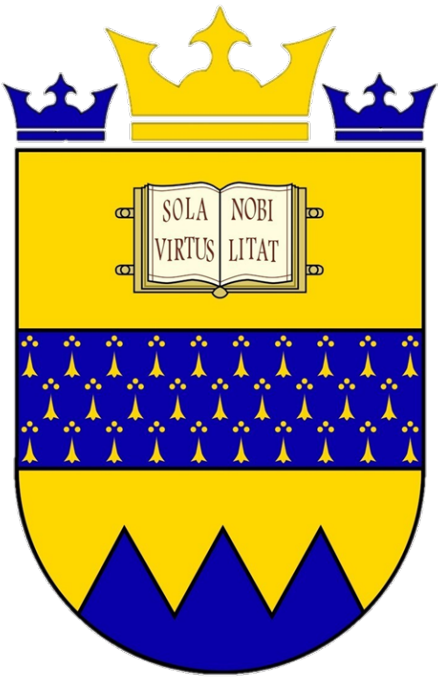

UGSM-Monarch Business School
Doctoral Dissertation

Socially Responsible Digital Leadership:
A Framework For Digital Organizations

PROGRAM:	D.Phil. In Digital Leadership
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- Final Submission to the Dissertation Committee -

ABSTRACT

Digital innovation that disrupted various industries has characterized the start of the 21st-century. The reliance on digital technology is exacerbated by the impact and influence of a plethora of applications that are used daily by billions of users. The digital agenda involves digital organizations that influence individuals, and importantly, the collective unit of individuals are influenced in society through digital technologies. The level of interdependencies and integration for the new work environment requires leadership in the digital era to develop and create long-term deliverables by challenging current leadership theories and models in the context of *Digital Social Disequilibrium*. The research posits that digital leaders in organizations should act responsibly in the application, management and leadership of digital disruption.

The present research examines the characteristics of a new *Socially Responsible Digital Leadership* framework that assists in explaining the influences and relationships of digital leadership, social leadership, social innovation and social capital on reaching *Digital Social Dynamic Equilibrium*. The research defines that Digital Social Dynamic Equilibrium "involves the complex interaction of digital and societal forces in a constantly changing world to reach a dynamic equilibrium to maximize socio-economic value".

The methodological structure of the research was articulated around the literature review of existing seminal authors and the professional focus of the quasi-academic domain, the content analysis of existing institutions and structured data, and the interviews with digital professionals. The research uses a unique analytical strategy of the grounded theory method with a phenomenological approach that allows the use of both qualitative and quantitative data. The influence of digital innovation on people in organizations and society through a triangulation of three research domains, being: leadership, digital innovation and social justice were examined. Themes were uncovered relating to the nexus of information at the intersection of these three research domains including the introduction of the bricolage of academic domains of digital leadership, social leadership and social innovation.

The interpretive bricolage of the research unfolded as the components were added inductively by connecting the dots of information to form the Socially Responsible Digital Leadership framework. The conceptual framework developed from this research can be used by various stakeholders of digital leadership, to redesign or

align company policies and strategies by incorporating the digital and societal forces to expedite efforts to reach Digital Social Dynamic Equilibrium. From a societal perspective, the people influenced by digital innovation can collectively use the framework as an advocacy tool to leverage more co-operation between digital organizations and the stakeholders in society to contribute to increased socio-economic value.

The triangulation of the research data has been considered and analysed; consequently, it can be concluded that the academic knowledge is congruent with the practical application in the field on a commercial basis. The introduction of Digital Social Dynamic Equilibrium illustrates the importance of reciprocity between digital leaders and society to achieve mutually beneficial solutions to maximize the socio-economic value. Socially Responsible Digital Leadership should develop further into an academic domain for academic scholars to research in the future.

The identified characteristics that are unique to digital disruption, the digital industry and digital leadership could potentially stimulate dialogue on the new paradigm of Digital Social Dynamic Equilibrium. Furthermore, the constant change introduced by digital disruption with Digital Social Disequilibrium will need improved collaboration between the academic and professional communities to expedite the implementation of the research results into practice. The result and the findings of the present research could be useful to current and future business leaders to understand better the mechanisms that explain the social influences of digital transformation on individuals in organizations and society.

Keywords: *Socially Responsible Digital Leadership, Digital Social Dynamic Equilibrium, social capital, leadership, digital leadership, social leadership, social innovation, digital forces, societal forces*

QUOTES

“A day without learning is a day without living.”

- Carson V. Heady

“Intellectual growth should commence at birth and cease only at death.”

– Albert Einstein

“Honesty is the precondition for genuine scientific and scholarly work.”

- Leo Baeck

“The one who graduates today and stops learning tomorrow is uneducated the day after.”

– Anonymous

“Nothing that is worth knowing can be taught.”

– Oscar Wilde

“Science at best is not wisdom; it is knowledge. Wisdom is knowledge tempered with judgement.”

– Lord Ritchie-Calder

“The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time, and still retain the ability to function.”

- F. Scott Fitzgerald

DEDICATIONS

To my wife Adele, for her undevoted support, encouragement and patience during this long and rewarding journey. I am eternally grateful for the empathy towards me through the entire process. My children continually made compromises due to my limited available time to accommodate me in my pursuit of knowledge. I trust that the example set will be an encouragement for their dreams and aspirations.

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I dedicate the work to scholars that walked before me that invested in human rights, social change and collective well-being. I wish to continue my journey with no end-point, but with a multitude of future opportunities to reflect, grow and share my knowledge, experience and wisdom through my learnings with others.

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A journey of a thousand miles starts with a single step. The doctoral journey never ends for the eternal scholar. The doctoral dissertation is a journey that changes the individual who completes the journey whereby scholarly conduct is the responsibility of an eternal humble student of knowledge. The human mind continuously conquers challenges that seem impossible.

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PURPOSES AND ATTESTATION

This document is prepared as a Dissertation submission to Monarch Business School Switzerland in fulfilment of the degree of:

Doctor of Philosophy in Digital Leadership

The author hereby attests that the work herein provided in fulfilment of the above degree requirements are wholly of his own effort and hand. Further, the author attests that this document constitutes the entire submission of the dissertation component.

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Dr. Francois Volschenk, DBA — Date

Dr. Francois Volschenk, DBA
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NOTES TO READER

- Names of fields of study and sciences such as economics and physics are not capitalized.
- The term “digital” if used in isolation, refers to “digital transformation” or “digital disruption.”
- The term "a priori statement" has been used to refer to a proposition or assumption that is accepted a priori.
- Squared brackets [like these] signify additions made by the author when quoting others.
- The new terms introduced in the research, Digital Social Disequilibrium, Digital Social Dynamic Equilibrium and Socially Responsible Digital Leadership, are indicated with capitalized first letters.

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LIST OF ABBREVIATIONS

4IR	Fourth Industrial Revolution
B2B	Business-to-Business
B2C	Business to Customer
CCTA	Central Computer and Telecommunications Agency
CISR	Centre for Information Systems Research
CRSA	Constitution of the Republic of South Africa
CST	Catholic Social Theory
DNA	Deoxyribonucleic Acid
DSD	Digital Social Disequilibrium
DSDE	Digital Social Dynamic Equilibrium
GST	General Systems Theory
GT	Grounded Theory
HBR	Harvard Business Review
ICT	Information and Communication Technology
IT	Information Technology
ITIL	Information Technology (IT) Information Library
MLQ	Multi-Factor Leadership Questionnaire
P2P	Person to Person
SEM	Structural equation modelling
SET	Social Exchange Theory
SRDL	Socially Responsible Digital Leadership
SST	Social Shaping of Technology

CHAPTER ONE

INTRODUCTION

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Final submission to the Dissertation Committee
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CHAPTER ONE

1.1 INTRODUCTION

The start of the 21st-century has been characterized by disruptions that have taken various forms that have been proliferation by the growth of the internet. The prominence of the availability of digital technologies, communication and data have enabled social media platforms that empower customers, the internet of things equipping objects with the ability to create, send and receive data, big data and collectively culminated in disruptive digital business models. The reliance on digital technology is exacerbated by the impact and influence of a plethora of applications that are used daily by billions of users. The challenge presented is that with the reliance on digital technologies, the risk of the potential negative impact of the unethical or illegal use of the available data of individuals by organizations increases. The digital agenda involves organizations that influence individuals, and importantly, the collective unit of individuals are influenced in society. The research posits that digital leaders in organizations should act responsibly in the application and management of digital disruption in society with the introduction of *Socially Responsible Digital Leadership*.

Digital is exciting and thrilling but can be a bit unnerving (Ross, 2017). According to Rogers, digital refers to a “host of powerful, accessible and potentially game-changing technologies like social, mobile, cloud, analytics, internet of things and cognitive computing” (p.3). The business landscape has changed forever with the

boundaries of industries that are continually changing. Future business leaders face the challenge that leadership will have to adapt to the business environment of constant change through digital disruption.

According to Rogers (2016) “new ecosystems and business models have evolved, redesigning the competitive landscapes across industries” (p.2). The term digital refers to something much more critical: “digital refers to the transformation that companies must undergo to take advantage of the opportunities these technologies create” (Rogers, 2016, p.25). Digital transformation or digital innovation involves rethinking the operations of a company and more importantly restructuring a value proposition. A digital company innovates by delivering enhanced products and services and offering a customer-centric engagement. The business landscape has changed forever. According to McRae (2015) in The Independent: “The world’s largest taxi firm, Uber, owns no cars. The world’s most popular media company, Facebook, creates no content. The world’s most valuable retailer, Alibaba, carries no stock and the world’s largest accommodation provider, Airbnb, owns no property” (p.1). Something significant is the cause of the trend of changing industries namely digital disruption. Future leaders in the digital era by should re-image their business models to take advantage of digital opportunities while managing the disruptive threats (Neubauer, Tarling, & Wade, 2017). Moreover, the digital era has created new organizations that disrupted industries and even created new industries. As a result of digital innovation and disruption, the largest companies in the world drive digital as part of their key strategies.

History suggests that the concentration of wealth in a limited quantity of individuals leads to social pressures (Wolcott, 2018). Billions of people are at the lower end of the economy, the middle class is declining in advanced societies and youth underemployment is epidemic in many countries (Abelow, 2014). While there is a general belief that leaders cannot improve the situation (Abelow, 2014), Winston Churchill famously stated that: “the price of greatness is responsibility.” Similarly, in the words of Albert Einstein that allegedly[1] stated: “I fear the day that technology will surpass our human interaction. The world will have a generation of idiots”. The disruption in organizations and society reinforce the importance of strong leadership in these difficult times with the potential negative influences of digital disruption. Leaders need guidance through defined researched discourse as guidance towards the new digital future.

The starting point in leadership research is the general assumption that leadership is a necessity and is impartially measurable. The alignment of individuals to move in the same direction is an organizational problem that requires leaders to align the people and not try to organize them (Kotter, 1990). “The ultimate test of practical leadership is the realization of intended, real change that meets peoples enduring needs” (Burns, 1978, p.462). Leadership is about influencing others in a systematic approach to understand and agree the requirements of what needs to be done and

[1] According to the book Voices of Truth: Conversations with Scientists, Thinkers, and Healers (2000) by Nina L. Diamond, no one has yet found a published instance of attributing the quote to Einstein.

the understanding how to do it, through the method of “facilitating individual and collective efforts to accomplish shared objectives” (Yukl, 2010, p.8). The key to effective enablement is cultivating self-awareness and understanding the impact our behaviour will have on others (Kelly, 2014). Traditional leadership research has an inherent bias toward exaggerating the importance of individual leaders but sometimes weak at studying leadership as a dynamic, shared process embedded in complex social systems. As organizations move toward flattening their structures, possibly eliminating many middle-level management positions, the need for improved leadership in those organizations at all levels becomes evident (House, 1971). The currently available discourse on leadership seems inadequate to address the challenges in the complex and ever-changing digital business environment. McHould and Grace (1993) draw attention to the methods of Foucault that give primacy to the idea that humans are viewed as subjects being subjected to historical processes and concepts that constrain them from thinking otherwise. The leaders of Socially Responsible Digital Leadership should be as free-thinking as digital itself without any factual or emotional constraints.

Cabrey and Haughey (2014) found that an essential factor that makes organizations efficacious at change, almost sixty percent, is having a culture that embraces the change and effectively managing employees through the change. True leaders inspire passion and belief in the abilities of followers to perform what is required for an organizational change. The belief by people that their abilities can be improved makes the desired future state more important than believing that their abilities

cannot be changed (Sevincer, Kluge, & Oettingen, 2014). The level of interdependencies and integration for the new work environment requires leadership in the digital era to develop and create long-term deliverables by challenging current leadership theories and models. While Socially Responsible Digital Leadership clarifies the currently available discourse, the research introduces the *Digital Social Dynamic Equilibrium* with digital and social forces, that can assist digital leaders to balance the constituents of the complex new digital ecosystem within the Digital Social Disequilibrium context.

1.2 BACKGROUND AND CONTEXT

Leadership has been observed, studied, researched and extensive literature accumulated over centuries but still remains a generally misunderstood phenomenon. Similarly, Burns (1978) states that “Leadership is one of the most observed and least understood phenomena on earth” (p.2). Leadership is a frequently discussed topic, yet probably one of the least understood concepts in current business and society (Bolden, Hawkins, Gosling, & Taylor, 2013). The word leader has an ancient pedigree, derived from the Old English lædere, “one who leads,” agent noun from lædan, ”to guide, bring forth” (Kelly, 2014, p.1). Otherwise, leadership is an old term, but the actual etymology of the word is modern where the first known use of it dates to 1821 when leader was combined with the suffix “ship” denoting the position of a leader (Kelly, 2014). An appropriate context for research would be an environment where strong leadership had a strong influence such as South Africa.

Nelson Mandela, one of the greatest humanitarians in the world, was proudly South African. He introduced the new “Constitution of the Republic of South Africa, 1996” (CRSA) to the Constitutional Assembly for the adoption of the new constitution in 1996. According to Sunstein (2001), the Constitution of the Republic of South Africa is one the most admirable constitution in the history of the world for its inclusion of socio-economic rights through being respectful to democratic prerogatives and the limited nature of public resources. The South African constitution is 18 years old and is rightly held up as a document worth emulating. The CRSA is unique because it includes what constitutional scholars call positive rights including a novel and highly promising approach to judicial protection of socio-economic rights. The research context is a country with a strong political background, but with a strong emphasis on socially responsible actions with one of the most reliable liberal constitution in the world. The contemplated research attempts to synthesize knowledge and experience to formulate a pragmatic digital leadership that is socially responsible in the context of a country that has a strong understanding of social paradigms.

According to Mumford (1906), the “primary task of sociology as a science is a description and explanation of the factors fundamental to the associate life” (p.1) from the viewpoint that all human associations have specific characteristics in common. From this point of view, the focus of the attention of the sociologist is upon the interactions, the reciprocities and the process of association of human beings (Mumford, 1906). The development of the correct leadership style is fundamental for

the survival and sustainability of businesses, organizations and society (Thorpe, Lawler, & Gold, 2007), thus “maintaining leadership as one of the most researched phenomena within social science” (Grint, 2010, p.23).

Furthermore, the Harvard Business Review (HBR) (2004) affirms the rejection by Prentice of the concept of leadership as the exercise of individual power by force or an individual that has extraordinary analytical skill. Prentice (1961) defined leadership as "the accomplishment of a goal through the direction of human assistants" (p.21) and a successful leader as one who understands the motivations of people to enlist employee participation in a way that combines individual and group needs (Harvard Business Review, 2018). Rost (1993) defines the importance of leaders as “leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes (p.102).” Maxwell (2016) affirms the statement by saying that “all leadership is influence – nothing more and nothing less” (p.1). The research investigates how leaders can improve organizational influence through the utilization of digital technologies by leveraging of the influence, impact and complex interaction of digital influence on people and society that exacerbate or proliferate the impact of digital.

Warren Bennis stated in an interview that leadership is the capacity to translate vision into reality (Boocher, 1991). The current wave of industry disruption is driven by technologies, business models and digital tools including analytics, big data, artificial intelligence, virtual reality, blockchain, cloud environments, mobile solutions,

machine learning, connected devices, the sharing economy,digital transformation and digital ecosystems. Moreover, digital innovations are continuously increasing the rate of change, thereby complicating it for leaders to create or even maintain positions of competitive advantage (Neubauer et al., 2017). Digital leaders should be the catalysts for change by not merely protecting or improving current organizations but also by disrupting organizations or industries with new opportunities.

As the business landscape shifted from industrial to informational, leadership behaviours have needed to move away from just controlling people and processes. While traditional process and systems thinking provide a persuasive basis for analyzing and improving how organizations deliver goods and services, the people, process and technology methodology has been recognized as the three components of a successful business operational strategy. People, process and technology, known as the Golden Triangle of Business, has its origins in the fundamental principle of the Information Technology Infrastructure Library (ITIL). The UK Central Computer and Telecommunications Agency (CCTA) developed the IT Infrastructure Library framework, in the late 1980s, to lower costs and to manage IT better for improved service delivery (ITIL, 2014). Nevertheless, due to the limitations of process thinking in an information-driven environment, a more holistic systems approach that recognizes the interdependencies between the system components of people, process, technology and information should be implemented to incorporate more of the complexities of digital disruption in real-world delivery systems.

Termed the Fourth Industrial Revolution (4IR) by Klaus Schwab, the digital revolution consists of developments in information technologies combined with robotization, automation of tasks, the internet of things and variety of other technological advances in areas such as manufacturing, transport and biotechnology (Mckenzie, 2017). The implications of the considerable influence of digital on people, process, technology and information, are undeniable. This research will focus primarily on the influence on people in organizations and society. Digital business is fundamentally changing the organization of every leader (Bennis, 2013), thereby suggesting the requirement of a framework for digital leaders.

Leadership authors that focus on people, the importance of people, the impact on people and where possible around the influence of technology on leadership and people have a significant contribution to the research. The contributions by notable leadership authors are highlighted in Table 1.2 with examples of citations and significant contributions from several of the most notable leadership scholars. The mentioned notable authors appear to be frequently cited for their innovations and theories within transformational or people-orientated leadership: textbooks, journals and articles. Moreover, the listed leadership authors are regarded as influential thinkers in leadership. The published work of the authors has been listed as potential inflection points that align with the proposed nature of the research. The shared context that appears in the literature is that most of the leadership scholars study leadership in a topic according to and relating to one academic discipline within a specifically defined context. Digital has no boundaries, industries are changing,

organizations are changing, and the position of individuals are changing. The influential authors appear to formulate leadership concepts or theories that fit within their academic upbringing and do not extend the praxis towards other academic disciplines.

Table 1.2 Influential Thinkers in Leadership	
Author	Significant Contributions with Citations
Burns	The idea of transformational leadership (James M. Burns, 1978), Power and politics (J M Burns, 2004)
Northouse	Leadership Theory and Practice (Northouse, 2015), Leadership in the 21st century (Northouse, 2015)
Avolio	Transactional and transformational leadership (Avolio, Bass, & Jung, 1999), Leadership development and the MLQ (M. B. Bass & Avolio, 1997), Authentic Leadership (Earlbaum & Mahwah, 2006)
Hersey and Blanchard	Situational Leadership. Leadership behaviour and styles (Hersey. P & Blanchard. K, 1988).
Bass	Development of transformational leadership (Bernard M. Bass, 1990; Bruno & Fundacao, 2008), Leadership development and the MLQ (M. B. Bass & Avolio, 1997)
Bennis	Development of Servant Leadership in Organizations (W Bennis, 2010), Leaders and Managers (W Bennis, 2010), Leaders in the digital world (Warren Bennis, 2013)
Yukl	Psychology of Leadership, Influence of leadership (Yukl, 1982), Critique of various theories (Yukl & Van Fleet, 1992), Leadership in Organizations (Jermier, 1995)
Source: Francois Volschenk (2018)	

Furthermore, many seminal authors in leadership literature appear to firmly hold the assumption that leadership is exercised differently within different industries. While the ability to manage people is vital in leadership practice, an understanding of the

application of the current theories is equally important (Simonton, 2011), to bring forth the full potential of the individual in the digital era. Moreover, it appears that the scholarly literature primary focuses upon leadership, leaders, followers, styles and teamwork but not enough apparent work in an ever-changing environment, its implementation and praxis. The domain of leadership in digital transformation and the potential social responsibility of digital leadership has not been studied. Nonetheless, the research on leadership has not provided much satisfaction over the years on the meaning, its need and purpose (Rost, 1993, 2008). The elements and relationship aspects of leadership that constitute its meaning and necessity have not been extensively studied. Upon a thorough examination of various prominent research and academic databases, there appears to be little research conducted within the area of digital leadership. The lack of research on digital leadership is illustrated in Table 1.7 presented later in the chapter.

The focus on leadership is an international phenomenon (Bolden et al., 2013), but the importance and the role of leadership qualities seem to be an unclear phenomenon as to whether there are leader specific qualities, defined actions, contextual variables or situational influences. The contemplated research examines these factors from the perspective of digital leaders. Effective leadership could help humanity through times of peril, political challenges or disruptive technologies. Mills (2005) argues that few things are more critical to human activity than leadership. Leadership could make a business or organization successful. One of the most notable recognitions individuals strive for, regardless of education, age, gender or

profession, is becoming, being a leader or obtaining a leadership position (Mills, 2005). The critical nature and value of leadership is of paramount importance to society and business, and thus introduce the problem statement at hand.

1.3 STATEMENT OF PROBLEM

People generally know a lot about their leaders and very little about the true meaning of leadership. Leadership research has been met with a lack of apparent clarity, great perplexity, complexity and on the meaning and purpose behind the subject matter. Rost (1993) critiques leadership concept as understood in the last 75 years to reconstruct post-industrial leadership for the twenty-first century where he develops a new definition that fundamentally distinguished leadership studies from management which he labelled as a post-industrial paradigm (Rost, 1993). Grint (2010) states “we appear to be no nearer a consensus [in understanding leadership’s] basic meaning, let alone whether it can be taught, or its effects measured and predicted” (p. 1). Despite the plethora of available leadership research, the question should be asked as to how the business concepts of management and leadership are transferable and applicable to digital transformation and its surroundings and the designated leaders. The present research will investigate the answer to this question. The following section will elaborate further on the purpose behind the present research within social responsibility and the need for digital leadership research.

It is suggested that the discursive formation of leadership literature with certain implicit assumptions inhibits the ability to create more appropriate alternative

leadership models for the twenty-first century. The research will attempt to discover the historical development of leadership theories that enabled the discourse of leadership and explore the currently available leadership concepts. Foucault (2007) introduced the orderly unconscious structures underlying the production of scientific knowledge in time. The process involves finding the “bits and pieces that have to be in place to allow something else to be possible” (Kendal & Wickham, 2003, p.25). With the questioning of the underlying assumptions and by investigating the cultural and social needs to which leadership responds, the historical conditions of possibility of Foucault are revealed. The fragments of materials from a variety of sources create something new from what already exists.

The application of leadership theory in the digital age challenges the scientific knowledge of leadership in a new context at a different time. Schwab (2017) defines the significant changes as the Fourth Industrial Revolution (4IR) as profound changes that are a great promise or potential peril for humankind. Despite the differences between countries, the challenges from automation are universal. Policies are required that assist workers and institutions to adapt to the impact on employment of digital automation (Chui, Manyika, & Miremadi, 2017). Businesses will need to find ways to embrace the opportunities from the productivity growth potential that automation offers through digital innovation.

There is a common perception that leaders are instrumental in the performance of the organizations they lead. In contrast, Newark (2017) argues that considerable

research suggests that the influence of leaders on organizational performance might be minimal. This view is consistent with research suggesting that the impact of leaders is both more modest and context-dependent than many portrayals of them imply (Avolio et al., 1999; Derue & Ashford, 2008; Judge & Piccolo, 2004). The research will investigate the importance of leadership in the digital era.

Considering the Marx theory of alienation, where Karl Marx expressed concern regarding the ways hyper-specialization can reduce purpose (Warfare, 2013) this is also a concern for the 4IR given the fears of Schwab for the younger generation, amongst whom many consider white collar jobs to be the norm. Schwab fears that this generation may not find happiness or purposes, or will have to deal even more with corporate cravings of a work-life balance and harmonious work-life integration (Hollis, 1992). Heffernan (2017) proposes a reduction of the adverse effects of workers and consumers alike losing control of the technology used to buy and sell goods and services. Scholz (2016) proposes platform co-operativism as a mash-up of 19th-century co-operative principles with 21st-century technology, evangelizing the collaborative technology and co-operative businesses (Heffernan, 2017). According to Scholz (2016), three principles lie at the heart of platform co-operatives namely communal ownership, democratic governance and transparent data.

While the investment in leadership development and information available on leadership continually increase (Grint, 2007), there still seem to be uncertainty on how to translate the ideas about leadership and leader into best-practice for

organizations (Hirsh et al., 2004). Leadership has been studied extensively from a theoretical foundation and in various contexts (Horner, 2004). Despite the extensive studies and available leadership literature, leadership is one of the most observed and least understood phenomena on earth (James M. Burns, 1978). Moreover, according to Yukl (2013), leadership has been investigated for centuries over cultures and theoretical beliefs, but the application of principles in leadership is understudied.

Effective leadership has been recognized as a central determinant of growth and success in organizational settings (Haslam, Reicher, & Platow, 2014). Within the context of the digital revolution that transforms markets by rapidly changing the competitive landscape, embracing digital transformation can represent the difference between retaining market leadership, gradually declining or eventually being pushed out of business (Dubois, 2016). Due to faster technological change and greater international competition, the net result is that successes from the past could no longer be a formula for success in the future. Significant changes are necessary to survive and compete effectively in the disruptive digital environment. According to Kotter (2011), more change always demands more leadership.

Traditionally scarce knowledge, resources, opportunities and education have kept society as a pyramid. According to Abelow (2014), the pyramid of scarcity in society is contrasted by the pyramid of digital abundance. Moreover, the increased availability of the best tools, resources, knowledge and opportunities to succeed are made available to everyone as part of everyday living by the pyramid of digital

abundance, potentially resulting in the pyramid becoming obsolete (Abelow, 2014). With the growth of the benefits of available technology through reform or revolution humanity may increasingly face questions of what they would do when technology can do nearly anything (Wolcott, 2018). Effective leadership is required that can define potential problems, address issues and implement solutions to current and future issues and problems.

1.4 THE PURPOSE STATEMENT

The primary purpose of the present research is to:

> Determine by using both qualitative and quantitative research methods the characteristics of a new Socially Responsible Digital Leadership framework that assists in explaining the relationships between digital innovation, social justice and leadership incorporating the influences of digital innovation on people in organizations and society to maximize socio-economic value.

1.5 RESEARCH QUESTION

In the context of the discussion above the main research question has been developed as follows:

Main Research Question:

> "What are the characteristics of a new conceptual framework that describes Socially Responsible Digital Leadership in a technologically disruptive context?"

Sub-Research Questions:

A series of sub-research questions have been developed to fully address the main research question focussing on the “why” and the “how” inclinations of the phenomenon of digital leadership that is socially responsible in a South African context. The sub-research questions will inform the nature of the analysis with regards to the main research question. The questions are:

SRQ-1: What are the most critical leadership components within a digital innovation context?

SRQ-2: What are the potentially negative influence of digital innovation?

1.6 RESEARCH METHODOLOGY

The present research will extract praxis and principles from responses provided by semi-structured interviews of selected digital professionals to arrive at a holistic consensus of leadership. The research will distinguish and provide linkage between theoretical knowledge before evidence, “a priori,” and practical knowledge or experience after evidence, “a posteriori,” to justify in relation to the praxis of digital leadership. Moreover, the research methodology relies on personal interviews where study participants underwent a semi-structured personal interview process by way of an agreed recorded personal, telephone or Skype call interview. In the interviews, the participants were questioned about the influence and societal impact of digital innovation, social innovation, social leadership, digital leadership, Digital Social Dynamic Equilibrium and leadership concepts in general. Further details on the research methodology will be discussed and elaborated in Chapter Three. The

subsequent section will discuss the significance of the study and the opportunity for leadership to contribute to the digital age in a socially responsible manner.

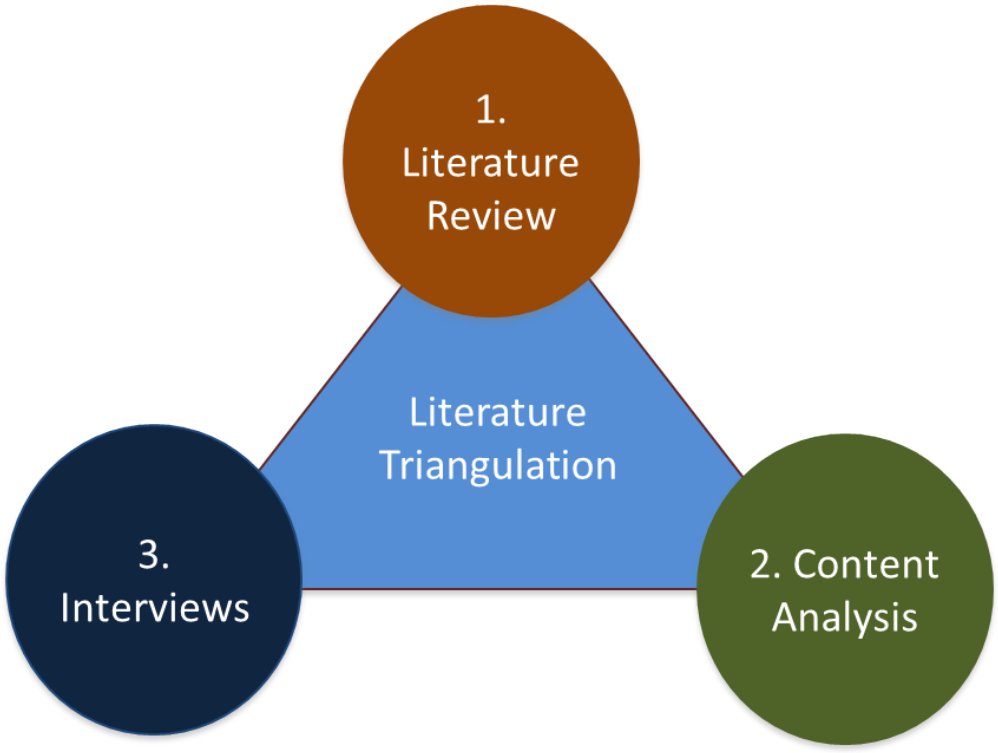
The limitations and advantages of quantitative and qualitative methods make it desirable to use a complementary combination of methods through mixed methods whenever possible. Sherris et al. (2006) posit that mixed research methods are the most useful approach for exploring the knowledge, attitudes, beliefs, behaviours and preferences of the audience. The perceived confidence increase in the results of leadership research when similar results are found for the different research methods (Yukl, 2010). Research by Stentz, Plano-Clark and Matkin (2015) illustrates a significant increase in mixed methods designs to advance leadership theory and theoretical thinking about a wide array of leadership phenomena.

The research employs a mixed research method based on qualitative and quantitative research methods for data collection. Mertens (2011) argues that “as researchers, we have the potential to contribute to social change in a more conscious way if we view mixed methods as a tool for such change (p.195)”. The research design structure is rooted in the Grounded Theory (GT) approach to isolate the main aspects and influences on digital leadership and its designated leaders in the field. Grounded theory is an inductive approach through its development of theory from data collected from the phenomenon (Moustakas, 1994). Increased attention should be given to qualitative analysis to address the emic and etic, which refer to two kinds of field research done and viewpoints obtained, from the perspective of the subject

and the observer (Peng, Peterson, & Shyi, 1991). Both inductive and deductive research have merit in describing and explaining the research issue, but the focus through the phenomenological approach would be inductive research to explore and discover new insights.

Figure 1.6 illustrates the aim of the research to respond to the research question by way of a triangulation of research data.

Figure 1.6
Methodological Triangulation



Source: Monarch Business School Switzerland

An extensive literature review of existing seminal academic authors (desk research) will identify knowledge gaps of leadership theory, digital innovation theory and social

justice theory, and the professional focus of the influence of digital innovation as illustrated in Figure 1.8 presented later in the chapter. A two-stage interview process with stakeholders (field research) will complement the content analysis by helping to uncover personally held beliefs and understandings of perceptions of leadership. The various perspectives of multiple stakeholders are incorporated in the study that will be categorized into a group of employees and managers and a group of executives.

1.6.1 Quantitative Data Analysis

The quantitative research attempts to fragment and delimit phenomena into measurable or common categories that can be applied to all subjects or situations (Winter, 2000). The research makes an effort to “understand the participants’ culture and to predict hindrances that respondents may face” (Nguyen, 2007, p.10). A quantitative analysis of the influence of digital innovation from publications, reports, articles and commercial documents will be examined.

1.6.2 Qualitative Data Analysis

Qualitative Research is the science of ascribing the meaning individuals or groups attribute to a social or human condition, whereby it is generally inductive through the process of inferring a generalized conclusion from particular instances (Spratt, Walker, & Robinson, 2004). Traditionally leadership research was only accepted if it was conducted in a decisive, objective and quantitative paradigm (Mortimer, 2009). In contrast, according to House and Mitchell (1970), the use of qualitative methods

offer some advantages for studying leadership. Similarly, Bryman (2004) also advocates making greater use of qualitative methods in leadership. In the same vein, Lisle (2011) emphasizes the strengths of qualitative research methods by arguing that it is most useful for exploring complex and multiple issues as required for digital disruption and innovation. The proposed qualitative research looks deeper into the issues of interest and explores the nuances related to the issues at hand.

Phenomenology is the study of specific and defined phenomena as experienced from the first-person point of view (Smith, 2013). The evaluation standards for qualitative methods are not as explicit as for quantitative methods, and interpretations based on qualitative methods could sometimes be highly subjective. In phenomenological studies, the researcher must maintain an open mind and describe things realistically and not as self-perceived perceptions. Moreover, phenomenology attempts to eliminate everything that represents a pre-judgement or pre-supposition (Smith, 2013). A qualitative method using a phenomenological research design will be conducted on the components of the proposed Socially Responsible Digital Leadership approach, as contemplated by the research. Digital innovation and digital disruption have significantly less available discourse, in contrast to the currently available discourse on leadership and social justice. The phenomenological approach will attempt to increase the available language and text available on digital theory.

Furthermore, qualitative methodology is more concerned with understanding the meaning of social phenomena and focuses on links among a more substantial number of attributes across relatively few cases (Tuli, 2011). The goal of a qualitative investigation is attempting to understand the complex world of human experience and behaviour from the point-of-view of those involved in the situation of interest (Krauss, 2005b). The proposed research will challenge preceding acceptable quantitative paradigms of leadership research through an in-depth phenomenological approach.

1.6.3 Research Process

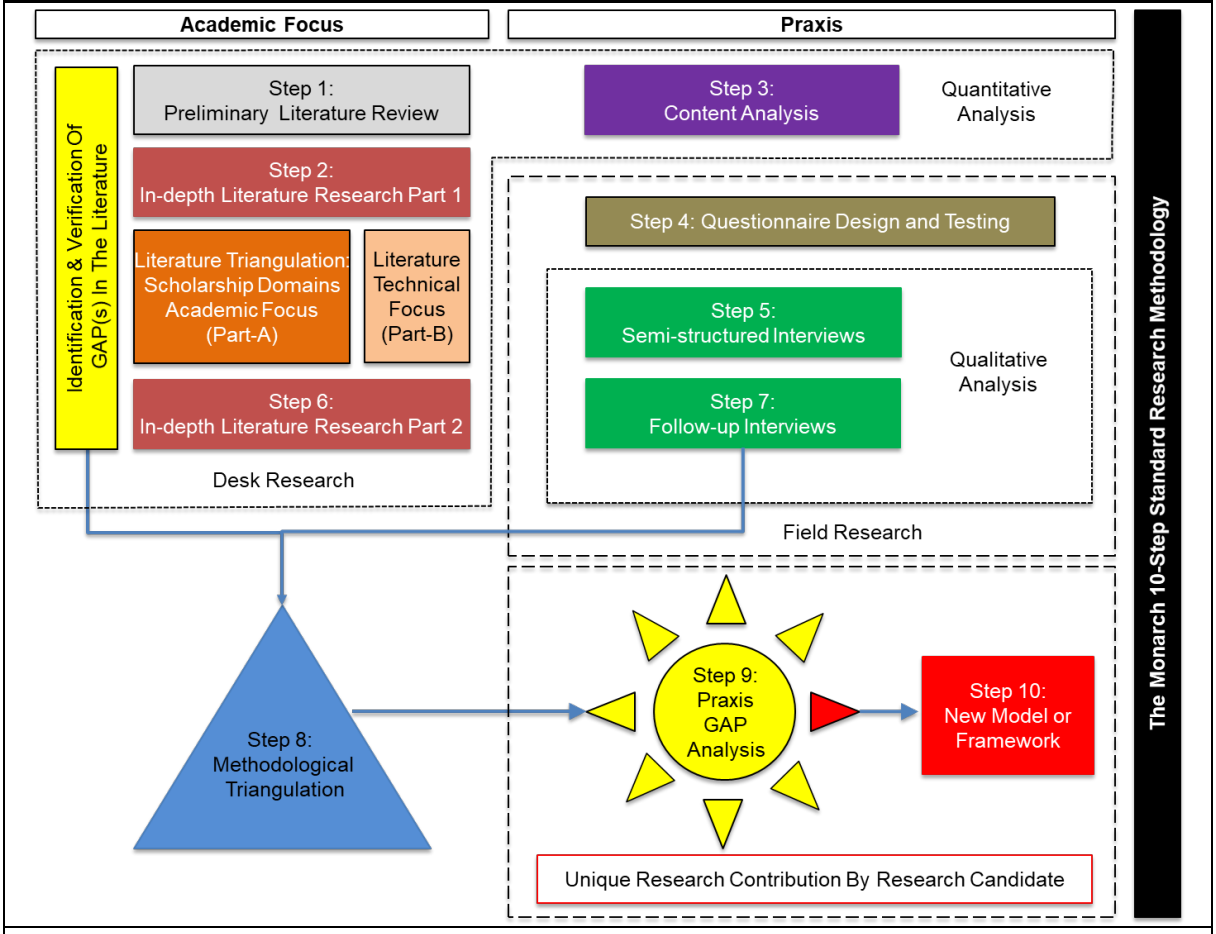
The contemplated research shall be built as a phenomenological study of Socially Responsibility Digital Leadership (SRDL) in South African organizations. As Figure 1.6.3 shows, the contemplated research aims to respond to the main research question using a methodological triangulation that integrates the literature review with a professional focus on a review of quasi-academic industry content along with an investigation of the personally held beliefs and understanding of industry participants by way of a structured interview process.

The research utilizes the Monarch 10-step Standard Research Method as a process flow for the completion of the research. The steps involved are:

Step 1: Preliminary Literature Review. Research begins with a survey of the relevant seminal authors within the three academic scholarship domains identified in Section 1.8. This review will provide a solid understanding of the

landscape of the scholarship within each domain, the identification of the important authors over time and a better appreciation and understanding of the nexus of the domains and their integration

Figure 1.6.3
Monarch 10-Step Standard Mixed Research Method



Source: Monarch Business School Switzerland

Step 2: In-Depth Literature Review Part 1. An in-depth review of the seminal authors and theories within the three academic scholarship domains identified in Section 1.8 and quasi-academic professional sources will be completed to provide a solid academic foundation to the research. Identification of the gap

in the Literature will be made and clearly identified in relation to the research question and contribution of the research.

Step 3: Content Analysis. An analysis based on data obtained from professional documents including but not limited to: white papers, statistical research documents, economic and business review data, website analysis and other sources will be examined.

Step 4: Questionnaire Design & Testing: The development of interview questions will be informed by and synthesized using the understandings gleaned from the review of the academic literature, quasi-academic technical documents and content analysis sources. Based on the understanding of the existing theories and gaps present in the academic and professional literature the questionnaire will be developed and tested with the assistance of volunteers. Attention is paid to perfecting the administration of the questionnaire from a flow and timing standpoint to ensure that questions are clear and concise and have a direct bearing on the focus of the contemplated research.

Step 5: Semi-Structured Interview Process: Stakeholders to be interviewed will be industry participants considered knowledgeable with respect to the research. A minimum sample of 20 participants will be interviewed for each participating stakeholder level identified in Table 1.9. Interviews will be conducted at a location convenient to the subjects and are expected to be approximately 30 to 45 minutes in length. Interviews will be digitally recorded unless objected to by the participant in which case manual notes will be taken.

Step 6: In-Depth Literature Review, Part 2. A second more in-depth literature research review, informed by the semi-structured interviews of Step 5, will be completed to add more expertise and specificity to the research analysis by redefining the scope and consideration of the contemplated research further.

Step 7: Follow-Up Interviews. To achieve a more specific view informed by the first round of interviews, along with the second more in-depth literature review, a smaller sub-set of 10 respondents from each participating Stakeholder group, selected from the first-round sample, will take part in more in-depth follow-up interviews. These interviews will seek to uncover deeply-held personal beliefs and understandings regarding the research at hand.

Steps 8 and 9: Triangulation of the Data and Gap Analysis. A triangulation of the research data from the literature reviews, content analysis and interview processes will be considered and analysed, in order to determine whether or not the existing academic knowledge is congruent with the practical application in the field on a commercial basis. The result of this analysis should determine whether a Praxis Gap exists between the academic (theoretical) and the practical (applied) domains.

Step 10: Development of New Conceptual Model or Framework. Building on the Praxis Gap analysis in Step 9, a thorough analysis of the existing models and frameworks within the academic domain will be considered. This analysis will evaluate whether the existing frameworks sufficiently address the requirement for practical application within the industry and whether it should be further improved or modified.

1.7 THE SIGNIFICANCE OF THE STUDY

The existence and development of leadership qualities is an essential and significant factor in personal life and the workplace and of great value within our society (Rost, 2008). Effective leadership development is a significant challenge for companies around the world, where the transition to the new digital organization creates large leadership gaps. High-performing leaders today need different skills and expertise than in generations past, yet most organizations have not moved rapidly enough to develop digital leaders, promote young leaders and build new leadership models (Abbatiello, Knight, Philpot, & Roy, 2017). Rogers (2016, p.45) states that “those who ignore digital business as an important centre of gravity of society in an age of globalization have to pay the price of marginalization and cultural remoteness” (p.45). The significance of digital leaders is that their wealth accumulated from digital technologies make them the wealthiest people in the world. The wealthiest people in the world have a staggering amount of wealth, with wealth comparable to the GDP of small countries for some (Calfas, 2017). Three of the wealthiest people in the world Jeff Bezos, Bill Gates and Mark Zuckerberg have made their fortunes from digital technologies.

The threat of digital innovation through automation and artificial intelligence could pose a potential challenge or threat to people. Humanity has practically created an electronic divine entity through evolving digitalization and utilization of IT. Large amounts of information from big data can be analysed through artificial intelligence to judge individuals including from friendship choices, purchasing preferences, political

views or even drinking habits (Margolis, 2017). For Example, Social Credit that is currently being piloted for a 2020 launch intends to mine and aggregate data on the more than one billion Chinese citizens to assign each a trustworthiness rating (Margolis, 2017). The application of digital innovation is limited only by human imagination. The potential impact of digital innovation is expanded daily through increased processing capabilities, digital acceptance by society and the plethora of ever-increasing available data for processing and analysis.

There seemingly has not been significant research carried out on the concepts of the leadership of digital innovation professionals and their inclination towards social responsibility. In Table 1.7, a bibliometric review illustrates results from three referencing databases: ProQuest, JSTOR and Google Scholar. The three databases have been selected to support further the notion that there is a lack of existing research on Socially Responsible Digital Leadership. Table 1.7 is vital for gaining an appreciation that Socially Responsible Digital Leadership is currently an understudied area. Also, it is important to note that many of the search results may not contain any direct relationship to the subject matter of digital leadership as each of these totals have not undergone any thorough form of filtering to extract non-significant results.

Furthermore, the search results consist of all formats such as books, web pages, working papers, articles and journals. The terms leadership, social and digital produce a significant amount of search results, but very few occurrences as combined terms. The impact of digital leadership should have a considerable

influence on organizations and larger society based on the profile of digital leaders, social impact of digital innovation, wealth distribution of digital leaders, social impact of digital on people and perceptions of human survival in the face of digital dominance.

Table 1.7
Bibliometric Review of Socially Responsible Digital Leadership

	ProQuest	JSTOR	Google Scholar
Terms of the search	Search Results		
1. Leadership	813 763	125 687	3 640 000
2. Corporate Social Responsibility	183 281	28 404	2 470 000
3. Social Justice	203 010	95 411	1 200 000
4. Digital	1 561 256	22 641	5 550 000
5. Digital Innovation	123 709	5 536	2 480 000
6. Digital Disruption	20 432	688	604 000
6. Social Leadership	275 810	87 716	3 210 000
7. Digital Leadership	66 203	4 744	1 660 000
8. Social Innovation	289 588	55 579	3 260 000
9. Socially Responsible Digital Leadership	4 305	1 446	72 700
10. Digital Influence	79 775	7 532	3 570 000
11. Digital Influence on Society	37 907	4 522	3 440 000
Source: Francois Volschenk (Details collected January 28th, 2018)			

With the bibliometric review presented in Table 1.7, there is an apparent lack of scholarly research on leadership and digital, and a lack of scholarly research on the impact of digital innovation and leadership on society. The proliferation of digital technology, the internet and digital disruption can be considered vital institutions

within a functioning society. Therefore it should be researched as a dominant constituent of leadership. In conclusion, although there is extensive research on leadership and social justice, a nexus of leadership and social justice with digital affords an insignificant amount of research. The opportunity for the research is presented for this manuscript to shed additional insight into the domain of study.

The research increases focus on the application of a pragmatic digital leadership approach, that may have positive benefits for both professionals and academics, by the research that focuses on three main objectives:

1. The most critical leadership components within a digital innovation context;
2. The influence of digital innovation on people in organizations and society;

In recognition of the value that effective leadership has on organizational performance and due to decreasing talent, organizations are directing greater resources that affect leadership development (Avolio, Avey, & Quisenberry, 2010). The contemplated evidence-based research will investigate the acceptance and the practical application of the Socially Responsible Digital Leadership approach. The permanent change of a state of mind through social responsibility may positively influence long-term digital leadership change.

The scope of this research appears not to have been completed elsewhere. Thus the contemplated research will provide a basis for further research and examination of the phenomenon of social responsibility applied to digital leadership. The research

integrates the discourse of great thinkers and other influencers with more recent applicable seminal literature on leadership, digital innovation and social justice to bridge the evident literature gaps.

1.8 THEORETICAL FRAMEWORK

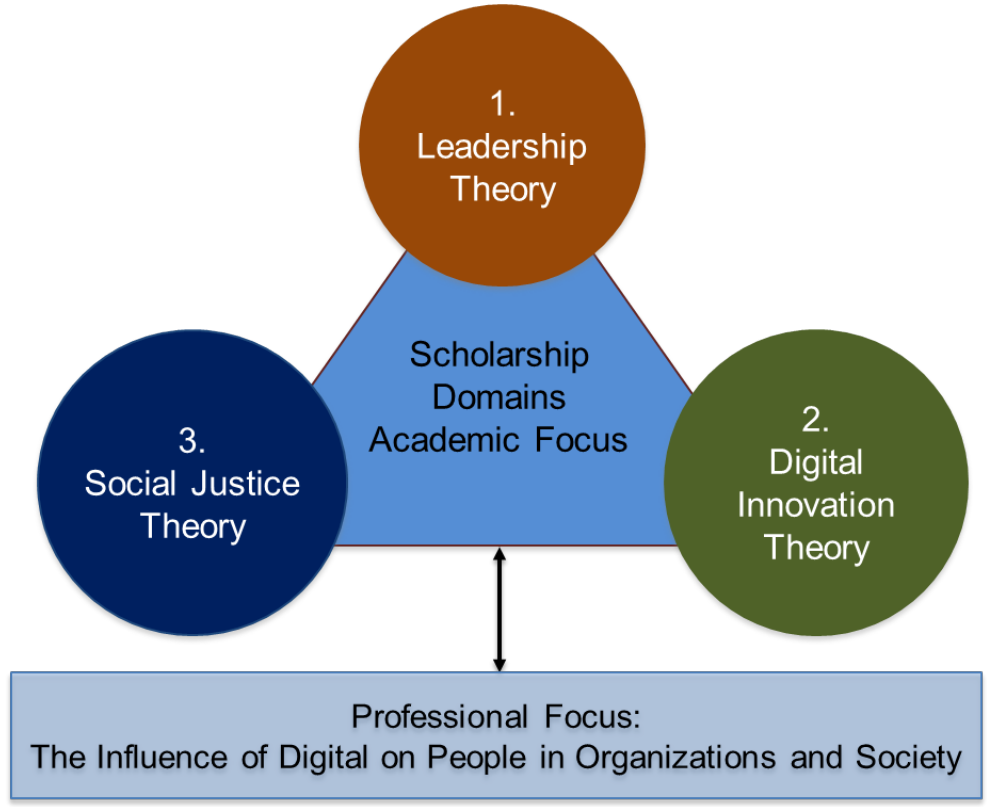
The theoretical framework will be structured based upon an integrative literature review approach. The selection of this distinctive form of research will assist in generating new knowledge of leadership (Torraco, 2005). Additionally, it should bring forth a more holistic approach to the concept of Socially Responsible Digital Leadership as the framework is designed upon various academic disciplines.

The specific context of the research will frame this research study. In this context, the epistemological assumption of extreme positivist view which promotes that knowledge can only be based on observing concrete reality is not supported. It is argued that in order to understand socially constructed phenomena the researcher could not be objective and independent, hence the positivist notion that data should be value-free, and the objective is not fully accepted. The need to understand perceptions and preferences is tempered by the recognition of the inevitable role of the researcher and the researched as active participants of knowledge creation. Our mental constructs must assist our knowledge of the real world is the epistemological relativism (or cognitive relativism) that the truth of a statement is relative to a social group or individual. The addition of knowledge aligns with Foucault's (2007)

principles that the body of knowledge should be established as a coherent, valid and unified body of knowledge.

The theoretical literature review has been separated into three categories as per Figure 1.8 to allow for the analysis and integration of the writings.

Figure 1.8
Literature Triangulation and Professional Focus



Source: Francois Volschenk (2018)

The academic domains that assist in the formulation of the essential determinatives of Socially Responsible Digital Leadership are:

- Leadership Theory

- Digital Innovation Theory
- Social Justice Theory
- Professional focus: The influence of Digital Innovation on People

The information presented below is an abridged description of the integrative literature that will be utilized in the study:

Part One – Leadership Theories: This section will discuss the timeless and seminal work of some of the significant influential thinkers throughout history that have shaped current thought on Leadership praxis. The fundamental areas of leadership focus are leadership theories, leadership traits and behaviours, situational, contingency, transactional, charismatic and transformational leadership, leadership factors and influences on leadership. Incorporated within this section will be the intersection of digital innovation and leadership, described as digital leadership.

Part Two – Digital Innovation Theories: This section will transition from historical innovation to a modern point of view to formulate and describe digital transformation or digital disruption, hereafter referred to as digital innovation. Incorporated within this section will be the intersection of digital innovation and social, described as social innovation.

Part Three – Social Justice Theories: This section will introduce social justice, Catholic social theory, corporate social responsibility, organizational social justice

and workforce justice. Also, this segment will illustrate the concept of social innovation. Incorporated within this section will be the intersection of social justice and leadership, described as social leadership.

Part Four – Professional Focus - The Influence of Digital Innovation on People in Organizations and Society: This section will introduce the multi-dimensional influence of digital innovation with the largest digital organizations in the world, the growth of digital organizations, invasion of privacy, analogue and digital thinking, the proliferation of mobile device usage and the threat of a potential decrease in jobs.

The intersections of the academic domains and the professional focus will be instrumental in understanding the chosen research methodology discussed in Chapter Three. The concepts and theories familiarize the reader with the significance of data analysis and results collected in Chapters Four and Five. The following section will present a general overview and description of the nature of the research to be conducted.

1.9 NATURE OF THE RESEARCH

The research investigates the change from digital, past, present and future influence in the world. Aristotle defined a “man of freedom as the pinnacle of human existence; an individual freed of any concern for the necessities of life and with nearly complete agency” (Wolcott, 2018, p.2). Abelow (2014) questions whether modern technologies in the new digital world could help everyone succeed and prosper while still

promoting collaboration between individuals. Furthermore, Aristotle defined the three principles of knowledge as techné with a technical focus, episteme with a focus on knowledge and importantly, phronesis as practical knowledge. The principles of Aristotle applied to leadership means that effective leadership cannot be achieved merely with remedial action or only greater knowledge or expertise from leaders. In the same vein, Grint (2007) argues that leadership cannot be limited to just a technical problem (techné from Aristotle) or only requires specific great skills. With a purely technological solution to leadership, it could be argued that appropriate systems should already have resolved the enigma of leadership issue.

Moreover, leadership is not just a problem of understanding and knowledge as per Aristotle's episteme. Grint (2007) supports that leadership also requires greater wisdom, Aristotle's phronesis, through which leaders develop the wisdom to see what the good might be in the particular situation required by society, and then enact the processes that generate the good. The proposed research posits that in the uncertainty of digital disruption the application of appropriate leadership through techné, episteme and phronesis should contribute to the Socially Responsible Digital Leadership framework. Virtuousness represents the best that humankind aspires to achieve, whereby responsible leadership to pursue the highest aspiration of good, is a noble aspiration (K. Cameron, 2012). Similarly, according to De Bettignies (2014), a changing world demands a new leadership style that emphasizes social impact and commitment to the common good.

Furthermore, leadership appears to be an overlooked phenomenon especially regarding its importance to digital leadership and the transferability or similarity to the existing concepts of leadership theory. Leadership is generally not well understood and generally lacks clarity (Yukl, 1999). Digital business strategy is an essential aspect of leadership that is fundamentally changing every leader's life regardless of the organization or industry (Bennis, 2013). The nature of the research focuses on the pivotal factors that influence digital aligning the praxis with Aristotle like principles to achieve Socially Responsible Digital Leadership.

Furthermore, it appears that more research is needed to clarify the term digital leadership, social leadership and social innovation as components of a Socially Responsible Digital Leadership framework. The Level-of-Analysis diagram of Table 1.9 further illustrates the participants within the phenomenological aspect of the research.

Table 1.9
Levels of Analysis & Partial Stakeholder Identification

Level	Organizational Level	Unit Level
MACRO	Societal	Heads of government, Ministers, Political party leaders, Regulation bodies
MESO	Organization	CEO, SVP, AVP, C-level executives, Executive management
MICRO	Individual	Middle management, Employees, Citizens

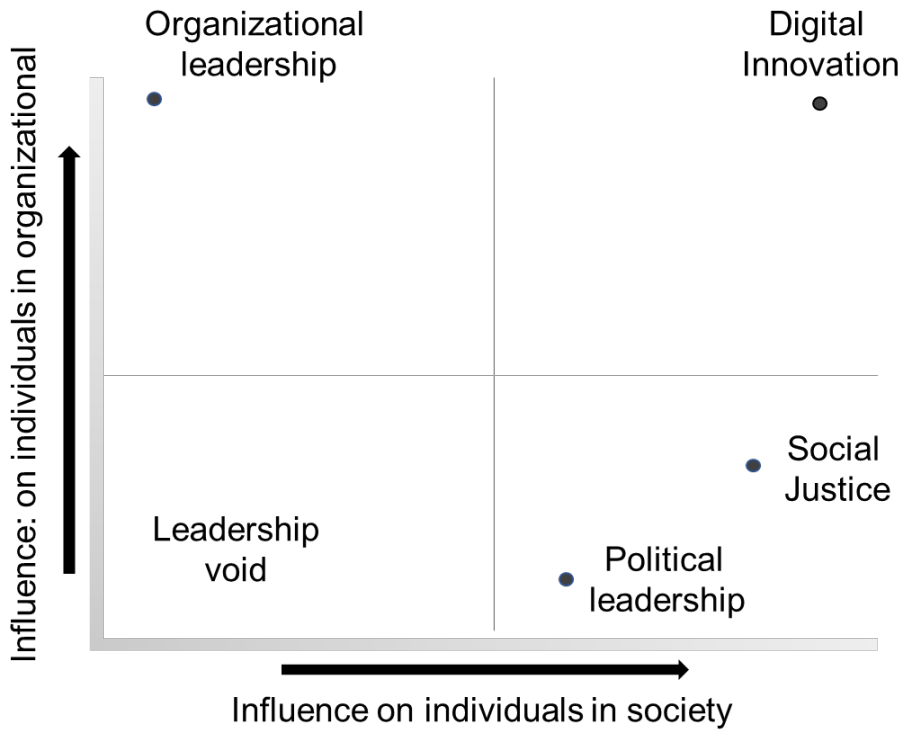
Source: Monarch Business School Switzerland

The qualitative research is conducted through interviews with at least 40 individuals, twenty from top management (meso level) and twenty from employees and middle management (micro level), to analyse potential differences between quantitative and qualitative results.

The proposed literature review has created a context of understanding in the research context prior to and during the study period. The researcher is genuinely aware of the issue of bias in designing the interview questions as postulated by Nguyen (2007). Furthermore, the requirements for participants are those who have had experiences relating to the phenomenon of digital innovation and preferably with the influence of digital disruption in an organization or society. The proposed complex interaction between the influence of leadership, social justice and digital disruption on individuals in organizations and society is illustrated in Figure 1.9.

De Bettignies (2014) defines a new leadership style consisting the five dimensions of awareness, vision, imagination, responsibility and action, but more importantly, it should be considered at the individual, organizational and societal level. The research posits an alternative approach by changing it to the influence on individuals in organizations and society. The premise of multi-factor influence will be expanded in Section 2.3.4 with the introduction of the combined complex influence on individuals in society and organizations of digital innovation.

Figure 1.9
Influence of Leadership, Social Justice and Digital Innovation on Individuals in Organizations and Society



Source: Francois Volschenk (2018)

Ironically it is social capital that is the key that unlocks the digital influence (Solis & Webber, 2012). According to Putnam (1995) social capital is a "feature of social life through networks, norms and trust, that enable participants to act together more effectively to pursue shared objectives" (p.1). The social networks that individuals create form incubators of trusted interaction that increase their influence on society. Social capital has its home base in social networks as formed by individuals, while on the other hand, it is used by individuals as an influencer (Guḥmundsson & Mikiewicz, 2012). Within the recursive interaction of individuals, social networks and social capital the influence of digital innovation continually grows. Moreover, this explains

the significance of the influence of digital innovation on people in organizations and society.

1.10 DEFINITIONS

The author has provided definitions of some of the key terms used throughout the document to ensure a general framework for clarification.

Corporate Social Responsibility: The continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large (Holme & Watts, 2000).

Digital: The simplest technical definition is: Signal transmission that conveys information through a series of coded pulses representing 1s and 0s as represented in binary code (Gartner, 2004).

Digital: (seen in the context of digital transformation) is about using data to transform organizations or industries.

Digital (mindset): Digital is about using data to make better and faster decisions, devolving decision making to smaller teams, and developing much more iterative and rapid ways of doing things (Dörner & Edelman, 2015).

Digital disruption: is an effect that changes the fundamental expectations and behaviours in a culture, market, industry or process that is caused by, or expressed through, digital capabilities, channels or assets (Gartner, 2004).

Digital leadership: In the context of the research leadership or management involved with digital innovation and digital disruption.

Digital Social Dynamic Equilibrium (DSDE): involves the complex interaction of digital and societal forces in a constantly changing world to reach a dynamic equilibrium to maximize socio-economic value.

DNA: the fundamental and distinctive characteristics or qualities of someone or something.

Leadership: The dignity, office, or position of a leader; English special purposes of a political party; ability to lead; the position of a group of people leading or influencing others within a given context; the group itself; the action or influence necessary for the direction or organization of effort in a group undertaking (Dictionary, 2007). According to Silva (2016), “Leadership is the process of interactive influence that occurs when, in a given context, some people accept someone as their leader to achieve common goals" (p.3) in research on the definition of leadership.

Management: Organization, supervision, or direction; the application of skill or care in the manipulation, use, treatment, or control (of a thing or person), or in the conduct of something (Dictionary, 2007).

Mindset: the ideas and attitudes with which a person approaches a situation, especially when these are seen as being difficult to alter (Collins, 2016). Mindset is an attitude, disposition, or mood, or an intention or inclination. A mindset can also be an incident of a person's worldview or philosophy of life.

Social capital: those tangible assets [that] count for most in the daily lives of people namely goodwill, fellowship, sympathy and social intercourse among the individuals and families who make up a social unit (Hanifan, 1920); or more modern version of networks together with shared norms, values and understandings that facilitate co-operation within or among groups (Keeley, 2007).

Socially: with respect to other people or society (Dictionary, 2007).

Socially Responsible Digital Leadership (SRDL): Leadership in digital organizations that maximize the socio-economic value of digital innovation by contributing to solving societal problems in ethically responsible ways.

Socially responsible leadership: leadership, ethical and technical skills necessary to effectively contribute to solving social problems in ethically responsible ways.

Society: 1. humankind, people, the public: 2. culture, civilization, community, way of life, world; organization, system: 3 organization, club, association, circle, league, institute, academy, alliance, guild, group, fraternity, sorority, brotherhood, sisterhood, fellowship, union, consociation, sodality (Dictionary, 2007).

1.11 LIMITATIONS AND DELIMITATIONS OF THE STUDY

According to Katz (2009), no research or experiment can be assumed to be without any unambiguity and is expected to contain some limitations, assumptions and delimitations. Limitations are variables that are not controllable by the researcher, and that may affect the internal validity of the research. Accordingly, delimitations are fundamental to the explanation for the specificity of the research and how it is restricted within the defined limits. The subsequent paragraphs converse upon the limitations and delimitations of the research on Socially Responsible Digital Leadership.

1.11.1 Limitations

The present research may include the participant's personal bias in the investigation as well as measured limitations such as the interpretation of the intensity of

responses. The participant's years of experience, age and background may have impacted the results of the present research. The field of digital innovation is a very young profession, which may have an influence the orientation and identification of participants within the field of social responsibility.

There is a chance that the selected participants may not have answered the questions honestly due to concerns about the risks and benefits of their responses. The concerns may have caused participants to feel uncomfortable with specific questions thereby limiting the full potential of the results. Improvements in the management field are possible through an improved understanding of the inherent cultural equivalence (Peng et al. 1991). Future research should be expanded to multiple countries and diverse cultures to determine the perceptions of diverse cultures. Time constraints concerning fieldwork may have disrupted the data collection process. The work schedules of participants, the co-operation of participants or personal social responsibility orientation may have reduced the effectiveness of the research. Scheduling conflicts and work commitments resulted in rescheduling and the prolongation of the study.

1.11.2 Delimitations

The present research may include the participant's personal bias in the area of study and possibly measured limitations such as the interpretation of the intensity of responses. The gender composition of companies through pre-dominant male participation may over-represent the male point of view because of the lack of

balance by an equal number of women participants. Furthermore, the age and length of experience of the participants and cultural background may influence the responses of the participants.

Additionally, semi-structured interviews will be employed to minimize the intrusiveness of the interview process. There are great opportunities to develop conceptual models or frameworks that can be utilized in digital leadership as the area is considered understudied. The phenomenological approach should create opportunities to intervene in issues that inhibit or enhance the development of digital leadership in the future.

1.12 ASSUMPTIONS

Four main assumptions are influencing Socially Responsible Digital Leadership that shape and support the conduct of this research:

A. Digital Leadership has an Influence on Organizations:

The decisions and direction by digital leaders within an executed digital strategy have influences on individuals in an organization;

B. Digital Leadership has an Influence on Society:

The decisions and direction by digital leaders with a well-defined and executed digital strategy can influence society through the disruption of industries in society;

C. Digital Leadership has an Influence on Individuals in Organizations and Society:

The significant influence of digital innovation is the result of the recursive vacillating interaction of individuals, social networks and social capital. The research posits that digital leaders can influence the recursive process of the influence on individuals in organizations and society through disruptive digital innovation;

D. The Period is Appropriate now for the Application of Digital Leadership:

The research is aligned with the premise that the sets of rules in the present given period define the limits and forms of the acceptable in society; and

E. Digital Leadership Constituents Are Universal:

There are universal aspects of leadership within the examination of all the academic biases, labels and constituents that demonstrates it is a ubiquitous concept that remains the same across its application in society for the application of digital leadership. The difference between various digital organizations is specific to the objectives and mission of a particular organization, but holistically the structure and elements of digital leadership remain the same.

1.13 SUMMARY OF CHAPTER ONE

House (1971) claims that as organizations move toward flattening organizational structures by perhaps removing some mid-level management positions, improved leadership in those organizations at all levels becomes more important. The flattening of hierarchies has never been more accurate and applicable than in the age of digital transformation. Traditional leadership research has an inherent bias toward exaggerating the importance of individual leaders, thereby discarding the importance of studying leadership as a dynamic and shared process embedded in

complex social systems. Therefore, transformational leadership requires innovation to develop and create long-term deliverables by challenging current leadership theories and models.

Furthermore, leadership is the process of influencing others to understand and agree what needs to be accomplished, how that needs to be completed and the process of facilitating individual and collective efforts to accomplish shared objectives (Yukl, 2010). Similarly, Burns (2003) asserts that in transformational leadership leaders and followers make each other advance to a higher level of morality and motivation. The level of integration and interdependencies needed for the new digital work environment require leadership that integrates social and technological perspectives into a sustainable leadership style.

True leaders inspire passion and belief in the abilities of followers to perform what is required for an organizational change. Russell (2001) argues that individual values are core beliefs that form an essential part of the psychological composition of each individual which invigorates human behaviour. Believing that one's abilities can be improved makes the desired future state more important to people, than believing that one's abilities cannot be changed (Sevincer et al., 2014). In a similar vein, a comprehensive description of leadership influence requires a multi-level approach utilizing dyadic, group and organizational theories in developing a multilevel model (Jermier, 1995). While most leadership studies have a narrow focus with little integration of findings from different approaches, this research aims to provide an

understanding of leadership including leadership knowledge, experience, styles and decision making to drive responsible organizational and social change from digital innovation.

The area of leadership within digital transformation and digital disruption is considered an underdeveloped area of research. Despite the influence of digital on people, a thorough desk review and investigation of available literature revealed that a definitive study had not been conducted on the influence of digital leaders and managers in both organizations and society. A secondary goal of the research is to develop a comprehensive understanding of the importance of the constituents of a leadership framework when discussing what constitutes digital leadership, in addition to comprehending leaders potential influence within professional bureaucracies. Also, a further goal is to gather and construct a collective sharing of best methodologies and strategies to help deal with digital innovation whereby research can provide a conceptual theoretical framework that is based on the knowledge and experience of individuals to develop further, inspire, innovate and create new socially responsible digital opportunities. Lastly, the framework should provide leaders and professionals with the principles to evaluate the efficiency of digital leadership in a socially responsible manner.

The present research attempts to achieve the above through careful analysis and fusion of both praxis and theory. In Chapter Two influential authors are studied to evaluate leadership concepts, the evolution of leadership, general leadership theory

and practice, social justice theory, and digital innovation, disruption and transformation to add new insight by exploring digressive academic disciplines to traverse materials and domains. In Chapters Three and Four, the research will focus on the research methodology and presentation of the practical application of the seminal theories as observed by digital knowledgeable individuals and leaders as obtained through the fieldwork analysis. The findings of the fieldwork analysis and the application of the theories covered in the literature review chapter will be compared, analysed and contrasted.

In Chapter Five, the research synthesizes and integrates the findings while respect to responding to the earlier identified research question. Furthermore, Chapter Five will introduce a new theoretical contribution to the knowledge base in the area of Socially Responsible Digital Leadership studies. Finally, Chapter Six concludes with thoughts and ideas with respect to identifying further areas for future research.

CHAPTER TWO

LITERATURE REVIEW

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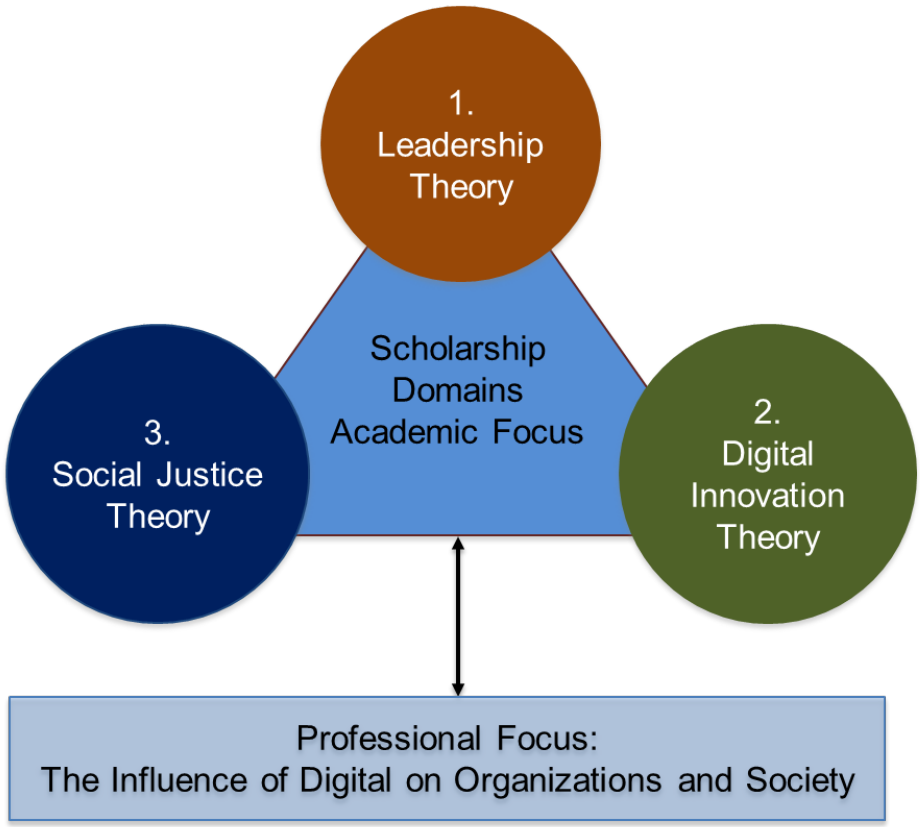
CHAPTER TWO – LITERATURE REVIEW

2.1 OVERVIEW

The chapter will discuss the views of prominent scholars within the context of the research objectives outlined in chapter one, which will assist in providing answers to the research question. The literature review section brings together three distinct academic areas of scholarship to create a triangulation of the research domains and complimented with the addition of quasi-academic material with a professional focus on the influence of digital on organizations and society. For the research, the nexus of these research domains includes leadership theories, digital innovation theories and social justice theory as illustrated in Figure 2.1A. The nexus of the domains underscores the belief that the synthesis of leadership in a digital transformation environment with social justice orientation forms an academic framework for Socially Responsible Digital Leadership (SRDL). The chapter is divided into four sections, with three academic domains and the professional focus on the influence of digital on individuals in organizations and society.

The investigation of leadership, digital innovation and social justice theories with the accompanying research and academic critique will identify the statements that have contributed to the expansive formation of the domains. The academic archive develops by examining the “sets of rules which at a given period and for a given society define the limits and forms of the acceptable sayable” (Foucault, 2007, p.64).

Figure 2.1A
Literature Triangulation and Professional Focus



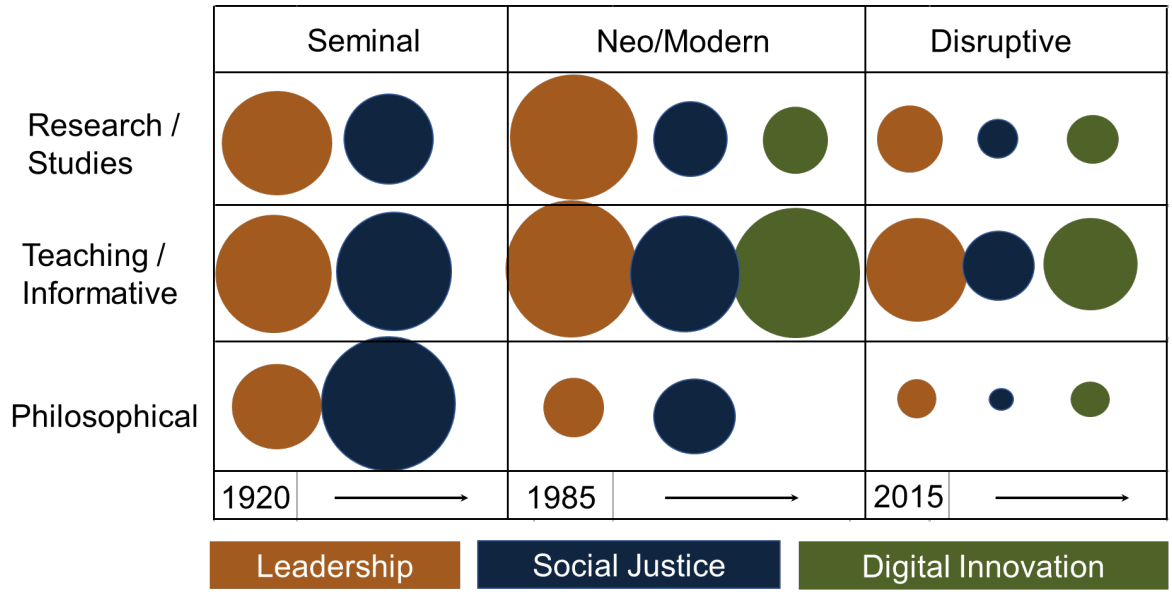
Source: Francois Volschenk (2018)

The research attempts to explain the influence of the multiple academic domains, incorporating the complexity of the ever-changing nature of digital influence. In addition, the literature review will allow fusion with a professional focus of the quasi-academic professional sources, to investigate the influence of digital on organizations and society, thereby providing a solid academic foundation to the research.

Digital innovation and digital disruption have less available discourse in contrast to the currently available discourse on leadership and social justice, based on the bibliometric review in Table 1.7. A concise analysis of the literature focus in the three

academic domains into three categories of seminal, modern or neo-modern and disruptive is illustrated in Figure 2.1B. The corresponding approximate time periods are illustrated for the periods from 1920, 1980 and 2015.

Figure 2.1B
Analysis of the Literature Focus



Source: Francois Volschenk (2018)

The categories of research or studies, teaching or informative and philosophical add more specificity to the available literature in the three chosen academic domains. Firstly, leadership literature from leadership theories for teaching or informative and research on leaders or leadership in organizations have been extensively published in the last century but limited from a philosophical perspective. Secondly, in contrast, social justice theories have been focused on the philosophical perspective and focused on the teaching and informative perspective but have steadily decreased in the century. Thirdly, digital innovation only started in the 1980s with a predominant

focus on the teaching and informative perspective, with limited emphasis on research and studies of the implementation of digital technologies and a limited philosophical perspective.

Chapter Two concludes with a summary section that seeks to synthesize and integrate the literature review to identify the gaps in the existing literature. The identification of the gaps in literature is achieved through a holistic integration of Part One, Two, Three and Four of the literature reviews.

2.2 PART ONE – LEADERSHIP THEORY

The common denominator of leadership research, whether explicit or implicit, is the prominence of leadership theories (Mortimer, 2009). The theories are generally an easily comprehensible, continuous series of events, a tree of knowledge, leading to the present, underpinning all research, model development and application. Harvard Business School provides one of the best characterizations of leadership as ”leadership is about making others better as a result of your presence and making sure that impact lasts in your absence” (Sabau, 2012, p.301). The research takes the perspective that leadership literature, as a product of research into leadership development and practice, is constructed to answer precise social needs at historic moments. Furthermore, the research explores why statements regarding leadership are made at all and what purpose it accomplishes (Alvesson, 2002), thereby ensuring that the needs of society are addressed by the statements.

There is a tendency for many writers to marginalize contextual issues when examining the impact of leaders on organizations (Bryman, Gillingwater, & McGuinness, 1996). Leadership authors can be differentiated between old paradigm models and new paradigm models of leadership. New models relate to concepts such as charismatic leadership (House, 1971), visionary leadership (Sashkin, 1988) and transformational leadership (Bruno & Fundacao, 2008). Whereas earlier old paradigm models see leadership as a process that involves influencing others within a group context that involves goal attainment (Northouse, 2015), more recent definitions of leadership have highlighted the role of leader as defining organizational

reality (Bryman et al., 1996). Day (2011) suggests that leadership is distinct from management. While management only equips individuals with knowledge, skills and abilities for known tasks, on the other hand, leadership prepares individuals for roles and situations beyond their current knowledge, experience and comfort zones (Day, 2000).

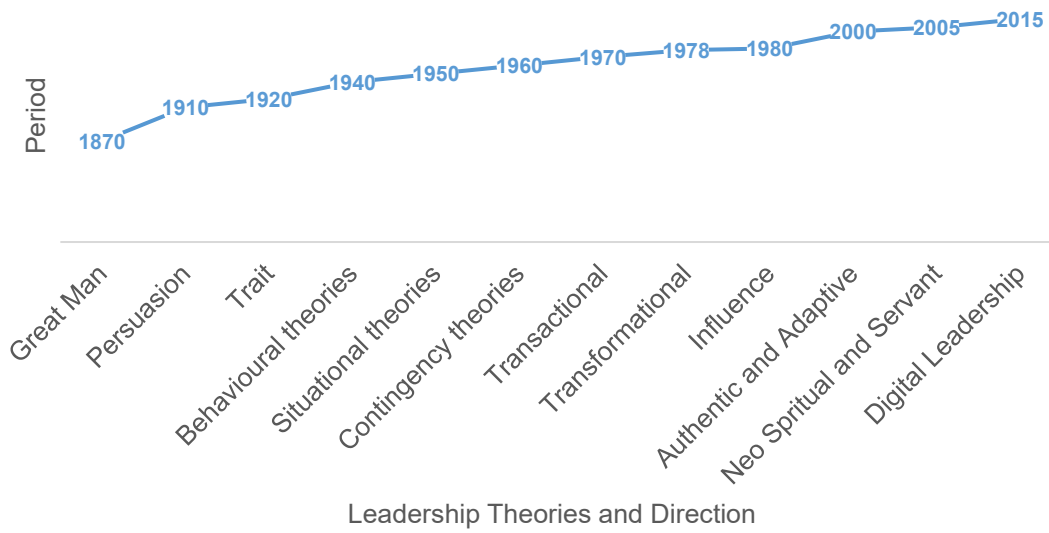
2.2.1 The Development of Leadership

The academic and theoretical foundations of leadership theory have changed over the last century, but essential functions of leadership namely the establishment of goals, improved decision-making, communication and conflict resolution have not significantly changed. Similarly, leadership authors generally agree that the implementation of leadership has evolved in many ways over time. However, the concept of leadership and the requirements for leaders and leadership remained relevant (Bruno & Fundacao, 2008; No authorship indicated, 1988; Ulrich & Smallwood, 2016). Bass already found a proliferation of leadership books in the 1990s with over 3300 books, consequently counting all formats Amazon currently offers over 100 000 books with the word leader or leadership in the title. Interest in the field of leadership remains high and should probably continue to grow.

The summary of the development of leadership theories through the approach to leadership over the last two centuries is summarized in Figure 2.2.1. Historically leadership can be traced from its initial focus on Great Man according to Galton, where only a man could have the characteristics of a great leader. The Great Man

theory of leadership could have its origins with Aristotle when the famous philosopher is quoted as saying: “men are marked out from the moment of birth to rule or be ruled.”

Figure 2.2.1
Development of Leadership Theories and Alternative Approaches



Source: Francois Volschenk (2018) based on Grint (2007), Northouse (2013) and Harrison (2018)

From 1900 to 1929 leadership was defined as the management of men through persuasion and inspiration (Aluko, 2014). In the 1930s traits became the focus of defining leadership and leadership viewed as an influence rather than domination (Northouse, 2015). Against the backdrop of World War II, leadership in the 1940s was generally defined as an ability to persuade or direct men or dynamic relationship. In the 1950s, leadership was contextualized with group dynamics with the behaviour of an individual that directs the activities of a group (Grint, 2011). Leadership was

referred to in the 1960s as the influence of leaders with the interaction between leadership traits, leadership behaviours and the situation in which the leader exists. In the late 1970s, Burns (1978) defined leadership as an emotional relationship defined within an integral part of group dynamics and relationships. Leadership in the 1990s described only leaders in a role that leads, guides, conducts, directs or control. From the start of the 21st century, the focus shifted away from individual leaders when the focus reverted back to leadership with transformational leadership and other modern principles. According to Bennis (2013) examining the historical development of leadership, theories provide some necessary perspective as well as the context within which to appreciate the increasing interest in future leadership approaches.

In the following section, the development of leadership theories in the last one hundred years will be discussed, starting with leadership traits and further some of the latest discussions on leadership.

2.2.1.1 Leadership Traits

The historical development of the study of leaders and leadership derives from the Great Man theory by Galton. The theory postulated that royalty, war heroes and successful individuals possessed the abilities for remarkable success through inherent abilities and talents that differentiate them from the rest of the population. The Great Man theory remains relevant, despite its lack of scientific rigour and veracity (Harrison, 2018). In the world of business, the search for a hero to save

failing companies still has a universal appeal (Spector, 2014). The Great Man theory subsequently gave rise to the trait theory in the 1920s and 1930s, which generally unsuccessfully attempted to identify traits that made leaders different from other individuals. Bernard (1926) explained leadership through internal qualities from birth. Moreover, leadership is a natural part of humankind, and it is impossible to imagine human beings without leaders, thereby necessitating investigations into leadership traits and competencies (Mortimer, 2009). The premise of the theory was that leaders possess some universal characteristics that made them leaders. Traits were viewed as something that was there at birth, therefore seen as inborn, fixed, and applicable to and in almost any circumstance. Thus, leader traits are relevant only to the degree that it pertains to the task under consideration.

The comparison of Stogdill (1974) on the characteristics of leaders with non-leaders concluded that a few characteristics were correlated with leadership, but interestingly, the found relationships were only weak. Consequently, it can be concluded that there were no specific set of characteristics that could distinguish leaders from followers or could predict the success of leaders. Likewise, no attempt was made to measure the leader's performance (Hollander & Offermann, 1990). Despite critique by various authors (Jermier, 1995; Northouse, 2015; Rost, 1993), the trait theory remains a popular theory of leadership due to its intuitive appeal and its use of benchmarks for identifying effective leaders. Spector (2016) presents a fuller notion of the Great Man theory in defence of the theory suggesting it is worth considering because of its contemporary relevance. Similarly, the trait theory is

based on a fascination with the great men of history, therefore, can be criticised for its failure to explore the role of leadership in ensuring business and organizational coherence (Grint, 2011). Researchers in the field subsequently refocused their efforts away from who a leader was to what leaders did and attempted to identify observable leader behaviours. In the literature, several hypotheses have been made about the traits of successful leaders. For example, according to research by Hogan, Curphy and Hogan (1994), measures of personality are correlated with ratings of leadership effectiveness. The big-five model of personality postulates the five broad dimensions as “urgency, agreeableness, conscientiousness, emotional stability and intellect” (Horner, 1997, p.275). Importantly, despite the extensive literature and research, there are still minimal conclusive universal traits identified for leadership.

2.2.1.2 Leadership Behaviours

The second major thrust in leadership approaches investigated leadership behaviours to determine what successful leaders should do (Halpin, 1957). The behavioural approach attempts to identify what good leaders do in the work environment to draw correlations between specific behaviours and the effectiveness of a leader (Jermier, 1995). Research on behavioural leadership fundamentally identified two dimensions of focus on the task and the people or interpersonal dimension (Yukl, Gordon, & Taber, 2002; Yukl & Van Fleet, 1992). Yukl, Gordon and Taber (2002) describe the task aspect of the leader’s behaviour as a focus on goal achievement or job accomplishment. For example, effective leadership behaviours would demonstrate competencies regarding production, directive leadership, efforts

to initiate structure and supervision. In contrast, the people focus, or relationship behaviour would demonstrate concern for people, supportive leadership and focusing on the feelings of individuals by the display of proper appreciation to reduce stress (Jermier, 1995). Leaders with a people focus generally promote satisfaction among group members, facilitate the development and maintenance of harmonious relations in the workplace and facilitate social stability within a group.

2.2.1.3 Situational Leadership

Westburgh (1931) found that the success of leaders is tied to their ability to understand both their followers and the environment, responding to both depending on the requirements of the changing circumstances. As the investigation into leadership behaviours evolved, it became clear that the situation or context within which leadership is exercised is important as well. Stogdill (1948) reviewed and synthesized more than two decades of leadership research and concluded that no specific traits or personal characteristics represent absolute indications of leadership. The work of Stogdill (1948, 1974) and (RD, 1959) resulted in a general re-orientation of the leadership research in the 1950s towards situational leadership. The research by Stogdill and Mann identified some specific personal characteristics including extroversion and dominance that are associated with leadership. The research concluded that situational elements could place decidedly different burdens on leaders and that the characteristics of leaders and followers significantly impact the leadership process. Specific situational considerations that were identified by the research include the nature of the activity or task, the availability of resources, any

associated history and the nature of the relationship between the leader and followers.

Two prominent models of situational leadership are available: the Tannenbaum and Schmidt's leadership continuum model and the Hersey-Blanchard situational leadership model. Tannenbaum and Schmidt (1973) were among the pioneers to describe various factors within the manager, the subordinates and the situation what was believed to influence the choice of the leadership style of leaders (Peretomode, 2012). The factors are classified in a continuum sequence varying from autocratic leader-centred to democratic subordinate–centred (Tannenbaum & Schmidt, 1973), where successful leaders cannot be primarily characterised as strong leaders or as permissive ones. Leaders should accurately assess the forces to determine the most appropriate behaviour at any given time and the ability to behave accordingly (Tannenbaum & Schmidt, 1973). The limitations of the theory were the inability to differentiate between the vast differences in the types of individuals being led and disregard for the myriad of different circumstances faced by leaders.

Hersey & Blanchard (1982) offered a theory that integrated task and relationship behaviours, contingent on the situational context. This model emphasized leader behaviours and not traits, and introduced the idea of concern for follower development by leaders. Importantly, the model introduced a new dimension that matches leadership styles to the ability of the followers to perform the applicable tasks. Hersey and Blanchard (1982) contrast Fiedler's contingency leadership

through the situational leadership model that suggests that successful leaders do adjust their styles.

The Situational Leadership Model provides with an understanding of the relationship between the style of leadership and the level of readiness of followers for a specific task. The Hersey-Blanchard situational leadership model identifies four leadership styles namely participating, delegating, telling and selling, where each style represent a different combination of task-oriented and relationship-oriented behaviours. A critical issue in making the adjustments in leadership styles is the maturity levels of followers that are indicated by the readiness of followers to perform in a specific given situation (Yeakey, 2002). Hersey and Blanchard highlight four different types of leadership behaviour based on combining directive and supportive behaviour: telling that is high directive with low support; selling that is high directive and high supporting; participating that is low directive and high supportive; and delegating that is low directive and low supportive (Sahal, 1979). The function of a leader is to continually evaluate and adapt behaviour to the ability and psychological maturity of followers that are willing to complete specific tasks at hand.

More recently this view is supported by research by Yukl (2006) that concludes that researchers consider that the effectiveness of a leader's behaviour could be dependent on several situational factors. The identified situational factors of the leaders are the nature of the work performed within an organization, the extent of authority and discretion of the leader, the attributes of the subordinates and the nature of the external environment. Furthermore, situational leadership theories can

also be categorized as either trait or behavioural, depending on the judgement of the researcher on whether the actions of the leader reflect either traits or skills or the leader respond in a specific way to the demands of a specific situation. This re-orientation of the field paved the way for consideration of other approaches to the leader-follower relationship (Hollander & Offermann, 1990).

Consequently, to the situational approach, the contingency and transactional leadership models approach to leadership theory were spawned from the situational approach in the mid-1960s. Fiedler continued the move away from traits and toward continued interest and emphasis on the attributes of leaders that could culminate in a more positive response by followers. Fiedler (1967) identified leadership effectiveness traits that relate to the qualities required by individuals in leadership roles, as opposed to identifying any specific individual traits.

2.2.1.4 Contingency Leadership

Contingency theories assume the eventuality of a leadership variable is contingent on other variables in dealing with the interaction between the leadership traits, the leadership behaviours and the situation in which the leader exists. The Contingency models offered by (Fiedler, 1964; House, 1971) and later by (Vroom & Yetton, 1973) contend that leadership effectiveness is compounded by the qualities of the leader and the demands of the situation. The contingency and transactional models contributed to the understanding of leadership complexity by migration away from trait or situational approaches to leadership (Hollander & Offermann, 1990).

Contingency theories suggest multiple ways of leading and that an effective leadership style in one situation may not be successful in another situation (Virkus, 2009). The behaviour of individuals results from conscious choices among alternatives that are systematically related to psychological processes, within particular perceptions to form beliefs and attitudes (Pinder, 1984). Moreover, contingency theory offers a useful model of a viable approach to explore the relationship between the style of an employee and the conditions found in the workgroup, for predicting worker's performance (Miller, Butler, & Cosentino, 2004). Furthermore, the contingency model proposes that leader effectiveness is determined by the interaction of the leader's motivational disposition with the situational favourability for leader influence (Miller et al., 2004). In a similar vein, the social cognitive theory, through the mental processing of information, states that people learn through modelling others and anticipation of the consequences of their behaviour, not just from direct engagements (F. Luthans, 2005).

The contingency model emphasizes the importance of the characteristics of the leader and the favourableness of the situation (Virkus, 2009). Moreover, Northouse (2013) highlights the strengths of the contingency theory as grounded in empirical research thereby broadening the scope of leadership understanding. The model has some predictive powers in determining the type of leadership that could be useful to organizations in developing leadership profiles for human resource planning. The most effective leadership behaviours and style meet the specific requirements of the

situation (Jermier, 1995). Leaders must be able to understand the complex requirements of different situations and adapt their behaviours accordingly.

The development of the contingency approached started in the 1960s Fred Fiedler advanced the first theory using the contingency approach by introducing the contingency theory of effectiveness (Sahal, 1979). The theory state that leadership effectiveness (regarding group performance) depends on the interaction of two factors namely the leader's task or relations motivations and aspects of the situation (Sahal, 1979). The leader's task or relations motivation is measured through the Least Preferred Co-worker scale (LPC). The Least Preferred Co-worker scale asks leaders to recall a previous or current co-worker they worked with least well to characterize this individual with ratings on a series of 8-point bipolar adjectives (Sahal, 1979). While high LPC scores reflect more positive descriptions of the least preferred co-worker, low LPC scores reflect more negative perceptions. Fiedler argued that individuals with high LPC scores are motivated to maintain harmonious interpersonal relationships, whereas individuals with low LPC scores focus on task accomplishment (Sahal, 1979). Building on the findings from behavioural approaches, Fiedler suggested that leadership styles were either relationship or task oriented (Armandi, Oppedisano, & Sherman, 2003).

Fiedler's (1964) Contingency Leadership Model posits that leaders should adequately address a host of situational variables to make intelligent decisions regarding the required actions. The Fiedler model suggests that task-oriented leaders perform more

effectively in situations classified as very favourable or very unfavourable, while relations-oriented leaders perform more effectively in situations of moderate favourability (Miller et al., 2004). An attractive element of the Fiedler model is that it can predict a more effective style of leadership as influence varies (Hill, 1969). Research by Miller et al. (2004) concludes, in contrast to Fiedler, that relations-oriented followers performed better in highly favourable conditions.

Martin Evans originally developed Path-goal theory in 1970 and expanded by Robert House in 1971 into a more complex contingency theory (Sahal, 1979). Path-goal theory is a dyadic theory of supervision that is concerned with the relationships between formally appointed superiors and subordinates in their day-to-day functioning, and how formally appointed superiors affect the motivation and satisfaction of subordinates (House, 1971). The leader should employ particular behaviours in specific situations to increase follower satisfaction and motivate efforts toward task accomplishment (Sahal, 1979). The original theory of House in 1971 had two general classes of leader behaviour namely path-goal clarifying behaviour and behaviour directed toward satisfying the needs of subordinates (House, 1971). House and Mitchell (1975) extended the theory to two aspects of a situation namely follower characteristics and task characteristics (Sahal, 1979), and four kinds of defined behaviour in more specific terms: directive, supportive, participative and achievement orientated. House (1996) posits that it is a function of a leader to clarify goals and the path to these goals to subordinates.

The path-goal theory has made a substantial contribution in highlighting the potential influence of leaders on the motivation and performance of followers. The path-goal theory is based on an identifiable relationship between leader effectiveness and subordinate satisfaction as a function of task ambiguity (DeCaro, 2005). The role of the leader is dependent on the working environment of subordinates and the amount of structure in the environment, where highly structured environments that provide a significant amount of organization and role task clarity provide a clear path to work goals (DeCaro, 2005). In structured organizations with clear role clarity, the leader should concentrate on relationships with subordinates by reducing monotony in the situation and supporting morale. Likewise, the Decision-Making Model of Vroom & Jago (1973) notes the importance of leaders to determine the potential participation of subordinates in the decision-making process. The model was predicated on the idea that there was a direct link between subordinate acceptance of decisions and worker productivity.

In a world of constant change, leaders in organizations must be able to adapt their behaviour to meet different situations (Harrison, 2018). The contingency theory has highlighted that situations require careful consideration to assess leadership behaviour. In contrast, Yukl (2013) is critical of the early contingency theories, pointing out many conceptual weaknesses that made these theories challenging to validate and use.

2.2.1.5 Charismatic Leadership

Towards the late 1970s and early 1980s leadership research showed interest in the idea of the charismatic leader (Hollander & Offermann, 1990) with the concept first introduced by Max Weber in 1978. Charismatic leaders are typically thought to exert enormous influence and power over their followers as a result of their emotional appeal, especially in crisis-type situations where conventional wisdom suggests strong leadership is sought out (House, 2015). The House theory of charismatic leadership included several key points of how leaders behave or behave differently from other leadership behaviours and the conditions under which leaders are most successful. In terms of traits, House (1977) suggested that charismatic leaders had a strong need for power, had high self-confidence and firm convictions. Burns (1978) postulates that charisma is a phenomenon often associated with political leaders. He posits that the favourable characteristics associated with the charismatic style inspire trust, confidence, acceptance, obedience, affection for the leader and improve performance from their followers.

Gardner and Avolio (1998) present a model where leaders take social actions with impression management behaviours to create and maintain identities as charismatic leaders. The model postulates that impression management, articulation of an engaging vision, communication of high expectations and articulation of confidence in the ability of followers are key behaviours of charismatic leaders (Gardner & Avolio, 1998). Moreover, the behaviours of a charismatic leader is generally aimed at influencing the attitude and perceptions of followers about the leader.

In contrast, while Bass (1985) mostly agrees with Burns that a charismatic leader can discard their self-interest in favour of the larger collective good of the organization or society, but suggests that some charismatic leaders might put their self-interests first. Charismatic leaders could use their charismatic qualities to influence others to promote their own best interests. Interestingly, the behaviour is labelled as pseudo-transformational where some leaders could fabricate crises to continue on the dependency of followers (M. B. Bass & Avolio, 1997). The pseudo-transformational leaders could inappropriately threaten, coerce, demand compliance and manipulate follower behaviour (Bruno & Fundacao, 2008). Moreover, by promoting absolute follower obedience and dependence, the pseudo-transformational leaders exploit hierarchical differences and symbols of authority to advance their interests.

2.2.1.6 Transactional Leadership

Transactional leadership models initially derived from the social exchange perspective that focused on the effectiveness of the relationship and the defined social contract between leaders and followers. Transactional leadership focuses on the exchanges that occur between leaders and followers (Bass, 1985, 1990; Burns, 1978). These exchanges allow leaders to accomplish organizational “performance objectives, complete required tasks, maintain the current organizational situation, motivate followers, direct behaviour of followers toward achievement of established goals, emphasize extrinsic rewards, the avoidance of unnecessary risks and focus on the improvement of organizational efficiency” (McCleskey, 2014, p.122). Moreover, transactional models focus on exchange theory and the perceptions and

expectations followers have regarding the actions and motives of leaders. The leader and subordinate develop a separate exchange relationship by defining the role of the subordinate where in return for performing a specific task, there is an expectation of an agreed upon reward by the subordinate. According to Hollander and Offermann (1990), the perception of followers is paramount regarding fairness and equity of the exchange with the leader. Research by Judge and Piccolo (2004) reveals that transformational and transactional leadership are so highly related that it makes it difficult to separate their unique effects. The research posits that successful digital transformational leadership can only be successful in the presence of well executed transactional leadership.

2.2.1.7 Transformational Leadership

The concept of transformational leadership is fundamentally defined as leadership that involves change as contrasted with leadership that retains the status quo (Avolio et al., 1999; Bruno & Fundacao, 2008; James M. Burns, 1978; Stephens, 2013). Transformative leadership evolved as a discernible trend in the late 1970s and early 1980s (Bernard M. Bass, 1990). The concept of transformational leadership was first introduced by Burns (1978) in *Leadership* and subsequently expanded upon in the new book *Transforming Leadership* (J M Burns, 2004). Burns began the process of reformulating how the field looked at and understood leadership. Burns conceptualized leadership as “a social process that involves leaders and followers working together to common interests and mutually defined ends” (Goertzen, 2012, p.83). The work of Burns established much of the framework for the constructs of the transactional and transformational leadership paradigm. Burns (1978) differentiated

between leaders who interact with followers more transactional and leaders who interactions with followers more transformational.

Burns (1978) viewed transformational type leadership as potentially more formidable than transactional leadership since it “occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality” (p. 4). In contrast to transactional leaders that focus on the exchange between leader and follower, cognizant transformational leaders, appeal to higher order needs of followers as identified by Maslow’s hierarchy (H., 1943), thereby engaging the follower across every dimension (James M. Burns, 1978). In support of the validity of transformational leadership, results from the research by Bono and Judge (2000) concluded that transformational leadership does not depend on the characteristics of followers.

While transactional leaders operate within the framework of the interests of their followers, transformational leaders seek to change the framework altogether (Bernard M. Bass, 1990; Bruno & Fundacao, 2008). A logical explanation is that transactional leadership could be seen as a pre-requisite to transformational leadership (Bruno & Fundacao, 2008). Importantly, transformational leadership did not replace transactional leadership instead evolved from and build on it. Although Burns established the new transformational paradigm, Bass could be given credit for bridging the gap between transactional and transformational leadership. Bass expanded on the concept of Burns of transformational leadership, turning it into a

cogent measurable theory for the field (Bass, 1985). Taken together the research, leaders should typically use both transformational and transactional approaches although transformational leadership is arguably more formidable in its effect (Avolio et al., 1999; Bruno & Fundacao, 2008). Research by Judge and Piccolo (2004) reveal that transformational and transactional leadership are so highly related that it makes it difficult to separate their unique effects. Yukl and Van Fleet (1992) concludes that "Bass views transformational and transactional leadership as distinct but not mutually exclusive processes" (p.176). In conclusion, importantly the two theories of transactional and transformational leadership are neither inconsistent nor incompatible.

2.2.1.8 Authentic Leadership

Among the emergent perspectives, authentic leadership (Avolio, 2005; Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans & May, 2004; Luthans & Avolio, 2005) is gaining increased attention in the scholarly and practitioner communities. Terry (1993) asserted that:

> authenticity is ubiquitous, calling us to be true to ourselves and true to the world, real in ourselves and real in the world, when authenticity is acknowledged, we admit our foibles, mistakes and protected secrets, the parts of ourselves and society that are fearful and hide in the shadows of existence (p.139).

The central premise of Avolio and Gardner (2005) is that through increased self-awareness, self-regulation and positive modelling, authentic leaders foster the development of authenticity in followers. Moreover, the authenticity of followers contributes to their well-being and the attainment of sustainable and veritable performance. The core of what constitutes profoundly positive leadership is the primary differentiation of authentic leadership in whatever form it exists (Avolio et al., 2004). Walumbwa, Avolio, Gardner, Wernsing and Peterson (2008) defines authentic leadership as:

> a pattern that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information and relational transparency on the part of leaders working with followers, fostering positive self-development. (p.94)

Klenke (2005) explicitly incorporates a spiritual component as a determinant of authentic leadership. While Avolio et al. (2004) suggested that authentic leadership may incorporate spiritual and ethical leadership, Klenke (2007) hypothesizes that spirituality, defined as self-transcendence, self-sacrifice and a sense of meaning and purpose, serves as a precursor of authentic leadership. Moreover, authentic leadership leads to various dimensions of leadership effectiveness including respect for the leader, commitment to leader's requests, enhancement of problem-solving skills and group ability to deal with change and crises (McCleskey, 2014). Walumbwa

et al. (2008) conceptualized a developmental approach to authentic leadership, describing it as a pattern of leader behaviour that develops from and is grounded in the leader's positive psychological qualities and strong ethics. They suggest that authentic leadership is composed of four distinct but related components: self-awareness, internalized moral perspective, balanced processing and relational transparency. Avolio, Walumbwa and Weber (2009) suggest that authentic leaders learn and develop each of these four types of behaviour over a lifetime.

According to George et al. (2013), the fulfilment of authentic leadership is the satisfaction of leading a group of people to achieve a worthy goal with "a deep inner satisfaction that you have empowered others and thus made the world a better place" (p.8). The five dimensions of authentic leadership as described by George (2003) is illustrated in Figure 2.2.1.8. Each dimension is associated with an observable characteristic: purpose and passion, values and behaviour, relationships and connectedness, self-discipline and consistency, and heart and compassion. Structural equation modelling (SEM) performed by Walumbwa et al. in 2008 demonstrates the predictive validity of authentic leadership for important work-related attitudes and behaviours, importantly improving ethical and transformational leadership. Northouse (2016) explains the authentic leadership model as: Firstly, authentic leaders are driven by passion with a sense of purpose and knowing what they are about and where they are heading. Secondly, authentic leaders have values, know what they are, and don't compromise on those values by acting in accordance with their values. Thirdly, authentic leaders build relationships with others

and have a connectedness with their followers by sharing experiences, listening and communicating with followers. Fourthly, authentic leaders have self-discipline with focus and determination. The consistency makes the self-disciplined leader remain cool, calm and consistent during stressful situations.

Figure 2.2.1.8
Authentic Leadership

Source: George (2003)

Finally, authentic leaders have heart and compassion with sensitivity to the needs of others and the willingness to help. Importantly, the authentic leadership dimension model introduces an exciting perspective of evaluating the viewpoints of the leader,

described as a dimension, and the appropriate reactions or influences, e.g. the values of the authentic leader is aligned with the behaviour of the leader.

Northouse (2016) critiques authentic leadership theory as still in its formative stages with some concepts that are not fully practically developed or substantiated. Firstly, the moral component of authentic leadership is not fully explained where it is unclear how higher values such as justice inform authentic leadership. Secondly, the rationale for the inclusion of positive psychological capacities as a part of authentic leadership has not been clearly explained by researchers. Lastly, the link between authentic leadership and the achievement of positive organizational outcomes is unclear. Moreover, measurements of authentic leadership by Walumbwa et al.,(2008) is based on the assumption that there are general or perhaps universal facets of what constitutes authentic leadership that consistently define such leaders as self-aware, ethical, balanced decision makers and transparent.

The positive critique includes that beyond direct performance outcomes, the notion that authentic leaders may possess the ability to enhance follower commitment and citizenship behaviours are very promising in the context of the positive relationship between these constructs and performance (Bachrach, Powell, Bendoly, & Richey, 2006). Moreover, authentic leadership may provide early evidence to identify leaders who may not adhere to the highest ethical and moral principles regarding their decisions, actions and behaviours (Walumbwa et al., 2008).

2.2.1.9 Other Notable Leadership Theories

Leadership authors have used decision-making, influence, cognitive thinking and motivation theory to formulate other leadership theories over the past few decades as presented below:

2.2.1.9.1 Normative Decision Model: Vroom-Yetton Model

While many contingency theories define leadership effectiveness in terms of group performance or team satisfaction, the normative decision model is a unique contingency theory in its exclusive focus on providing prescriptions to optimize the leader's decision-making process (Sahal, 1979). The decision-making tool helps leaders determine how much involvement should be invited when making decisions by outlining a set of five different decision-making strategies that range on a continuum from directive to participative decision making (Vroom & Jaago, 2007). The strategies include two types of autocratic styles (the leader decides alone), two types of consultative styles (the leader consults followers but decides alone) and a group decision-making option (group consensus).

Field (1979) question the utility of the Vroom-Yetton model for two reasons. First, it is not as parsimonious as other models of leader-decision process choice; second, it deals with only one aspect of leader behaviour that of selecting different decision processes for different problem situations. Vroom and Jago reported in 1988 the accumulated evidence from some field studies concluded that decisions following the decision tree were almost twice as likely to be successful than decisions that did not use the prescriptions advocated by the model. Leaders who make decisions following

the decision tree tend to receive favourable ratings from subordinates (Sahal, 1979). Results by Ettling and Jago (1988) support Vroom and Yetton' s conflict rule and suggest that interactive group processes are preferred decision tools.

The normative decision model contributes to an understanding of decision-making processes that underscores the significance of the situation (Sahal, 1979). Maier's work on problem-solving deals with this aspect of leader behaviour plus necessary leadership skills and their development (Field, 1979). Despite substantial empirical evidence validating the model, it is questionable whether leaders can accurately answer the questions posed by the decision tree.

2.2.1.9.2 Multiple Linkage Model

Yukl incorporates behaviour and situational theories to define the Multiple Linkage Model. According to Yukl (1982) work unit performance depends on six variables namely member effort, member ability, the organization of the work, teamwork and cooperation, availability of essential resources and external coordination with other parts of the organization. Importantly, while leaders can influence the variables in some ways, the effects of leader behaviour also depend on the situation (Yukl, 1982). The premise of the Multiple Linkage Model is that the combination of managerial behaviour and situational variables determine the performance of the organization.

2.2.1.9.3 Cognitive Resources Model

A leader’s cognitive ability contributes to the performance of the team only when the leader’s approach is directive (Nelson, 2014). An important contribution of the

Cognitive Resources Model (CRM) is the conclusion that stress affects the relationship between intelligence and decision quality. However, the experience of leaders is positively related to decision quality under high stress. Fiedler and Garcia (1987) state that with simple tasks leader intelligence and experience are irrelevant.

2.2.1.9.4 Substitutes for Leadership

Specific individual, task and organizational variables act as substitutes for leadership or neutralizers that is something that lessens the effect of something else (J. P. Howell, 1997). The variables negate the hierarchical superior's ability to exert either positive or negative influence over subordinate attitudes and effectiveness. The research literature provides abundant evidence to maximize organizational and personal outcomes, the members of an organization should be able to obtain both guidance and good feelings from their work settings.

Guidance is usually offered in the form of role or task structuring, while good feelings may stem from stroking behaviours or may be derived from intrinsic satisfaction associated with the task itself (J. P. Howell, 1997). Substitutes for leadership include characteristics of the subordinate, the task or the organization. However, Kerr and Jermier conclude it is not possible to differentiate at all among leadership substitutes and neutralizers in terms of relative strength and predictive capability.

2.2.1.9.5 Leadership and Motivation

According to Vroom and Jago (2007), viewing leadership in purely dispositional or purely situational terms discards a significant portion of the phenomenon.

Contingency theorists potentially limit conclusions on the leadership phenomenon with the dominant emphasize on the key behaviours of leaders and contextual variables involved in the leadership process. While the leadership research and theories reviewed above depend heavily on the study of motivation, motivation theory suggests that leadership is less a specific set of behaviours, but it is about creating an environment in which people are motivated to produce and follow the direction of the leader. A popular motivation theory is that of Herzberg (1964) that differentiated between elements in the workplace that led to employee satisfaction or dissatisfaction, where the satisfaction and dissatisfaction can be classified as two different continua instead of two ends of the same continuum.

2.2.2 Key factors of leadership

The key factors of leadership contextualize salient characteristics of leadership as listed below:

2.2.2.1 Leadership develops over time

Research by Derue and Ashford (2008) propose leadership as a mutual influence process that can cause leaders and followers to shift over time. Zaccaro et al. (2001) suggest as a team becomes more experienced and achieve a significant level of expertise, other team members take over some of the leadership functions while designated leaders retain boundary spanning responsibilities. Leadership qualities can be defined as personal attitudes and beliefs within an individual that slowly develop over time (A. Wilson, Lenssen, & Hind, 2006). Leadership in the nature of

individuals is developed over time, and similarly the nurturing of leadership attributes in individuals are important over time.

2.2.2.2 Leadership is a process to create change

Yukl (2006) defines leadership as “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” (p.8). Kotter (1990) argue that the functions of management and leadership are dissimilar where the primary function of management is to provide order and consistency to organizations, while the primary function of leadership is to produce change and movement through adaptive and constructive change. Without influence, it is impossible to be a leader as leadership is about the ability to influence subordinates, peers and stakeholders in an organizational context (Sassen, 1996).

2.2.2.3 Leadership is personal and developmental

Leadership develops over time. Personal leadership must improve over time through skills, knowledge and experience to drive personal development. Leadership is not merely a process of acting or behaving, or just managing the process of relationships, it is a process of power-based reality construction (Smircich & Morgan, 1982). Moods matter therefore emotional leadership is the spark that ignites a company's performance by creating success or a landscape of disasters (William, 2004). An effective leader develops personal leadership with a long-term transformational approach through effective influence tactics, improved decision-making, motivational strategies and principles to improve the company culture.

2.2.2.4 Leadership is distributed

Leadership has shifted in focus from the attributes and behaviours of individual leaders to a more systemic perspective, whereby “leadership is conceived of as a collective social process emerging through the interactions of multiple actors” (Bolden, 2011, p.6). Distributed leadership suggests leadership as a process that sees leaders not in charge of followers, but as members of a community of practice (Drath & Palus, 1994). The community of practice is defined as “people united in a common enterprise who share a history and thus certain values, beliefs, ways of talking, and ways of doing things” (Drath & Palus, 1994, p.4). A distributed viewpoint on leadership recognizes the work of all individuals who contribute to leadership, whether the individuals are formally designated or defined as leaders or not (Harris & Spillane, 2008). The modern flatter organizational structures with less bureaucracy and hierarchy generally improves distributed leadership.

2.2.3 Effects on Leadership

The previous sections addressed leadership from an inside-out perspective to conceptualize what leadership is and how it is understood. In contrast, the effects on leadership have an outside-in perspective of the external effects of several factors on leadership in specific contexts.

2.2.3.1 The Effect of Diversity

Workforce diversity describes differences among people concerning age, race, ethnicity, gender, physical ability and sexual orientation. A well-managed workforce diversity increases human capital (F. Luthans, 2005). Managing diversity is an essential but challenging responsibility of leaders of organizations today because diversity can also result in distrust and conflict, lower job satisfaction and potentially higher turnover (Jermier, 1995). The potential advantages of diversity are greater variety of perspectives that increases creativity and the full utilization of a diverse workforce increases the amount of available talent for filling essential jobs. Schermerhorn et al. (2005) propose to manage diversity by developing a work environment and organizational culture that allows all organization members to reach their full potential.

The successful management of diversity may lead to more satisfied, committed and better-performing employees with a potentially better financial performance for an organization (Hammer, 2013). Schermerhorn et al. (2005) define an organization as diversity mature when managers ensure the effective and efficient utilization of employees in pursuit of the corporate mission and managers consider how their behaviours affect diversity. A clear leadership approach could assist in the motivation of employees towards the pursuit of the common company goals and improved performance.

2.2.3.2 The Effects of Culture

According to Schein (1985) culture is “a set of shared, taken-for-granted implicit assumptions that a group holds and that determines how it perceives, thinks about and reacts to its various environments” (p.2). Peter Drucker compared company cultures with country cultures stating: “never try to change one, instead try to work with what you have.” The explanation of how organizations function has been inaccurate by not giving enough attention to social systems in organizations, through researchers that underestimate the importance of culture-shared norms, values and assumptions (Schein, 1996). Norms are a relatively visible manifestation of taken-for-granted assumptions that most members of a specific culture never question or examine (Schein, 1996). Members of specific cultures are sometimes not even aware of their own culture until they encounter a different one. By carefully observing what goes on when organizations attempt to improve their operations in response to new data from the economic, political and technological environment, the critical role that culture and subcultures play in this process are evident (Schein, 1996). It can be concluded that culture has a critical role in an organization that can influence performance improvements in organizations.

Schein (1992) believes failure to take culture seriously enough stems from our methods of inquiry, which put a higher premium on abstractions that can be measured rather than on careful ethnographic or clinical observation of organizational phenomena. Hitt et al. (2008) propose an approach to manage cultural differences effectively. Firstly, through flexibility by openness to new approaches, ideas and

beliefs and willingness to change an individual's behaviour. Secondly, with knowledge of specific cultures by understanding the beliefs and behaviour patterns of different cultures. Lastly, through interpersonal sensitivity by the ability to listen to and resolve problems with people from different cultures.

The Competing Values Framework, where the competing or opposite values in each quadrant give rise to the name for the model, was initially developed from research conducted on the significant indicators of effective organizations (K. S. Cameron & Quinn, 2006). Each organizational culture profile reflects underlying attributes, including the management style, strategic plans, climate, reward system, means of bonding, leadership and fundamental values of the organization (K. S. Cameron & Quinn, 2006). Organizations, of course, may have multiple, unique sub-cultures associated with different sub-units. Cameron and Quinn (2006) realized that the real work in culture change, and the most challenging part by far, lies in the actual implementation and follow-up. The use of tools or principles to assist with implementation will be of great use in the future for culture change (K. S. Cameron & Quinn, 2006). The implication in the context of this research identifies the implementation of changes to company culture as an opportunity for improvement in the currently available leadership literature.

2.2.3.3 The Effects of Leadership on Individuals and Teams

Leadership behaviour and style have a considerable influence on individuals, teams and in organizations. According to Lorsch (2008) followers follow leaders because of some qualities of the relationship.

- An alignment between the leader's goals and the values and expectations of followers.
- Two-way communication between leaders and followers. The leader must know what followers want and what they are experiencing, and the followers must understand what the leader's goals are and how they can contribute to the required achievements.
- The appropriate sources of leader power and influence in the relationship.

Zaccaro et al. (2001) recommend a leadership performance process model to improve team effectiveness that explicates and emphasizes the functional leadership approach in terms of superordinate and subordinate leadership dimensions. The model synthesizes various motivational strategies into leadership team processes for performance improvements. Traditional transactional leadership that is more focused on personnel and material resources drive the team co-ordination processes. Transformational leadership utilize the motivational theories to improve cognitive, motivational and effective processes through mental processes, emotional intelligence, intrinsic and extrinsic motivators and emotions to manage and motivate the team. Improved team effectiveness can, therefore, lead to improved productivity and profitability.

A follower is "a person who acknowledges the focal leader as a continuing source of guidance and inspiration, regardless of whether there is any formal reporting relationship" (Yukl, 1998 p.6). Meaningful work allows people the freedom to set goals and the freedom to dream (Welch, 2006). Effective leadership is dependent upon the relationship between the leader and his followers (Lorsch, 2010). Organizations that require the benefits of followers must find innovative ways of rewarding them by finding ways to bring them in partnerships inside the organization (Onofrei, Hunt, Siemienczuk, Touchette, & Middleton, 2004). The difference between an effective and ineffective follower is enthusiastic, intelligent and self-reliant participation (Onofrei et al., 2004). Effective followers differ from ineffective followers in their motivation and perceptions of their role, where effective followers are defined as independent, utilize critical thinking and are active in their defined roles in a relationship with a leader.

2.2.3.4 Influence Tactics

Rowe and Guerrero (2011) define power as the potential or capacity to influence others to bring about desired outcomes through affecting others' beliefs, attitudes and behaviour. The two kinds of power are personal power, being the capacity to influence that comes from being viewed as knowledgeable and likable by followers, and position power (Sassen, 1996). Personal power is derived from the interpersonal relationships that leaders develop with followers (Jermier, 1995). Position power is that power that comes from holding a particular office, position, or rank in an

organization (Ingvaldsen & Gulla, 2015). Responses to influence attempts include resistance, compliance, or commitment. Resistance occurs when the influence target does not wish to comply with the request and either passively or actively repels the influence attempt. Compliance occurs when the target does not necessarily want to obey, but the target does obey. Commitment occurs when the target not only agrees but also actively supports it as well. Through collaboration, openness and the creation of shared meaning, leaders can elicit the commitment of others and guide the work process, allowing members to expand their skills and contributions to the organization more broadly (Hackman, 1987). Leadership is an influence process as motivating is the way how leaders lead (Denning, 2018). Herewith the challenge of leadership in the digital era, that leaders should endorse positive influence tactics.

2.2.3.5 The Effect of Ethics

Ethical leadership identifies three dimensions of ethical leadership namely the ethics of the motives of a leader, the influence process strategies and the nature of the self-transformation needed for ethical leadership (Kanungo & Mendonca, 2012). Ethical dilemmas occur when someone must choose whether or not to pursue a course of action that, although offering the potential of personal or organizational benefit or both, may be considered unethical (F. Luthans, 2005). The ways of thinking about ethical behaviour are the utilitarian view attempting the greatest good for the highest number of people, the individualism view by best serving long-term self-interests, the moral-rights view that respects and protects the fundamental rights of all human beings or the justice view to be fair and impartial in the treatment of all people.

Maldonado and Lacey (2001) research on moral leadership identifies qualities as constituting moral and ethical characteristics including humility, listening, personal truthfulness and actions that relate to justice. A critical component of leadership behaviour is determined by the role and discretion to act in ways that the incumbent sees as appropriate in order to make that role work (Fiol, Harris, & House, 1999).

The decision-making and discretion increase as the level of authority and responsibility of a manager or a leader increase. Followers play an active role in the leadership relationship by empowering the leader and influencing their behaviour, and by determining the consequences of the leadership relationship (J. M. Howell & Shamir, 2005). Modern flatter and leaner organizations require people who take pride and satisfaction in their supporting role as followers, without the requirements of excessive attention to their efforts.

2.2.4 Alternative Approaches to Leadership

Henry (2012) suggests multiples paradigms in contemporary times to fuse the knowledge and skill-sets from multiple perspectives in leadership within an environment of constant change. The concept of paradigm introduced by Thomas S. Kuhn in his seminal work the structure of scientific revolutions (Kuhn & Hawkins, 1963), gave substantial meaning to changing and transitioning moments of scientific knowledge. Kuhn (1970) claimed the method of accepting new discoveries is a scientific revolution with the creation of new paradigms or ways of thinking and doing.

2.2.4.1 Leadership Significance

Leaders motivated by the Logic of Absurdity recognize the reality of their potential limited significance and unwaveringly accept the limited recognition (Newark, 2017). Some authors question the need for leaders where management is significantly reduced, and teams take on significant decision-making responsibility (Bednarek, 1990; Dumaine, 1990). Moreover, ancient Chinese wisdom declared that: “a leader is best when people barely know he exists when his work is done, his aim fulfilled, they will say: we did it ourselves” (Michelle, 1997). The Logic of Absurdity is possibly the most appropriate manner to view leadership in organizations with mostly work teams. The key to the organizational transformation of teams lies in the evolution of the role of leadership to recognize the importance of the context of leadership and the dynamics of constant change.

2.2.4.2 Emotional Intelligence

Emotional intelligence refers to the capacity for recognizing our feelings and those of others, for motivating ourselves, and for managing emotions in ourselves and our relationships (Goleman, 2000). Moreover, the research by Goleman (1998) on Emotional Intelligence (EI) competencies and their application for leaders showed that EI accounts for more than 85 percent of outstanding performance in top leaders. EI is twice as important to leadership effectiveness as IQ and technical expertise combined, and EI is four times as important in terms of overall leadership success (Makes, 2014).

2.2.4.3 Leadership Decision-Making

Mostovicz, KakabaDSDE and KakabaDSDE (2009) posit that leadership is a developmental process, that is based on the decision-making of a leader. The assumption is that at least two good options are always available.

The possible decisions are based on the Theta worldview in looking for affiliation or the Lambda worldview in looking for achievement (Mostovicz et al., 2009). Consequently, leaders should realize that the decision-making should correlate with their personal worldview. Importantly, leaders should balance their own worldview and the planned organizational activities to continuously improve ethical behaviour. This dynamic theory of leadership concludes that while leaders strive toward genuinely ethical leadership, in reality, the goal is beyond human capacity (Mostovicz et al., 2009). The reality of a continuous struggle for improvement to balance perspectives requires leaders to aspire towards an equilibrium between potentially dissimilar objectives cognitively.

2.2.4.4 Complexity Leadership

Complexity Leadership is grounded within the framework of Complexity Science (Olmedo, 2012). The three inter-related building blocks of Complexity Science include non-linear dynamics, chaos theory and adaptation or evolution (Schneider & Somers, 2006). According to Uhl-Bien, Marion and McKelvey (2007), complexity science informs that traditional leadership models are products of bureaucratic paradigms that are only effective in real production-based economies. Traditional leadership theories are limited in explaining the knowledge era that is characterised by features

characteristic of complex adaptive systems including disruption, innovation and globalism.

Marion and Uhl-Bien (2001) introduced complexity leadership for organizational leaders that face complex realities with no linear cause-effect relation. The complexity leadership theory is not a unique theory but rather a set of ideas in multidisciplinary science, compounded by different interrelated blocks (Schneider & Somers, 2006). The theory is a framework for leadership for learning the creative and adaptive capacity of complex adaptive systems in knowledge-producing organizations (Uhl-Bien et al., 2007). The new perspective considers the importance of interactions and emergent properties to predict where planning is merely impossible.

Complexity Leadership supposes the creation of conditions necessary to favour emergence, adaptability and learning in organizations rather than directing the whole organization to reach its objective (Olmedo, 2012). The strategic significance of complex leadership is the understanding and visualization of unspecified future states to enable directing the whole organization to it. Importantly, leaders as managers or controllers are substituted by the leaders as enablers (Plowman et al., 2007). While no one can control the future, the role of a complex leader is to assure proper conditions for a system to self-organize productively in reaction to complexity.

Uhl-Bien et al.,(2007) suggest certain qualities for complex leaders including complex seeing, thinking, feeling, knowing, acting, trusting and being. The premise is that

leaders should improve system-thinking to plan for future complexities pro-actively but does not advocate the demise of leadership research conducted under the General Systems Theory (GST) framework. Processes, systems and technologies generally drive organizations, therefore, General Systems Theory based leadership theories remain applicable in multiple contexts (Uhl-Bien et al., 2007). According to Osborn and Marion (2009), approaches that favour a mix of models and explore a range of leader contexts better explain the complexities of leadership.

2.2.4.5 Irrational Leadership

Some literature on leadership endeavours depict the leader as an embodiment of virtue, and speaks only highly of the attributes that constitute leadership. In contrast, de Vries and Balazs (2011) suggest a different way of studying leaders through the clinical paradigm that offer some explanations for leadership derailment. They suggest that the psychological pressures that often lead to dysfunctional behaviour should be addressed, and discuss the interrelationship between personality, leadership style and organizational decision making. By discarding the assumption of rationality an alternative view of leadership theories suggests that most leadership theories are inadequate, oversimplified and even fictional rationalizations are made after the fact. According to de Vries (2009) “abnormal behaviour is more normal than most are prepared to admit and certain personality types are more likely than others to show their dark side” (p.417). Moreover, Bolden (2007) argues that the subtle social and psychological factors could interact to undermine the very principles that good leadership is meant to address. The shadow side of leadership is illustrated by

de Vries (2009) with the alternatives of narcissistic, controlling, depressive, abrasive, paranoid, negativistic, hypomanic charismatic and neurotic leadership as alternatives for the rational assumptions of leadership theories. Moreover, de Vries (2009) argues that greater attention needs to be paid to achieving congruence between the personal needs of employees and organizational objectives. In conclusion, this will lead to a greater sense of determination, sense of competence, feeling of community, sense of enjoyment and a sense of meaning (Rayner, 2013).

2.2.5 Leadership in the Digital Era

Leadership is a complex concept that will continuously evolve and “a determined definition may long be in flux” (Northouse, 2013, p.4). After decades of dissonance leadership scholars start to agree that there is not a universally acceptable definition of leadership (Northouse, 2015). Growing global influences, generational differences, constant changes and global economic challenges contribute to different leadership theories applicable to diverse conditions and people. With the expansion of digital innovation as a global phenomenon, research scholars in the 21st-century should incorporate the constantly changing environment into future leadership studies.

The influence of digital disruptions has already caused and will cause considerably more changes in the nature of work, in the workforce and the structure of most organizations. Significant change creates ambiguity for employees and customers, creating a greater need for leaders to provide direction (Denning, 2018; Huter, Cuschenbery, Ginther, & Fairchild, 2013). Furthermore, leadership is a crucial

element of all societies, but its role and capacity are getting more complicated with amplified participation in globalization and technology development (Denning, 2018; Punnett, 2004). Digital technologies propose new ways to connect and co-operate with businesses and to build connections between people. Digital disruption has defied traditional business models and continue to do so (Denning, 2018). The concept of leadership needs to be re-evaluated in this context. Characteristics that made leaders successful 15 or 20 years ago may or may not be the same characteristics needed today.

Neubauer et al. (2017) define Agile Leaders as executives that can successfully lead in disruptive digital environments. Neubauer et al. (2017) postulate that “agile leaders combine elevated levels of humility, adaptiveness, vision, and engagement with the specific business behaviours of hyperawareness, informed decision-making, and fast execution to navigate through disruptive operating environments (p.26).” Information and communication technologies (ICTs) are having a profound effect on society and organizations. However, the literature on ICT adoption, from selection to implementation, has not been well integrated into leadership theory, particularly in terms of adoption. Leaders should adopt ICTs to improve their competencies, where this is generally seen as an antecedent condition for what is considered e-leadership. In contrast leaders generally only recommend and support the implementation of ICTs for organizational use, thereby potentially depriving themselves of the richness that ICTs may offer. Moreover, leaders should become competent in dealing with and navigate the challenges of leading within the digital space (Van Wart, Roman, Wang,

& Liu, 2017). Leadership has continually changed over time as individuals and organizations change. Consequently, leadership should be continually studied to remain relevant in the current digital transformation context.

2.2.6 Conclusions on Leadership

Leadership in this new century should evolve with the constant change in the nature of people (George & Sims, 2007). While leaders lead, manage and control an organization, the organization influences individuals as part of the organization either as stakeholders or customers. The group of individuals form part of society that is collectively influenced by the actions of the individual leaders and the organizations. The currently available literature on leadership suggests a plethora of ways to lead or leadership styles. The contingency theories build on the trait and behaviour theories, with the sophisticated analysis of the leader and the situation (Horner, 1997). A broader view includes leader style and situation to be evaluated with characteristics of the followers. The transactional leadership theory builds on the Grounded System Theory to improve efficiencies in organizations. Transformational leadership aims to influence and change individuals. Alternative approaches incorporate specific situations and contexts including irrationality, complexity and decision-making as hybrid theories to add to the body of knowledge on leadership. The understanding of the complexities of leadership introduced an even broader look at leadership with a focus on the organizational culture (E. Schein, 2007; E. H. Schein, 1985). Peter Drucker famously said, “culture eats strategy for breakfast.” Schein posits for leaders to be more relevant in the context, issues related to the organizational culture must

be identified. Despite the plethora of leadership research, it is impossible to define one universally accepted concept of leadership. The progression from the traditional leadership approaches to a new paradigm of leadership in the digital era needs a fresh focus on leadership, wherewith defined as digital leadership in the context of leaders of organizations that use digital technologies to change organizations or industries.

Kouzes and Posner (2010) state that “all significant and meaningful accomplishments involve adversity, difficulty, change, and challenge; no one ever got anything extraordinary done by keeping things the same” (p.104). Leadership is amazingly complex compounded by the layered philosophy approach with a profusion of elements (McBRIDE, 1926). As long as persons exist striving to define it, there will be an unlimited number of differing opinions on what leadership is (McBRIDE, 1926). Therefore, with the influence of society and culture, leadership is always changing and reinventing itself.

Despite the potential of each individual to be a leader either as in nature of an individual as a leader, or the nurture in the development of leaders, the key to leadership is a willingness to become a leader. Pragmatic leadership consists of two essential components namely principles and experience (Reinmoeller, 2015). Leadership requires the pragmatic capabilities to do things realistically in a way based on practical rather than theoretical considerations. Alimo-Metcalfe and Alban-Metcalfe (2005) propose an alternative approach to leadership with an emphasis on

the practical side of leadership. Moreover, pragmatic leadership is more than transformational models and should also recognize the significance of servant leadership by focusing on the development of individuals in an organizational context (Alimo-Metcalfe & Alban-Metcalfe, 2005).

Kouzes and Posner (2010) state that conventional wisdom portrays leadership as something found mostly at the top. Moreover, myth and legend treat leadership as if it were the private reserve of a very few charismatic men and women, but nothing is further from the truth. Furthermore, Kouzes and Posner (2012) propose that leadership should involve everyone everywhere. Leaders are everywhere, and in presence, leaders should also be available everywhere. The leaders recognize that in relationships with followers trust is a crucial ingredient that must be built and maintained (Maslanka, 2004). Leaders should understand that the interactions with employees in the organizations are critical. To further understand the importance of the leadership function, leaders should reflect on failures and successes but remain humble and human to seize moments to lead organizations better.

In the midst of the available leadership theories, a vital challenge to the academic leadership field involves the articulation of the appropriate frameworks to develop leaders and leadership (GALANOU, 2010). In contrast to the prescriptive leadership theories, de Vries (2009) calls on leaders to become aware of negative aspects of their leadership, to deal with experiences reflectively and rationally thereby reducing any adverse effect on employees. Moreover, with the prevalence of collusive

practices, leaders and followers require a thorough understanding of themselves, including strengths and weaknesses, with an open-minded approach to alternative forms of information and feedback (De Vries & Balazs, 2010).

With an understanding of leadership, the challenge after knowledge and skill according to Aristotle is how to provide the opportunities to learn wisdom from experience. Grint (2007) proposes in the education of leaders to acquire more humility to understand and respect the limits of knowledge and expertise. Subsequently, a solution might be to facilitate learning opportunities for leaders to learn wisdom through experience. The challenge is to provide opportunities for leaders to lead in real situations that require decisions in the midst of uncertainty, anxiety and risk. The reality is that leaders require opportunities to learn wisdom through phronesis or practical wisdom.

The exercise of influence in leadership is an activity that a leader does to others. Crainer and Dearlove (2014) suggest the perspective of something that the leader does on behalf of others. The importance of the influence of the follower to the leader has become more prevalent. Despite the lack of data showing that the psychological contract between people and organizations has shifted, Crainer and Dearlove (2014) suggest that the relational commitment has changed to a more transactional approach by employees based on a service-oriented approach. The new generation has adapted to the approach with an inherent attitude of limited loyalty to organizations. Zembylas (2010) argues there are distinctions between good leaders

and social justice leaders. Social justice leadership focuses on leadership that unsettle unjust practices and promotes inclusion and equity for all stakeholders (Gewirtz, 1998; Larson & Murtadha, 2002). Despite the increasing body of literature on social justice leadership, the emotional tensions of the struggles of leaders for equity and justice have been understudied (Jansen, 2005, 2006).

A phenomenological inquiry into leadership should not study the attributes of leaders, but rather the fundamental structures of human beings that make it possible to be a leader in the first place (Souba, 2015). Creating leaders entails a first-person phenomenological methodology, which provides direct access to what it means to be a leader and what it means to exercise proper leadership in real time, with real results (Souba, 2015). The decoupling of commitment and loyalty in the digital era forces leaders to re-evaluate the relationship between organizations and individuals but more importantly also the meaning of work, leadership and leadership development (Crainer & Dearlove, 2014).

Within the uncertainties of the disruptions in the digital era, a better understanding is required to understand the influence of digital on individuals, organizations and society. Moreover, for an understanding of the influence, a better understanding of the principles, theories, operations and implementation of digital transformation is required. The following section will investigate digital innovation theories.

2.3 PART TWO – DIGITAL INNOVATION THEORY

The Greek philosopher Heraclitus said that change is the only constant (Baloyannis, 2013). In the modern context with more changes than ever in technology, digital transformation has become imperative for all businesses (B. Rashid, 2017). According to the English proverb “necessity is the mother of all invention.” The saying had its origins from Plato but transformed through centuries to conclude that demanding situations inspire ingenious solutions. In preparing for the future individuals, organizations and society will need to “navigate through an uncertain, complex and changing terrain” (Bolden et al., 2011, p.168). Digital disruption and transformation seem to encapsulate the true meaning of the proverb. With the potential implications of digital innovation on humans, humanity is in uncharted territory, unlike anything experienced before (Hollis, 1992). From the proliferation of the extensive application of digital, with innovation it is evidence that competition inevitably brings out more in competitors and push the boundaries of innovation.

As a prelude to better understand the influence of digital innovation, a brief synopsis of innovation is introduced. Economists estimate that 50-80% of economic growth comes from innovation and new knowledge (Cooper & Helpman, 2004). Economic growth is a disequilibrium process where some organizations grow while other stagnate (Cooper & Helpman, 2004). Mulgan (2006) defines principles to assist with innovation namely the risks are contained, evident failure is highlighted, users have a choice and expectations are met.

Epistemologically, innovation is articulated as: “to make something new” (Medina, Lavado, & Cabrera, 2002, p.1). Furthermore, innovation supposes the introduction of change, that can be technical, technological, commercial, financial, social, administrative or organizational (Medina et al., 2002). The innovative activity of organizations is generally a response to the ongoing changes in the environment, whereby the organization want to achieve a competitive advantage because of the innovative behaviour.

Kuhn (1970) posits that normal science tends to gather knowledge in particular schools of thoughts that can lead to the rejection of necessary innovation because it is potentially contrary to historically proven knowledge. Technological discoveries and inventions will almost certainly increase in the future with the declination of the suppression of scientific and technical innovations. Kim and Mauborgne (2015) study on blue ocean strategies that showed that 86% of new product or service introductions were in existing markets, therefore, market competing moves, while only 14% were products or services in new markets. Interestingly companies only achieved 39% of the realized profits from existing market investments, but a staggering 61% of the profits from the much smaller set of introductions in new markets (Kim & Mauborgne, 2015). Accordingly, companies should consider the result in planning the introduction of new services or products.

Some confusion exists on the terminology of digitization, digital business, digitalization, digital transformation and digital. Digitization and digitalization are two

closely associated conceptual terms that are often used interchangeably in a broad range of literature (Brennen & Kreiss, 2014), but the concepts are different. Digitization is the automation of processes by the digitization of information through the injection of technology for automation. Digitalization is the use of digital technologies with digital data at the core to create revenue, improve or transform businesses to create an environment for digital business (I-Scoop, 2018). Digital transformation encompasses all aspects of business with the acceleration of technology adoption and change that leads to entirely new markets, customers, business realities, opportunities and ultimately potentially leading to a new economy (I-Scoop, 2018). According to Rashid (2017) digital transformation "involves a radical rethinking of how an organization uses technology in pursuit of new revenue streams or new business models" (p.7). Similarly, Tiersky (2017) defines digital transformation as disruptive business transformation, while according to Sabau (2012), digital transformation involves radical thinking about using technology by organizations in search of new revenue streams or even transformed new business models. Digital business is not about selling products or services, but about keeping brand promises where the combination of trust and transparency enable optimal efficiency in digital networks (R. Wang, 2015). Raskino and Waller (2015) define digital as "how enterprises will apply that understanding of digital for advancement and advantage in digital business" (p.24), to create new business designs by the dissolution of the boundary between the digital and physical world. The research presents digital, aligned with digital transformation as "using data to transform organizations or industries."

Market leaders generally drive transformation in organizations from typically around 5 percent of organizations, and fast followers, usually around 15 percent of organizations, through transformational change (R. Wang, 2015). Disruptors make sense out of the pot of problems their predecessors stirred up and target solving the pre-eminent problem (Heskett, 2015). Importantly, to be relevant in the constant changing world: “disrupt digital businesses before you get disrupted!” (R. Wang, 2015 p.9). Furthermore, the digital transformational culture involves thinking about what customers want and delivering it (R. Wang, 2015). The adoption of technology by individuals is driven by the choice of individuals to use or adopt specific technologies, while this drives disruption. Customer needs in organizations or society drive digital disruption, while innovative organizations should derive strategies to deliver on the requirements of customers. Furthermore, Schwab (2017) describes innovation as a complex social process with the potential to change the world. The scale and magnitude of the constantly changing technology revolution will probably introduce economic, societal and cultural changes of potentially unimaginable extent (Hollis, 1992). Accordingly, in social context attention should be given to innovation advances that will facilitate the best possible outcomes.

According to Schwab (2017) the scientific advancement, wide-spread application and commercialization of innovation are social processes as the result of the development of people that exchange ideas, interests, values and social norms in a specific context. The social impact of the co-produced innovations is entwined

components of the new technological systems. Moreover, the impact of digital innovation and transformation will have a significant correlative influence on society.

With the proliferation of technology, the access to and usage of information have increased exponentially in the last years through the mobilization of the internet on mobile phones, handheld devices and other electronic devices. In the context of constant change, the one thing that is certain according to Dubois (2016) is that "digital disruption no longer a question of if, but rather when" (p.2). Moreover, the world is continually changing with technology increasing influentially. The challenge to business leaders is to align digital transformation with innovation to drive business growth with the introduction of productive changes to deliver more value to customers (B. Rashid, 2017). While Burns (2003b) expressed his concern with changes in society and the negligence of people to comprehend the essence of leadership, limited research has been conducted on the influence of digital on leadership. Importantly, in the digital era leaders should firstly understand digitization, digitalization and digital transformation to facilitate the organization to innovate for the digital era.

Forrester reports that most digital transformation efforts by business leaders lack confidence, accordingly recommending that enterprises need to recognize that the evolution of a true digital value proposition is not just about digital. Digital transformation requires a re-invention of significant portions of the organizations including business models, technology, operating processes and people (Tiersky,

2017). Bennis (2013) postulates that digital business strategy is an essential aspect of leadership due to the constant fundamental change in the life of a leader independent of their specific organizations.

Li and Zheng (2014) recommend that organizations should innovate continuously to obtain and maintain a competitive advantage considering the unpredictability of the changing business environment. Individuals in organizations are the backbone and driving force in organizations, with their innovative behaviours considered vital for the innovation performance of an organization. Moreover, organizations should take measures to stimulate the innovation willingness of employees to promote organizational innovation behaviour (Li & Zheng, 2014). Digital transformation requires an organizational change in thoughts and a deliberately planned change in organizational culture (B. Rashid, 2017). The modern organization should understand digital technologies, the relevance of the technologies in potential business outcomes and the methods to implement the technologies in the organization (Lamoureux, 2017). The right choices and correct implementation of emerging technologies will differentiate successful organizations from others.

A synopsis of current traditional innovation literature reveals a significant emphasize on service models. The service sector contributes more than 50% of the Gross Domestic Product (GDP) in the global economy (Sutrisno & Lee, 2012). Moreover, the importance of the service sector is expected to further grow in the future. The combination of digital strategies combined with the growth in the customer-centric

approach use data to enhance products that should shift various organizations from a product-focused selling approach towards a services-oriented approach (Hollis, 1992). Despite this, very few studies have investigated the impact of digital disruption on service innovation, and therefore the most substantial shift in the way business will be conducted in the future. Various digital transformation frameworks have been developed to assist leaders to drive the transformation in their organizations.

A brief synopsis of the industrial revolutions will be presented to contextualize digital innovation with an introduction to technological determinism and social constructivism as determining factors that drive innovation. With the introduction of digital innovation, the challenges and impact of digital transformation will be describing the influence on the workforce and workplace of the future. Digital innovation frameworks are synthesized by qualifying requirements, internal and external perspective, and the implementation in organizations discussed as a holistic view on digital transformation. A pragmatic approach to digital transformation is introduced with the digital congruency model as a framework for digital leaders to effectively lead digital transformation.

2.3.1 The Industrial Revolutions

Innovation has become the emblem of modern society (Godin, 2008), almost a remedy for resolving societal problems. Huter et al. (2013) postulate that “technology is characterised as a tool or system that shapes or impacts the way people

communicate and collaborate with each other" (p.34). It has been witnessed through the accelerated growth of technology that the global economy is probably changing more rapidly than during any other time since the first Industrial Revolution. Modern technologies are being adopted faster than previously. The invention of the spindle took 119 years to disperse outside Europe while it took the Internet only seven years to spread across the globe (Berger & Frey, 2015). To better understand the context of the current proliferation of technology a synopsis of past industrial revolutions is illustrated in Table 2.3.1A. Starting with the First Industrial Revolution in the middle of the 18th-century constant progression has been made in the quest to use technology to improve humankind.

Table 2.3.1A
The Stages of Industrial Revolutions

Period	Industrial Revolution	Changes and the Significance of the Changes
1760 to 1840	First Industrial Revolution	Mechanical Construction: Railroads and steam engine
1890 to 1920	Second Industrial Revolution	Electricity, production lines and mass production.
1960 to 2010	Third Industrial Revolution	Computer or Digital revolution: Mainframe, personal computer and internet
2010 to current	Fourth Digital Revolution	Digital transformation: Artificial Intelligence, digital platforms and mobile computing.
Source: Francois Volschenk (2018)		

Hayek attempted to explain the existence of the spontaneous order to counter the claim that any beneficent social order needed to be constructed.

Hayek (1988) states in a critique of the errors of socialism:

> To understand our civilisation, one must appreciate that the extended order resulted not from human design or intention but spontaneously: it arose from unintentionally conforming to certain traditional and largely moral practices, many of which men tend to dislike, whose significance they usually fail to understand, whose validity they cannot prove, and which have nonetheless fairly rapidly spread by means of an evolutionary selection - the comparative increase of population and wealth - of those groups that happened to follow them (p.6).

Furthermore, Hayek (1988) explains that the “unwitting, reluctant, even painful adoption of certain practices kept together, increased their access to valuable information of all sorts” (p.6). Some scholars argue that the spontaneous order process, as defined by Hayek, could be one of the least appreciated facets of human evolution.

The corroboration of the digital innovation as an ever-evolving transformation of human practices corroborates with the spontaneous order of Hayek that the access to valuable information has increased that was not socially constructed. The importance of careful planning of digital in the Anthropocene, or Human Age, is also

emphasized by Schwab's (2017) remark that it is the first time in the history of the world that human activities are shaping nearly all life-sustaining systems on earth. The stages of the digital revolution with the significant influence of digital technologies is summarized with the three stages of the digital revolution. Lamoureux (2017) introduces a conceptualization of the three stages of the digital revolution as illustrated in Table 2.3.1B.

Table 2.3.1B
The Stages of the Digital Revolution

	First Digital	Second Digital	Third Digital
	Pre 2000	2000-2015	2015 and Later
Key Technologies	• Mainframes • Programming Languages • Commercial Software • Personal Computer	• Cloud Social • Mobile • Analytics	• Internet of Things • Machine Learning • Natural Language Processing • Machine Vision • Robotics
Business Uses (Product, Process, Customer)	• Management and Transaction Systems • Personal Productivity	• E-Commerce • Mobile Commerce • Online Presence • Analytics • Customer Apps	• Automation of Physical Processes • Automation of Clerical Processes • Digital-Embedded Products • Connected Products • Predictive Analytics • Improved Customer Journey
Business Outcomes	• Efficiencies	• Revenue Protection • Profitability Improvements • Market Valuation Increases	• Better Products for More Revenue • Cost Reductions Improved Customer Loyalty • Market Valuation Increases

Source: Lamoureux (2017**)**

The first stage of the digital revolution that concluded at the end of the twentieth century introduced the personal computer, commercial software and a plethora of programming language that assisted in improving efficiencies. The second digital was mostly exacerbated by the proliferation of the internet, mobile communication and the transition to cloud-based data storage. The third digital that forms the focus of this research involves digital transformation that utilizes the inventions from the previous stages to further enhance digital innovation that can transform organizations or industries with the use of data. The First Digital started in the early 1950s at the dawn of digital technology in business with the automation of large enterprises. The stage ended with the proliferation of internet users around the turn of the century. The Second Digital (2000-2015) introduced technologies such as social, mobile, analytics/big data and cloud applications. With the advance of internet use and improved communication several new internet technology providers burst on to the scene with digital products that connect individuals, e.g. Facebook, search the Internet, e.g. Google and Yahoo and improve the easy to find and purchase things, e.g. Amazon. The Third Digital era, introduced around 2016, has five key technologies that drive the period namely internet of things (IoT), machine learning, natural language processing (NLP), machine vision and robotics (Lamoureux, 2017). Natural language processing, machine learning and machine vision and are forms of artificial intelligence (Lamoureux, 2017). The technologies monitor, listen, see, anticipate, move and even learn. There is no doubt that the third digital era has a significant influence on individuals.

2.3.2 Technological Determinism and Social Constructionism

Digital technologies offer new ways to connect, collaborate, conduct business and build bridges between people (Merifield, 2015). Society may wonder if technology has overtaken society, or even dictate its shape. The perspective of technological determinism suggests that technology is responsible for shaping society. Technological determinism is an ideology that considers technology as being the primary reason for the progress and potential growth of society (H. Wang, 2013). Pannabecker (1991) suggests in its most extreme form that "technological determinism maintains that materials and physical laws are such that technology is determined to develop in a particular way or pattern" (p.3). Determinism holds that everything is a sequence of pre-determined conditions and events that operate with regularity and is therefore in principle generally predictability.

In contrast, an opposing perspective is social constructionism, that postulate that people are responsible for the development of technology and thereby adjust technology to conform to their requirements. Social constructionism asserts that technology develops as a result of social, cultural or economic factors, contradicting the assumption of technological determinism that technology is the reason for social growth (Douglas, 1990). Diverse social groups all contribute their own values and concerns to the design process (Pannabecker, 1991). Actor networks are characterised by the removal of distinctions between technical, social, political and economic factors to the point of "breaking down the distinctions between human actors and natural phenomena" (Bijker, Hughes, & Pinch, 1987, p. 4). The

corroboration between technology and spontaneous order is evident in the conclusion by Pannabecker (1991) that “technologists build networks, but these networks are not viewed as systems of discrete, well-defined elements connected in ways that are always predictable” (p.7).

The perspectives represent polarised viewpoints whereas a composite view could be more representative of the characters of technology in modern society. Sociologists have gravitated towards a combination of technological determinism and social constructionism. Society plays a definite role in the shaping of technology, while the importance of the role of technology in social change is also recognized. Technological determinism can inherently be questioned on the premise of free will and human responsibility (Pannabecker, 1991). Moreover, social constructionism, actor networks and other models including historical and philosophical analyses provide frameworks for conscious reflection. Importantly, the polarised viewpoints assist in the extension of an understanding of technological complexity in the context of digital innovation.

2.3.3 The Digital Challenge

Most ancient Greek philosophers prioritized contemplation over action as the pinnacle of human endeavour. The contrary can be argued as the result of the introduction of constant change through digital disruption. A proposed result of the Fourth Industrial Revolution will be “the fusion of the physical, digital and biological world will further transcend time and space limitations through increased mobility”

(Schwab, 2017, p.83). Moreover, the potential paradigm shift in the work environment could deprive individuals in a society of the luxury of reflection. The digital challenge postulates that organizations, through digital leadership, are compelled to appropriate responsible action.

Klaus Schwab is the first person to introduce the world to the concept of the Fourth Industrial Revolution (4IR) through his book, The Fourth Industrial Revolution. According to Schwab (2017), the 4IR builds on the third but is much broader and more significant. Computers, machines and Artificial Intelligence are becoming smart and connected, contributing to a “dynamic fusion of technologies in the physical, digital, and biological and leading to change” unlike anything experienced by humankind before (Schwab, 2017, p.8)”. Schwab (2017) predicts a similarly powerful impact with the historical importance of the fourth industrial revolution compared to the previous three industrial revolutions while cautiously raising two primary concerns. Firstly, the understanding of the required levels of changes underway with competent and knowledgeable leadership across all sectors are low to analyse the disruption of the economic, social and political systems (Hollis, 1992). Secondly, the “world lacks a consistent, positive, and common narrative” (Schwab, 2017, p.9). The narrative or framework is essential to empower a diverse set of individuals and communities in society to develop a sustainable solution to safeguard against the potential backlash of the fundamental changes underway.

The promise of digital automation, digital disruption and Artificial Intelligence (AI) therefore raises new questions about the role of work, and more importantly about the relative position, or even potential future position, of individuals in the context of digital change. Wolcott (2018) points out that individuals will remain focused for decades to come on activities of physical or financial production. He further argues that the proliferation of technology will enable the provision of services and goods at lower cost, suggesting that human beings will be compelled to investigate and transition to new previously inconceivable roles (Wolcott, 2018). Individuals need to realize the significance of the constant change, analyse and understand it to prepare for the best response for favourable results.

In contrast to the digital mindset, a social mindset proposed by Scholz (2016) introduce a platform co-operativism as a mash-up of 19th-century co-operative principles with 21st-century technology. Platform co-operativism proposes the perfect marriage of collaborative technology with co-operative businesses (Heffernan, 2017). According to Scholz (2016), three principles lie at the heart of platform co-operatives namely communal ownership, democratic governance and transparent data. While platform co-operativism or digital co-operation is possible and necessary, in reality, it is not absolute or inevitable. Scholz (2016) proposes an online digital economy based on democracy and solidarity. Although socially justifiable, it is hard to imagine that the current owners of digital platforms are willing to share the wealth through a collective model of ownership.

According to Grossman (2016), the most disrupted industries are challenged by two forces. Firstly, low barriers to entry into the specific sectors lead to agile competitors. Secondly, the organization generally have large legacy business models that generate the most significant percentage of their revenue. The organizations in the most disrupted industries, therefore, have to mitigate embedded cultural and organizational challenges to address the pace of trade and the organizational change required (Grossman, 2016). Digital leadership should be cognizant of the changes while simultaneously transforming internally to the changes.

Rashid (2017) concludes that successful digital transformation requires digital maturity and modern organization culture. He summarizes the requirements as customer demands, process orientation and innovation in business. Customer demands are about delightful customer experience and customer loyalty. Process orientation involves digitization and employee enablement to promote data-driven decision-making for greater performance improvement. Innovation in business goes beyond existing business needs by fostering new innovative products and services.

The impact of the modern technology revolution will be more significant than any previous industrial revolution. The introduction of digital innovation in society pose various challenges to individuals in organizations and society. Ignorance of the potential impact of the digital disruptions should be avoided. Moreover, Schwab (2017) warns about the impact on society, with radical changes in the way diverse communities that compromise modern society will develop and relate to one another.

The digital age will bring significant changes to people in organizations and society with the nature of jobs that will change, the interpersonal communication of new generations changes and the availability of data constantly increases.
Schwab (2017) describes the effects as the speed of everything happening much faster than before, the breadth of influence is much broader in organizations and society, the depth of multiple radical changes is simultaneously and complete digital transformation in the system. The premise of the extremity of the impact of digital transformation is that human needs and desires are infinite, where the potential process of supply by humans should also be infinite (Hollis, 1992). Consequently, excluded economic recessions and other cyclical trends, work should always be available for everyone.

2.3.4 The Impact of Digital

According to Castells (2014): “In all moments of major technological change, people, companies, and institutions feel the depth of the change, but they are often overwhelmed by it, out of sheer ignorance of its effects” (p.10). The recent proliferation of the digital phenomenon removes constraints to create exciting new possibilities that could positively affect the lives of individuals and influence enterprises (Westerman, George, Bonnet, Didier, McAfee, 2014). Schwab (2017) predicts that the fourth industrial revolution will have a global impact with prodigious and multifarious intertwined effects. The elements of the digital world including hardware, networks, software and data are pervading the business world irrespective of industry or geographical location whereby organizations will become much more

digitalized in the future (Westerman, George, Bonnet, Didier, McAfee, 2014). While the fourth industrial revolution could empower citizens, the potential negative impact is the reduction of the interest of individuals. The World Economic Forum describes the phenomenon of the disempowered citizen whereby “individuals and communities are simultaneously empowered and excluded by the use of emerging technologies by governments, companies and interest groups (WEF, 2016, p.13).

Keynes (2008) warned against widespread technological unemployment due to the discovery of means to accelerate the economy that will reduce the use of labour without finding new uses for labour. Importantly, it should be noted that despite the potential positive impact of digital technology on economic growth the potential on the labour market should not be neglected. The fears about the effects of technology on the labour market are not unique to digital innovation. However, the potential impact could be far more significant thereby warranting the careful handling of the situation.

Goldin and Katz (2007) investigated the influence of technology on the wages of educated individuals in the twentieth century. It is common to both halves of the century that technological change increased the demand for skilled and educated workers. Interestingly, the U.S. wage differentials were unusually high at the beginning of the twentieth century, but decreased in several stages over the next eight decades, only to increase from the 1980s. Goldin and Katz (2007) concluded from the early 1980s up to 2005 that the labour market premium to skill rose sharply.

The canonical model perspective emphasizes that the return on skills with investment in education be dictated by the increase in the supply of skills in the labour market as a result of technical changes. Importantly, the canonical model assumes technology is exogenous and generally that technological change is skill-based. Acemoglu and Autor (2010) postulate that improvements in technology naturally increase the demand for more skilled including college graduates, relative to non-college workers. In conclusion, the unskilled could population will have a problem in the digital era, while the skilled and educated will have opportunities to increase their income. On the contrary, the results of the research by Acemoglu and Autor (2010) suggests wide-ranging consequences on the extent of skill biases of technical change across different periods and countries.

The wealth distribution in the world is unequal indeed. According to the Credit Suisse Global Wealth Report of 2016, the wealthiest 1% of the global population control half of all assets, while “the lower half of the global population collectively own less than 1% of the global wealth” (Kersely & Koutsoukis, 2016, p.2). The report further establishes that wealth inequality continues to rise. Moreover, while the lower fifty percent of the population owns less than one percent of total wealth, the wealthiest top 10 percent own a staggering 89 percent of all global assets (Kersely & Koutsoukis, 2016). Globalization and digital innovation will exacerbate the situation through the opening of markets with fewer boundaries and limitations on trade.

The evidence on labour substitution from the fourth industrial revolution suggests that fewer jobs are being created in new industries than previous revolutions (Hollis, 1992). According to an estimate by Frey and Osborn (2015), the extent of new jobs created by technologies throughout the start of the 21st-century has been disappointingly low, with only about 0.5% of the United States workers in 2010 working in new industries that did not exist in the previous decade. The figures are significantly lower percentage than the 8% of new jobs created in new industries during 1980 to 1990, and the 4,5% of new jobs created in the following decade (Frey & Osborne, 2017). The findings corroborate with the US Economic Census shows that innovations in information and other disruptive technologies tend to raise productivity by replacing existing workers rather than creating new products needing more labour to produce them (Hollis, 1992). Importantly the results indicate a downward trend in new jobs over time through modern technologies.

The increased in the use of computer technologies had a negative influence on the most routine work, such as repetitive calculating, typing, sorting or repetitive motion action in the labour market (Berger & Frey, 2015). Frey and Osborne (2013) quantified the potential effect of technological innovation of unemployment by ranking different professions based on their probability of being automated. The research concludes that employment will grow in high-income cognitive and creative jobs and low-income manual occupations, but will significantly diminish for middle-income routine and repetitive jobs (Frey & Osborne, 2017). Moreover, at the same time, the demand for nonroutine interpersonal and analytical skills increased dramatically.

Berger and Frey (2017) conclude that the displacement of routine tasks by computer technologies have also created new employment opportunities for workers with cognitive abilities and non-routine social skills.

Technologies introduced in the digital have made a significant societal impact. Some people believe automation will enable humans to move from less menial to more meaningful employment that requires creativity and human interaction. Ford (2015) warns against the potential increase in job market segregation between the low-skill/low-pay and high-skill/high-pay segments. The hollowing out of the entire base of the jobs skills pyramid could lead to growing inequality with a subsequent increase in social tensions. Robotics and advanced self-service technologies are increasingly deployed across nearly every sector of the economy that could primarily threaten lower-wage jobs that require modest levels of education and training (Wallace, 2018). Schwab (2017) notes that even with automation, humans will still be needed to support the automated production processes. According to Ford (2015), creative destruction may be a comforting hypothesis with the proliferation of new technologies to positively influence humanity.

Moreover, Ford (2015) argues that new technologies are not creating new jobs, but instead it is reducing jobs. Similarly, Schwab (2017) predicts that with improved technologies companies can do more work with fewer employees. Ford (2015) postulates the potential negative impact of automation and artificial intelligence on the economy where it is no longer just blue-collar jobs that are being automated. The

impact of exploding opportunities in information technology, big data and artificial intelligence on the economy warrants a warning of the triple revolution that Ford (2015) define as income inequality, sinking wages and evaporating purchasing power. Ford (2015) proposes a social approach with a guaranteed income for all. The unlikely approach is controversial, but it also attempts to address the gleaming potentially adverse effects of digital innovation.

Job market polarization defines the propensity for the economy to drastically decrease middle-class skills jobs, to replace with a combination of high-skill professional jobs and low-wage service jobs (Autor, 2010). The occupational polarization can be illustrated with an hourglass-shaped job market with smaller middle portions and the desirable jobs at the top or bottom end. Autor (2010) identifies four specific mid-range occupational categories that have been impacted by the polarization as sales, administrative, production and labourers. Autor (2010) concludes that the primary driving forces behind job market polarization are “key contributors to job polarization are the automation of routine work and the international integration of labour markets” (p.4) and more recently, as promulgated with globalization, offshoring.

There is fear that a significant portion of current jobs is at risk to disappear without the opportunity of replacing it. McKinsey Global Institute (2017) estimates that between 400 million and 800 million individuals could be displaced from their jobs by automation by 2030 around the world. Even more alarming, a study by Frey and

Osborne, 2013) corroborates the by estimating that almost 50% of jobs, depending on job type and country, are at high risk of being eliminated over the next 20 years. With automation and digitalization, full employment may not be required to produce certain goods and services as organizations will make use of the automation opportunities or be at risk of going out of business. Business leaders should lead the social transformations brought on by digital innovations. Schwab (2017) appeals to leaders to get involved in dialogue, debates implications and viable solutions and participate actively in the search for solutions.

Digital influences on all aspects of human lives as it invades privacy due to its entrenchment in all aspects of our world. It touches humans in more ways than any previous innovation. One of the most significant individual challenges posed by the proliferation of the internet and social media is the increasing degree of interconnectedness with legitimate concerns about privacy. Michael Sandel observed that “we seem to be increasingly willing to trade privacy for convenience with many of the devices that we routinely use” (Segran, 2015).

2.3.5 The Digital Workforce, Workplace and Workface of the Future

While assumptions about future workplaces are still being framed regarding current patterns of employment and economic migration (Mckenzie, 2017), it has become imperative to postulate the real influence of digital on people in the workplace
In the context of constant change through digital disruption, the growing occurrence of technological influences the approach of people to work. Technology impacts the

way the modern workplace is structured, and the way tasks and responsibilities are carried out. Moreover, the ubiquitous presence of technology in the lives of individuals may limit the development of high levels of self-awareness and limit opportunities for authenticity (Colbert, Yee, & George, 2016). The influence of individuals in organizations through digital transformation has changed and will continuously evolve in future the way jobs and organizations might be redesigned. The challenge for modern organizations is to leverage the advantages of digital technologies and aligning the competencies of a digital workforce to ensure effective communication and collaboration while mitigating potential disadvantages

The digital workforce brings essential competencies to the workplace, whereas the prevalence of technology may impact identity development and expression, interpersonal relationships and collaboration abilities in individuals (Colbert et al., 2016). Moreover, Colbert et al. (2016) emphasize that the increasing use of technology has complex effects on the development and expression of identity of individuals in organizations.

The pervasiveness of technology in the everyday lives of people may impact the quality of human interactions. Turkle (2011) observed that the continuous presence of technology has changed how individuals interact with others and the expectation of individuals from relationships. Moreover, the plethora of opportunities, including social media, for self-presentation in digital worlds limits the self-awareness of individuals (Turkle, 2015).

In the context of constant change motivation of individuals in organizations are changing. The continuous proliferation of digital innovation into organizations and society is exacerbated by the obsession of humans with connectivity and social acceptance. Some organizations are reducing their reliance on email and other electronic communication to encourage more face-to-face communication (David Burkus, 2016) in an attempt to increase cognitive levels for improved efficiency in problem-solving and decision making. Moreover, with higher levels of digital fluency to the workplace, the digital workforce may respond well to gamification motivation strategies similar to the virtual world. In gamification, the application of game design methodology, motivation and principles (Robson, Plangger, & Kietzmann, 2015) has already become a popular strategy to increase employee motivation in organizations (Pettey & van der Meulen, 2011). Again, the world is changing with digital and alternatives approaches could be required in the future to motivate people to improve performance.

Empathy is broadly defined as “the reactions of one individual to the observed experiences of another” (Davis, 1983, p.113). In specific contexts, it is postulated that the increased use of technology may be associated with declining levels of empathy. A cross-temporal meta-analysis between 1979 and 2009 among college students in the United States found that students inclination towards dispositional empathy levels decreased (O’Brien, Hsing, & Konrath, 2010). Whereas the exact cause of the effect is unknown, the idea that limiting technology use or increasing in-person connections might increase emotion recognition is intriguing.

Employees have an abundance of information at their fingertips, the ability to collaborate with colleagues across the globe and deliver products with increasing capabilities at decreasing costs. The modern preferred organizational communication methods have changed humanity wherein texts or emails the ability to ask questions, develop closeness, togetherness and understanding are sometimes neglected. Importantly, face-to-face communication has some advantages over technologically mediated communication. Interestingly, Barley, Meyerson and Grodal (2011) found that employees who spend more time processing email have higher perceived levels of stress at work. Jackson, Dawson and Wilson (2001) found that with the continuous interruptions from emails, individuals may have difficulty in focusing attention on complex problem-solving or creative idea-generation tasks. New technology has blurred the lines between work and non-work spheres (Ramarajan, 2013). Moreover, in a study of the daily intrusions of emails on non-working hours Butts, Becker and Boswell (2015) found that increased time required to respond to email outside of work was correlated to higher anger levels and increased work-family conflict.

Globalization has led to the increased use of virtual teams, and although there are substantial advantages, the coordination across team members can be challenging due to reduced effectiveness in managing the teams appropriately (Gilson, Maynard, Jones Young, Vartiainen, & Hakonen, 2015). Interestingly, an increase in the efficiency of employees responsible for idea generation or complex problem solving may be seen with scheduled periods of uninterrupted of any technological intrusions

(Sykes, 2011). The digital workforce will need to develop new ways of working to leverage from the full capabilities of technology, while continually recognizing the challenges of continuous increasing technological presence.

2.3.6 Towards a Digital Innovation Framework

Irrespective of the level of co-operativism or pure capitalism, organizations that embark on the journey digitalization require a strategy for leaders to transform the organization. The Greek philosopher Heraclitus said that change is the only constant (Baloyannis, 2013). With the context of constant change, the transformation from traditional thinking to digital is challenging for leaders, whereby digital innovation frameworks could assist leaders to define a digital implementation strategy to maximize on the opportunities of the digital era. The proposed framework investigates how digital innovation should be incorporated into a digital strategy. Moreover, with an understanding of the impact of digital a better understanding will assist in the improvement of the understanding of the total influence of digital innovation on organizations and society.

Through careful contemplation, the pre-requisite recommendation is that organizations should be digitized as a prologue to digital transformation. According to Ross (2017) without digitization, the attention of managers and leaders attention will be consumed fixing operational issues, without progressing to digital. However, according to the MIT Center for Information Systems Research (CISR), despite more than 20 years of business digitization history only 28% of established companies

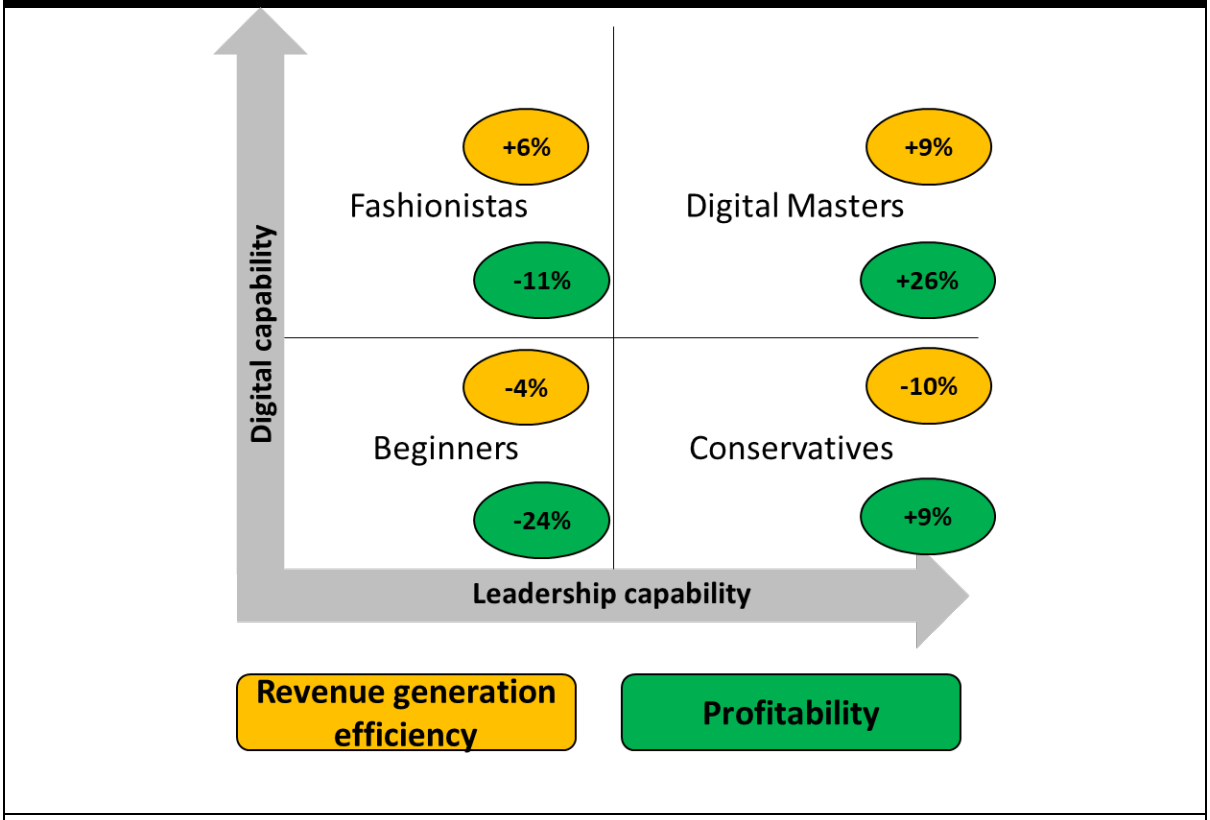
have successfully digitized. Moreover, the enigma of digital can be mostly clarified through the internal organizational digitization process as the preamble to digital transformation.

The context of proposed digital frameworks is analysed from an internal and external perspective. The internal view is expanded into strategic, tactical and operational, further based on the background of Information Technology incorporating the People, Process, Technology and Information (PPTI) framework. The external perspective includes customers, competition and constant change. The link between internal and external is proposed through a focus on sustainability to maintain the relationship between internal and external to include all stakeholders. The inclusion of a soft approach in the digital framework will be investigated. The analysis of the context will culminate in the synthesis of the information into a new proposed digital innovation framework.

Westerman, Bonnet and McAfee (2014) researched more than 700 companies results in revenue generation efficiency and profitability according to leadership capability and digital capability as illustrated in Figure 2.3.6. Westerman, Bonnet and McAfee (2014) define a Digital Master as a company that use digital technologies to drive significantly higher levels of productivity, performance and profit. Digital Masters find ways to build a clear vision of a radically different future by engaging employees in the common goal, fostering strong relationships between technical and business

people and managing the change through strong governance (Westerman, George, Bonnet, Didier, McAfee, 2014).

Figure 2.3.6
Levels of Digital Mastery with Performance Analysis



Source: Francois Volschenk (2018) based on Westerman, Bonnet, & McAfee (2014)

Interestingly, organizations that excel in leadership capability are significantly more profitable than their peers with both Conservatives and Digital Masters being respectively 9 and 26 percent more profitable than their average industry competitors. On the other hand, Beginners and Fashionistas with weaker leadership capabilities lack behind competitors with 11 and 24 percent on the profitability measures. Similarly, revenue generation efficiency increased with digital capability,

while a lack of digital capability resulted in decreased revenue generation efficiency. Importantly, an increase in digital capability with no rise in leadership capability results in revenue growth but with lower profitability, while in the case of Digital Masters an increase in digital capabilities with increased leadership capabilities delivers the required positive revenue generation and profitability. In conclusion, digital transformation should be driven by improved leadership capabilities in an organization.

Westerman, Bonnet, & McAfee (2014) identify four elements of leadership capability development including a shared transformative vision, strong governance, deep engagement and robust technology leadership. Moreover, digital masters use technologies are essential tools that can be combined to move closer to customers (Westerman, George, Bonnet, Didier, McAfee, 2014). Digital mastery transforms the customer experience to steer customers effortlessly through the digital experience (Westerman, George, Bonnet, Didier, McAfee, 2014). Accordingly, Westerman et al. (2014) propose a defined targeted experience per customer according to specific behaviour patterns. Moreover, applied digital innovation involves the use of data and analytics to inform the segmentation of the customer base of an organization.

Traditionally companies could develop a competitive advantage by delivering superior customer experience, optimizing internal operations or improving access to broader distribution channels. However, with new digital technologies organization can connect many participants by the creation of new platforms to interact and

transact (Westerman, George, Bonnet, Didier, McAfee, 2014). Importantly, digitally transformation in operations, or digitization, requires a vision that extends beyond incremental tweaks where it needs real-time right data. This view corroborates with Ross (2017) that postulate digitization as a pre-requisite for digitalization whereby proper operations transformation starts by overhauling legacy systems and information to provide a unified view of processes and data (Westerman, George, Bonnet, Didier, McAfee, 2014). Companies that struggle with becoming genuinely digital fail to develop the digital capabilities to work differently and the leadership capabilities required to set a vision and execute it (Westerman, George, Bonnet, Didier, McAfee, 2014).

Digital transformation is changing the face of organizations while also evolving industries. Dubois (2016) recommends three significant areas where organizations can digitally transform to capture potential opportunities. Firstly, intelligently utilizing digital data for insight into the knowledge-creation processes thereby creating competitive advantages. Secondly, integration leverages from the plethora of digital channels to transform organizational processes and create agility. Lastly, the impact of digital dynamics to improve organizations value proposition (Dubois, 2016). Digital progress has been the premonition of change that may affect the way businesses and society operate (Raskino & Waller, 2015). Raskino and Waller (2015) postulate that the uncertainty surrounding digital can be clarified by utilizing the nucleus of three macro forces namely resolution revolution, compound uncertainty and boundary blurring.

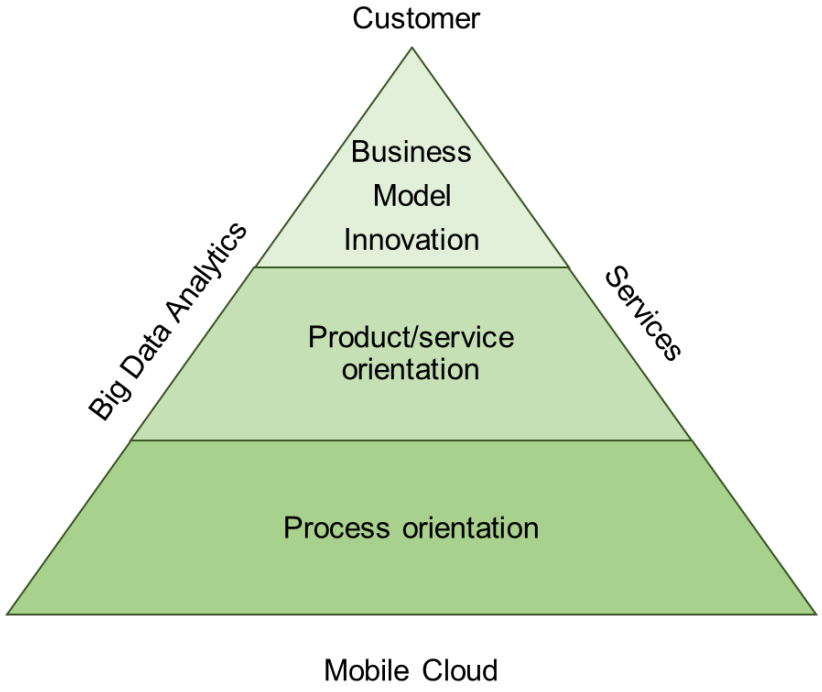
Rogers (2016) shows why traditional businesses need to rethink their underlying strategy and introduces the five domains of digital transformation strategy as customers, competition, data, innovation and value and further motivate the reasons traditional businesses require to transform assumptions in their organizations. The five domains which need to be converted if organizations want to succeed in the digital world: (1) how the businesses view customers as part of a network, (2) competition comes from platforms more than products, (3) how data can be leveraged as a strategic asset, (4) innovation is driven by experimentation and scaling and (5) value for customers is dynamic and adaptable.

Lamoureux (2017) defines digital transformation as “using digital technologies to improve products, processes or the customer journey (p.7).” According to Lamoureux (2017) regardless of the period, the successful use of digital technology is defined by three common factors to generate positive business outcomes. Firstly, formulating a vision to that use technology to improve services or products to maximize value. Moreover, defining the digital technology or information that is valuable to customers and should be embedded into products or provided as a service. Secondly, better and improved operational improvement processes that minimize movement utilizing automated methods that are faster, more reliable and have a lower cost. Lastly, improved customer experience by making it easier for the customer. Digital should make the customer processes, e.g. ordering, receiving, getting service or using the products more accessible.

2.3.6.1 Qualifying Requirements for Digital Transformation

Spil, Kijl and Salmela (2016) investigated the shift from process-oriented digital strategies towards a more balanced and integrated combination of product, process and business model innovation. The research into the progress of the Integrated Digital Strategy mapped organizations on the digital strategy pyramid in Figure 2.3.6.1.

Figure 2.3.6.1
The Pyramid of Digital Strategies



Source: Spil, Kijl and Salmela (2016)

In theory the division between product and process is evident (Fichman, Dos Santos, & Zheng, 2014; Grover & Kohli, 2013) but in practice this contrast is less

apparent. Rogers (2016) warns leaders to rethink business strategies for the digital age cautiously with a clear understanding of the strategical intended direction for the organization. Interestingly, the main conclusion of Spil et al. (2016) is that digital strategies are still process oriented. Moreover, organizations seem to be more directed toward process without the progression to service orientation or even business model innovation.

Kaufman and Horton (2015) propose digital transformation from a traditional to an integrated digital organization with the five components of mindset, model, strategy, implementation and sustainability approach. Importantly, the mindset should drive the direction of the organization with the three criteria of measurable, integrated and nimble. Firstly, big data and improved analytics should be utilized to measure cause and effect in real-time for agility in strategic activities. Secondly, all digital channels should be integrated transparent, coherent and cost-effective (Kaufman & Horton, 2015). Lastly, with the agility through potential collaborations with other small or medium size organizations will improve the potential to react to new innovations. Raskin and Waller (2015) define compound uncertainty as “the combined and complex effects of digital change that undermine and shift the mindsets, structures and practices on which leaders have previously relied” (p.14). Moreover, the principal uncertainties from digital change are in the three areas of technology, culture and regulation. Inventive reasoning has been a typical normal for effective leadership across generations. Moreover, in the digital era, innovative and creative thinking is a prerequisite for adaption and survival (Hollis, 1992).

2.3.6.2 The Digital Mindset

Digital requires constant change to identify new customers, partners, distribution channels, alliances, collaboration, cost structures and marketing approaches (D. L. Rogers, 2016). Data is the lifeblood of digital where data generally quickly shift the power structure in an organization. What the impact of data has had on organizations is evident with the data-driven organization culture that challenges the traditional culture in organizations. Traditional decision-making had previously been deferred to individuals with extensive experience in customer requirements. In the digital era, decision-making in an organization is generally challenged by data (Grossman, 2016). Data has shifted power to data owners to make strategic decisions. Organizations that foster a culture of making data-based decisions should have a stronger competitive position in the future (Grossman, 2016). Turning data into insights is an integral part of the competitive strategy of an organization (D. L. Rogers, 2016).

Moreover, data is the core of the digital transformation mindset whereby every business and every function within the organization has to learn to make sense of the massive amount of data being generated with every transaction of the customer, the suppliers and the employees. The proliferation of the internet and the availability of cloud storage make it easier to access data anytime and anywhere conveniently. Augmented humanity can improve collective insights with data at the right time and in the right context (R. Wang, 2015). The presentation of information in real-time

through an analytic algorithm will suggest or predict what the users require, thereby improving decision making. The result is enhanced customer experiences through utilization of transformational innovation.

2.3.6.3 Internal Perspective

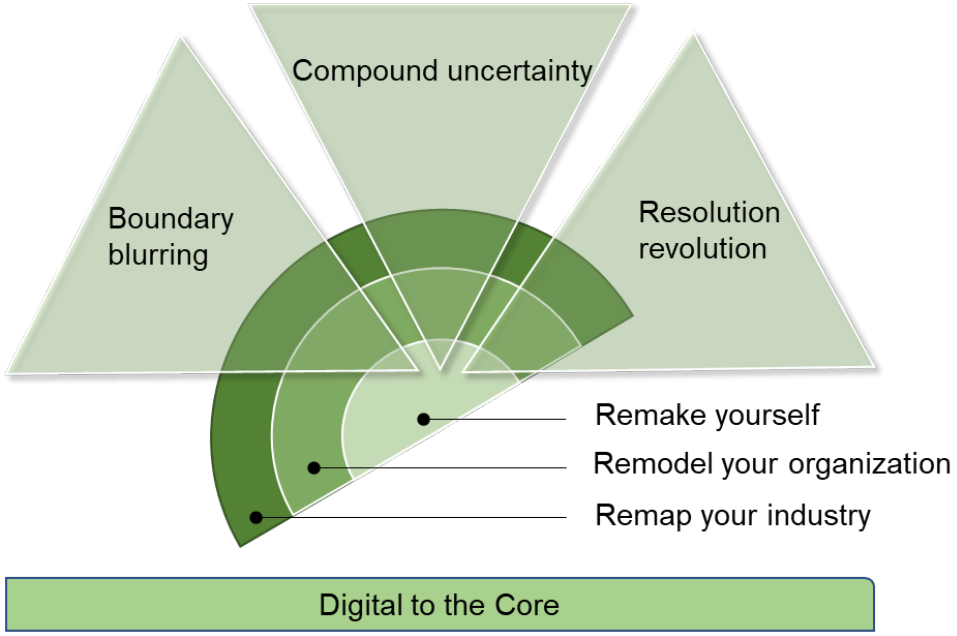
Rogers (2016) uses an internal perspective to illustrate how to harness customer networks, platforms, big data, rapid experimentation and disruptive business models by integrating it into existing businesses and organizations. The proposed implementation from an internal perspective should be enabled by integrating strategy, tactical and operational efficiencies. Existing businesses that leverage from relationships and processes to dynamically apply innovative technologies will be the winners (Lamoureux, 2017)**.** Established business should leverage emerging digital technologies to be the disruptors rather than the disrupted. Wang (2015) postulates disruptive digital engagement according to three principles of strategic, engaged and transparent. The principles will be discussed in the strategical, tactical and operational implementation below:

2.3.6.3.1 Strategic

Digital should be driven by the right people leading the charge (Grossman, 2016). Wang (2015) views that strategically visionary top-down leadership is essential for the potential of digital transformation and requirements for an integrated digital organization. Rogers (2016) argues that digital transformation is not about updating your technology but about upgrading your strategic thinking. Raskino and Waller

(2015) expand on the digital mindset organizations should operate at all three levels of the framework for remastering leadership for the digital age in Figure 2.3.6.3.1A.

Figure 2.3.6.3.1A
Digital to the Core



Source: Digital to the Core framework by Raskino and Waller (2015)

Firstly, remap the industry to fundamentally new industry paradigms. Secondly, remodel the enterprise on requirements to redefine the organization. Thirdly, remake leadership to thrive as a leader in the digital era. Even pre-digital-era companies can be reinvigorated with new strategies to capture the new opportunities of the digital world (D. L. Rogers, 2016). In light of the recent explosion of digital disruptors, few companies or industries are unsusceptible from future existence by resourceful entrepreneurs that extract value from the existing established infrastructure of others.

The Raskino and Waller (2015) 'Digital to the Core' framework contextualizes the digital mindset and strategic direction for organizations. Raskino and Waller (2015) define the resolution revolution as "the effect of being able to see and sense what is happening in both the physical and digital worlds in ever greater fidelity and detail, then understanding and more precisely controlling things, events and outcomes" (p.14). With the constant threat of digital disruption established companies should brace themselves for attacks by disruptors or the companies risk extinction. Merifield (2015) proposes confidence in a leader to drive the organizational culture change and foster confidence from employees. Moreover, Kaufman and Horton (2015) emphasize the importance of integrated performance management should be implemented throughout the divisions in the organization with routine measurements of social performance utilizing metrics and online monitoring tools.

Lamoureux (2017) propose a digital enablement matrix, as illustrated in Table 2.3.6.3.1B to assist in the clarification of where and how to use digital in specific industries based on the characteristics of the product or service as a commodity or differentiated product. Firstly, differentiated products disruption is likely with product improvements. Secondly, commodity products disruption is more likely through internal process improvements or customer focus improvements. The additional critical understanding of digital enablement is an internal or external perspective. Furthermore, the difference in the possibility of the implementation of digital disruption in differentiated products and commodity products should be understood. Improvements from an internal perspective address people, process and technology

in the form of product or service improvements, or internal process improvements for reduced costing.

Table 2.3.6.3.1B Digital Enablement			
	Digital Enablement		
	Internal perspective		External perspective
Products	**Improved products**	**Lower cost**	**Convenience**
	Product Improvements	Internal Process Improvements	Customer Focus Improvements
Differentiated Products	Disruption Likely • Automotive • Industrial Products • Medical Devices	Disruption Possible	Disruption Possible
Commodity Products		Disruption Likely • Agriculture • Financial Services • Manufacturing • Professional Services: Basic	Disruption Likely • Deliveries • Distribution Professional Services: Advanced
Source: Francois Volschenk (2018) based on Lamoureux (2017)			

An external perspective focusses on convenience improvements from a customer viewpoint. The enablement matrix bridges an important gap in the practical understanding of the application of digital transformation in organizations. The application in multiple industries is suggested where disruption is likely for differentiated or commodity products. The enablement matrix is only the first step in the identification of where digital disruption is possible, but the application is subject

to the successful implementation of business principles to enable organizations for success in the digital era.

2.3.6.3.2 Tactical

The adoption and implementation of a digital mindset is no longer an option for an organization, but rather a requirement for long-term survival. Implementation in the digital age requires more than just a top-down strategic approach but also limited hierarchical bureaucracy (Kaufman & Horton, 2015). The organizational redesign should embrace the principles of a digitally integrated organization through collaboration to identify emerging opportunities. Innovation in digital technologies enables continuous testing and experimentation. Constant learning, the rapid iteration of products and fail fast are becoming the norm of product and service development (D. L. Rogers, 2016). The measurement of success in the digital age transcends beyond traditional KPIs and business value metrics.

Authenticity is required to sense and respond to the customer, to refine nuances and the relevance of the experience (R. Wang, 2015). There are a significant amount of cloud platforms including Microsoft's Azure, Amazon Cloud and others. In a digital world, radical transparency is inevitable, and authenticity is earned with trust as the currency (R. Wang, 2015). "Trust drives influence, engagement and relationships" (R. Wang, 2015 p.69). Trust from the customer will be earned through the availability and applications and data and the confidentiality of customer information. Interactions with customers must reflect the authenticity of the brand promise and resonate throughout the whole organization at every level (R. Wang, 2015). The challenge is the balance

between the intelligence to utilize big data analytics versus the confidentiality of personal information.

Moving from real-time to the right time involves roles and responsibilities, time and frequency, location, business processes, sentiment and customer intent to engage in business (R. Wang, 2015). Companies must learn how to improve communication with customers to achieve high performance on social media (Balan, 2014). The digital movement is from experience towards more personalized interactions (R. Wang, 2015). Successful digital distribution should nourish a culture of digital DNA through strong leaders that embrace transformation. The intention driven association with other and the improvement of return of influence through the exposure on social media will be a driving principle for a digital strategy. The requirements of customers need to be predicted through contextual information or association on every occasion to improve digital engagement. The most important is that insights from a vast amount of available data should be the driving principles for future digital strategies by digital leaders.

2.3.6.3.3 Operational

Kaufman and Horton (2015) define the new normal by moving away from the traditional product-driven approach through customer experiences and touch points to values-driven principles. The portfolio of knowledge, expertise and skills have to be unique to rethink the way it fulfils customer demand (D. L. Rogers, 2016). Principles include the drivers for change that are, a digital culture with the consumer driving the change, goals of success comprises planet and community and

relationships that are sustainable based on shared values (Kaufman & Horton, 2015). Successful companies tend to settle into complacency with the value created continually eroding (D. L. Rogers, 2016). Companies should create a value proposition and a value-network (D. L. Rogers, 2016), that differentiates the company and build barriers to imitation. In the digital era, businesses need more than ever to build capabilities that equip businesses to identify, realize and manage new opportunities presented by the changing landscape (Merifield, 2015).

2.3.6.4 External Perspective

Raskino and Waller (2015) define boundary blurring as “the merging of digital and physical worlds, leading to alterations in the core products, propositions and possibilities for industries as we know them and softening the dividing lines between industries” (p.15). Disruptors sell what customers want, while traditional thinking in competitors result in selling what competitor company wants (Blanding, 2015). In a conventional marketing context, selling had to be driven to customers. In the digital world, the organization has to continuously change its processes and policies to respond to the evolving needs of the customers, and collaborate with customers through active engagement (D. L. Rogers, 2016). Wang (2015) proposes continuous engagement and collaboration with customers whereby demand drives digital transformation and innovation. Collaboration with customers should differentiate organizations from competitors in the digital era.

Wang (2015) postulate that digital business is not about selling products or services, but more importantly about keeping brand promises with the combination of trust and transparency to enable optimal efficiency in digital networks. The salient principles defined by Wang (2015) to develop successful disruptive digital business models within the context of the digital era are transformation focused, data, relevant, authentic, intention-driven and networked.

Transformational culture involves thinking about what customers want and delivering it (R. Wang, 2015). The innovators that can harness the power of information and communication technology are reaping ever more benefits (Lanvin, 2015). The digital business model shift involves two steps namely: self-knowledge including the organizational DNA, and the application of transformational innovation (R. Wang, 2015). Moreover, digital leaders should make a cognitive decision to analyse their unique situation in the context of the digital era, embed a digital DNA and move forward through transformational digital innovation. As an example, general conversations about cloud computing have been dominated by vendors who focus more on technology and less on business value (Iyer & Henderson, 2010). Wang (2015) proposes new business models and experiences that reflect brand authenticity.

Networked economies are disintermediating by cutting out the middleman. Competition does necessarily come from the traditional peers in the industry in the digital world (D. L. Rogers, 2016). Individuals and organizations can influence

markets on their own, but networked economies are required to realize the full market potential (R. Wang, 2015). The social world is not Business-to-business (B2B) or Business to Customer (B2C), but as a peer-based approach is Person to Person (P2P. Based on Wang (2015) networked economies applied to digital innovation have five characteristics:

- People-to-people networks drive the way people interact on a massive personalized scale. The people-to-people network should take advantage of laziness in humans by identification of the path of least resistance that customers can quickly engage with the system. An application that is available in the cloud or on various platforms should comply with the requirements of interaction on a massive scale and capitalize on the laziness of people. Dashboards or applications that are available on current search engines or social media platforms will enhance the customer experience and can be personalized;
- Force multipliers amplify the speed, intensity and influence of the person or organization in the network. Applications in the cloud are on a peer-to-peer network that will act as a force multiplier that amplifies output to produce more output faster, better and cheaper, through the interactions of all the members of the network. Digital leaders should recognize the strength of social capital. The highest level of taking a force multiplier is predictive hotspotting that will predict if something will happen, how it will happen, and when it happens through algorithms applied to streams of data (R. Wang, 2015).;

- The peer-to-peer principle is direct engagement, e.g. website, manufacturer or distributor do not handle the direct engagement with customers. Intermediaries and other barriers are taken away by connecting individuals that know what they want and what they are doing. Communication should be on a peer-to-peer basis, with the cloud hosting platform that only handles the technical, marketing and financial aspects;
- Friction is minimized through interactions in the network. Connections feed off each other and create different sets of experiences that is an extension of the reciprocal relationship that is required in cloud hosting. Application developers need platforms to market and promote their applications, and platforms owners need the content from the developers of the applications;
- Connections are made through digital systems that result in better pricing information. Blanding (2015) suggests unbundling content that allows customers to pick and choose what content they want to consume. Digital applications in the cloud should be available on a subscription basis, or a per use basis.

2.3.6.5 Sustainability: The Link between the Internal and External Perspectives

According to Adler (2006), the effects of technology depend somewhat on the social context. He postulates that the social context will encourage or discourage the adoption of the technology. More importantly, Adler (2006) states that with the adoption of technology, social context will improve the efficacy of how technology is used, thereby increasing the ultimate impact of technology. Rogers (2016) concludes

that digital is not about technology, postulating that digital transformation is about leadership and continuously thinking differently. The five domains of digital transformation, although very internally focussed in transformation, does not outline the importance of changes in organizational culture.

Traditional optimization of short-term profitability must be replaced with a long-term focus with emphasis on sustainable corporate planning beyond just corporate social responsibility towards the creation of shared values through shared business and social values. Beyond social business is the Digital Integrated Organization (DIO) that combines digital technology, digital marketing strategy and core human values to benefit all stakeholders (Kaufman & Horton, 2015). In digital business, where data is the heart of digital transformation, things are different from the traditional contextual relationships through digital imprints that happens when no-one is looking by everything in the interaction or engagement (R. Wang, 2015). The digital revolution has brought about significant changes in consumer behaviour (Martins, 2012). Digital systems use probabilistic models to predict answers through complex algorithms because decisions cannot be based on gut-feeling about a situation anymore (R. Wang, 2015). Decisions about information or products that a consumer wants will be based on real-time contextual relevancy with consideration of mood, environment, time and another consumer related context. Information from consumer choices and the utilization of other applications can be utilized in data analytics to market other products or applications digitally.

The collaboration between hosting partners and application developers, that tap into the people-to-people networks, will accelerate understanding of future events. Co-creation and co-innovation through new partners will be a driving force of success for a cloud platform. Progress in digital innovation will not be selling products or services but keeping promises and meeting customers' expectation outcomes as the most important (R. Wang, 2015). Wang (2015) suggest that trust built on transparency and reputation will foster long-term brand loyalty. Moreover, sustainability can only be secured through trust.

Schwab (2017) introduces a soft approach to digital to harness inner strengths with the introduction of the four distinct types of intelligence to nurture in individuals to successfully drive digital innovation.

Schwab (2017) states that:

> ” Understanding and grasping new ways of keeping our physical bodies in harmony with our mind, our emotions, and the world at large is incredibly important, and we are learning more about this through the incredible advances being made in numerous areas, including medical sciences, wearable devices, implantable technologies and brain research (p.111).”

Schwab (2017) firstly introduce the mind as contextual to understand and apply knowledge. Good digital leaders make sense of context with the ability and willingness to anticipate emerging trends and connect the dots (Hollis, 1992).

Secondly, the heart as emotional to process and integrate thoughts and feelings relate to the self and others. David Caruso clarifies emotional intelligence through the statement that “it is very important to understand that emotional intelligence is not the opposite of intelligence, it is not the triumph of heart over head – it is the unique intersection of both” (Schwab, 2017, p.108). Persistent and intense change characterizes the digital world where emotional maturity will differentiate successful leaders from others. Schwab (2017) postulates an essential trait for coping with digital disruption is leaders at institutions should be equipped with high emotional intelligence resulting in more creativity, better equipped and more agile and resilient individuals. Thirdly, the soul as inspiration where inspired intelligence is about the continuous search for meaning and purpose to act towards the common good. Lastly, the body as the physical to cultivate and maintain personal health and well-being to apply the energy for the benefit of the individuals, organizations and society.

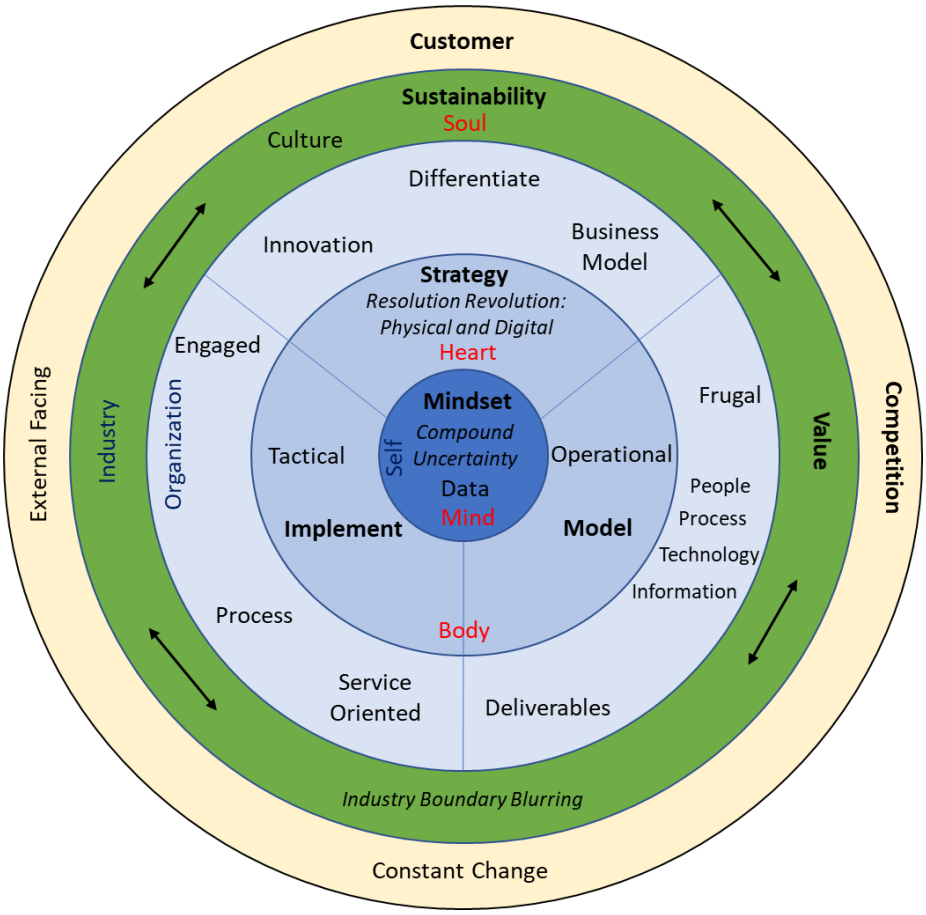
The conclusion is unmistakable that balance is critical for individuals that are engaging in digital, similar to the engagement of individuals in other fields. The concept of congruency is introduced as a structure to synthesis with a balanced approach towards the implementation of a digital transformation model, presented as the Digital Congruency Model.

2.3.7 The Digital Congruency Model

The synthesis of the literature with gaps in the models suggests the formulation of a new conceptual digital innovation model for organizations. The proposed model as

per Figure 2.3.7 utilizes congruency to incorporate the changing components to describe the context better.

Figure 2.3.7
The Digital Congruency Model



Source: Francois Volschenk (2018)

At the heart of digital is data (Rogers, 2016; Wang, 2015) as proposed through the digital mindset (Kaufman & Horton, 2015; Rogers, 2016) in the context of compound uncertainty (Raskino & Waller, 2015). Digital transformation is defined by the researcher as "the transformation of organizations or industries through the use of

data.” From the viewpoint of data as the core of digital, the views in the organizations are strategic, tactical and operational. Business units can have a practical application of the model to deliver the digital mindset. The strategy defines the business model that differentiates the organization through constant innovation.

Tactical is how digital is applied and implemented in an organization through engagement (R. Wang, 2015), service-oriented approach (Schwab, 2017; Spil et al.,2016) with the defined process including automation that digitized (Ross, 2017) the organization. The operational delivery is a through a model of operational excellence based on frugal principles (Leadbeater, 2014) through the PPTI framework (ITIL, 2014) incorporating people, process, technology and information to deliver the digital product or service.

The inside-out perspective from the self, to the organization, to industries through to external facing is proposed with a congruency approach to balancing the components to reach congruency. According to Esposito and Williams (2010) explicitly congruence is an inside-out perspective that focusses mainly on the internal referencing of humanity, while sustainability is an external perspective that reference society and culture. Sustainability connects the internal digital perspective with the external facing customers, competition and other stakeholders in the context of constant change. The delivery of value (Lamoureux, 2017; D. L. Rogers, 2016) is required within the context of industry boundary blurring (Raskino & Waller, 2015)

through an organizational culture (Grossman, 2016; R. Wang, 2015) built on transparency and trust (R. Wang, 2015).

The inner strengths of individuals to deliver digital congruency through intelligence (Hollis, 1992) aligned to organizational requirements is illustrated in the body, mind, heart and soul. The context of uncertainty is defined with data as the core of the digital mindset to conceptualize the new digital differentiators for organizations. The heart integrates the thoughts and ideas to deliver on the strategy. The body requires the energy to fulfil the requirements of delivery of the system on a tactical and operational level in an organization. The soul continuously searches for meaning and purpose as delivered with the sustainability as the link between internal and external perspective.

With the synthesis of multiple concepts combined with a pragmatic approach, the proposed model could address the requirements to deliver digital transformation in the digital era. In the digital world with the threat of self-centred individuals, it is necessary to rebalance this trend towards a focus on the self with a pervasive sense of common purpose (Hollis, 1992). Society needs to share a common purpose of humanity collectively to mitigate the potential risks of digital disruption. The implications of digital disruption in a social context are neglected in the congruency model. The limitations of a holistic and balanced approach that incorporate social into a sustainable business model will be investigated with social justice theories to balance digital transformation with the inclusion of a social perspective.

2.3.8 Conclusion on Digital Innovation

Organizations could be slow to react to digital transformation due to traditions, the nature of the organization or individual resistance to change. Merifield (2015) postulate that digital transformation means something different to everyone, but digital leaders are 26 percent more profitable than their industry competitors. Grossman (2016) researched the industries that are being disrupted the most by digital concluding that leaders should leverage from three levers being catalytic roles, culture and commitment. Catalytic functions of new employees can act as catalysts to speed up the digital transformation (Grossman, 2016). Individuals could be brought in to disrupt traditional thinking and business models. Grossman (2016) further identifies a unique combination of psychometric attributes of individuals that are potential disrupters including significantly more innovative, disruptive by cutting through bureaucracy, social artfulness, bold leadership and determination. There is no doubt that the inexorable integration of technology in our lives will impact our notion of identity and whether it could diminish some of our quintessential human capacities such as self-reflection, empathy and compassion (Hollis, 1992). Moreover, new roles should be explicitly created where individuals are tasked with driving growth with responsibilities in the positions to combine strategy, corporate development, investment and operations with the objective of discovering meaningful new revenues streams.

Ross (2017) warns not to confuse digital with digitization. Digitization involves the standardization of business processes driven by potential operational excellence and

reductions in cost. Moreover, for many organizations, digital transformation is only digitization or digital optimization in disguise, where the new digital initiatives merely augment existing services (Denning, 2018). The concept of digital transformation is an all-encompassing change involving people, process, systems, operations, technology, culture and finance in an entirely new paradigm of organizational change. Peter Drucker said “culture eats strategy for breakfast” that articulate the heart of digital transformation.

Traditional approaches by organizations to obtain competitive advantage included cost leadership, market-leading research and development or marketing (Porter, 1998; Teece, 2010). In contrast, Spil et al. (2016) postulate that the ability to capitalize on new digital technologies will become a more significant way to both maintain, improve and strategically change the competitive positioning of an organization. The research by Spil et al. (2016) observed a lack of e-leadership or the inability of organizations to capitalize on the new business model and product innovation opportunities that were enabled by digital technologies and resources. Established companies do not have to change their business model or become digital platforms by emulating other digital disruptors (Lamoureux, 2017). Schwab (2017) predicts the winners of digital will be those who can participate fully in innovation-driven ecosystems by providing new ideas, business models, products and services. Ross (2017) warns that digital transformation will be a long journey, consequently encouraging organizations to start soonest with the process.

The digital era constructs technology as an all-pervasive and dominant part of the individual lives of individuals. Schwab (2017) postulates that humankind is yet to understand the full impact of the technological change, but more importantly, the effect on the mind, heart, soul and body. The challenges of digital innovation are even more daunting than the opportunities are compelling (Hollis, 1992). Humankind should work to transform the challenges into opportunities by proactively prepare for the potential impact. The world is changing, hyper-connected, and uncertain but the opportunity to shape the future in a way that benefits all is this possible, and importantly, the appropriate time for action is now (Schwab, 2017). A valuable lesson learned from the Industrial Revolutions is that the unique skills and abilities of people resulted in higher than average wages (Ornstein, 2017). The Industrial Revolutions increased inequality, where the vast portion of wealth attributed to economic growth was allocated to the economic elite only.

With the failure of technological development to consider the requirements of the market of potential users, social science articulated its contribution to innovation. More than 20 years ago Williams and Edge (1996) suggested that social science, with the introduction of the Social Shaping of Technology (SST), should have a more significant role in technological development in the following decades. SST researchers articulated their role as practitioners in technological design, policy formation and specialisms in heterogeneous engineering (Williams & Edge, 1996). The successful utilization of SST, in the long run, was argued could be the undoing of the concept of technology being disassociated from social activity. Consequently,

Williams and Edge (1996) suggested modes of analysis for technology, incorporating social science, which is different from the status quo. Unfortunately, minimal progress has been made in the last two decades to emphasize the importance of social science in technology where it has not been extensively studied to explain the social shaping of technology.

As the evolutionist Martin Nowak remarked, co-operation is the only thing that could possibly rescue humankind (Hollis, 1992). As the principal architect of four billion years of evolution, co-operation has been a driving force because it enables people to adapt amid increasing complexity and strengthens political, economic and social cohesion (Hollis, 1992). Humans should collectively take responsibility for a future where innovation and technology are centred around humanity. Technology should be employed to drive humankind towards more sustainable development (Hollis, 1992). The future ought to be formed by putting individuals first and enabling them to make a difference. Humankind continually needs to be reminded that all modern technologies are foremost tools made by people for people. The closer technology mimics the reality of human existence the more beneficial the impact of digital transformation will be on humanity.

With a better understanding of the uncertainties of the disruptions in the digital era, an investigation into the social side of the proposed co-operation of humankind is required to contextualize the social influence of digital on individuals, organizations

and society. The understanding of a just society will be investigated based on social justice theories in the following section.

This section investigated innovation, the digital challenge and digital innovation. The following section will further the understanding of technology and innovation with the introduction of social justice to better the understanding of the influence of innovation on society.

2.4 PART THREE – SOCIAL JUSTICE THEORY

The great Aristotle defined a “man in freedom” as the pinnacle of human existence, where the man in freedom is an individual free from any concern for the necessities of life in their thoughts and actions (Wolcott, 2018). Elites in societies from different countries in the world, inspired by social justice, have for centuries aspired for the absolution of gainful employment. Despite the plethora of research and social theories, the debate on the decrease of social injustice is still relevant and vibrant. Historically, the common aim of socialist movements was the nationalization of the “means of production, distribution, and exchange” (Hayek, 2011, p.56) with the objective of controlling economic activity toward some ideal of social justice. The diversified socialist schools differ predominantly in the political methods of the reorganization of society. While Marxism was revolutionary, Fabianism was gradualist, but the two movements were similar in their conceptions of the new society. In principle, socialism postulates the collective ownership of the means of production for employment use and not for profit (Hayek, 2011).

Social justice is anchored in the belief of “dignity and sovereignty of the human person, a just society is one in which people are treated equitably” (Hocking, 2017, p.29). Interestingly, according to Beugre (1998) in the study of justice the power of perception is more important than reality itself. Moreover, the challenge in social justice is the continuous required interaction between agency and structure in an attempt to achieve the best perceived balance for most individuals. The primary challenge in the field of sociology is an understanding of the relationship between

agency and structure. Agency identifies the thoughts and actions taken by people that express their individual power (Cole, 2018). In contrast, structure is the factors of influence such as social class, religion, gender, ethnicity, ability and customs that direct or limit the potential decisions of an individual (Müller, 2015). Similarly, according to Cole (2018) structure refers to the complex and interconnected set of social elements in relationships or institutions that conspire to shape thoughts, behaviours, experiences and choices in the overall life courses of individuals.

With a world population of close to seven billion people, globalization affects social justice with the total world market not limited to the size of an individual country. In a just society, the majority of people should be committed to a legitimate form of equality, with a potential redistribution of income and wealth to less fortunate people in society (Ornstein, 2017). The increased market size opens more opportunities for millionaires and billionaires to grow wealth while potentially increasing further inequality and reducing social justice in the world. Importantly, with the introduction of the concept of the influence of digital innovation on individuals in organizations and in society in chapter two, the potential of digital to enable individuals to act with authority will be postulated in alignment with social justice principles. Social justice literature will be investigated from a philosophical and historical background in the context of society and organizations in the following sections.

2.4.1 Social Justice

The concept of social justice is based on the Christian doctrine of helping less fortunate people including the weak, sick and oppressed (Ornstein, 2017). The

plethora of Social Justice meanings have different meanings for different individuals. According to Ornstein (2017) in a just society, individual rights displace group rights, corporate rights and property rights**.** Moreover, in a fair and just society, individuals are remunerated by the goods and services produced for the common good. However, in a society that only emphasizes excellence individuals are paid by supply or demand through profit generated with success measured and wealth distributed that is based on the profit generation.

Social justice in a synthesis of the perspectives of prominent social justice authors Rawls and Miller can be described as the contract between a society and its members with defined conditions of the interaction and actions of the individuals in the society. According to Rawls (1999), the basic structure of a society can be viewed as a single unified scheme with participants in social arrangements that influences their life prospects and expectations. In contrast, the worldview of moral individualism leaves little room for collective responsibility or for the duty of carrying the moral burden of social injustice. Importantly as a vital precept, Rawls (1993) envisioned justice to mean fair and impartial distribution of opportunities rather than a redistribution of resources.

Furthermore, to enable a better understanding of the concepts of social justice, a brief historical review of the history of social justice will be introduced. The concept of social history could be traced to the great thinkers like Plato and Aristotle. Plato positively pronounced that each soul tends toward good (Balau & Neagoe, 2017).

According to Plato (1985), man is not fulfilled in isolation but in harmony with other people. Similarly, for organizations as a form that satisfy the cohesion function of individual needs, the “concept of justice will be more easily recognized at the State level, rather than at the individual level” (Plato, 1985, p.58). For Aristotle, the conceptualization of social justice, in a broader meaning than narrower, particular and socio-economic vectored view, is related to the idea of universal justice with an all-encompassing virtue (Munz, 2017a). According to Aristotle (2000) “we see in fact, that anyone, who can be described by using righteousness as a character trait, is consequentially appropriate to act in accordance with it, to practice justice and be oriented towards what is right” (p.90).

Moreover, Aristotle considers that all virtues reside in justice (Balau & Neagoe, 2017) where “it is the most comprehensive form of mortality, because it is the expression of the full moral orientation of the will; it is however perfect, because who has it, with respect to the other, not just for themselves, exhibit moral character” (Aristotle, 2000, p.91). The development of social justice is synthesized based on the direction of thought, and the context of the development is illustrated in Table 2.4.1. During the seventeenth and eighteenth centuries, some absolute monarchs used the premise of social justice to justify the consolidation of state power. Thomas Hobbes (1588-1679) saw the construction of an external authority was essential to the maintenance of a just society (Calma, 2010).

Table 2.4.1 The Development of Social Justice			
Period	The Direction of Thoughts or Context	Significant Contributors	Direction of Thoughts
The Great Thinkers	Various Philosophical mindsets	Plato (427-347 BC) and Aristotle (384-322 BC)	Philosophical
17th and 18th centuries	Political	Thomas Hobbes (1588-1679)	Preventative – minimize harm in society
1750+	Political and social radical	Rousseau (1712-1778)	Opportunities and individual liberty
1850	Political	Karl Marx (1818-1883)	Constant injustice in communities
1891	Religious	Rerum Novarum. Catholic priests	Personal principles
1970	Political and philosophical	John Rawls (1921-2002)	The social contract with a detailed vision of egalitarian liberalism
2000	Pragmatic	David Miller (1946-)	The market is fair. Individuals get what they deserve.
2015+	Neo-pragmatic	The new era of the digital social mindset	The different complexion of the influence of society through social capital
Source: Francois Volschenk (2018)			

The external authority or state should create and enforce laws and social norms to preserve peace. Furthermore, this state should restrain humans from harming each other in the pursuit of self-interest. The concept of a just society was conceptualized with the emergence of commercial and industrialized capitalism. The central premise

of this concept of social justice emphasizes collective responsibility to prompt the creation of a system of laws to mitigate individuals from harming others.

Rousseau (1712-1778) lead the revolutionist that initiated the change of the shape of modern westerly institutions. The revolutionist view postulated that social justice realization was associated with the protection of individual liberty, the achievement of equality and the community of humanity. The concept of social justice from the revolutionist emphasizes individual liberties and equality of opportunity, rights and outcomes and importantly, the inequality and injustice in the centuries with the most prominent period of revolutions.

The gap between the ideals promoted by social justice development in the preceding centuries and the realities of persistent inequality and injustice became apparent in the 19th and 20th centuries. Karl Marx (1818-1883) argued that humans did not have a fixed and innate nature, but were instead defined by their social relationships, which in turn, were dependent on the economic structure of society and the classes it produced. According to Marx, the origin of injustice was political-economic structures that promulgated the conquest of economic gains, discrimination, profiteering by specific individuals and misuse of privileged position.

The social justice development up to the introduction of Catholic Social Theory (CST) in 1891 through the Rerum Novarum with the inculturation of practical wisdom, was generally influenced from a political viewpoint. The basic premise of Catholic Social

Theory with a religious orientation is the common good with economic justice and solidarity. Social justice will be further explained in the following sections with a brief discussion and introduction of Catholic Social Theory as a religious viewpoint that could positively influence business leaders. Lastly, social justice through leadership post World War II will be discussed.

2.4.1.1 Introduction to Social Justice Theories

In alignment with the Foucault principle of a fact is only related to a specific time, every theory of social justice is related to the time or social setting. The formal theories of social justice are generally derived from broader moral perspectives (Bankston, 2010). According to Bankston (2010), the term social justice rests on two governing principles. Firstly, social justice can be viewed primarily as the redistribution of goods and resources to improve the situation of the disadvantaged. Secondly, the redistribution is related to the rights of the relatively disadvantaged in making claims on the rest of the society. Importantly, the notions of good or right applied to a social system are subject to contextual relativism (Balau & Neagoe, 2017). Furthermore, the extent to which social theories are products of social settings is debated in the sociology of knowledge. The premise of social justice is that justice would prevail when individuals received what they needed on the basis of their humanity and not on what they deserved because of just their social class origin or productivity. This idea of social justice emphasizes redistribution, based on human need and the perceived value of distribution in contrast to the social status or productivity of individuals.

In general terms, social justice theories can be grouped as distributive, egalitarian and enablement theories. The distributive theories of social justice focus on the potential re-allocation of limited resources justly and appropriately amongst individuals of society (Rawls, 1999; Wahid, Ahmad, Nor, & Rashid, 2017). According to Kolm (1996), human resources are the scarcest resource in terms of capacity that can be categorized into productive and consumptive capacities. While productive capacity describes the ability of an individual to produce goods and services with skills and expertise, consumptive capacity relates to the satisfaction derived from the productive capacity (Kolm, 1996) The premise of egalitarian theories of social justice is the equal treatment in respect of what each person deserves (Nielsen, 1989). Societal resource reallocation should be managed to derive the greatest benefits for the most disadvantaged and helpless of society (G. A. Cohen, 1989; Nielse7n, 1989). The redistribution should be in a mutual consent manner to guarantee satisfaction of the unsatisfied needs of individuals in society (G. A. Cohen, 1989). The enablement theories of social justice focus on the behaviours of organizations to consistently add in the self-development of individuals, and importantly not inhibit any individual in society (Young, 1990).

Some of the most prominent theories will briefly be discussed to add more specificity to social justice theories, in terms of context, the premise of the theory, significant contributors and proposed implementation of the principles of the theory. Depending on the context the authors applied principles to derive philosophical theories in the

specific context. The synthesis of theories with an analysis of the implementation is illustrated in Table 2.4.1.1.

Table 2.4.1.1 Summary of Social Justice Theories			
Theory	Context and Premise	Significant Contributors	Implementation
Utilitarianism	Redistribution	Bentham, James Mill, Austin and J.S. Mill	Maximum good for the highest number of people
Self-perfectionism	Duties of own station	Bradley	Internal strength for improvement
Marxism	Liberating society	Marx	Liberating Society
The Theory of Rawls	Systemic approach	Rawls	Whole society and needs of disadvantaged must be addressed
Libertarianism	Based on rules	Nozick and Hayek	Justice and law as guidance
Pluralist Account	Individuals responsible for their own actions	Miller	Pragmatic unequal distribution, people get what they deserve
Comparative Approach	Pragmatic on decision making	Sen	The different complexion of the influence of social
Source: Francois Volschenk (2018)			

The significance of the implementation corroborates with Foucault with the fact that theories are relevant in context and period. The understanding assists in the understanding that the contextualization of a social justice theory should be framed

within an understanding of the environment. The understanding of the environment will assist whether the intended implementation is applicable in a modern era.

The most proponents of utilitarianism, Bentham, James Mill, Austin and J.S. Mill contemplated practicability and utility as the measure of virtue and justice. Bentham phrased the fundamental axiom " it is the greatest happiness of the greatest number that is the measure of right and wrong"' (J. H. Burns, 2005). Utility is the consideration of good, right, progress, morality and justice. Utilitarians promoted that the welfare of the destitute is protected and justice needs to be demonstrated. Moreover, according to utilitarianism useless, painful, evil and unjust should be changed or reformed in the interest of the highest number of individuals (Jatava, 1998). The utilitarianism view reflected the unequal distribution according to the status of individuals, where the rights of the disadvantaged were often sacrificed in favour of the privileged classes of society (Robinson, 2006). While J.S. Mill rejected a purely quantitative measurement of utility, the main critique of utilitarianism is the inability to quantify, compare or measure happiness or well-being. Another critique, based on the second order evils of Bentham, the potential that utilitarians are prepared to punish an innocent person for the potential of the greater good. Despite the critique, the utilitarianism view has made a significant contribution to social justice theory.

Green and Bradley were leading thinkers on the theory of Self-Protectionism that introduces the idea that each individual should do the duties of their station, as

defined in their assigned work as a teacher, worker or others. Self-Protectionism postulates that the establishment of a just and good society will be easier when individuals do the duties of their station. While Bradley considers the theory of “my station and its duties” to be the main foundation of justice, he acknowledges that it is an incomplete account of duties (Stern, 2011). Bradley acknowledges its limitations by arguing that where “individuals who have a capacity for art or science may have a duty to take up these activities” (Stern, 2013, p.21), that duty cannot be imposed on them by society, due to its private nature where that the duty does not relate to the good of others. The Self-Protectionism view believes justice can be achieved on an individual and social level with no contradiction between the two.

For Marxism, the concept of justice is the liberation of society through the reduction of the exploitation of class. In contrast, Rashid (2002) argue that Marxism is normative and does not provide any specific theory of justice, considers communism as a principle of distribution based on equality. For Marxists, the idea of justice has developed through the ages and changes based on economic conditions and relationships Marxists criticize capitalism to highlight the real interests of the workers. Freedom generally encourages people to aspire to equality. While the Marxian concept of communism or justice has been modified based on time, place or situation, the defining principle has remained, with an emphasis on human welfare. In Libertarianism, Hayek and Nozick reject the notion of social justice with a traditional understanding of justice as respect for law and rights. Libertarian theories of justice thus focus on the processes by which social results come about. The

Libertarian argument contains three central claims based on Nozick (1974) entitlement theory which postulates that distributive justice consists of three principles namely the principle of justice in acquisition, the principle of justice in transfer, and the principle of rectification for violations of acquisition or transfer. Libertarianism accentuates distribution according to the individual property ownership and without any redistribution (Ho, 2016). Justice is therefore defined by the processes and not by the outcomes.

2.4.1.2 Catholic Social Theory

Franciscan spirituality prompted the development of free markets in the thirteenth and fourteenth century in Italy (Bazzichi, 2003), while religious experiences in personal life and society provided knowledge to initiate alternative perspectives on business and economics (Cornuel, Habisch, & Kletz, 2010). Religious ethical orientation has apparently not lost its authenticity in globalized twenty-first century. The heritage of Catholic social thought from the Rerum Novarum in 1891, is an inculturation of practical wisdom into the lives and work of individuals in an industrialized society (Cornuel et al., 2010). The veracity of Social Catholicism is supported through the practical wisdom of Christian labour priests, entrepreneurs, activists and other stakeholder groups that all contribute to its longevity and achievements (Cornuel et al., 2010).

The teachings of Aristotle, with phronesis or practical wisdom, has been a fundamental principle of virtue in the Catholic tradition (Cornuel et al., 2010).

Future business leaders should take cognizance of Catholic traditions with its practical wisdom potential benefits to society. According to Cornuel et al. (2010) **s**tudying CST could be beneficial for experts in organizations as the doctrine "hinges on the accountability of the person at work, as well as on the accountability towards the person at work" (p.748). The consequences of the interactions of individuals within the organization are unpredictable, combined with the evolution of the social system, it exacerbates the potential influence on individuals.

In contrast to the liberal concepts in philosophy and economics, CST postulates that no single motivation drives the actions of individuals. According to Cassidy (2006), the basic premise of Catholic Social Theory is the common good, economic justice and solidarity. The common good encompasses all elements of social living including cultural, economic and political that enable individuals to attain fulfilment. Economic justice emphasizes that the economy is for people and not the inverse. Solidarity, or in simpler terms unity, is a defined commitment to the common good for all.

Importantly, Christian social ethics that is limited only to redistributive social policy, cultural and educational issues or to the welfare sector will become irrelevant in the near future (Cornuel et al., 2010). Moreover, any doctrine that unilaterally focuses idealized on principled positions but neglects the practical wisdom of business will be condemned limited specific cultural relevance (Cornuel et al., 2010). In the digital era, the prominence and influence of business cannot be ignored as an important centre of activity for society. In the globalization world ignorance of the importance of the

influence of business, and in specific digital transformation, could lead to cultural unsociability.

The Rerum Novarum despised labour, refusing to consider labour as merchandise contingent on the same rules as the supply and demand of goods (Cornuel et al., 2010). The Rerum Novarum places man at the centre of the economy. Within the Christian understanding of responsibilities, individuals get involved in activities outside of their workplace, illustrated in the Catholic requirements to impact society. Zollo, Reuer and Singh (2002) explain that the wise manager should pragmatically optimize two potential outcomes namely competitiveness in markets and trust among stakeholders. Trust and social cohesion is the essence of the continuous enlightened endeavour of Catholic Social Teaching (Cornuel et al., 2010).

In a pragmatic approach, proposes a pedagogy for integrating Catholic Social ethics into business ethics. In the model of moral behaviour, Cassidy (2006) suggests the worldview that leads sequentially to moral awareness, after that moral reasoning and finally moral behaviour. Moral reasoning describes the ethical approach that assesses the morality of the decision. Moreover, moderators in the model are situational factors including integrity and corporate culture that may influence moral awareness, moral reasoning and moral behaviour (Cassidy, 2006). Importantly, differences between religious and non-religious worldviews may lead to differences in moral awareness, moral reasoning and moral conduct (Jensen, 1997; Weaver &

Agle, 2002). The contextualization and conceptualization of the application of CST into business may assist leaders to improve ethics in organizations.

2.4.1.3 Social Justice in the post-World War II era

The main trends of Social Justice post World War II were most noticeable in the period from the late 1950s to the 1970s. The period introduced the change toward the new social history. The re-orientation introduced by the new social history is apparent in the subjects chosen for academic reports, congress paper and contents of mayor journals (Laxton, 1977). The most significant contribution by John Rawls (1999) postulates social justice as a critical exposition of the concept of the reasonable as: “all social values – liberty and opportunity, income and wealth, and the bases of self-respect – are to be distributed equally unless an unequal distribution of any, or all, of these values, is to everyone's advantage” (p.662). Rawls (1999) criticized the gap between the highest and lowest paid workers advocated for more taxes by rich people to reduce the gap between rich and poor. Moreover, he asserted that justice should be framed in terms of fairness and basic moral principles with a social contract to ensure basic rights for the people. Rawls (1999) viewed society is a standard form of human interaction through a shared understanding among participating members in a cooperative venture for mutual advantage. Moreover, Rawls (1971) postulated that a satisfactory life for anyone is possible only through complex and enduring processes of social cooperation, and distributive principles are required to determine the fair distribution of both economic and social advantages.

Rawls published a revision of *A Theory of Justice* (1971) in 1999 in response to the criticisms during his lifetime. He further elaborated and refined the arguments in *Justice as Fairness: A Restatement* (2001) as an extension of the 1971 work, but he has never changed the main outline of his ideas about fairness (Bankston, 2010). Rawls (2001) further renewed emphasis to the claim that the cooperative character of the social organization is the most fundamental idea of his theory. The underlying premise of Rawls is that of society is a fair system of social co-operation over time from one generation to the next (John Rawls, 1958). Moreover, the realization of society as a fair system, within which principles of social justice is applied, is appreciated over time extending from a generation to the next generation.

The Rawls (1999) theory concludes with two principles. Firstly, the basic liberties of citizens are political liberty, liberty of conscience and freedom of thought, freedom of the person with the possession of property and freedom from arbitrary arrest and seizure. All the liberties are required to be equal by the first principle where citizens of a just society all have the same basic rights. Secondly, while the distribution of wealth and income need not be equal, it must be to everyone's advantage where positions of authority must be accessible to all. The set of distributive principles of Rawls (1999) provides the essential principles to evaluate and judge the arrangements of social justice. Importantly, the principles of Rawls of social justice reflect an underlying concern for human well-being. That is distinctly different from the previous social justice theories that promoted the virtue of their common

humanity of all individuals towards humanitarian assistance (Finn & Jacobson, 2008). Moreover, the encompassing conclusion is that the social arrangements in totality should be beneficial to all fully co-operating individuals down to the least advantaged. In a critique of Rawls, Balau and Neagoe (2017) argue that the Rawls perspective position what is right above what is good. Moreover, this view of social justice applies less to individuals and more to society as a whole. Similarly, Ho (2016) highlights the unequal distribution based on individual needs, with a focus on the needs of the disadvantaged.

Miller (2001) introduces a practical approach to the real pursuit of social justice rather than vague propositions about what social justice is. In a modern context Miller (2001) prospects that social justice is:

"the pursuit of social justice in the twenty-first century will be considerably tougher than it has been in the last half of the twentieth ... and that we will have to think much harder about questions of scope, about what the universe of social justice should be in a world in which economic, social, and political boundaries no longer neatly coincide" (p.265).

The Miller view of social justice suggests unequal distribution based on what an individual deserves (Ho, 2016) based on individual behaviour. Moreover, the Miller pluralist social justice idea suggests that the market can distribute to individuals what they deserve, that individuals as responsible for their own destiny, rewards are

proportionate to individual efforts and talented and hardworking individuals deserve the fruits of their labour. The approach by Miller (2001) is inevitably grounded in disagreement by pointing out while individuals may be committed to social justice there are agonizingly still disagreement about its practice.

The comparative approach of Sen to social justice aims to make society less unjust, rather than striving to make society perfectly just (Richards, 2012). John Rawls strongly influenced Sen to consider the two competing thinking traditions about the justice of transcendental institutionalism and realization-focused comparison. The transcendental institutionalist approach aims to identify an ideal of justice and then define the nature of just institutions (Richards, 2012). Moreover, based on the social contract model, the transcendental tradition aims to frame a unique set of principles of justice (Ege, Igersheim, & Le Chapelain, 2016).

On the other hand, realization-focused comparison seeks to give practical tools to discriminate between real situations, focusing on the outcomes realized by actual social institutions. The comparative approach of Sen (2009) explores social alternatives, ranking them based on the values and priorities of the community. Importantly the approach focusses on what actually happens in the world, without consideration of the justness of the situation. In a different perspective, Sen (2009) appraise the effectiveness of an institution according to the reduction of injustice. As a requirement, Sen (2009) posits a transcendental or spiritual dimension as a pre-

condition for any theory of justice, while according to Rawls only a transcendental dimension is required for a consistent comparative approach.

Combining the Rawls and Miller perspectives, social justice is predominantly concerned with the contract between a society and its members that define the conditions of interaction and living of the individuals. R. Higgs (2008) has argued that some thinkers like Karl Marx have depicted social thought as steered purely by events. Moreover, in the event-driven view, the ideas about society are derived from the social relations and social positions of the individuals that hold the ideas (Bankston, 2010). Hayek and Mises differ by rejecting the deterministic perspective in a theory-driven approach where creative and original thinkers stand independently from social influences to develop new ideas that can shape public ideology (Bankston, 2010).

Young (1990) outlines that social justice should be concerned with specific grossly unequal distributive outcomes that are systematically and routinely produced real-world processes. As opposed to an idea of equality as the elimination of differences, she argued for a politics of difference: “Equality as the participation and inclusion of all groups sometimes requires different treatment for oppressed or disadvantaged groups” (1990, 158). Young (1990) postulates that: “justice should refer not only to distribution but also to the institutional conditions necessary for the development and exercise of individual capacities and collective communication and cooperation” (p.3). Importantly, Young argues for a more comprehensive formulation of social justice to

reflect the importance of the root causes of established patterns of disadvantages on some groups and individuals within society. The perspective addresses the potential additional entrenched root causes of the disadvantaged in society. Extremely unfair social arrangements are often explained through the existence and persistence of some distributive inequalities. The underlying unjustness of the disparity in moral status is not always necessarily evident in distributive outcomes (Finn & Jacobson, 2008).

To pragmatically apply social justice theories to a digital context the conceptions of justice should be acceptable to the individuals influenced by the circumstances. Justification of actions may be settled by way of deliberation by ascertaining which principles are rational for the given contractual situation thereby connecting the theory of justice with the theory of rational choice (Rawls, 1999). The challenge with social justice theories is the limitation of the unidirectional application of the perception of justice. The research posits that the principles of social justice should be applied with bidirectional influence where possible. In the discussion about Corporate Social Responsibility, the current trend is unidirectional with institutions driving the CSR based on their own justifications.

2.4.2 Corporate Social Responsibility

The application of social justice in business is investigated with an analysis of Corporate Social Responsibility. A definition for Corporate Social Responsibility state that “societal expectations of corporate behaviour; a behaviour that is alleged by a

stakeholder to be expected by society or morally required and is therefore justifiably demanded of a business" (Whetten, Rands, & Godfrey, 2002, p.374). Within the exact definition, the concern of unidirectional influence and decision making is highlighted. Currently, Corporate Social Responsibility is an organizational drive without any control or authority from the disadvantaged individuals, or supposedly the beneficiaries of CSR actions. The influence of organizations on individuals in society is analysed based on the current approaches in Corporate Social Responsibility.

Kotler and Lee (2005) assert that there are five C's in CSR that corporations should fulfil namely conviction, commitment, communication, consistency and credibility. Conviction is about real improvement in business performance. Commitment is to deliver on promises. Communication is transparent and open communication with all stakeholders through reciprocity and consistency is a process of continuous improvement and lastly the credibility in the ability of the corporation to be trusted by stakeholders. While the communication discussed by Kotler and Lee (2005) is a two-way process of communication where are respected and addressed, it is limited to communication and not influence. Soundarya (2015) propose that the movement towards corporate concern for the triple bottom line of financial, social and environmental performance needs radical change throughout the corporation. While the study of Soundarya (2015) emphasize the importance of corporate social performance results based only on corporate social innovation and modern corporate philanthropy, he suggests organizations be involved in "building a better tomorrow" (p.42).

While Holme and Watts (2000) suggested that responsible CSR behaviour in business practices is represented by a continuing commitment by an organization to behave ethically by contributing to economic development, improving quality of life of employees, the local community and society, in contrast, the practical implementation seems different. According to Lee (2008), the conceptualizations of and research on CSR have evolved from a discussion of the macro social effects to an organizational-level analysis of CSR and its impact on organizational processes and performance. The theoretical orientation has shifted from explicitly normative and ethics-oriented arguments to implicitly normative and performance-oriented managerial studies (European Commission, 2011). The proliferation of digital innovation seems to provide the opportune to move into a societal approach to make a difference in the world.

Moreover, empirical studies of CSR have generally neglected the role of corporate leaders to implement CSR initiatives (European Commission, 2011). The business case for the implementation of CSR according to Lindgreen and Swaen (2009) are based on four arguments: (1) reputation legitimacy strengthening, (2) building competitive advantage, (3) reduction of cost and risk and (4) creating reciprocal beneficial situations through synergistic value creation. Moreover, Vogel, (2006) argues that organizations engage in more responsible behaviour in the absence of legal requirements based on strategic, defensive and sometimes still for altruistic reasons.

Lindgreen and Swaen (2009) propose a critical review of existing scales and indicators that assess the impact of CSR on the different dimensions of business performance and the well-being of society. The traditional CSR approach is unidirectional, while a reciprocal bidirectional approach should be more influential.

An interpretation Sarbanes-Oxley could posit that the cost of CST is too high, even suggesting that CSR could be viewed as a drain on organizational financial returns, initiated by the capitalistic system as a policy to enable responsible behaviour (WALDMAN & GALVIN, 2008). The CSR models and the possible suggestions available to managers are ambiguous, while the research into the development and implementation of CSR focusses on limited aspects and dimensions (Porter & Kramer, 2007). Despite the uncertainty about the real benefits and advantages of CSR, organizations generally use CSR activities to enhance their reputation with consumers and stakeholders. While the literature debates the motivation for the communication about CSR initiatives, organizations that choose to communicate with customers, use a variety of marketing tools (Van De Ven, 2008). Communication includes marketing in annual reports (Sweeney & Coughlan, 2008) and promote the reputational impact on their websites (Maignan & Ralston, 2002; Wanderley, Lucian, Farache, & de Sousa Filho, 2008). The availability of digital channels and social media should in the future be a more viable option for CSR communication.

The motivation for organizations to engage in CSR is vague. According to Campbell (2006), organizations will act in more socially responsible ways with strong regulation

by government, collective self-regulation and other independent organizations. The normative institutional environment generally encourages socially responsible actions with defined acceptable behaviour. Moreover, socially responsible behaviour is more prevalent in firms that belong to business associations and that actively engaging in dialogue with stakeholders (Campbell, 2006). The research posits that the current motivation for CSR can be generalized as only uni-directional institutional initiated behaviour.

2.4.3 Organizational Social Justice /Workplace Justice

The concept of social justice should be expanded beyond the wider to focus on specific organizational justice to better understand how the principles of social justice can be implemented in organizations. Justice has been placed at the pinnacle of organizational values by Rawls (1999) when he referred to it as the "first virtue of social organizations" (p.34). Homans (1961) first proposed the concept of organizational justice as distributive justice. The very term organizational justice was termed by Greenberg (1987) in an Academy of Management Review article. Organizational justice for employees of an organization is a sense of the fair moral treatment is what keep people together in organizations to work effectively (Cropanzano, Bowen, & Gilliland, 2007). Pina (2006) organizational justice can be positioned as an inquiry into the perceptions of fairness in the minds of employees in the workplace.

Organizational justice can be identified as one of the core values of an organization. Over the years, research has confirmed that justice in an organization is a subjective term; what is important is employees' perception of what is just or unjust. (Yadav & Yadav, 2016). Organizational justice may be defined as “the study of fairness at work” (Byrne & Cropanzano, 2001, p.5). Organizational justice refers to the just and ethical treatment of individuals in an organization (Cropanzano, 1993), or more generally the perceptions of fairness in the workplace (Bryne & Cropanzano, 2001).

Occupational justice is taken to be an aspect, subset, derivative or complementary to social justice (Hunter, 2000). Social justice and occupational justice can be seen as joint aspirations towards an inclusive world and are mutually supportive. Occupational justice has been defined as equitable or fair opportunities and resources “to do, be, belong and become what people have the potential to be and the absence of avoidable harm” (Wilcock & Hocking, 2015, p.414). The understanding that occupational justice is an aspect of social justice is consistent with social justice in relation to the principles of fairness and equity. Hocking (2017) suggest a focus on what people have the capability to do and be, in contrast to a mere explanation of distribution.

Pina (2006) explains workplace justice or organizational justice with three concepts: (1) distributive justice that is the fairness of outcomes; (2) procedural justice that describes the fairness of the process; and (3) interactional justice as a communication method by decision makers interaction. Distributive justice refers to

the perception of employees of the fairness in decision making and the allocation of resources (Alan, 2012). Procedural justice pertains to the perception of employees of the fairness in the determination of the distribution of resources (Alan, 2012). Bies and Moag (1986) presented the idea of interactional justice defined as “the fairness of the interpersonal treatment that one receives at the hand of an authority figure” (p.3). Moreover, it refers to the quality of interpersonal treatment of employees on the implementation of new procedures (Colquitt, 2001). Interactional justice is the most complex of the workplace justice concepts based on the interpretations of personality characteristics, the psychology of the individuals involved and interpersonal communication challenges (Pina, 2006).

Importantly, Colquitt (2001) emphasize that the combination of all the three components of justice predict trust. Fairness is viewed as an essential and necessary condition that leads to trust (Beugre, 1998). Trust is built when the commitments that were made are consistently kept (Axelrod, 2001). The existence of a strong bond of trust, positively contributes to the perceptions of employees, that the organization is an equitable workplace (Kontakos, 2007). Cropanzano et al. (2007) explain the importance of perceptions with an argument that leaders should be less interested in knowing what is just, compared to understanding the perception of employees of what is just.

Mary Kay Ash stated that: “people are definitely a company’s greatest asset. A company is only as good as the people it keeps” (Jesal Shethina, 2017). Employees are the real assets of the organization, where the unique people drive the competitive

advantage of the organization. Tangible and non-tangible benefits motivate individuals, while commitment, performance, satisfaction and the well-being of employees are at the core of organizational performance initiatives. (Yadav & Yadav, 2016) posit to integrate justice into the framework of organizational well-being. A study by Ohana (2014) concludes that there is a positive relationship between organizational justice and affective commitment. Similarly, for Cropanzano et al. (2007) injustice is like a corrosive solvent, that can cause harm and can dissolve bonds within the organization.

Yadav and Yadav (2016) analysed organizational justice and synthesized the literature into approaches, dimensions and outcomes of organizational justice to develop a conceptual framework. The three dimensions of justice form the core of the framework, that is presented by distributive, procedural and interactional that represent outcome, process and treatment fairness respectively. The three major identified approaches to organizational justice are instrumental, relational and ethical illustrate how to motivate individuals based on the criteria. The instrumental approach motivates with economic benefits, the relational approach with a feeling of self-worth and the ethical approach addresses human dignity. The framework illustrates how organizational justice may influence outcomes in an organization and influence its employees through its relation when potential variables are presented.

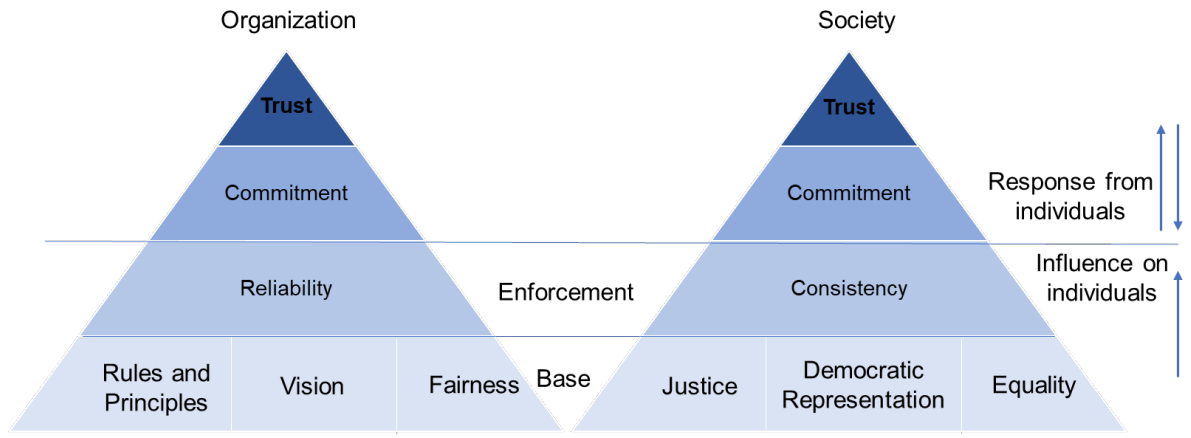
The reciprocal influence from an employee perspective is an organizational commitment that can be defined as “the relative strength of an individual’s identification with and involvement in a particular organization” (Mowday, 1979, p.27).

The link between organizational commitment and organizational justice is presented with the Social Exchange Theory (SET) that can explain the link. According to Lavelle, Rupp and Brockner, (2007) social exchange theory proposes that social behaviour is the result of an exchange process, aimed at the maximization of benefits and the minimization of costs. According to this theory by Homans, (1961), people compare the potential benefits and risks of social relationships. While different views of social exchange have emerged, theorists do agree that social exchange involves a series of interactions that generate obligations (Emerson, 2010). The interactions in SET are interdependent and contingent on the actions of people (Cropanzano & Mitchell, 2005). SET also emphasizes that these interdependent transactions have the potential to generate high-quality relationships, although as we shall see this only will occur under certain circumstances (Cropanzano & Mitchell, 2005).

A definitive link between the various forms of organizational justice and organizational commitment has been confirmed by a plethora of empirical studies (A. Cohen & Veled-Hecht, 2010; Farndale, Hope Hailey, & Kelliher, 2010). Leaders can use the framework to identify and plan the organizational influence through different approaches to deliver on the required outcomes in an organization. The research posits a trust triangle for organizations and an alternative trust triangle for society, that may be used as a guide for building trust. The introduction of trust in organizations and society is introduced in Figure 2.4.3 that aligns with the concept of the influence on individuals in organizations and society. The basis for trust is the principles of justice in society, but rules and principles in organizations; vision in

organizations and democratic representation in society; and fairness in organizations and equality in society.

Figure 2.4.3
Trust in Society and Organizations



Source: Francois Volschenk (2018)

The basis for trust should be enforced with reliability in decision-making in organizations and consistency in society. The creation of trust can act as the enabler to positively influence individuals in the modern digital era of constant change.

While social justice philosophy underlined the importance and legitimacy of the principles of social justice, occupational justice concepts proved influential to divulge the influence and impact on participation. Organizational justice is an inflection point of the importance of social justice in the context of the influence on individuals in organizations and society. The identification of suffering in an organizational context by the identification of potentially disruptive actions on individuals in organizations

assisted in a better understanding of justice (Hocking, 2017). With the shift in the perspective from participation in society to participate in organizations, researchers identified specific barriers that previously prohibited the implementation of social justice.

2.4.4 Organizational Change incorporating Social Justice

In a world of constant change, within the context of the proliferation of digital transformation, effective organizational change within organizations is essential to expedite the integration between digital and organizational change. Despite the growing need for change in organizations it is widely acknowledged and asserted that up to 70% of change initiatives fail (M. Higgs & Rowland, 2005). Schaffer and Thomson, (1992) suggest concentrated efforts on results, and not on activities. Moreover, Holt et al. (2007) suggest that readiness for change is a multidimensional construct affected by perceived convictions among workers in their capabilities to actualize the proposed change, that leaders are committed to the proposed change, and the proposed change is beneficial to the members of the organization.

Collins (2001) recommends change leadership guidelines to transform companies from good to great. Good-to-great companies confront the most facts in the reality of the situation but remain focused and confident to be successful in the end. Good-to-great transformations do not happen overnight or in one big leap, therefore, minimize radical change programmes, reactionary moves and restructuring Collins (2001). The experience from the prior engagements could assist significantly through a gradual transformation. Moreover, good-to-great companies are usually pioneers in the

investment in and application of carefully selected technologies that directly link to their breakthrough performance concept (Walker, 2006). Performance breakthroughs need the following intersection issues: the company do what it can do best, how its economics work best and importantly ignites the passion of individuals in the organization.

Disciplined people without hierarchy, bureaucracy and excessive and unnecessary controls that are allowed to innovate through entrepreneurship, lead from good to great performance. Organizational change should harness the natural creativity and organizing ability of its employees and stakeholders through principles including generative relationships, minimum specification and the positive use of attractors for change (Plsek & Wilson, 2001). The example of Google suggests that successful and productive organizational culture draws people that want to work there (F. Luthans, 2005). The rapid change brought about by digital transformation needs less hierarchical and more trust-oriented environments where individuals can flourish.

The success of the vision of a leader depends on the values that impact on organizational performance and ultimately the creation or destruction of shareholder value (Lichtenstein & Dade, 2008). Each organizational change requires a unique response, and possibly different response, as well as a willingness to be flexible and collaborative in approach to implementation of change (Andrews, Cameron, & Harris, 2008). The values of leaders may be different from organizational culture therefore seemingly sensible decisions taken at the executive level may be uncomfortable to

others in the organization with different values (Lichtenstein & Dade, 2008). It is important to recognize that people disturbed by the change are less likely to hear what you are communicating and will need time to adjust (Carnall, 2007). Individuals that initiate the change are at a more advanced stage of the change curve, while others may well be further behind and more inwardly focused (Carnall, 2007).

Future organizational change should recognize the diversity of people and their reactions to change. Sending out signals through deliberate role modelling, physical work conditions that support non-hierarchical workplace connections and more flexible cross-organization means of co-operating will also induce a culture more amenable to beneficial change (Aitken & Parry, 2014). A critical factor to consider is the impact of emotions that can improve leadership during times of transition which translates into less resistance, quicker engagement and higher commitment (Lawrence, Ruppel, & Tworoger, 2014). In the digital world with fewer hierarchy leaders should clearly understand the social context to expedite the successful implementation of changes in an organization.

2.4.5 Philosophical Perspective on Work and Labour

Hannah Arendt articulated an understanding of human activity in The Human Condition where Arendt introduced the three levels of the course of life as labour, work and action (Wolcott, 2018). Arendt (1998) sets apart the active life, or vita active, from the contemplative life, or vita contemplativa. While in psychology the contemplative life is regarded as more important, Marxism insisted that the active life was more important because the contemplative life is based on the active life. The

Arendt approach argues that both carry equal weight and that the vita active can be subdivided into labour, work and action. While labour generates the inputs that sustain human life, work creates the physical artifacts and infrastructure of the human world and action address the interaction and communication between human beings. With action, humans explore and attempt to assert distinctiveness as human beings (Wolcott, 2018).

According to Arendt (1998), labour involves human activity to meet biological needs including reproduction and survival. In the modern world, all humans must perform labour for their needs to be met. The differences between work and labour are that work has a definite start and end, requires raw materials that generally violate nature and the fruits of work are durable. Action is the personal projection of humans on others including all communication. Arendt (1998) postulates that the Christian focus on valuing life still directs human activities, whereby society is defined by labourers. While work is important as an enabler of a good life, according to Arendt (1998), humans should understand that work is only a means to an end.

2.4.6 Conclusions on Social Justice

Despite the extensive discourse and literature on justice and social justice, the ongoing discussions on the notion of achieving justice society are highly complex. The premise of social justice theories is a just system that ensures self governance of individuals as an intrinsic factor of welfare and equity among members of society. In practice, the levels of distribution are challenged continuously with dynamics in society to submit to the proposed premise (Balau & Neagoe, 2017). Liberalism

boosts the value of what is right above what is good (Balau & Neagoe, 2017). With the Rawls theory (1999), the idea of the good of society is constantly diluted with the philosophical expression of liberalism that promotes the ideal of unburdened and morally independent individuals.

Nozick (1974) opposes the idea of social justice as a distinct category of morality with the implausibility of any constructed conception of justice with a preferred distributive outcome. The objection of Nozick (1974) is that the individual actions could be interpreted as unjust even when the actions had no wrongdoing. The outcome orientation of distributive theories superseded the cumulative decisions of multiple separate individual moral agents as potentially unjust. Nozick (1974) suggest that it is just, as long as there is no injustice in the acquisition or transfer of resources. Aligned with the principles of Capitalism, Novick supports the distribution of resources from voluntary transactions through sales and agreements.

Hayek (1976) argued that virtues are attributable only to individual moral agents because “only human conduct can be called just or unjust” (p.31) and “to speak of justice always implies that some person or persons ought, or ought not, to have performed some action” (p.33). In contrast to the general conception that corporations or organizations have any accountability, for Hayek (1976) all accountability rest with individuals. Moreover, instances of social injustices could have no identifiable agents who could be held accountable for circumstantial unjust actions.

In contrast to the age of scarcity that humans have encountered, the upcoming age of abundance with new digital technologies would require even more attention to the social contract. The importance of the social contract will increase with the dramatic shifts in employment, social changes and time management of individuals. One of the primary challenges in the digital world will be for people to live fulfilling lives whilst there are fewer relative workers (West, 2015). Leadership should have discerning plans to address social issues associated with the changing workforce to mitigate the risk of a permanent lower classes of unemployed individuals (West, 2015). Moreover, future leaders should fully comprehend the potential influence of digital on individuals in organizations and society, applying practical wisdom to alleviate negativity whilst continually balancing the increase of technological advancements with a just society.

Arendt warned about a society of labourers, as glorified by Communists, where individuals are freed from the constraints of labour to “no longer know of those other higher and more meaningful activities for the sake of which this freedom would deserve to be won” (Wolcott, 2018, p.5).The challenges of the digital age with a threat of a drastic reduction in certain jobs opens the debate on the importance of labour and work. On the one hand, technological innovation improves humankind, but the reduction of jobs threatens to reduce humankind to labourers that cannot be elevated to human freedom. The challenge to future leaders is to accept the responsibility to address the salient issues of the threat of digital innovation on

society. The following section will investigate the influence of digital disruption on individuals in organizations and society.

2.4.6.1 Conclusion on organizational change and social change

Changes should be effectively communicated, practically implemented and be sustainable in the long-term. New theories in social justice should be developed to address the continuous changing issues of perceptions of fairness in the changing workplace (Bryne & Cropanzano, 2001). At the current initial stages of exciting transformation of work, work practices and workplaces, digital competencies of the workforce and the use of technology in the workplace will continue to develop and change. Organizations are increasingly introduced to a wealth of possibilities for increasing effectiveness. More research is required to better understand the influence of digital on communication, relationships and empathy in the workplace (Colbert et al., 2016). The juncture of the newly created capabilities for the digital workforce and technological advancements present multiple opportunities for fundamental organizational change (Colbert et al., 2016). Colbert et al.(2016) emphasize the importance to identify the potential threats of the ever-expanding technology use for relationships and effective collaboration.

2.5 PART FOUR - PROFESSIONAL FOCUS: THE INFLUENCE OF DIGITAL

The proliferation of technology forms the underlying structure of the globalized technology system. Technology has enabled the benefits of globalization. The current exponential growth of digital disruption has been preceded by certain discoveries, developments and continuous improvements over the last two centuries across the industrial revolutions. For example, Moore's Law as first hypothesized in 1965 by Intel founder Gordon Moore states that the number of transistors in a dense integrated circuit will double approximately every two years (Loughran & Friday, 2017). The shrinking of transistors enables a more substantial amount to be held within the same area, which results in a faster processor that can operate at lower power requirements. The phenomenal growth in technology should continue in the next century, resulting in less expensive components to enable digital growth. It can be concluded that globalization, industrialization and digitalization as facilitated through technology and technological growth should become more pervasive in the future.

Digital influence is the capacity to affect others to take action and change opinions or behaviour either directly through persuasion or indirectly in the traditional sense (Solis & Webber, 2012). The influence of digital moves beyond the traditional sphere of influence. Digital does not only have an influence on, but digital can also be the influence. Consequently, in a world where traditional marketing has less impact, marketers want to involve digital disruption as an influencer to impact individuals (Solis & Webber, 2012).

The traditional way to define influence is “the act, power, or capacity of causing an effect in indirect or intangible ways” (Solis & Webber, 2012, p.8) and expanded with “the capacity to have an effect on the character, development, or behaviour of someone or something, or the effect itself” (Dictionary, 2007). Digital has changed the world we live in, and consequently, digital organizations have transformed the traditional landscape of organizations. Amazon outranked Walmart in 2015 as the most valuable retailer in the United States by market capitalization, but with no physical infrastructure or stock on hand. Uber is the largest peer-to-peer ridesharing and transportation network company in the world without owning a single vehicle.

Digital innovation is different from other innovation as digital transformation has the potential to replace human jobs or to improve humans to think at a higher level. Solis (2012) defines digital influence as “the ability to cause effect, change behaviour, and drive measurable outcomes online” (p.8). Digital is no longer separate or definite measurable, but it is a part of the change. Importantly, digital should be a tool to augment humanity but not replace humanity.

The comparison of the influences of various inventions compared to digital innovation in Table 2.5 shows the influences of the inventions on society, organizations and individuals. Generally, inventions have positive influences on individuals, organizations and society with opportunities, efficiencies or comfort. Similarly, digital enables convenience, comfort and opportunities, but also pose a potential threat to humankind through threats of jobs replacement, invasion of privacy and social well-

being. Importantly, digital should be the method and toolset to enhance humankind while maintaining the position that human beings should be the beneficiaries of digital transformation. In contrast, automation is transforming work, businesses and the economies around the world (Chui et al., 2017).

Table 2.5
Influences of Significant Inventions versus The Influence of Digital

	Influence on		
Inventions	Society	Organizations	Individuals
The Wheel	Opportunities	New opportunities and productivity	More accessible to work and transport
Electricity	Growth of industries and development	Industrialization	Comfort, facilitation and quality of life
Motor Vehicle	Breakdown of geographical limitations	New opportunities.	Convenience and new opportunities
Lean Manufacturing	Most effective to have a cost advantage	Increased productivity	Pressure to limit wastage at all cost
Personal Computer	Availability of information	Productivity through process improvements and automation	IT system and automation could threaten work opportunities
Digital Transformation	**The social change in organizations, industries and society**	**Largest opportunities and threats**	**Convenience and comfort, but pervasive to privacy. Threaten work opportunities and social well-being**

Source: Francois Volschenk (2018)

Currently, more than fifty percent of human activities could potentially be automated by adopting digital technologies (Chui et al., 2017). Interestingly, China, India, Japan

and the United States dominate the total, accounting for just over half of the wages and almost two-thirds the number of employees associated with activities that are technically automatable by adapting demonstrated technologies (Chui et al., 2017). Herewith lies the problem, according to the Gartner 2017 CEO survey, ninety percent of companies are currently engaging with digital optimization only, and a staggering 42 percent of respondents plan to use digital to optimize rather than transform their business (Boulton, 2017). Optimization equates to automation that means replacing jobs. The elimination of repetitive type jobs through automation is contradictory to the supposed driving forces behind the digital transformation of the improvement of humanity.

Moreover, technology and digital transformation should supposedly help everyone succeed and prosper. Abelow (2014) urges reaction to the problem with the time for action is now, without waiting for the future to arrive. Boulton (2017) proposes pairing business-focused philosophies such as a human-centered design with rapid application development models including agile to build digital services to enhance customer engagement and experience. Digital transformation requires business leadership and vision according to Westerman “you need technology on one axis while the other axis has to include the ability to envision and continuously drive change” (Boulton, 2017, p.3).

2.5.1 The Influence of Digital on Society

While humanity is marvelled with incredible discoveries and new technologies, the reality of serving special interests and not necessarily those of the public at large should be noted. Maynard (2015) postulates that digital will change what humans do and potentially change who they are. Hawking, Russell, Tegmark and Wilczek, (2014) hypothesize that:

"whereas the short-term impact of AI [artificial intelligence] depends on who controls it, the long-term impact depends on whether it can be controlled at all…All of us should ask ourselves what we can do now to improve the chances of reaping the benefits and avoiding the risks" (p.3).

Furthermore, the exploitation of Facebook of personal information with a blatant disregard for privacy illustrates the potential harm from the utilization of technology for personal or organizational gain. Facebook willingly shared the private data on 50 million users to the research organizations of Global Science Research and Cambridge Analytica (Chakravorti, 2018). Moreover, digital innovation influence the sense of privacy, notions of ownership (Maynard, 2015), consumption patterns (D. L. Rogers, 2016), time allocation of individuals, career development, skills development, interaction with people and personal relationships (Hollis, 1992).

The influence of digital marketing embraces three key elements different from traditional marketing namely aspiration, empowerment and unity (Clark, 2018).

Firstly, aspiration where the compare is not limited to geographic neighbours but worldwide with the desire to be like others based on interests, lifestyles, aspirations and success. Secondly, with an understanding of the aspiration of individuals, the influence shift to a sense of empowerment with the product or service to become better. Lastly, unity to like the individual or even like the association with the person, e.g. the increase in social media bloggers and self-marketers exacerbate the longing for acceptance. Interestingly, Robert Cialdini who defined the six fundamentals of influence established by social psychology studies namely reciprocity, authority, social proof, consistency and scarcity, liking and commitment, added *unity* that aligns with the digital marketing influence. Analogue or traditional marketing had an appealing message to everyone, hoping that it will influence the purchase. In digital, the unity of belonging or association with a brand or organization with something that matters to the individual is essential (Clark, 2018).

Rogers (2016) introduces the shift in mindset from traditional or analogue thinking to digital thinking as shown in Table 2.5.1. The significance and importance of influence in people to people networking are evident from the analysis. While traditional thinking generally discarded influences, value flows, communication and networking, the context of an organization has changed with digital. Reciprocal, bi-directional and dynamic value and influence is the conclusion from the synopsis of digital thinking. The direct forms of communication, direct engagements, the constant requirements of value within a dynamic trading environment where everything can change, requires organizations to re-think their traditional strategies. The new digital eco-

system is complex through webs of interconnectivity and influences that requires a digital mindset that can leverage from technology for growth. On the other hand, digital leaders should continually mitigate the potential negative influences from the constant social exposure of digital technologies.

Table 2.5.1 Analogue Thinking versus Digital Thinking	
Analogue Thinking	Digital Thinking
Customers as mass market	Customers as a dynamic network
Communications broadcast to customers	Two-way communications
Firm as the key influencer	Customers as key influencers
Marketing to persuade a purchase	Marketing to inspire a purchase, loyalty and advocacy
One-way value flows	Reciprocal value flows
Economies of (firm) scale	Economies of (customer) value
Source: Rogers (2016)	

Contrary to the past, the concept of belonging to a community today is defined by personal interests, perceptions and values rather than by geographic space including work and family (Hollis, 1992). The increased availability of communications and mobility provides opportunities for individuals to be heard and participate in public discussions, or even be involved in decision making. According to Solis and Webber (2012), social capital is the key that unlocks digital influence and connects to new customer influence and values. Similarly to loyalty programs, organizations can reach connected customers to build relationships or recruit into ambassador programs in recognition of their social stature and support (Solis & Webber, 2012).

Moreover, a critical element of influence is social capital, where the brand borrows the social capital of that individual to appear online (Solis & Webber, 2012). Social capital can elevate society and importantly the previously non-influential members, through the social network with authority due to the collaboration of members. In social equilibrium, the poor, or less privileged, generally have no authority or power to request for the compassion of leaders for assistance. Social capital changes the balance of strength to assist society to be able to voice their opinion through a collective authority and the power of the collaboration of members.

The digital influence on society corroborates with the fatal conceit by Hayek on socialism. According to Hayek's (2011) view of the economy, any intervention in free markets leads to inefficient outcomes in the short run, and in the long-term generally leads to the concentration of power in the hands of a few individuals. While socialism failed, the new influence of digital unlocks the potential for society in the form of social capital. In the digital age, society has strengths and influence that they did not previously have. Moreover, it can be postulated that digital could become the gateway between capitalism and corporate social responsibility with the new voice of society through social capital.

2.5.2 Current Trends that Highlight the Increase of Digital Influence

Current research will be highlighted that demonstrate the current impact and the potential future impact of digital disruption and digital organizations in the world. According to Frey and Osborn (2015), most individuals are consumers and producers

in the digital. Consequently, modern technologies will have a positive or negative impact on the living standards of people in both capacities.

2.5.2.1 Research on the potential decrease in jobs

In the study by Oxford Martin School, the potential decrease in jobs per countries was investigated as illustrated in Table 2.5.2.1. The Bruegel study, for example, finds a strong negative relationship between a country's GDP per capita and the share of their workforce at risk of automation, suggesting that countries transition into jobs that are less susceptible to automation along the development path. For example, the potential decrease in jobs in Romania is 62%, while in Belgium it is only 50%. In particular, developing countries are likely to find a larger share of their jobs at risk, as lower wages keep many jobs that are possible to automate from being displaced (Frey & Osborne, 2015).

Importantly, the table compares current jobs with the same future jobs, while the constant change of digital innovation will change some jobs and other jobs will be created. The consequences of changing jobs are that people should be willing to constantly make deliberate efforts to be reskilled or retrained in anticipation of the future job changes.

Table 2.5.2.1 The Potential Decrease in Jobs per Country						
Country	Frey & Osborne (2013)	Bruegel Study (2014)	ETLA (2014)	Frey & Osborne, Deloitte (2014)	SSF (2014)	Unionen (2014)
	702 Occupations	22 Occupations	410 Occupations	369 Occupations	109 Occupations	353 Occupations
Austria		54%				
Belgium		50%				
Bulgaria		57%				
Croatia		58%				
Czech Republic		54%				
Denmark		50%				
Estonia		54%				
Finland		51%	36%			
France		50%				
Germany		51%				
Greece		56%				
Hungary		55%				
Ireland		49%				
Italy		56%				
Luxembourg		50%				
Malta		51%				
Netherlands		49%				
Poland		56%				
Portugal		59%				
Romania		62%				
Slovenia		53%				
Slovakia		55%				
Spain		55%				
Sweden		47%			53%	37%
United Kingdom		47%		35%		
USA	47%					
Source: The Oxford Martin School, 2018						

2.5.2.2 News sources

The Pew Research Center (2018) researched people in 38 countries on the use of the internet, and social networking sites like Facebook, Twitter and other websites, as a source for news. Digital technology is starting to influence news habits across the globe The Pew report concludes that an average of 33% and a median of 42% for the survey countries are getting news on the internet at least once a day as per Table 2.5.2.2.

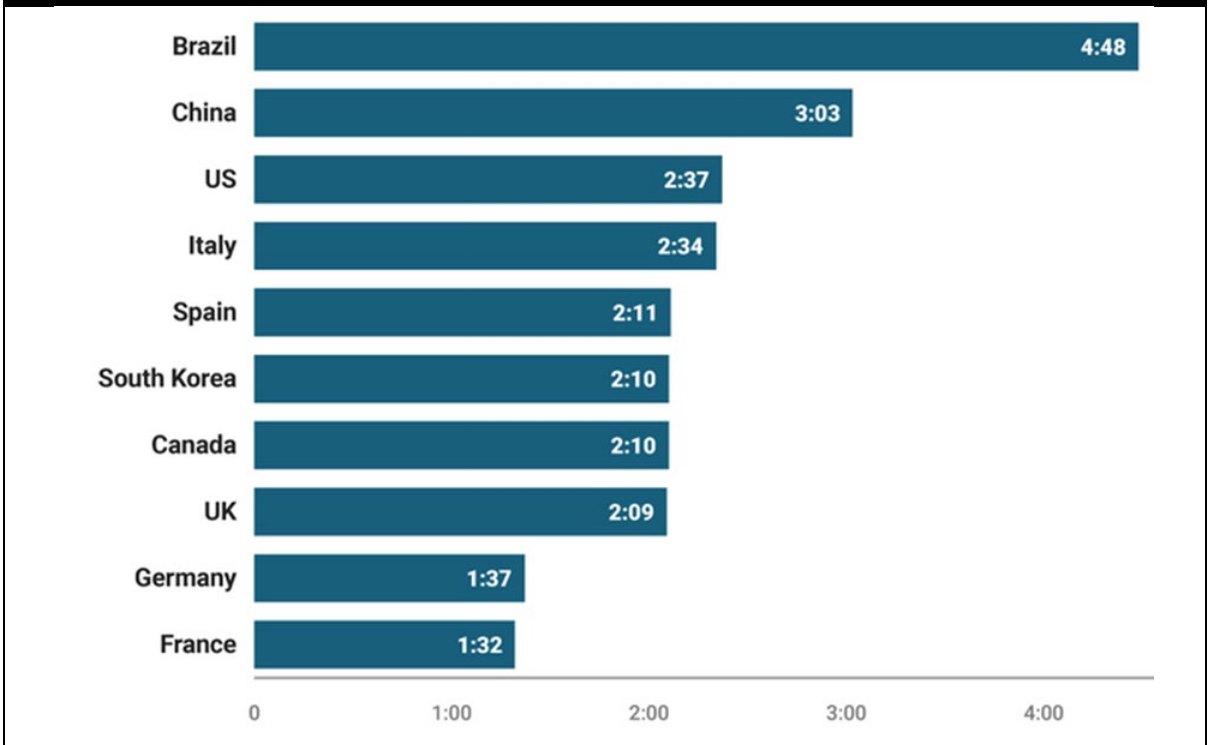
Table 2.5.2.2A Usage of Social Media as News Source				
		Age		
	Total for all ages	18 to 29 years	30 to 49 years	50 years or more
Average Usage	33.1%	53.9%	37.2%	14.4%
Source: The Pew Research Center (2018)				

While almost forty percent use social media, with potentially biased views as news source, a staggering amount more than fifty percent of the younger generation, age 18 to 29, get news from social media with full details available in Table 2.5.2.2B in Appendix F. While the news could be biased or misleading, more importantly, the younger generations are influenced more than other generations. Digital influence has increased over the last decade is expected to grow more over the next decades.

2.5.2.3 Mobile phone usage

The world-wide addiction to smartphones or mobile connectivity is continually increasing and even reaching alarming proportions in some countries. While the technology industry is trying to figure out what a post-smartphone world could look like, smartphone users are continuously spending more and more time with their hanDSDEts (Dunn, 2017). In various countries around the world, smartphone users last year spent on average more than an hour a day on their devices, while in some countries the average usage is a few hours per day, according to research from the Statista Marketing Outlook of 2018. Figure 2.5.2.3 shows the high daily usage per user per day with Brazil that averaging an alarming 4:48 hours per day.

Figure 2.5.2.3
Mobile Device Usage per Country (Hours per Day)



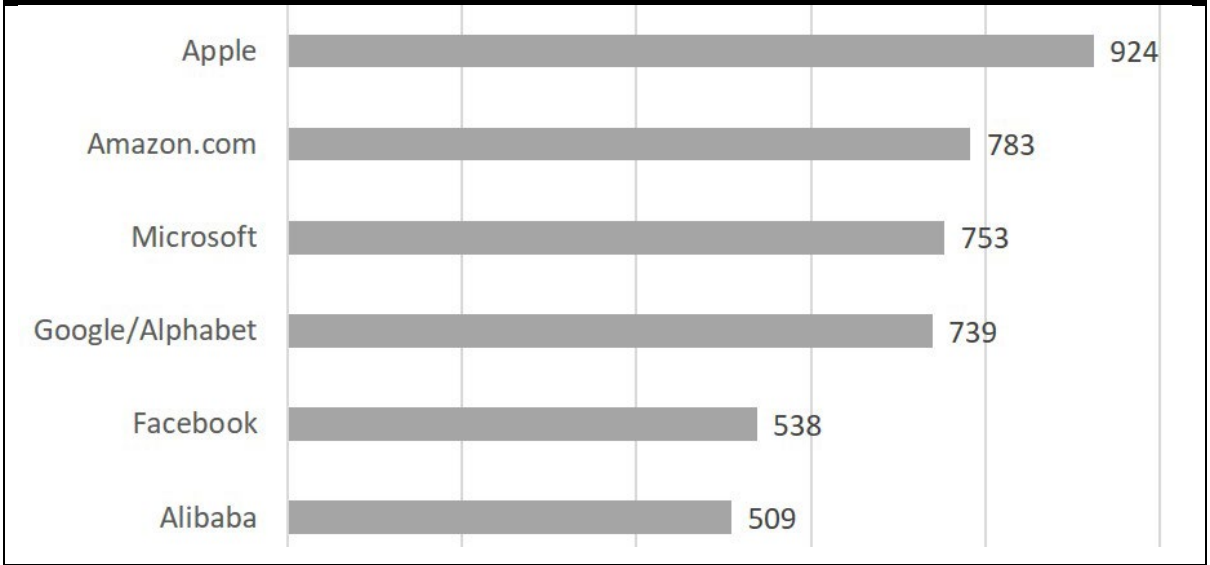
Source: Statista Digital Marketing Outlook (2018)

The United States of America and the United Kingdom have average daily usage of more than 2 hours per user per day. By taking the available research into consideration, it can be concluded that the world has indeed changed with people spending potentially too much time on their mobile devices.

2.5.2.4 The Largest Digital Organizations in the World

There are reasons for concerns in the digital era that innovation benefits the few rather than the many. The end of the 1990s in the United States saw the rise of a high number of internet companies, also called online companies or a variety of the name “dot com,” where the “.com” domain is derived from the word commercial (Statista, 2018). Figure 2.5.2.4A shows the market capitalization of the most extensive digital organizations in the world in 2018.

Figure 2.5.2.4A
Largest Digital Organizations (USD billion)



Source: Statista (2018)

Apple Inc., a multinational technology company, has the highest market capitalization of $924 billion[2]. The list includes mostly US-based organizations, including Amazon, Microsoft, Google and Facebook. Alibaba Group Holding Limited is a Chinese multinational conglomerate specializing in e-commerce, retail, Internet, AI and technology. As a result, digital organizations have a significant worldwide influence.

Moreover, Table 2.5.2.4B shows that the main risers of the market capitalization of companies since 2009 are technology companies. Apple comes in first with growth of $660 billion, followed by Alphabet (ex-Google). Amazon that is technically classified as e-retailer within Consumer Services comes in second with staggering growth of 1244% since 2009 (PwC, 2017). The proliferation of digital innovation is evident in the exceptional growth of the listed companies.

Table 2.5.2.4B
Largest Company Growth last decade

No	Company Name	Nationality	Industry	Change in Market cap 2009-2017 ($bn)	
1	Apple Inc	United States	Technology	660	705%
2	Alphabet Inc	United States	Technology	470	428%
3	Amazon.com Inc	United States	Consumer Services	392	1244%
4	Microsoft Corp	United States	Technology	346	212%
5	Facebook Inc	United States	Technology	330*	407%*
Source: PWC (2018)					

[2] Apple became the first trillion-dollar on the 2nd of August 2018 as reported by The Guardian (Davies, 2018).

2.5.2.5 The Influence of Social Capital – The Facebook story

A study of the influence of social capital and human behaviour can be seen from the example of the Facebook scandal in 2018. The data breach scandal involved information from 87 million user profiles that were extracted by Cambridge Analytica to utilize in targeted political advertising. Furthermore, Facebook was also investigated by the FBI, the Department of Justice and the Securities and Exchange Commission. Mark Zuckerberg received instant education into digital anthropology with the results of the leak of customer data to a third party (Chakravorti, 2018). As a result, there was a major reduction in trust of users towards Facebook. Zuckerberg was summoned to appear before the US Congress to answer questions about the scandal. Facebook's shares plunged 19% or $119billion in one day after the company revealed that 3 million users in Europe had abandoned the social network. The collapse of the share price of Facebook is the largest ever single day reduction in the market value of any company (Neate, 2018). According to Chakravorti (2018), "Zuckerberg is catching up with the uncomfortable fact that the social network he invented is making connections that he may not ever have imagined" (p.4).

Importantly, the reaction from society reveals that the influence of digital innovation is bi-directional. The exponential growth in subscribers can easily be diluted with the same hysteria where people change with the click of a button. In conclusion, digital innovation has a significant influence on people in organizations and society, but people have an influence on the digital innovation organizations with their collaborative power as consumers.

2.6 CRITIQUE AND OBSERVATION

The research challenges the assumptions and framework of leadership theory through the creation of a research strategy based more on Foucault's methods by creating a combination of thoughts on contingencies, in contrast to the traditional progressive tree of knowledge**.**

2.6.1 Current Approach to Leadership Theories

Traditional leadership theories are generally contextualized based on the period and context of reference. A brief synopsis of the development of leadership theories is listed in Table 2.6.1. Based on the inclination of the era an inflection effect is posited for the leadership theories of the period. Where the Great Man theory started with a predominant inclination towards the "who" of leadership, it changed over the course of the 20th century to included the "what," "where" and "how" of leadership. The period from 2015 is termed as digital disruption with a social paradigm shift through the influence of digital disruption with constant change.

Socially Responsible Digital Leadership can be defined as a new paradigm in the context of constant change from digital disruption. According to Bennis (2013), digital business is fundamentally changing the organization of every leader, thereby suggesting the requirement of a framework for digital leaders. Digital disruption will cause significant new challenges for digital leaders. While digital leadership is different from earlier leadership approaches, it is critical to incorporate learnings from the previous century of leadership knowledge.

Table 2.6.1 The Development of Leadership Theories		
Inflection Effect	Period	Leadership Direction and Significant Contributions
Who	Up to 1870s	Great Man Theory by Aristotle, Carlyle and Galton
Who and How	1900-1919	Persuasion and Inspiration. The centralization of power.
Who and What	1920-1939	Trait Theory
What	1940-1949	Behavioural Theories in Group Context
Where	1950-1959	Situational Theories
Who, What and Where	The 1960s	Contingency Theories. Influence.
How	The 1970s	Organizational Behaviour, Charismatic and Transactional Leadership
Why	1978	Transformational Leadership
How and What	1980-1999	Nature of leadership
Why	21st century	The process of leadership. Individual influence on a group to the common goal. Authentic and Adaptive Leadership. Spiritual and Servant Leadership.
Why in the context of constant change	After 2015	Socially Responsible Digital Leadership. Constant change. Social paradigm shift. Adaptive authenticity
Source: Francois Volschenk (2018)		

Moreover, Socially Responsible Digital Leadership does not replace any previous leadership theory, but instead, it builds on previous theories through additional uncertainty, constant change, the context of a different mindset, social complexities

and globalization. Within the backdrop of the complexity in digital innovation, leadership and social justice, the bricolage of literature is presented to explain the requirements for the nexus of understanding further.

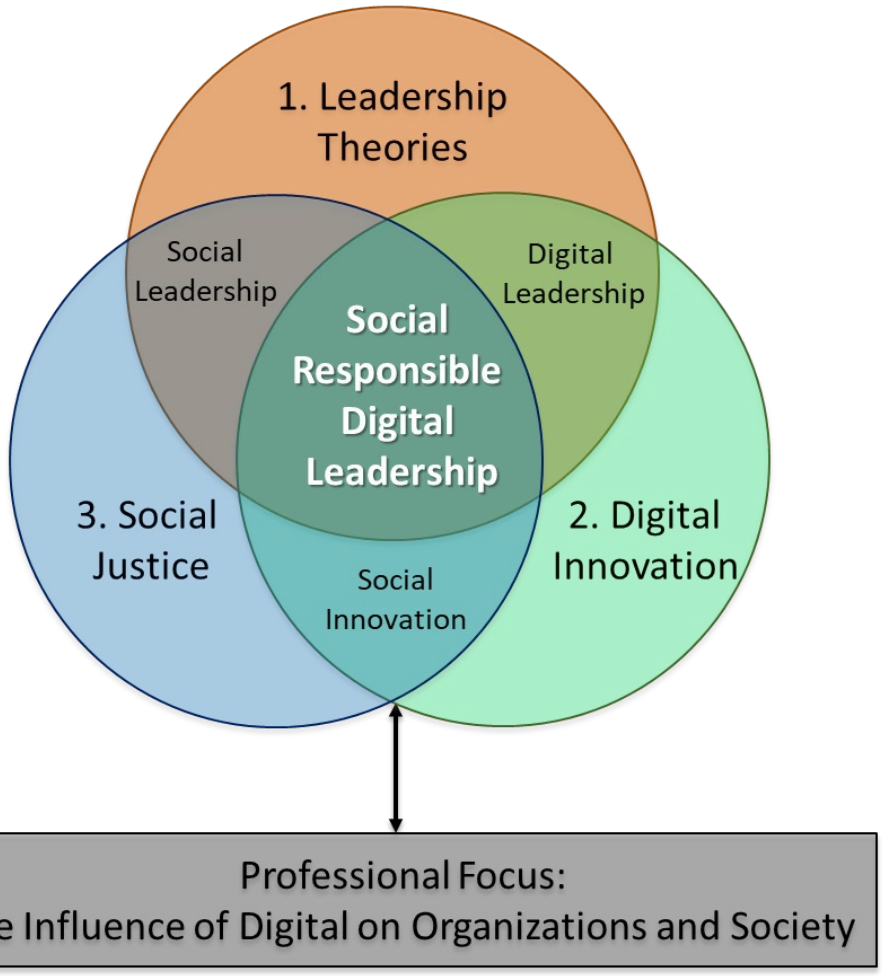
2.6.2 The Bricolage of Academic Domains

The triangulation of the academic domains and professional focus is illustrated as the intersection of leadership, digital innovation and social justice as demarcated as the area Socially Responsible Digital Leadership. To add to a pragmatic approach to the application of literature to an extension of literature is proposed as illustrated in Figure 2.6.2. The synthesis of academic domains, or referred to as the bricolage of domains, is represented as the intersection of:

- leadership and digital innovation as *digital leadership*;
- leadership and social justice as *social leadership*; and
- social justice and digital innovation as *social innovation*.

The theoretical uses of bricolage seem to be inspired by its capacity as a term to examine spontaneity, experimentation and modification (Phillimore, Humphries, & Klaas, 2016). Moreover, the application of the concept of bricolage may be appropriate in the context of digital with constant change through disruption. Therefore, the notion of bricolage as a creative, innovative and individualized process may offer an additional discourse that relates to Socially Responsible Digital Leadership through inductive processes to discover more information.

Figure 2.6.2
The Bricolage of Literature Triangulation



Source: Francois Volschenk (2018)

The visualization should not detract from the premise that the research does not propose a deductive process. A phenomenological research approach will be followed as an inductive process to gather more information to add more richness to the research. The currently available discourse on digital leadership, social leadership and social innovation will briefly be discussed to better inform the nexus of academic domains. The combination of academic domains forms the nexus for the

synthesis of (digital and social) leadership in a digital transformation environment with social (innovation) orientation forms an academic framework for Socially Responsible Digital Leadership.

2.6.2.1 Digital Leadership

The nexus of the digital innovation and leadership academic domains is the *digital leadership* category. Importantly, the primary field of the defined domain is leadership, with digital as a descriptive field of leadership. According to Hunt (2015) in the digital era, the underlying nature of leadership has not changed, but with the rapid development and deployment of digital technologies, the expectations from leadership and leaders are evolving progressively. Pulley & Sessa (2001) argue that [digital] technology is intensifying paradoxes that stretch the capabilities of a leader. Firstly, the increase in the speed of everything with the increased connected organizational communications can potentially compromise the quality of decision-making by the reduction of time efficiencies. Secondly, increased digital interaction reduces human contact and thus social cohesion while increasing social isolation. Lastly, digital places tremendous pressure on hierarchically structured organizations. In rigid structures, the tendency and ease that voices can be heard at any level in the organization are significantly increased.

Moreover, organizational change in the digital era requires different thinking from digital leaders. The five new dimensions of leadership of Hunt (2015) reflect the increasing role and ongoing impact of new technologies on organizations, industries,

economies and societies. Firstly, the whole organizations, including the leaders, should be digitally literate. Secondly, leaders must acknowledge the competence-extending potential of technological innovations. Thirdly, social and digital technologies are changing the nature of work, and leaders should revise alternative workforce management approaches. Fourthly, the foundation and facilitating of digital transformation are the responsibility of digital leaders. Lastly, leadership styles will have to adapt to meet new digitally oriented demands and expectations.

Digital leadership provides a further examination of how existing leadership styles embedded in an organization is affected by the constant changes in advanced information technology systems. In the digital age, the fundamental issue for leadership scholars and practitioners is to address the transformation, by the proliferation of technology, on individual and collective levels (Avolio et al., 2009). Ross (2017) states that successful companies in the digital economy should be both digitized to provide the scale and efficiency needed for the digital disruption and digital through the provisioning of continually changing customer value. With the increasing application of social and digital technologies in organizations, leaders should lay the foundation for digital transformation as almost every organization will become a digital organization (Champy, 2000). An essential pre-requisite for digital transformation is an organizational mindset to co-create with customers. Digital leaders need to engage customers in the value proposition process to better define offerings (Ross, 2017). Moreover, digital leaders should articulate a visionary digital value proposition as part of a Customer-Centric Value Proposition. The digital value

proposition should re-evaluate how digital technologies through a digital mindset with better information, can utilize and further enhance the assets and capabilities of an organization.

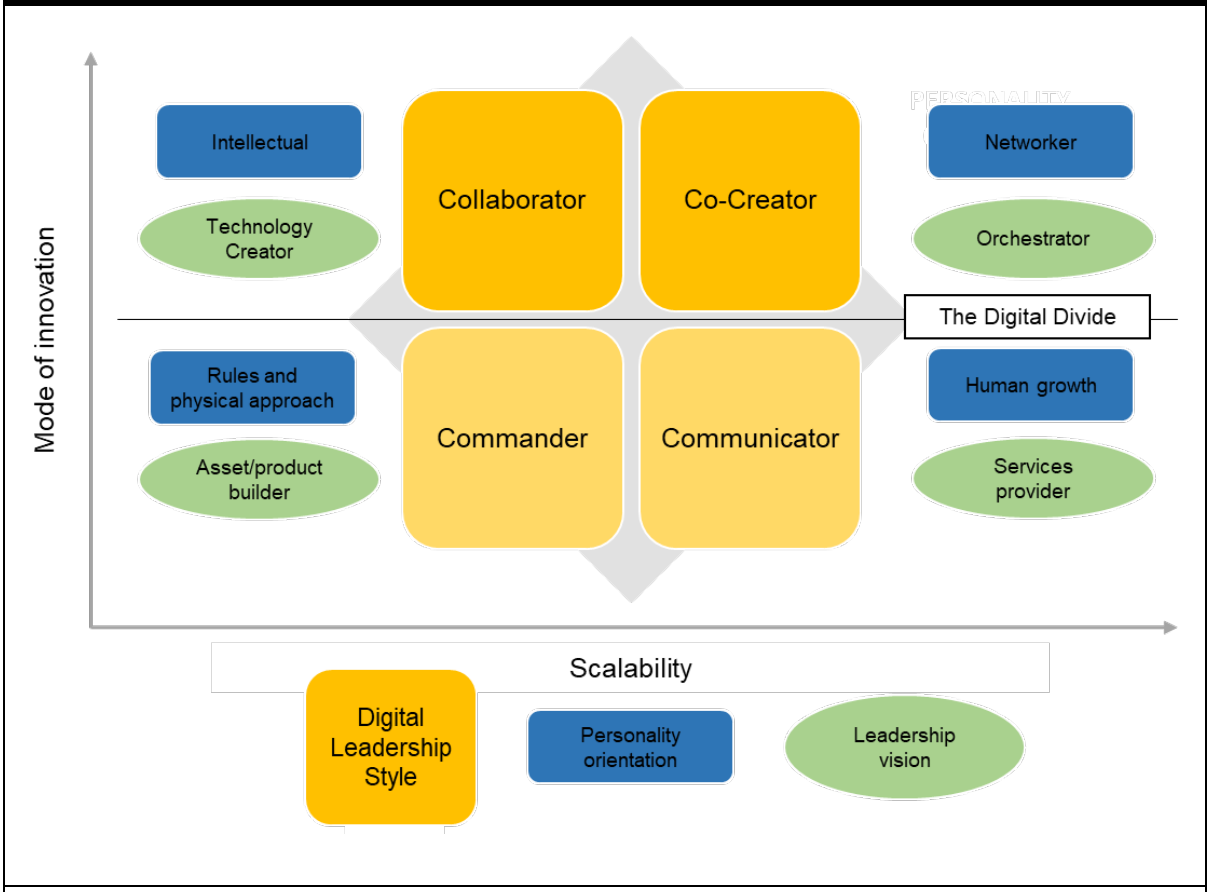
The digital congruency model in section 2.3.7 illustrated a proposed implementation of digital transformation in organizations through a holistic strategic, tactical and operational viewpoint approach. Importantly, the congruency model describes the “what,” “how” and “where,” but not the “who” or “why” of the digital leadership approach. Moreover, digital leaders should understand how to implement the digital congruency model. The process of successful leadership for the operational digital transformation is proposed by Libert, Wind and Fenley (2015) as a staged approach. Firstly the initiation phase that focuses purely on the discovery of new opportunities, secondly the ritualization phase that integrates into a digital ecosystem and the finally the internalization phase of full implementation. Moreover, digital leadership capabilities can describe “who” and “how” how to implement digital transformation within an organization. Hearsum (2015) proposes a human-oriented approach that involves self-awareness, customer-centred, systematic intelligence and adaptive leadership. The process starts with the realization of the leader of personal strengths and weaknesses, aptitude and attitude. An understanding of customers is critical for any digital organization. The intelligence to understand that organizations as human systems require vision to influence behaviour. The adaptive leader adapts to the constant change and with engagement involves people in the organization to grow. A

less autocratic leadership style resonates with digital empowered, connected and skeptical employees and customers.

Furthermore, success in digital transformation depends on a thorough understanding of the difference between digital technology, digital culture and the holistic approach to digital transformation. In the digital age, the elements of effective leadership take on new meaning and combine to create new leadership styles (Champy, 2000). Leaders find that open and agile organizations can manoeuvre more effectively than organizations where “all insight and direction comes from the top” (Libert et al., 2015, p.3). To understand “who” are the digital leaders of the future, Libert, Wind and Fenley (2015) propose a combination of the mode of innovation and scalability as building blocks, combined with asset class and specific leadership style, to contextualize the digital transformation journey as illustrated in Figure 2.6.2.1.

Four digital leadership styles are introduced by Libert et al. (2015) as Commander, Collaborator, Communicator and Co-Creator. The Commander sets the business goals and leads or manages others to accomplish it. With a rules-based and physical approach, the leadership style is limited by the vision and capabilities of the Commander. The approach is generally most suited to the production of commoditized goods. The Communicator sets a vision and a plan, but in contrast to the Commander, inspire others to create buy-in. With a strong emphasis on human growth, the style is suited to services firms that need to fulfil specific requirements.

Figure 2.6.2.1
Digital Leadership Styles



Source: Francois Volschenk (2018) based on Libert, Wind and Fenle (2015)

The increased modes of innovation are associated with the digital divide, where digital disruption can be more prominent. The Collaborator co-operates with customers and employees. With an emphasize on innovation the style taps into the innovation of people to create new intellectual capital. The Co-Creator has a network type approach that allows stakeholders to pursue individual goals to achieve the goals of the organization. The network type approach increases rapid scaling and innovation with high levels of participation. The network orchestrator share value with network participants, e.g. Airbnb and Uber are the most notable success stories.

The influence of digital transformation is incredibly complex through the extended potential psychological, moral and social implications. Schwab (2017) questions the motivation for individuals to become digital leaders in a fully transparent world where any indiscretions generally become knowable to all. The research by Libert, Wind and Fenley (2015), as conducted in S&P500 companies, concludes that in the digital age all organizations should include the leadership skill set to include Co-Creation as there are significant potential gains in the digital era to include network functions in an organization.

Despite the allure of digital leadership, only a few individuals will have the combination of knowledge, expertise, experience and personal acumen to be successful digital leaders. The research proposes a few salient characteristics of the new digital leadership style: (1) individuals should embrace their natural instinct as everyone is naturally inclined to a particular style of leadership (2) future digital leaders should find mentors to support their development with additional strengths in this new style of leadership (3) experimentation with new business models will lead to breakthrough digital innovations and (4) fail fast to start sooner with the next potentially successful iteration. Co-creation is significantly different from merely managing or leading, where it requires collaboration with peers, employees, stakeholders, customer and even competitors (Libert et al., 2015). Importantly, the digital divide is identified, that emphasize that digital platforms are not necessarily required for established companies to emulate other digital disruptors (Lamoureux, 2017) for all business models.

2.6.2.2 Social Leadership

Interestingly, according to FT (2013), the former South African president Nelson Mandela can be seen as the prototype of a social leader. The term *social leadership*, as coined by Jaume Filella, involves social leaders that "have followers because of their ability to bring people together, facilitate agreements and drive efforts in the same direction" (Financial Times ,2013, p.3). A social leader "creates a network of engagement, performance and growth towards positive and actionable solutions to societal issues" (Stodd, 2016, p.6). Moreover, social leaders generally facilitate negotiations in communities to drive collective efforts toward improvements in social development.

According to Langa (2017), one of the critical competencies of a social leader is proficiency in Social Innovation. Leaders with social innovation proficiency, view this challenge as an opportunity to create initiatives and processes that maximize social impact (Langa, 2017). To more adequately prepare leaders for social justice, leaders should contemplate critical awareness, the required knowledge and practical skills focused on social justice (Capper, Theoharis, & Sebastian, 2006). An understanding of social justice should include salient points of social justice theories to align with the essential nature of leaders that include beliefs, notions and values. Capper et al. (2006) posit that leaders with the specific skills required to enact justice should be able to commit to implementing the principles in practice.

While social justice leadership focuses mainly on leadership that disrupts and undermines unfair teaching practices (Gewirtz, 1998; Larson & Murtadha, 2002), Zembylas (2010) warns that embracing a social justice leadership vision may induce a range of emotions. Despite the increasing body of literature on social justice leadership, the emotional tensions involved in the struggles for equity and justice in leadership has not been adequately addressed (Jansen, 2005, 2006). Emotions can vary from excitement to disillusion and even anger and outrage over the existing social and cultural dynamics associated with injustice. (Zembylas, 2010) suggests exploring the emotional state of social justice leadership, so that equity and social justice can be successfully enacted, or social leadership development can be improved.

In the wisdom of ancient philosophy according to Lao-Tzu (1988): “a leader is best when people barely know he exists, when his work is done, his aim fulfilled, they will say: we did it ourselves.” The premise of social leadership means that humans should uplift each other through attentive service (The Center for Social Leadership, 2009). In social leadership, everyone can be a hero. The new leadership is about ordinary citizens living extraordinary lives of service and contribution. Importantly, social leaders similar to servant leaders lead by service and contribution and not rule by commanding.

2.6.2.3 Social Innovation

Gabison and Pesole (2014) explain open innovation, user innovation and social innovation through differences in their approaches and primary objectives. In summary, open innovation essentially focuses on profit, user innovation on user well-being and *social innovation* on societal improvement. An explanation of social innovation starts with a summary of the most common definitions amongst the plethora of definition of social innovation. Westley (2008) stated that: "social innovation is an initiative, product or process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system" (p.1). Mulgan et al. (2008) suggested a narrower definition: "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organizations whose primary purposes are social" (p.8). According to Anderson, Curtis, & Wittig (2014), social innovations are "new solutions to social challenges that affect equality, justice and empowerment" (p.32). Similarly, the Stanford Graduate School of Business (2018) states that: "social innovation is the process of developing and deploying effective solutions to challenging and often systemic social and environmental issues in support of social progress" (p.2). Importantly, solutions are highlighted in contrast to merely goals, strategies or initiatives.

Gabison and Pesole (2014) postulate that the ultimate goal of social innovation is systemic innovation. The conditions necessary to meet or create new conditions to make the innovations valuable include three essential ingredients: new regulatory

frameworks, new institutional forms and the full access to new technologies (Gabison & Pesole, 2014). Systemic innovation is elevated by the advent of disruptive technology, which usually involves changes in behaviours, infrastructure and even in cultures (Gabison & Pesole, 2014). In the context of social innovation, systemic innovation refers to radical changes to the fundamental social systems on which society depends. Franz, Hochgerner and Howaldt (2012) state that: “the new innovation paradigm is essentially characterised by the opening of the innovation process to society” and “innovation becomes a general social phenomenon and increasingly influences all walks of life” (p.2). This differentiates social innovation from business innovations which are generally motivated by profit maximization (Rafter et al., 2008). Moreover, to successful scale in disruptive technological innovation, both infrastructure through interactive open platforms and cultural changes are essential.

According to Schwab (2017), frugal business models can utilize the opportunities created by the collaboration of digital, physical and human innovation to deliver new forms of optimized innovation. The application of frugal principles is proposed as a social innovation applied in the digital era approach. Frugal innovators make constraints work for them by turning conventional wisdom on its head (Leadbeater, 2014). The ability to create significantly more business and social value while minimizing the use of diminishing resources is frugal innovation (Radjou & Pabhu, 2014). Frugal innovation is only limited by imagination, where marginal differentiating

factors are advantageous for frugal innovators. Leadbeater (2014) defines frugal innovation principles as lean, clean, simple and social.

Frugal innovation is “the ability to do more with less” (Radjou & Pabhu, 2014, p.15), with frugal principles that promote long-term strategic changes in an organization towards effective utilization of resources to maximize customer value. The research posits the frugal principles as proposed by Leadbeater has an excellent fit for the contemplated social innovation requirements of the Socially Responsible Digital Leadership framework. The proposed frugal principles of Leadbeater (2014) are described as:

Lean: Frugal systems are free from excessive resources from buildings, hierarchies and overheads, that compels them to unlock mutual self-help as its primary resource. Change can be created on a limited budget.

Simple: The smartest solutions are often the simplest that draw ideas from other familiar ideas (Leadbeater, 2014). Simple systems can be confounded by complex and costly systems that let them down (Leadbeater, 2014). The best solution is the simplest solution.

Social: Much of our most valued things are created together, with other people and not just served while just waiting as a customer (Leadbeater, 2014). Frugal systems unlock mutual self-help as the primary resource (Leadbeater, 2014). Social, shared solutions through engagement with stakeholders to do what is better for everyone.

Clean: Fully frugal innovation is not just ultra-low cost, but must also be clean by using fewer resources per capita (Leadbeater, 2014). Frugal inventors are not proud

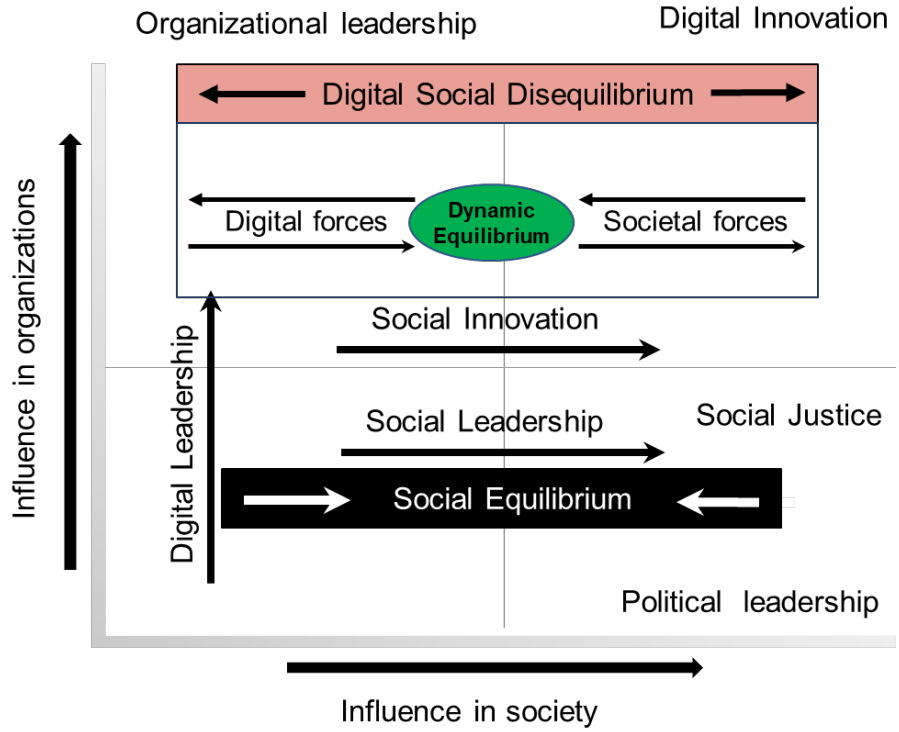
and often excel by borrowing from others what works by not limited themselves to personal contributions only.

The transition from the traditional industrial society to a services-based society resemble a paradigm shift in innovation systems, with an increase in the importance of social innovation over technological innovation (Franz & Hochgerner, 2012). Importantly, social innovations break down traditional barriers where: “social innovation is not the prerogative or privilege of any organizational form or legal structure” (Stanford Graduate School of Business, 2018, p.3). The implementation of social innovation requires collaboration between stakeholders in business, non-profit, government and individuals in society.

2.6.3 Digital Social Dynamic Equilibrium

The research introduces the concept of “Digital Social Dynamic Equilibrium” (DSDE) as illustrated in Figure 2.6.3. The directions of the influence factors of digital leadership, social leadership and social innovation are illustrated in a horizontal or vertical direction. The influence of the defined digital leadership is in a vertical direction to influence individuals more in organizations. The Socially Responsible Digital Leader uses organizational leadership to influence society through the introduction of digital innovation, using social innovation and social leadership, to influence society more.

Figure 2.6.3
Introduction of Digital Social Dynamic Equilibrium



Source: Francois Volschenk (2018)

Furthermore, the forces that drive towards or away from the equilibrium are defined as digital forces and societal forces. Moreover, the intrinsic and extrinsic forces are directional based on the actions of either digital or society. For example, the proliferation of the use of technology is a force associated with a society that increases the influence of digital on society. The theory of Digital Social Dynamic Equilibrium (DSDE) is defined as: “the continuous complex interaction of digital and societal forces through digital innovation and leadership to reach Digital Social Dynamic Equilibrium to maximize socio-economic value”.

The research evaluates the theory of Digital Social Dynamic Equilibrium to the principles defined by Kuhn (1977) of the five criteria that are individually important and collectively sufficiently varied to indicate what is an acceptable theorem. Firstly, a theory should be accurate within the defined domains. While the DSDE consequences are deducible from the literature, the demonstrated agreement will be tested in the interviews of the research. Secondly, a theory should be consistent. The DSDE contextualizes the internal and external perspective that is related to the behaviour of humans as described in anthropology. Thirdly, it should have a broad scope. The consequences of DSDE can be extended beyond the observation, with a broader application to influences in various contexts. Fourthly, it should be simple, as illustrated by the concise description of the phenomenon of DSDE. Lastly, a theory should be prolific, fruitful according to Kuhn (1977), as new research findings. While the DSDE discloses the new phenomena of previously un-noted relationships between the bricolage of the academic domains, the semi-structured interviews will further investigate the prolificity (fruitfulness) of the research findings.

To contextualize the premise of Digital Social Dynamic Equilibrium the potential of the equilibrium, or the intention of humans to relate to the equilibrium is investigated to the Spontaneous Order by Hayek, the Von Mesis Praxeology and the Nash equilibrium. Hayek viewed the existence of the spontaneous order as a counter to the claim that any beneficent social order needed to be constructed. Importantly, Digital Social Dynamic Equilibrium is not a planned constructed action, but the forces of digital and society contest to achieve dynamic equilibrium.

Ludwig von Mises defended as a social scientist that methodological individualism was a unifying methodology for social science (Canning, 1989). Praxeology rests on the “fundamental axiom that individual human beings act, that is, on the primordial fact that individuals engage in conscious actions toward chosen goals” (Rothbard, 1997, p.329). The ‘praxeology’ as defined by Von Mises, was the theory of the action of a rational behaviour originating from the will to survive facing scarcity (Canning, 1989). This praxeology concept of action contrasts with impulsive or knee-jerk behaviour that is not directed toward a specific goal. The DSDE corroborates with praxeology as a description of actions to survive in scarcity, as described within the context of constant change.

The Nash equilibrium is a mathematical construction describing the action of a set of rational agents for maximizing is own selfish objectives in a non-cooperative way. According to Canning (1989) with the Nash equilibrium methodological individualism can be described with mathematical precision and universality. An analysis of DSDE based on the Nash equilibrium in Table 2.6.3 attempts to explain the results of the strategic actions by each party for their own selfish objectives. Moreover, the application of the Nash equilibrium applies to all fields of rational choice that can be expressed using marginalism and individualism. In a Nash equilibrium, no individual can further improve their situation by changing their chosen strategy. Each party is doing as well as they can, even if that does not mean the optimal outcome for society.

Table 2.6.3 Analysis of Digital Social Dynamic Equilibrium based on the Nash Equilibrium			
		People in Organizational Strategy	
		No-support	Support
People in Society	Support	Social capital maximized; Specific opportunity for influence not optimal	**Social capital grow; Digital influence grow**
	No-support	Social capital minimized; Specific opportunity to influence minimal	Social capital not optimized; Specific opportunity for influence not optimal
Source: Francois Volschenk (2018)			

The support/support scenario describes a stable outcome that results from society and organizations making rational choices based on their expectation of the actions of others. The definition of social capital as a collective unit of individuals is the result of the growth in personal social acceptance. Importantly, support by society and digital organizations of the principles of Digital Social Dynamic Equilibrium, according to the Nash Equilibrium, will lead to growth in both digital influence and social capital. The result confirms the importance of Digital Social Dynamic Equilibrium and the framework as guidelines for digital leaders.

2.6.4 The Proposed Socially Responsible Digital Leadership Framework

According to Smyth (2004), a useful conceptual framework should elaborate on the research problem about relevant literature and presents a meta-cognitive perspective. Similarly, the philosopher of science Thomas Kuhn (1977) reminds us

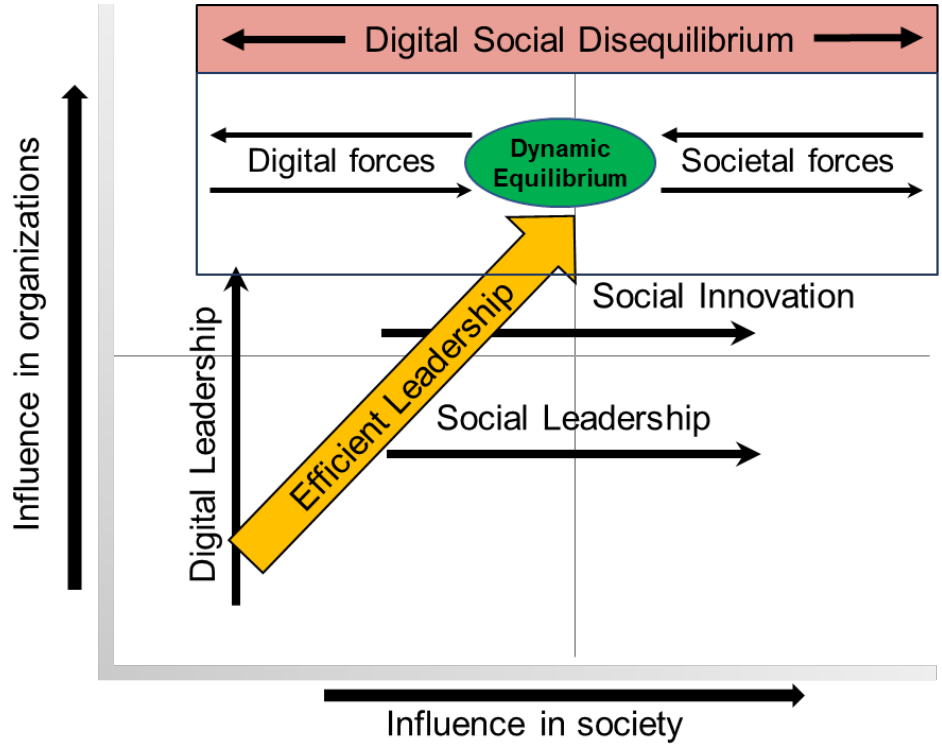
that “a theory should be fruitful to new research findings: it should, that is, disclose new phenomena or previously un-noted relationships among those already known” (p. 322). As stated earlier, Kuhn (1977) proposes the five characteristics of accuracy, consistency, scope, simplicity and fruitfulness be used as a criterion for the evaluation of a theory or framework. The conceptual framework should be a starting point for reflection on the research and the context of the research (Smyth, 2004). Vincent van Gogh proclaimed not to dampen our own inspiration or imagination, but more profoundly not to become the slave of our own model or creation.

Wittgenstein warned that all knowledge is relative to an individual’s own perspective and therefore there is no absolute point of view outside an individual’s historical and cultural situation (Polkinghorne, 1983). Moreover, Wittgenstein suggested that any observation is generally theory-laden due to the experience of interaction with an individual’s conceptual framework. It can, therefore, be argued that meanings or interpretations are theory dependent because “the meaning of the words used in various theories changes from theory to theory or from context to context (Polkinghorne, 1983, p.113).

The proposed conceptual framework illustrates a set of logically related abstract ideas that are central to the research problem. The proposed Socially Responsible Digital Leadership Model provides reference points back to the literature, which assisted the researcher in giving meaning to data and provided a structured

approach to articulate and formulate research findings. Figure 2.6.4 shows the holistic benefits for leaders to embrace the Digital Social Dynamic Equilibrium.

Figure 2.6.4
Efficient leadership to expedite Digital Social Dynamic Equilibrium



Source: Francois Volschenk (2018)

An understanding by digital leaders of the forces of the Digital Social Dynamic Equilibrium should enable more effective leadership and expedite the journey to the equilibrium. The conceptual framework incorporates the academic domains, a bricolage of academic domains, assumptions, literature gaps, theories and conclusions that support and inform the research. The structure of the conceptual framework will guide the research effort including the research question, research methodology and data analysis.

2.6.5 Summary of Literature Critique

In conclusion, the following can be said about the literature critiques:

- Existing literature did not provide a holistic analysis of the effect of digital transformation on leadership.
- The available literature did not provide an analysis that integrates the influence of digital disruption on people with social justice theories.
- There is a literature gap in explaining the leadership principles required for future socially responsible digital leaders.

Further analyses that explore the practicality of Digital Social Dynamic Equilibrium, the forces involved in reaching Digital Social Dynamic Equilibrium and the usability of a Socially Responsible Digital Leadership framework can offer more valuable insight as to “how” and “why” the influences of digital disruption can be mitigated or better utilized by digital leaders to act socially responsible.

2.7 SUMMARY OF CHAPTER TWO

According to Wolcott (2018) stakeholders in digital should “be liquid because flexible is too rigid” (p.3). The influence of digital is socially constructed by stakeholders and society (Hearsum, 2015). A single simple definition cannot merely encapsulate the plethora of meanings or interpretations of the word digital. The social construct of digital should therefore also be aligned with a social inclination. Stodd and Loudon (2017) suggest that successful organizations should maintain a dynamic tension

between formal and social leadership to become socially dynamic. Organizations should maintain strong pillars of formal leadership, while organizations that also maintain strong pillars of social leadership will succeed in the future (Stodd & Loudon, 2017b).

According to Foucault (2007), while many rules are unquestionably accepted only those statements that fit the “rules” become part of the current discourse. In contrast, this research contains views from a plenitude of available views, not just a chosen few which is implicit in work on traditional leadership approaches of current leaders. The contextualization of the Socially Responsible Digital Leadership from a leadership, digital innovation and social justice perspectives improves the broader reality of the research.

Philosophy is made up of ethics described as “ in search of the good,” of logic and physics as “in search of truth” and of metaphysics as that “tend towards righteousness” (Cornuel et al., 2010, p.750). Given the prominent place that theories of social justice assign to its preventive and prospective aims, attention to at least some naturally caused inequalities seems unavoidable. The proposed Digital Social Dynamic Equilibrium is impartial to social justice theories of distributive justice, strong-statist views as per Rawls and social-structural theories of justice, through a reversal of authority where social justice can have a dominant influence. Moreover, the Digital Social Dynamic Equilibrium is a practical agnostic approach based on the influences on individuals and is non-political, non-religious and non-culture specific

by embracing social justice principles. The social justice principles are leveraged to form and improve relationships with individuals in organizations and society that create opportunities for digital leaders to develop and promote business in the digital era.

Similar to the view of Hayek (1976) that all accountability rest with individuals, the net beneficiaries of all social responsibly efforts is not society but the individuals in society. The premise of the influence on individuals as a prelude to Digital Social Dynamic Equilibrium, emphasizes the importance of understanding the end-goal. The Digital Social Dynamic Equilibrium should be a digital leader goal that is continuously influenced by the bi-directional societal forces. Digital Social Dynamic Equilibrium is a continuous process in search of equilibrium between digital and societal forces. Importantly, there are no definitive answers or a defined pre-determined answer on the equilibrium. Humans are complex, and collectively humanity is even more complex. Therefore, in the context of constant change in the digital age, individuals are sometimes irrational that result is an ever-changing equilibrium point. The inherent impossibility to reach equilibrium does not detract from the importance of understanding the benefits of a continuous and dynamic process in attempting to reach the equilibrium.

With every innovation and advancement in technology, almost everything boils down to the individual, which validates the need for human welfare and dignity. While digital transformation is helping the world to experience better efficiency and higher

quality in living, working, being and developing, care should be taken to complement it with human nature elements like creativity, empathy and stewardship (Hollis, 1992). The core competencies of digital leaders should generally be similar to experienced leaders of organizational or social change (Hearsum, 2015), with functionality similar to people and cultural transformation (Wolcott, 2018). The future should be shaped by leaders that put people first, empower the people and use digital transformation for the greater good of humankind.

Finally, Schwab (2017) expressed concerns about “aligning sovereign rights and obligations with individual rights and aspirations (p.83)”. The future challenge is to find ways of preserving social harmony amid increasing diversity. The premise of the Digital Social Dynamic Equilibrium addresses by defining the balance between the influences of the digital and societal forces through continuous attempts to reach equilibrium for the maximum good of humankind. The following chapter on research methodology will further examine the influences of digital innovation in a societal context to create an extensive study on socially responsible digital leadership.

CHAPTER THREE

RESEARCH METHODOLOGY

Dr. Francois Volschenk, DBA
Final submission to the Dissertation Committee
Monarch Business School Switzerland
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CHAPTER THREE – RESEARCH METHODOLOGY

3.1 OVERVIEW

This chapter describes and discusses the methods used in the research. The limitations and advantages of quantitative and qualitative methods prescribed the requirement to use a complementary combination of methods through mixed methods. Kuhn (1970) argued that “if awareness of anomaly plays a role in the emergence of new sorts of phenomena, it should surprise no one that a similar but more profound awareness is prerequisite to all acceptable changes of theory” (p.79). While the quantitative approach provided insight into specific trends, the qualitative research approach allowed for the development of a deeper understanding of the phenomenon to better converge new ideas with the available discourse. A grounded theory method of research was used to holistically investigate meaningful characteristics of digital leadership components in South African organizations.

Furthermore, confidence in the results of leadership research is increased when similar results are found through different research methods (Yukl, 2010). While the recommended sample size per group is from ten participants upwards for phenomenological studies (Creswell, 2013), the phenomenological approach qualitative research was conducted through interviews with 20 individuals per organizational level. The requirements for participants were those who have had from that 5 years of experience relating to the phenomenon of digital or digital innovation as researched.

In this chapter, Section 3.2 elaborates the appropriateness of the methodologies, quantitative, qualitative, and mixed-methods, used in this research. Section 3.3 discusses the research design in detail, with emphasis on the importance of considering research validity and reliability in Section 3.4. The sampling method employed in this research is discussed in Section 3.5 while data collection and data analysis procedures are elaborated on in Sections 3.6 and 3.7.

3.2 APPROPRIATENESS

Episteme is the term which Foucault (2007) introduced as the orderly unconscious structures underlying the production of scientific knowledge in a particular time and place. It is the *epistemological field* which forms the conditions of possibility for knowledge in a given time and place, similar to the Kuhn (1977) notion of paradigm. The premise of phenomenology is the reduction of individual perceptions to a description of the universal understanding, described as a “grasp of the very nature of the thing” (van Manen, 1990, p.177). With the phenomenological approach, the researcher collects data from individuals who have experience of the phenomenon to develop an essential compound description of the experience of all the individuals (Creswell, 2013). The description of the experience involves “what” was experienced and “how” it was experienced (Moustakas, 1994). Moreover, the phenomenological methodology is considered most appropriate to identify subtle meanings and intimate beliefs without external thought influences on the participants (Moustakas, 1994).

Grounded theory (GT) predicates the forming of theory through the study of elements and interrelations by a better understanding of the nature and meaning of the lived experience of participants in a specific context (Moustakas, 1994). According to Trochim (2007), grounded theory is entrenched in the observation of the phenomenon and should not be limited to the creation of a new theory. The research applied the Grounded Theory approach to develop a theory about the phenomena of the research subjects. More specific, grounded theory was used to research the beliefs of digital professionals and where applicable their leadership praxis. The grounded theory explored the links to be developed between theoretical notions and the data collected from the interviews and desk research.

In the digital era of constant change, “we are confronting a universe marked by tremendous fluidity. This is a universe where nothing is strictly determined” (Strauss & Corbin, 2014, p.8). Digital leadership is a broad and complex phenomenon. By extracting theory grounded within the observations of the participants and a detailed description of the analytical coding of the data collected from the experiences of digital executives and employees, an integrative framework was created. Furthermore, Grounded Theory is an appropriate method to answer the main research question to originate in a framework or model. Moreover, the current deficiency of research within socially responsible digital leadership, predicates that grounded theory seems to be an appropriate method for investigating the structure for a more thoughtful understanding of answering the main research question.

While leadership studies have generally utilized quantitative methodologies to justify existing theories, Klenke (2007) suggests that the qualitative approach for leadership studies has become the most appropriate method of inquiry. Similarly, in research on personality and leadership research that involved complex human relationships Judge, Bono, Ilies, and Gerhardt (2002) found that the quantitative methodology approach proved deficient in examining leadership. Quantitative approaches are limited to the assumptions and only investigates the defined variables, thereby limiting potential discoveries of concealed related subject matter. In contrast, qualitative research allows for the analysis of how people think, to generate more detailed information on specific matters (Trochim, 2007). Furthermore, the selection of qualitative methodology allowed the research to better identify and analyse the influences, characteristics and interactions of digital leadership through the colloquial language of the participants in the semi-structured interviews.

3.3 RESEARCH DESIGN

Grounded theory is a systematic methodology in the social sciences involving the construction of theory through systematic gathering and analysis of data. Grounded theory as a research methodology operates inductively, in contrast to other hypothetico-deductive approaches. According to Rogers (2012), bricolage research as hypothesized by Denzin and Lincoln (1999) and later improved by (Kincheloe, 2004; Poland, 1995) and further refined by (Berry, 2006, 2011), can be considered a “multi-perspectival, multi-theoretical and multi-methodological approach to inquiry” (p.2). Bricolage is a process that combines different available resources to find a

workable method to solve defined problems (Baker, 2007). With the increase in the use of bricolage, Sobolewska (2016) suggests to research digital technology with methodological bricolage whereby the researcher can adapt tools and approaches to understanding the subject at hand better. As an interpretive bricoleur, the researcher understands that the research is an interactive process informed and shaped by the ethnicity of the people including personal biography, gender, history and social class and in the applied context. The interpretive bricoleur produces a "complex, quiltlike bricolage, a reflexive collage or montage, a set of fluid, interconnected images and representations" (Denzin, 2012, p.85). In the digital age, the imaginary quilt can be replaced by the analogy of "connecting the dots[3]." This interpretive bricolage structure can be visualized as connecting the dots of the presented text through categorization or in sequences of representations connecting the parts to the whole.

Grounded theory is a qualitative research design whereby the researcher generates a general theory of a process, action or interaction formed through the views of a number of participants (Strauss & Corbin, 2014). While a phenomenology emphasizes the meaning of the experience of a number of individuals, grounded theory study move beyond description to discover or generate a theory (Creswell, 2013). Moreover, according to Strauss and Corbin (2014) in a grounded theory study, all the participants would have experienced the phenomenon, and the development of a theory should assist in explaining the praxis or at least provide a framework for

[3] Reuven Feuerstein featured the connection of dots as the first tool in his cognitive development program.

further research. Importantly, Strauss and Corbin (2014) emphasize that the development of a theory is not available from a shelf but instead is generated or grounded in data from participants through their experience of the process.

With qualitative methods, pragmatism can complement purism through the congruency of the research with the theory (H. S. Wilson, Hutchinson, & Holzemer, 2002). Similarly, Salmon and Buetow (2013) suggest that grounded theory as the classic positivist should be complemented by a second phase of phenomenology that is ontologically realist and has an objectivist epistemology. In a similar vein, the Foucault perspective differs from pure positivist with the belief that truth does not exist to be discovered, but it is negotiated culturally based on a set of epistemological and discursive rules (M. Rogers, 2012).

While Creswell (2013) describes two approaches to phenomenology namely hermeneutic phenomenology (van Manen, 1990) and empirical, transcendental, or psychological phenomenology (Moustakas, 1994), the approach by the researcher follows hermeneutic phenomenology for the fieldwork. Van Manen (1990) describes hermeneutical phenomenology as research oriented toward lived experience, or phenomenology, that interprets the hermeneutics or “texts of life” (p. 4). Consequently, phenomenology is not only a description but an interpretive process in which the researcher makes an interpretation (van Manen, 1990) of the meaning of the lived experiences.

Furthermore, the research utilized a post-positivist approach to describe and explore in-depth phenomena from a qualitative perspective (Crossan, 2003), in contrast to the traditional positivism that adopts a quantitative approach to investigating phenomena. According to Guba and Lincoln (2000), in the constructivist paradigm realities are multiple, context-bound and mutually shaped by the interaction of the people who and people who do not necessarily know. In his theory of knowledge formation, Habermas theorized that human beings socially construct knowledge and that the perspective that they generally use governs their actions with respect to each other and their environment (Smyth, 2004). The interaction of the researcher and the researched forms the basis of the knowledge of their world, where this is the foundation of the constructivist inquiry through qualitative research (Smyth, 2006). The researcher favoured the constructivist view that knowledge is context-bound and shaped by the unique experiences of participants.

Epistemology and ontology perspectives are the foundations of how the research was built to shape the approach to theory and the methods. The researcher accepts that the method of research is linked to ontological philosophical positions of what is real, and epistemological positions of known facts through knowledge and experience (Wicks & Whiteford, 2006). Ontology is the “study of attributes that belong to things because of their very nature” (Guarino, Oberle, & Staab, 2009, p.1). Researchers generally operate under different ontological assumptions about the world and assume there is not a single reality (Krauss, 2005a). The ontologies are created by different people to describe the existence of things in the world from

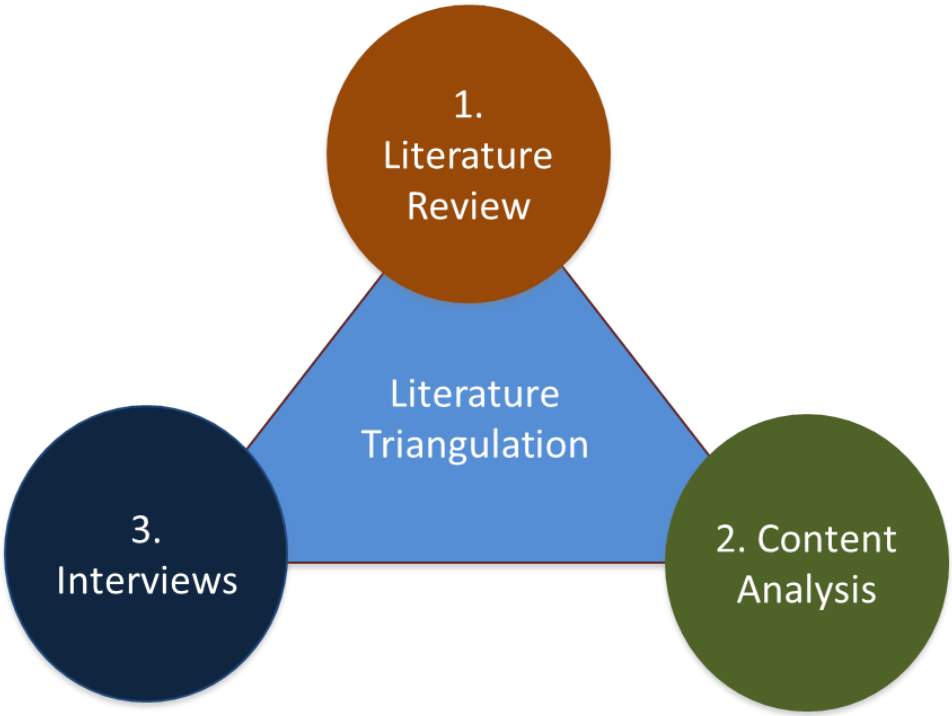
different viewpoints. The ontological elements of realities are not entirely accurate as it is an informed viewpoint by the participant. According to Krauss (2005), realists determines the reality of a social phenomenon through a combination of cognition processes that include elements of positivism and constructivism. Therefore, reality is actively constructed and not just discovered. Furthermore, the researcher postulates that the world is socially and freely constructed based on a particular time, event or culture.

Knowledge is created in a constructivist view by the interpretation of the meanings of the phenomena studied. Moreover, the interaction between the researcher and the participants changes the researcher and subject (Krauss, 2005a); and the knowledge is context and time-dependent (Foucault et al., 2002; Krauss, 2005a). Belsey (2002) suggests that there is no purely objective knowledge but rather “just another interrelated series of multiply interpretable texts” (p.32). Knowledge is thus not interpreted and accepted as a statement on absolute reality, but rather the final product of a creative search for better understanding.

Figure 3.3A illustrates the aim of the contemplated research to respond to the research question by way of a triangulation of research data. An extensive academic literature review of existing seminal academic authors (desk research) identified knowledge gaps of leadership theory, digital innovation theory and social justice theory. A two-stage interview process with stakeholders (field research)

complemented the content analysis and helped to uncover personally held beliefs and understandings of perceptions of digital leadership.

Figure 3.3A
Methodological Triangulation

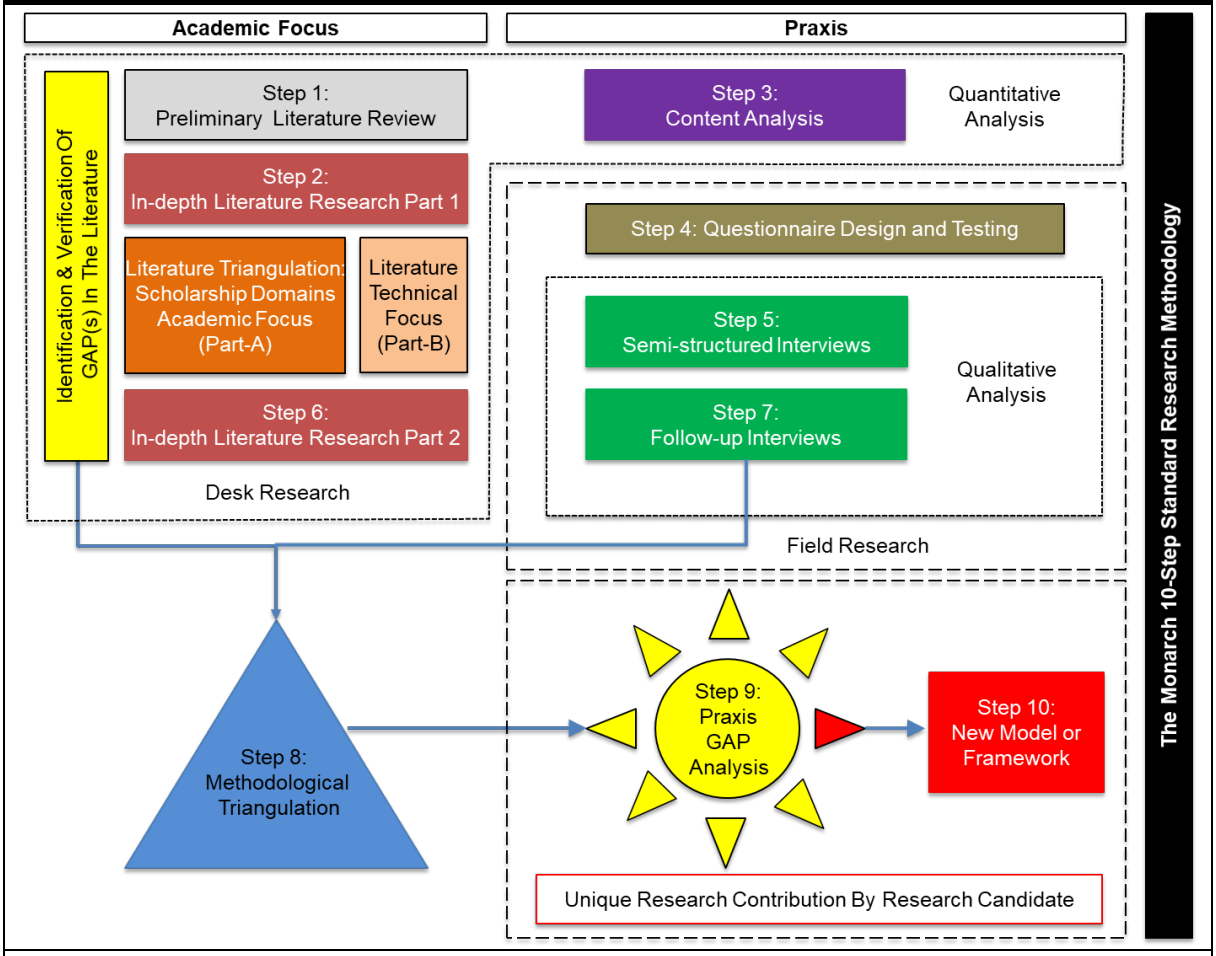


Source: Monarch Business School Switzerland (2018)

The various perspectives of multiple stakeholders were incorporated in the study and categorized in the group of employees and managers and the group of executives. Lisle (2011) emphasizes the strengths of qualitative research methods by arguing that it is most useful for exploring complex and multiple issues as required for digital disruption and innovation. The qualitative research looked deeper into the issues of interest and explored the nuances related to the issues at hand. A qualitative method using a phenomenological research design was conducted on the components of the proposed Socially Responsible Digital Leadership approach, as contemplated by the

research. The phenomenological approach increased the available language and text available on digital leadership. Figure 3.3B, as explained in section 1.6.3. shows the research responded to the main research question.

Figure 3.3B
Monarch 10-Step Standard Mixed Research Method



Source: Monarch Business School Switzerland (2018)

The methodological triangulation integrates the literature review with a professional focus on a review of quasi-academic industry content along with an investigation of the personally held beliefs and understanding of industry participants by way of a structured interview process. Furthermore, qualitative methodology is about an

understanding of the meaning of social phenomena by focusing on relations among a considerable number of attributes in the defined cases (Tuli, 2011). Moreover, the goal of a qualitative investigation is attempting “to understand the complex world of human experience and behaviour from the point-of-view of those involved in the situation of interest” (Krauss, 2005, p.764). The research challenged some earlier acceptable quantitative paradigms of leadership research through an in-depth phenomenological approach.

The researcher conducted the qualitative research based on the suggestions by Creswell (2013) and Stake (2010) listed as the following:

- the researcher as the primary data collector;
- face-to-face research conducted in naturalistic settings;
- focus on an understanding of the viewpoints or meanings of the participants;
- inductive data analysis;
- process control, but still with flexibility;
- non-random and purposeful sample selection; and
- a holistic understanding.

The research results were achieved through the collection and analysis of multiple sources of data and perspectives.

3.4 RELIABILITY AND VALIDITY

According to Golafshani (2003), reliability and validity are conceptualized as trustworthiness, rigour and quality in the qualitative paradigm. Trustworthiness in the research was increased through the improvement in reliability and validity that increased the quality of the qualitative research paradigm. The perspective of LeCompte and Goetz (1982) use qualitative equivalents to the quantitative counterparts, while Lincoln and Guba (1985) use naturalistic statement terms to approach the validation of qualitative research. Lincoln and Guba (1985) defined the four categories of trustworthiness as credibility, transferability, dependability and confirmability. In the next paragraphs, the four criteria are discussed in relation to the present research with the original terms of LeCompt and Goetz (1982) indicated in brackets.

Credibility (Internal validity) concerns the believability of the research results by linking the results with reality. In qualitative research, internal validity refers to the level to which social reality is represented in observations and measurements (LeCompte and Goetz, 1982). Validity is the extent to which a test measures what it is supposed to measure. Validity in qualitative research means the extent to which the data is plausible, credible, trustworthy and therefore defendable when challenged (Bashir, Afzal, & Azeem, 2008). Moreover, validity expresses the strength of the final results and indicates whether it can accurately describe the real world. The validation of the qualitative research followed the recommendation for validity as suggested by Creswell (2013) by assessing the accuracy of the findings as described by the

researcher and participants. Validity in the qualitative research was achieved by plausible, credible and trustworthy data that are therefore defendable when challenged.

Transferability (external validity) is a demonstration that the research findings can be applicable to other contexts. External validity concerns the generalization of the sample results that can be achieved in qualitative research through detailed illustrations (Poortman & Schildkamp, 2012), illustrated by means of various tables and figures from the participants. The research used in-depth interviews with 40 participants that have extensive digital experience. The interviews were followed up by a follow-up interview with 20 participants to ensure that any information which is new, can be utilized for the research and will allow for better accuracy in generalization. The research was undertaken in South African organizations with professionals that have experience with multinational organizations and worldwide exposure, that should warrant the validity of its application across any organization in the world.

Confirmability (objectivity): refers to the extent to which the research findings are independent. This is determined by the degree to which the findings are derived from the respondents' responses free from the bias and motivation of the researcher (Creswell & Miller, 2000; Lincoln & Guba, 1985).

Dependability (reliability) requires a demonstration that the findings are consistent and can be replicated (Lincoln & Guba, 1985). Reliability in simple terms describes the repeatability and consistency of a test as prescribed by Salkind (1997) that defines reliability as something that will similarly perform in the future as it has performed in the past. A reliable test or measure of behaviour can measure the same thing more than once and will result in the same outcome (Bashir et al., 2008). Kirk and Miller (1986) identified the three types of reliability as the degree to which a measurement remains the same, the stability of a measurement over time, and similarity of measurements within a given period. The research approach is posited to be fully repeatable and expandable to a more extensive research population.

Furthermore, McMillan and Schumacher (2006) recommend a list of ten strategies to increase validity in qualitative research. The research utilized eight of the strategies including (1) multi-method strategies that allow triangulation in data collection and data analysis; (2) prolonged and persistent field work that allows interim data analysis; (3) participant language verbatim accounts with literal statements of participants and quotations from documents; (4) participant as researcher with the use of participants recorded perceptions; (5) member checking with participants for accuracy during data collection; (6) participant review; (7) mechanically recorded data through digital recordings and (8) peer review of the synthesis of the research interviews.

3.5 SAMPLING METHOD

The sampling method used in the research was the purposive sampling method. In purposive sampling, the sample is chosen to keep in mind the purpose of the research and conducting research on respondents who qualify to be a part of the sample (C. A. Burns & Bush, 2014). Purposive sampling signifies a cognitive choice were sampling is a series of strategic choices about where, how and with who research should be conducted (Palys, 2008). Moreover, the purposive sampling method ensures for the research to contain a sample which genuinely represents the population, in contrast to the random selection of respondents (C. A. Burns & Bush, 2014). More specifically, the criterion sampling involved the search for individuals who met the specific criterion of digital experience as a pre-requisite for the interview. The total of forty respondents that was selected at the time of the field research was employed or have previously been employed with work experience in digital innovation, digital transformation or digital technology.

The respondents had experience in digital innovation working in organizations that have implemented advanced information technology systems or have transformed an organization to digital transformation. The respondents were deliberately chosen to represent as many organizations as possible by keeping in mind the requirement of executive, management and employee level individuals for the research. An extensive search including LinkedIn was undertaken to identify individuals based on their experience in digital innovation. A further snowball method was utilized to introduce more references from selected candidates that were approached to

complete the sample list of forty respondents. The individuals represent the two groups of meso level with executives and micro level with managers and employees. Within each group, the maximum participants per company did not exceed 10 per company and the participants were geographically dispersed across South Africa.

3.6 DATA COLLECTION

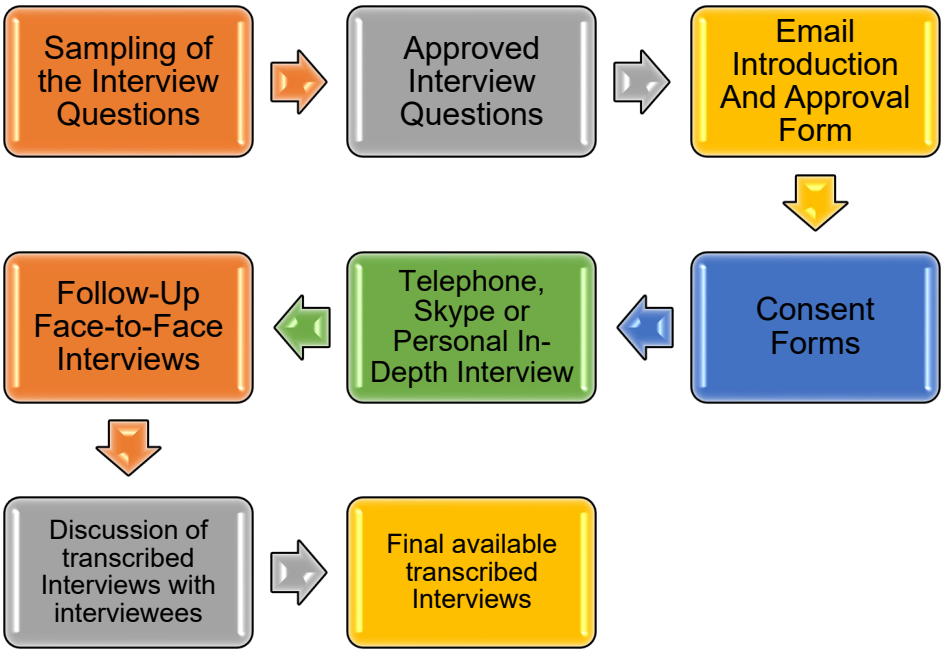
While data collection in qualitative research is an extensive and laborious process, the resultant data enabled rich contents that were coded, analysed and interpreted to answer the research question in context purposefully. The research used a phenomenological approach for an inductive approach to new insights into the phenomenon. The data collection method for phenomenological research followed the suggestions by Yin (2009) to hold on-site interviews for data collection, but telephonic interviews and Skype calls were also used as data collection methods for the research, due to the limited availability of specific participants.

The total number of respondents were forty and were at the time of the interviews current employees, managers or executives in companies with experience in digital innovation or transformation. The respondents belong to the employment category of executives or employees and managers in the organizations described. The respondents and the companies represented different industries and organization sizes.

The data collection phase, as illustrated in Figure 3.6, started with a testing phase where the questions in Appendix D were first tested with five participants to get an

understanding whether the questions were understood by the participants as anticipated. The interview test phase ensured the clarity and transition of the questions along with its relevance to the main research question. After the testing phase, the interview questions were improved and finalized for the main field research procedure.

Figure 3.6
Data Collection Method



Source: Francois Volschenk (2018)

An introductory email (Appendix C) was sent to each principal participant, along with three attachments; the research introduction letter from Monarch Business School (Appendix A); the participant consent form (Appendix B) and the semi-structured interview questions (Appendix D) . A time frame of three weeks was fixed for the final response from the participants, but with a reminder when some of them did respond, a follow-up email was sent to confirm their availability. The names of the participants

who did not respond to the third email were removed from the list of participants. The questions were shared with the participants before the interview to allow the participants to familiarize themselves with the motive of the field research. The participants are knowledgeable about the terms of leadership and digital innovation, but some were unfamiliar with social justice, Digital Social Dynamic Equilibrium and other terminologies. Importantly, the aim of the semi-structured interviews was to get an insight into the personal views of participants based on their experience and skill set. The participants were sent a notification through the consent forms and verbally before the interview that complete confidentiality will be maintained, all questions are voluntarily answered, all questions do not have to be answered and that the participants can discontinue the interview at any given time of the interview.

The data collection instrument, the semi-structured interview questions in Appendix D, was designed in three parts with Part-A as the information part, Part-B to Part-F the qualitative part (semi-structured interview) and additionally in Part-E the quantitative part (Likert scale). Quantitative data collection was collected directly from the participants by allowing them time to tick the most appropriate value on a scale from 0 to 7 on the Likert scale in the questionnaire. Participants started Part-E with the Likert scale responses before responding to the semi-structured interview part of the section. Qualitative data was collected for the semi-structured interviews of Part-B to Part-F of the questionnaire. A digital recorder was used to record the personal interviews and telephone calls, and a Skype recorder for Skype interviews.

The in-depth interview started with an introduction, after which personal profile questions were asked. The interviews continued with the semi-structured interview questions, with a strong emphasis on details and explanations. All interviews were recorded with the prior consent of the respondents. Interviews had a duration of between 30 and 60 minutes. The recorded interviews were saved as media files for further analysis during the data analysis phases. Participants were invited that upon a request from the participant, the transcribed text document from the recorded audio file would be shared with the participant.

The in-depth interview phase was followed by a follow-up interview phase to ensure that the principle of saturation is achieved in the data collection phase. The follow-up participants were tested within one month after the initial interview to test for accuracy in the responses of the participants to ensure response consistency. The participants were sent the same questions with their transcribed interviews prior to the follow-up interview. The method gave participants a chance to reflect and afford them more time to develop their response. The follow-up interview discussed their previous responses and asked more questions on the “why” of the research.

3.7 DATA ANALYSIS

The research used the unique analytical strategy of the grounded theory method with a phenomenological approach that allows the use of both qualitative and quantitative data. The qualitative data was collected from the forty respondents. Quantitative data was collected from the forty respondents, while additional quantitative data was collected during the content analysis phase and the professional focus literature

review. The qualitative data were collected by face to face interviews, telephonic interviews or Skype calls that was recorded for use during the data analysis phase.

The qualitative data collected from the research was organized and analysed using MAXQDA 2018 Analytics Pro software. MAXQDA software has advanced features for transcribing audio files to text files (VERBI, 2018). The qualitative data from the in-depth interview was recorded with a Panasonic RR-US591 digital recorder, files downloaded via USB port to the computer, imported into MAXQDA software and transcribed into text files with the multimedia tools available in MAXQDA software. After the import of the audio files into MAXQDA, the data was carefully analysed and coded separately for each respondent. The coded strings of all forty respondents were combined and analysed, to conclude on the research outcomes. The quantitative data were analysed with Minitab 18 software. The final interpretation of the results of the qualitative data and the quantitative data were combined to achieve the solution to the main research question.

3.8 SUMMARY OF CHAPTER THREE

The researcher predicates the significance of the internal reality of the interpretations of reality from each participant and that the knowledge emerged from a deep understanding of the data and the context it is embedded in. The researcher accepted that the internal oriented and socially constructed ontology affected the epistemological foundations of the research. Moreover, the mixed methods

supported the notion that reality is socially constructed, understood and interpreted by in each unique individual's unique contextual and emotional interpretation. Grounded theory was the phenomenological research method used for the analysis of the primary data. This method allowed for the examination of the personal explanations of respondents of their perception of the influence of digital innovation on people in organizations and society, digital leadership, social leadership, social innovation and Socially Responsible Digital Leadership. A total of forty respondents were interviewed and categorized into the two groups namely a group of employees and managers and the group of executives

As stated earlier, the research employed an original eighteen-item questionnaire made up of two sections: (1) Participant Profile and (2) Semi-Structured Questionnaire covering the core areas of each of the essential influence factors in the Socially Responsible Digital Leadership framework. The questionnaire was pre-tested before putting it to use for data collection from the research participants. The objective of this was to determine the appropriateness of the data collection method for the main research and to minimize possible errors in the questionnaire.

The digital professionals made their contribution to the research through a digitally recorded personal, Skype or telephone interview that was transcribed. The follow-up interviews afforded some participants an opportunity to review and approve the transcript of their conversation and make any necessary adjustment that was necessary. Thereafter, the responses obtained from the semi-structured interviews

were analysed, coded and grouped to build a further understanding of the interaction of the influence factors of the Socially Responsible Digital Leadership framework.

This research methodology suffices of serving as a bridge between paradigms explaining the research issues whilst integrating the practice of investigating the phenomenon. In conclusion, the conceptual research methodology framework effectively provides the structure for the research design to identify, clarify, justify and determine how the fieldwork should be undertaken. The following chapter will explore the data collected in further detail and present the resultant findings.

CHAPTER FOUR

PRESENTATION OF THE DATA

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Final submission to the Dissertation Committee
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January 15, 2019

CHAPTER FOUR – PRESENTATION OF THE DATA

4.1 PURPOSE STATEMENT

As previously mentioned, by implementing a multidisciplinary approach, the primary purpose of the research is:

> Determine by using both qualitative and quantitative research methods the characteristics of a new Socially Responsible Digital Leadership conceptual framework that assists in explaining the relationships between digital innovation, social justice and leadership to improve the positive influences or mitigate the negative influences of digital disruptions on individuals in organizations and society.

4.2 REVIEW OF THE RESEARCH METHOD

As mentioned in the previous chapter, a qualitative research methodology was implemented and investigated with a phenomenological approach. The research design is rooted in grounded theory to be able to isolate the main aspects of digital innovation and influences on individuals in society and organizations. Moreover, the characteristics and conclusions that guided the research design and analysis decisions are included in Table 4.2. The characteristics of the table serve as a structure for learning thereby explaining the natural progression of the studied phenomenon of the influence of digital transformation in the world. Furthermore, Krauss (2005) suggests in order to discover the subjectively meaning of the

responses by participants, researchers should identify with the social actors, the purposes and motives that trigger the responses.

Table 4.2 Review of the Research Method	
Characteristics	Conclusions
Research purpose	The researcher acknowledged a need to understand the professional and social situation from the perspectives of the participants.
Ontological assumptions	Human beings in a social context in the nature of the world inform their experience. The researcher accepts and respects the presence of multiple realities. Individual realities were explored in an attempt to avoid negative collective or group emotional inferences. The combination of individual realities will inform the collective reality.
Objectivity of data collection and analysis	Explicit and detailed descriptions of data collection and analysis procedures were followed.
Precision (in terms of reflexivity and constant comparisons).	A detailed description and an accepted understanding of the phenomena of digital leadership, social innovation and Digital Social Dynamic Equilibrium were essential.
Verification of results	Partly confirmed with affirmation by digital professionals, but confirmation with further research could be required for application in the rest of the world.
Empirical compliance	Research efforts were guided by systematic methods. The researcher suspended any own subjective experiences and beliefs. The researcher used statistical analysis based on evidence collected. The researcher used logical interpretations based on the evidence collected.
Logical reasoning	The researcher reached a conclusion by the examination of information to form generalizations through inductive reasoning. With the inductive approach, data were collected, and the theory expanded as the result of data analysis.
Source: Francois Volschenk (2008) based on McMillan and Schumacher (2001)	

The researcher attempted to gain an understanding of the point of view of each participant, thereby finding merit in the thoughts and feelings of each person, to better communicate the understanding through the coded words. Importantly, individual variations or unique themes are as crucial as commonalities about the phenomenon researched (Hycner, 1985). The open approach assisted the researcher in investigating the research setting of each participant independently. The targeted population were selected from organizations throughout South Africa. The final sample consisted of forty executive, management and employee level digital professionals in different organization types from different industries.

4.3 REVIEW OF THE DESIGN AND DATA COLLECTION

Initially, ninety-five individuals received an introductory email for participation in a volunteer study on Socially Responsible Digital Leadership. In the end, only forty participated in the research, randomly distributed throughout South Africa, each with a minimum of 5 years digital or social innovation experience. The selected individuals had up to two weeks to confirm their participation in contributing to the research. If no response was received after such time, the invitation was eliminated from the process due to time constraints. The final research sample of digital innovation professionals is those who responded to the initial email in the respected time limit and confirmed their willingness to partake in the research.

The data was collected through direct participation of digital innovation professionals who narrated personal perspectives on leadership. The information was digitally

recorded during a personal, telephone or Skype call interview. The allotted thirty minute interview time was extended in some instances due to the following factors: years of experience in digital innovation, personal perspectives and their understandings on the concepts of social and digital leadership. The majority of the respondents (24 out of 40) provided forty-five minutes to one-hour of narrative during a personal or telephone interview. The majority of participants showed great insight and knowledge while articulating their responses to the interview questions. The overall consensus among participants concerning the interview was that the questions forced them to think deeply and critically about the influence of digital innovation on people in organizations and society.

4.4 DATA DISTILLATION

This section provides an itemized clarification of the data collected from the respondents using the stated instruments and research methods used in Chapter Three. The forty responses of the digital professionals are presented in two parts:

Part A-Participant Profile: Each respondent was given a code name and listed numerically as Interview-101 to Interview-140. The respondents were categorized into two tables: 4.4.4.1 (group of executives) and 4.4.4.2 (group of employees and managers) and then characterised by their respective demographics:

- Gender
- Job title or job description
- Position (organizational Level)

- Age
- Years of experience leadership or management
- Years of experience digital or digital transformation

Part B – Conceptualizing Socially Responsible Digital Leadership (Appendix D): The findings from the responses to the semi-structured interviews from Appendix D is presented in the twenty sections from section 4.5 (category one) to section 4.24 (category twenty). The information collected from the respondents in digital audio files was imported and transcribed into MAXQDA Pro Analytics 18. The retrieved segments were organized, coded and arranged into distinct categories. Tally charts were used to identify the significance of the findings as a way to improve understanding of a situation and check for significant components of the phenomenon. Moreover, the tally charts helped to highlight information concerning the many factors that influence concepts, perceptions and the dynamics of Socially Responsible Digital Leadership. The statistics of the codes, sub-codes and categories were used to construct frequency tables, categorization tables and code matrix tables to illustrate the results.

4.4.1 Part A: Participant Profile

The forty participants are divided into the group of employees and managers and the group of executives.

Table 4.4.1.1 shows the randomized list of the twenty executive participants to comply to anonymity requirements requested by some participants. The average age of executives is 48.45 years with the youngest at 35 years and the oldest at 58 years. The executives have an average of 16.90 years of leadership experience and 14.95 years of digital innovation experience with details of the descriptive statistics from Minitab 18 available in Appendix Y1.

Table 4.4.4.2 shows the randomized list of the twenty employees and managers to comply to anonymity requirements requested by some participants. The average age of managers and employees is 40.10 years with the youngest at 28 years and the oldest at 54 years. The managers and employees have an average of 7.50 years of leadership experience and 10.65 years of digital innovation experience with details of the descriptive statistics from Minitab18 available in Appendix Y1.

4.4.1.1 Summary profile – Executives

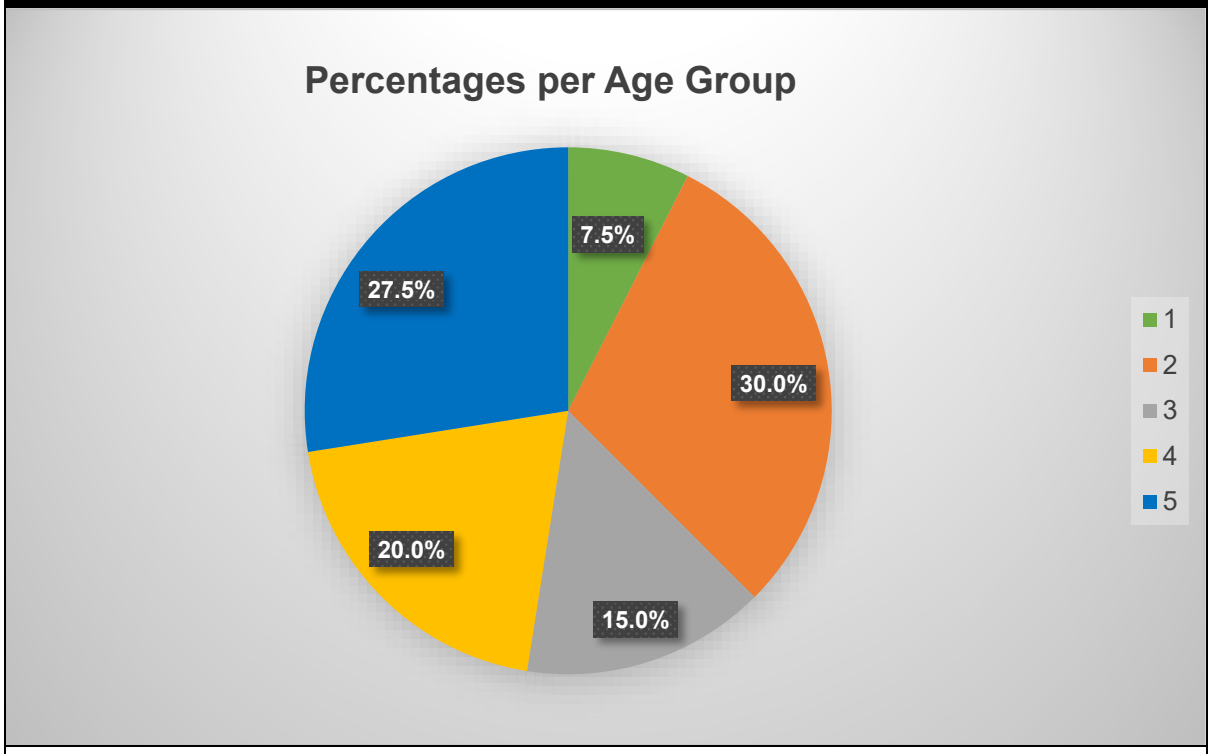
Table 4.4.1.1 Participant Profile Summary - Executives						
Position	Gender	Job description	Primary Job Function	Executive Age in years	Executive Leadership Experience in years	Digital Experience Executives in years
Average				**48,45**	**16,90**	**14,95**
Executive	Male	Chief Product Officer	Executive	54	28	24
Executive	Male	Chief Information Officer	Technical	40	18	8
Executive	Male	Chief Executive Officer	Executive	51	15	28
Executive	Male	Chief Executive Officer	Executive	56	25	10
Executive	Male	Chief Operating Officer	Executive	35	8	11
Executive	Male	Strategic Account Executive	Sales	54	15	5
Executive	Male	Chief Executive Officer	Executive	52	20	20
Executive	Female	Chief Human Resources Officer	Executive	39	6	5
Executive	Male	Chief Digital Officer	Technical	40	19	17
Executive	Male	Chief Information Officer	Technical	53	30	12
Executive	Male	Managing Executive: Operations	Admin	54	30	10
Executive	Male	Chief Development Officer	Technical	57	5	30
Executive	Male	Regional Director	Executive	42	15	10
Executive	Male	Chief Strategy Officer	Executive	58	15	10
Executive	Male	Chief Sales Officer	Sales	45	10	6
Executive	Male	Chief Executive Officer	Executive	48	25	21
Executive	Male	Digital Strategy Director	Executive	49	10	28
Executive	Male	Sales Director	Sales	39	13	16
Executive	Male	Chief Digital Officer	Technical	45	15	13
Executive	Male	Contract Executive	Admin	58	16	15
Source: Francois Volschenk (2018)						

4.4.1.2 Summary profile – Employees and Managers

Table 4.4.1.2 Participant Profile Summary – Employees and Managers						
Position	Gender	Job description	Primary Job Function	Managers /Employees Age in years	Managers /Employees Leadership Experience	Digital Experience-Employees in years
Average				**40,10**	**7,50**	**10,65**
Employee	Male	Solution Engineer	Technical	39	3	6
Employee	Male	Network Collaboration Manager	Sales	28	0	5
Employee	Male	Cloud Business Lead	Sales	38	10	17
Manager	Female	Special Projects Manager	Technical	40	5	6
Manager	Male	Head of Innovation	Technical	45	10	20
Employee	Male	Enterprise Architect	Technical	36	0	12
Employee	Male	Enterprise Account Manager	Sales	34	5	10
Manager	Male	Service Delivery Manager	Technical	46	10	25
Employee	Female	Change and Culture Specialist	Admin	39	10	5
Manager	Male	Service Governance Executive	Technical	49	15	11
Employee	Male	Enterprise Architect	Technical	39	0	11
Employee	Male	Automation Specialist	Technical	43	10	10
Employee	Female	Enterprise Account Manager	Sales	39	2	13
Employee	Male	Technical Account Manager	Technical	36	10	10
Employee	Female	Social Investments Manager	Admin	42	13	5
Employee	Female	Technical Account Manager	Technical	29	5	5
Employee	Male	Solutions Architect	Technical	39	10	7
Employee	Male	Solutions Architect	Technical	54	20	10
Employee	Male	Professional Service Delivery Manager	Technical	39	2	5
Manager	Male	Solution Engineer Manager	Technical	48	10	20
Source: Francois Volschenk (2018)						

4.4.1.3 Participation by Age Range

Figure 4.4.1.3
Participation by Age Range



Source: Francois Volschenk, 2018

Figure 4.4.1.3 shows the percentage of the forty participants per age group. Thirty percent of the participants are in the age group of 35 to 39 years. Only seven percent of the participants are younger than 35 years. The distribution of participants is well distributed across the ages over 35 years with a sizeable percentage of 27.5% of the participants aged over 50 years. The average age of the 40 participants is 44.27 years with a median of 42.50 years, with details of the descriptive statistics from Minitab18 available in Appendix Y1.

4.4.1.4 Participation by Leadership Experience

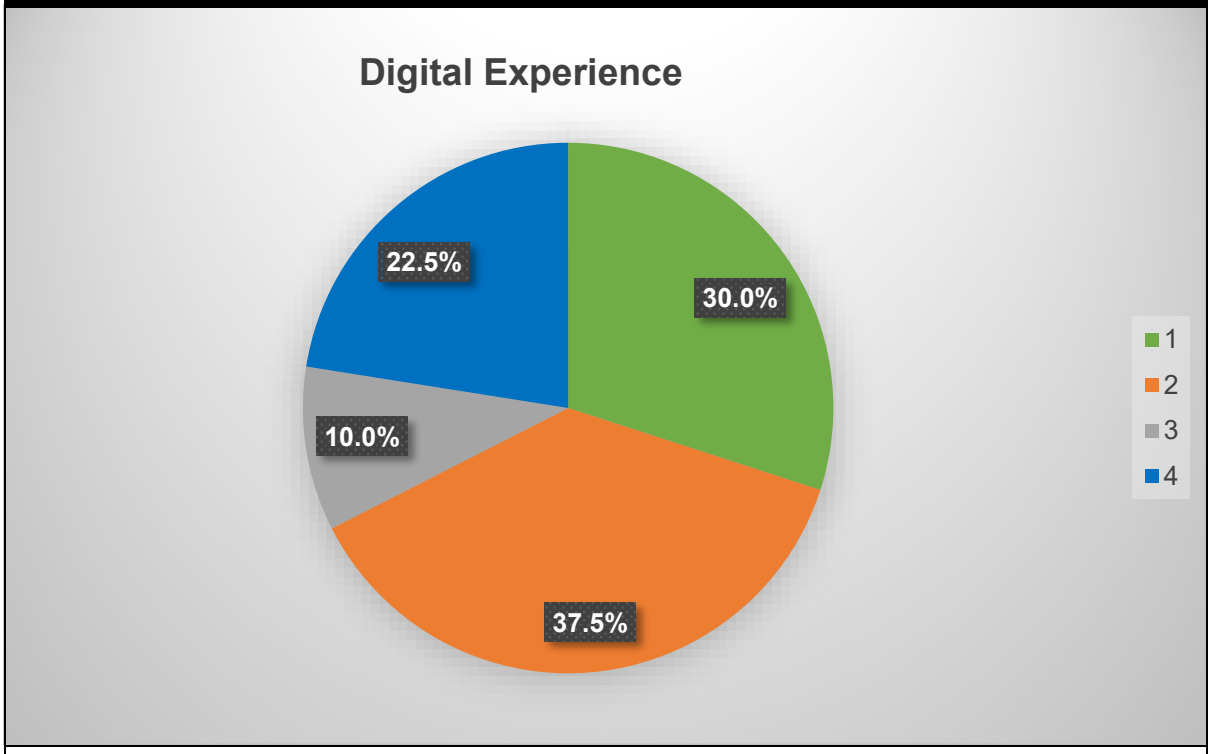
Figure 4.4.1.4
Participation by Leadership Experience

Source: Francois Volschenk, 2018

Figure 4.4.1.4 shows the percentage of the forty participants categorized in leadership experience. Thirty percent of the participants have 10 to 14 years of leadership experience. The distribution of participants is well distributed across ranges of experience with only fifteen percent of the participants that have less than five years of leadership experience. The average leadership experience of the 40 participants is 12.20 years with a median of 10 years, with details of the descriptive statistics from Minitab18 available in Appendix Y1.

4.4.1.5 Participation by Digital Experience

Figure 4.4.1.5
Participation by Digital Experience

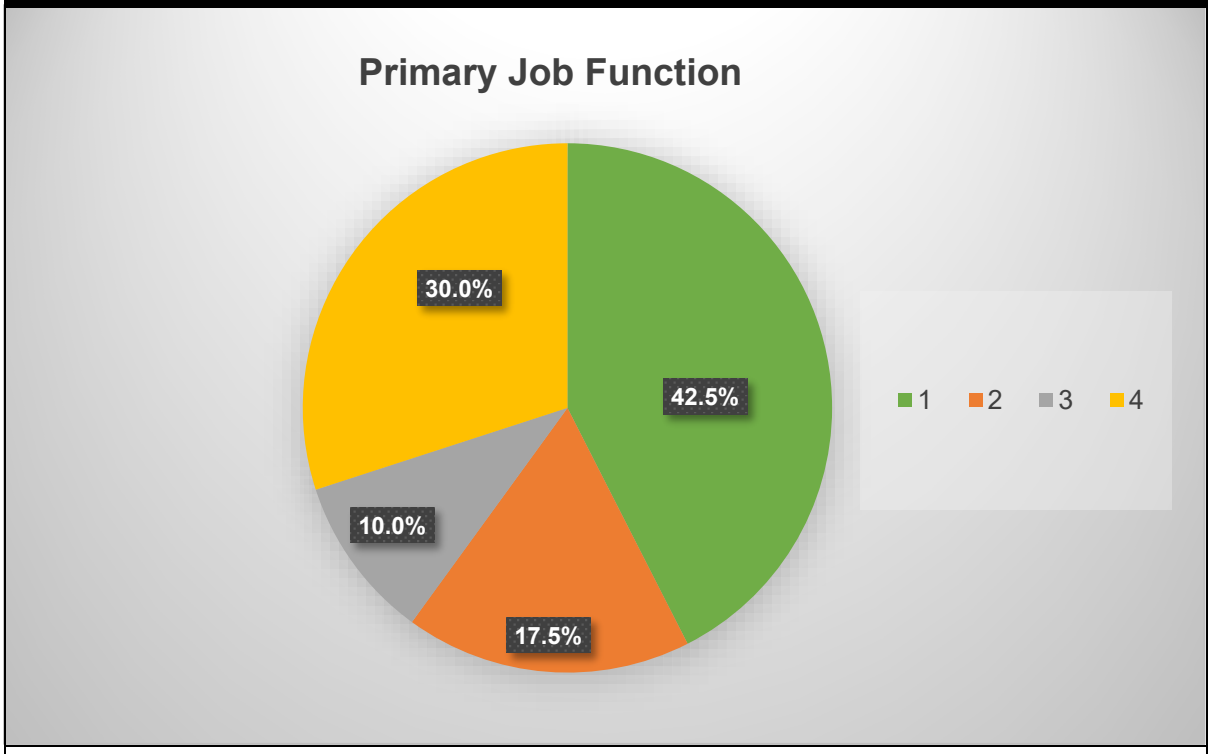


Source: Francois Volschenk, 2018

Figure 4.4.1.5 shows the percentage of the forty participants categorized in digital innovation experience. The largest group at 37.5%, has 10 to 14 years of digital innovation experience. The distribution of participants is well distributed across ranges of experience with 22.5% of the participants that have more than 20 years of digital innovation experience. The average digital experience of the 40 participants is 12.80 years with a median of 10.50 years, with details of the descriptive statistics from Minitab18 in Appendix Y1. The years of digital experience is significantly more than 10 years ($p=0.018$) at a confidence level of 95% as per Appendix Y2.

4.4.1.6 Participation by Primary Job Function

Figure 4.4.1.6
Participation by Primary Job Function



Source: Francois Volschenk, 2018

Figure 4.4.1.6 shows the percentage of the forty participants categorized in primary job function. The largest group of participants at 42.5% has a primary technical function. The second largest group of 30% is involved in an executive function in their organizations ranging from chief executive officers, chief product officers, regional directors and others.

4.4.1.7 Participation by Job Position

Table 4.4.1.7 Participation by Job Position		
Type of Job Position	Frequency	Percentage
Chief Executive Officer	4	10%
Chief Digital Officer	2	5%
Chief Information Officer	2	5%
Enterprise Account Manager	2	5%
Enterprise Architect	2	5%
Solutions Architect	2	5%
Technical Account Manager	2	5%
Automation Specialist	1	2,5%
Change and Culture Specialist	1	2,5%
Chief Development Officer	1	2,5%
Chief Human Resources Officer	1	2,5%
Chief Operating Officer	1	2,5%
Chief Product Officer	1	2,5%
Chief Sales Officer	1	2,5%
Chief Strategy Officer	1	2,5%
Cloud Business Lead	1	2,5%
Contract Executive	1	2,5%
Digital Strategy Director	1	2,5%
Head of Innovation	1	2,5%
Managing Executive: Operations	1	2,5%
Network Collaboration Manager	1	2,5%
Professional Service Delivery Manager	1	2,5%
Regional Director	1	2,5%
Sales Director	1	2,5%
Service Delivery Manager	1	2,5%
Service Governance Executive	1	2,5%
Social Investments Manager	1	2,5%
Solution Engineer	1	2,5%
Solution Engineer Manager	1	2,5%
Special Projects Manager	1	2,5%
Strategic Account Executive	1	2,5%
Source: Francois Volschenk, 2018		

Table 4.4.1.7 shows the job positions of the participants. Most of the positions were unique at 2.5% (one out of forty), except the chief executive officer position at 10% (four participants) and various positions at 5% (two out of forty participants).

4.4.2 Part B: Conceptualizing Socially Responsible Digital Leadership

The findings from the responses to the semi-structured interviews from Appendix D is presented in the twenty sections from Section 4.5 (category one) to Section 4.24 (category twenty).

4.4.2.1 Digital Innovation

The four categories in Section 4.5 to Section 4.8 deal with digital innovation and the influence of digital innovation on people in organizations and society.

4.4.2.2 Social Responsibility in Organizations and Society

The four categories in Section 4.9 to Section 4.12 deal with social responsibility in organizations and society.

4.4.2.3 Digital Leadership

The three categories in Section 4.13 to Section 4.15 deal with digital leadership and the mitigation of the negative influences of digital innovation.

4.4.2.4 Socially Responsible Digital Leadership

The six categories in section 4.16 to Section 4.21 deal with the components of the Socially Responsible Digital Leadership framework and Digital Social Dynamic Equilibrium. Section 4.23 illustrates the quantitative results from Part-E and Section 4.23 deal with significant quotes from the respondents.

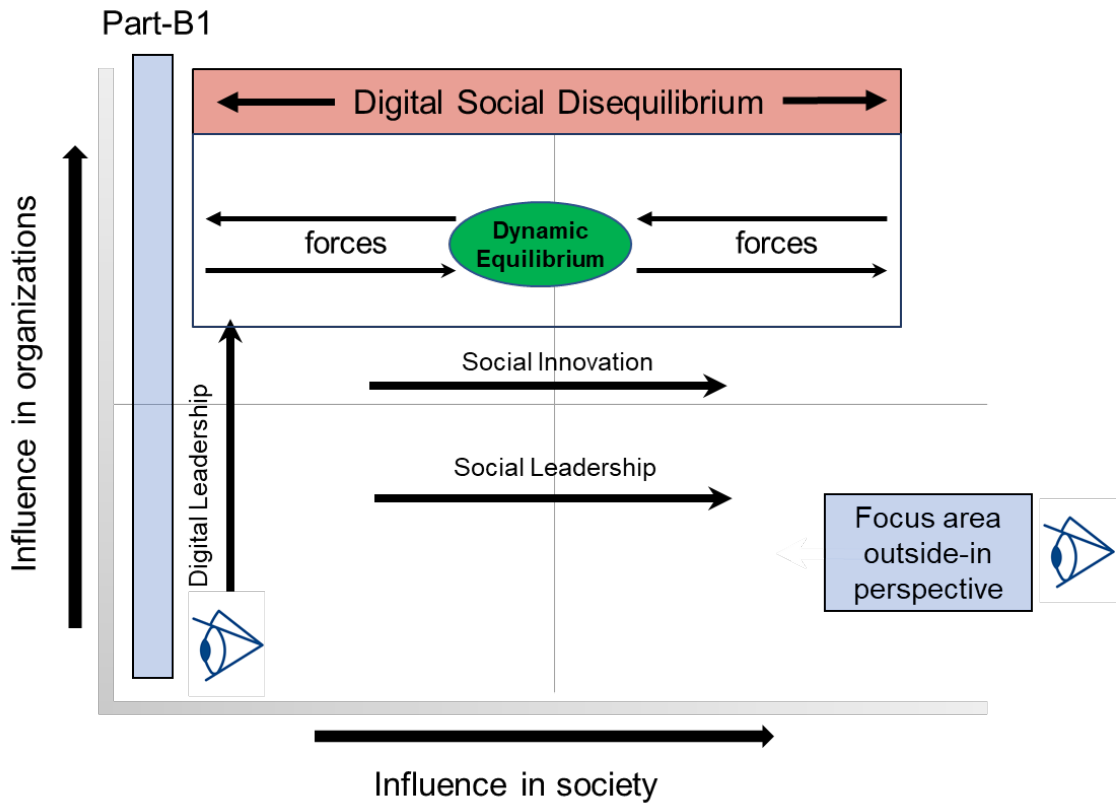
4.4.2.5 The Why of Digital

The one category in Section 4.22 deals with why digital is required in the world from an organizational and societal viewpoint.

4.5 CATEGORY ONE–The Impact of Digital on People in Organizations

In the first question of the interview, Part B-1, participants were requested to give their opinion on the potential impact of digital innovation on people in organizations. To add more specificity to the research subject, Figure 4.5A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.5A
The Focus Area of the Potential Impact on People in Organizations



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.5C of Appendix G1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part B-1 were categorized into 6 groups. Table 4.5D in Appendix G2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.5E in Appendix G3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.5A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 45 items in 6 categories of the potential impact of digital innovation on people in organizations. Table 4.5A illustrates that *digital created unique opportunities for people* and the *attitude of people will influence what will happen* at 8.70% each, *increase efficiency or work smarter* at 7.45% and *people feel threatened* and *increase productivity* both at 6.21%.

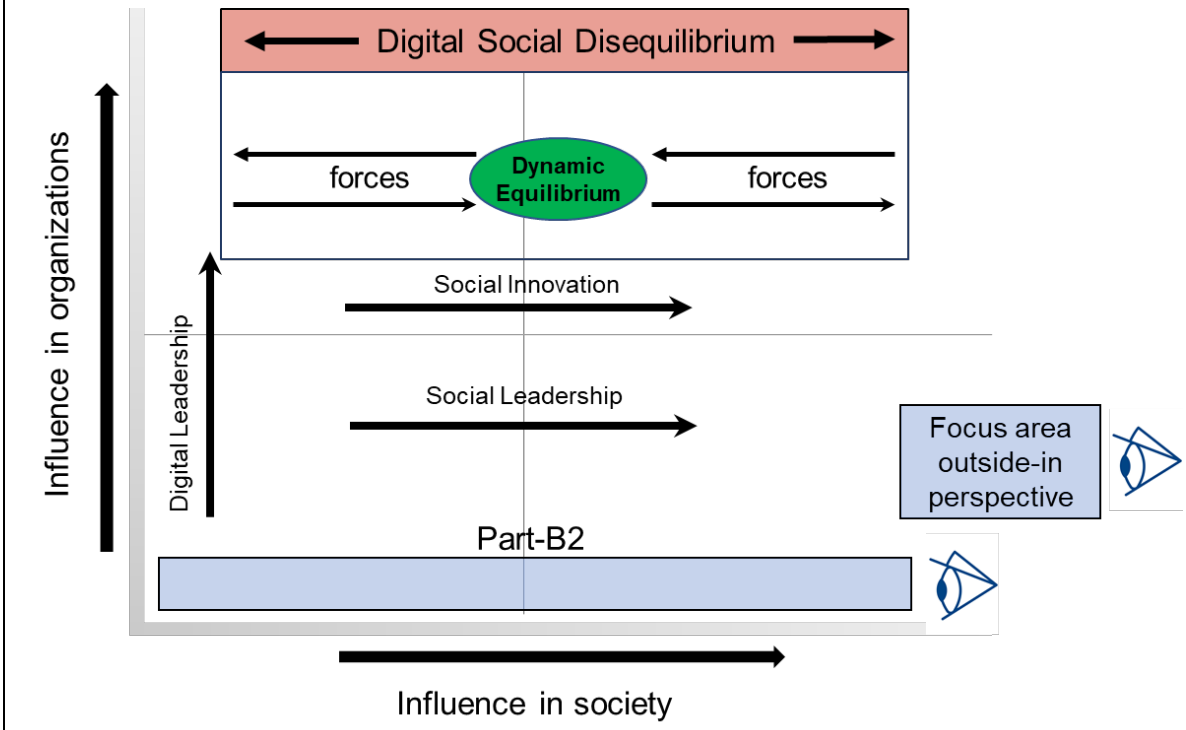
Table 4.5A The Potential Impact of Digital on People in Organizations		
Coded terms (n=40)	Frequency	Percentage
Part B-1: Potential impact on people in organizations		
○ External and internal impact	1	0,62%
○ Digital can transform industries	2	1,24%
○ Consumer-thinking in organizations	1	0,62%
○ Digital defines an organization	6	3,73%
○ Leadership styles will change with digital	4	2,48%
○ People are more controlled and monitored	2	1,24%
○ People have resistance to change	8	4,97%
○ The company culture should cultivate a growth mind	8	4,97%
○ The required skills changed with digital	6	3,73%
○ Use digital innovation to improve efficiency	4	2,48%
○ Short-term and long-term impact.	2	1,24%
○ Constant change	4	2,48%
○ Digital created unique opportunities for people	14	8,70%
○ Digital leaders will become the new business leaders	2	1,24%
○ Long-term is sustainability	1	0,62%
○ Mobile communication has increased the market size	3	1,86%
○ Short term is generally productivity and profits	2	1,24%
○ Natural resistance to change	3	1,86%
○ Fear of the unknown	1	0,62%
○ Lack of understanding or ignorance limit acceptance	1	0,62%
○ The potential impact can be positive and negative		
○ Generations influence the impact	4	2,48%
○ Implementation strategy is critical	2	1,24%
○ Requires a new way of thinking	2	1,24%
○ The attitude of people will influence what will happen	14	8,70%
○ Positive impact	2	1,24%
○ Digital innovations to satisfy needs	2	1,24%
○ Enhanced work experience	2	1,24%
○ Faster communication	2	1,24%
○ Improve communication	3	1,86%

○ Increase efficiency or work smarter	12	7,45%
○ Increase productivity	10	6,21%
○ Increased cultural diversity	2	1,24%
○ Integrate remote parts of the organization seamlessly	1	0,62%
○ Support decision making	2	1,24%
○ The ones that embrace it will think on a higher level	2	1,24%
○ Negative impact		
○ People are now always on	1	0,62%
○ People feel threatened by digital	10	6,21%
○ Poor communication	4	2,48%
○ Reduced productivity	2	1,24%
○ The workforce could decrease	1	0,62%
• Jobs will be replaced with functional abilities	2	1,24%
• Digital innovation could render some jobs redundant	2	1,24%
• Non-digital oriented people will struggle in future	2	1,24%
Total	161	100,00%
Source: Francois Volschenk (2018)		

4.6 CATEGORY TWO - The Impact of Digital on People in Society

In this question of the interview, Part B-2, participants were requested to give their opinion on the potential impact of digital innovation on people in society. To add more specificity to the research subject, Figure 4.6A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.6A
The Focus Area of the Potential Impact on People in Society



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.6C of Appendix H1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part B-2 were categorized into 3 groups. Table 4.6D in Appendix H2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.6E in Appendix H3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code

matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.6A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 34 items in 3 categories of the potential impact of digital on people in society. Table 4.6A illustrates a negative impact that digital could be an *inhibitor of social interaction* at 16.00%, a positive impact of a *broader communication circle* at 7.33%, a negative impact that *people too much on their mobile devices* at 6.67% and that *digital is an enabler or equalizer in opportunities for everyone* at 6.00%.

Table 4.6A
The Potential Impact of Digital on People in Society

Coded terms (n=40)	Frequency	Percentage
Part B-2: Potential impact on people in society		
○ Impact on people in society		
○ Digital information shapes minds	5	3,33%
○ Digital innovation will only increase in future	7	4,67%
• Lack of understanding of the impact	2	1,33%
• Proliferation of services	4	2,67%
• The virtual world will have an influence	1	0,67%
○ Enabler or equalizer in opportunities for everyone.	9	6,00%
○ Invasion of privacy	3	2,00%
○ Mobile technology has enabled opportunities	3	2,00%
○ People cannot function in society without digital	2	1,33%
• Messaging has even replaced phone calls	1	0,67%
○ The impact of digital depends on the purpose	2	1,33%
• Positive or negative impact	1	0,67%

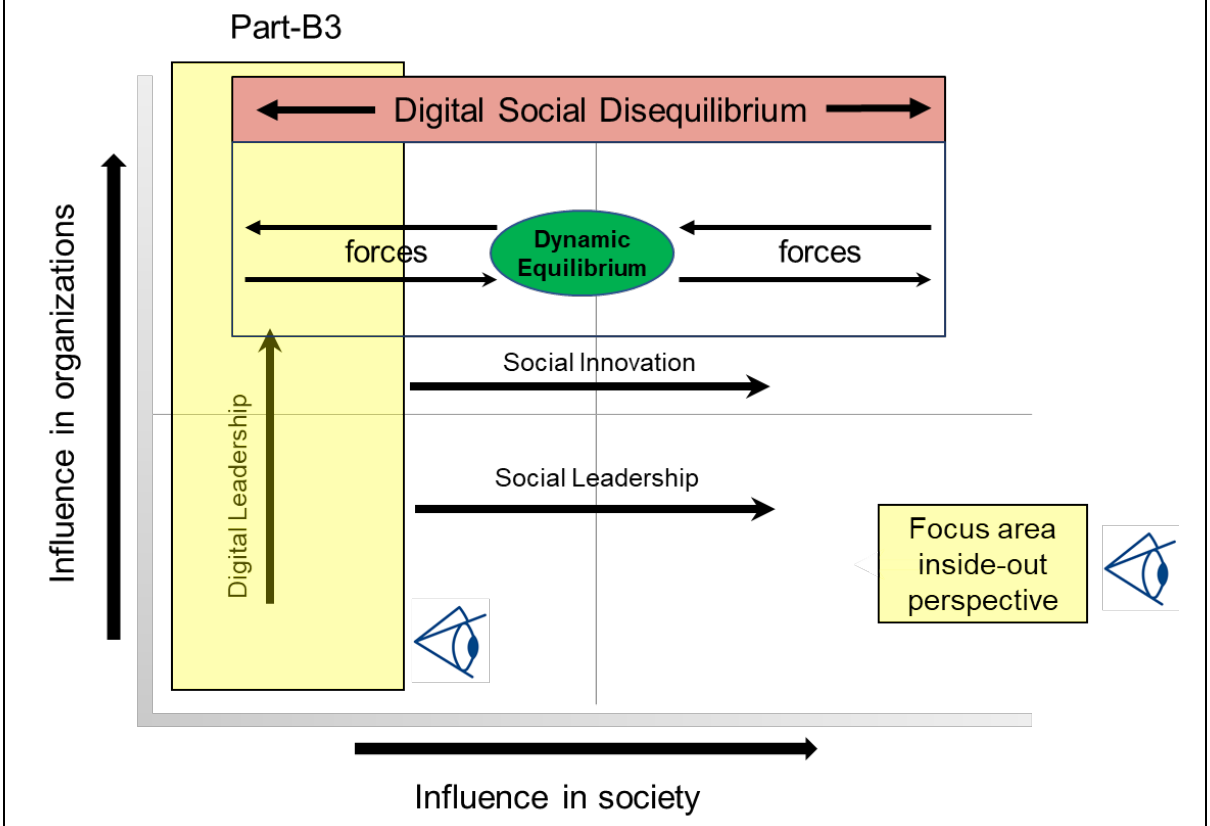
○ Positive Impact		
○ Allow people in society greater opportunities	6	4,00%
○ Broader communication circle	11	7,33%
○ Digital innovation has improved individual experiences	3	2,00%
• Improved personal safety and security	2	1,33%
• Improved opportunities for education	5	3,33%
• Improved access to information	6	4,00%
○ Improved convenience	5	3,33%
○ Improved individual productivity	1	0,67%
○ Key enabler to willing individuals.	4	2,67%
○ More affordable technology for all	1	0,67%
○ Negative Impact		
○ Digital can replace human capabilities	3	2,00%
○ Inhibitor of social interaction	24	16,00%
○ Instant gratification is expected	6	4,00%
○ Negative individual experiences		
• Excessive control on people	1	0,67%
• Higher stress levels	3	2,00%
• Increased peer pressures	2	1,33%
• People create digital personas / Virtual reality	5	3,33%
• Reduced privacy	3	2,00%
• Reduced productivity / laziness	1	0,67%
• Reduced security	2	1,33%
○ Overload of potentially futile information	6	4,00%
○ People too much on mobile devices	10	6,67%
Total	150	100,00%
Source: Francois Volschenk (2018)		

4.7 CATEGORY THREE – Digital Innovation in South Africa

In this question of the interview, Part B-3, participants were requested to give their opinion of digital innovation in South African organizations. To add more specificity to the research subject, Figure 4.7A illustrates the inside-out perspective of the

interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.7A
The Focus Area of Digital Innovation in South African Organizations



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.7C of Appendix I1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related

groups of codes. The codes of part B-3 were categorized into 4 groups. Table 4.7D in Appendix I2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.7E in Appendix I3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.7A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 30 items in 4 categories of digital innovation in South African organizations. Table 4.7A illustrates that d*igital innovation is slow in South Africa* at 16.06%, that *leading industries are banks, telcos and automotive* at 9.49% with *industries with advanced digital transformation* is at 8.03%, and *the digital culture change should happen first* rated at 7.30%.

Table 4.7A
Digital Innovation in South African Organizations

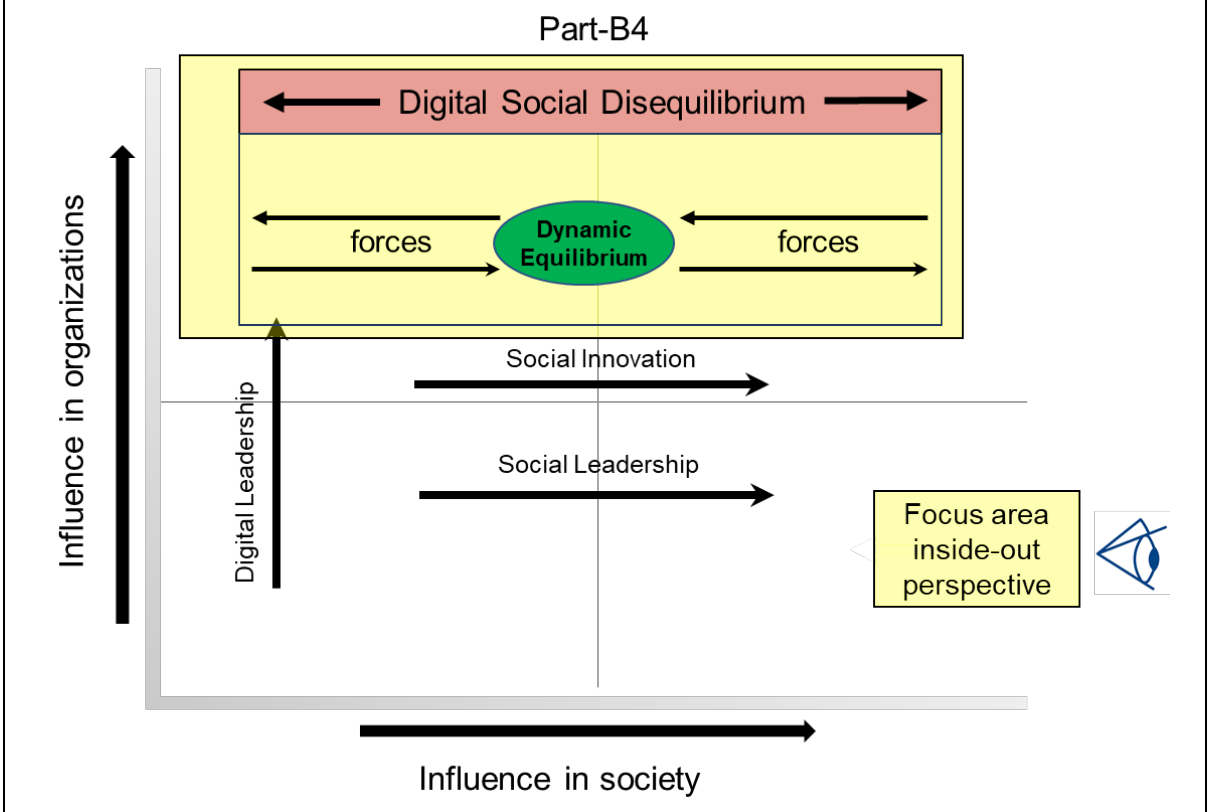
Coded terms (n=40)	Frequency	Percentage
Part B-3: Digital Innovation in South Africa		
○ Digital maturity in South Africa		
○ Conservative approach	4	2,92%
• Digital innovation inhibited by negative societal action	3	2,19%
• Digital is not a magic fix for all problems	1	0,73%
• Lack of digital skills	3	2,19%
• Stuck in old ways	4	2,92%

• Traditional corporate mindset	5	3,65%
• Under-developed infrastructure	1	0,73%
○ Digital innovation is at an acceptable level in South Africa	5	3,65%
○ Digital innovation is slow in South Africa	22	16,06%
• Digital transformation is misunderstood	3	2,19%
• Lagging against largest organizations in the world	6	4,38%
○ Digital transformation should be expedited	4	2,92%
• Invest in innovation hubs	1	0,73%
○ Industries with advanced digital transformation	11	8,03%
• Customer-centricity is critical	1	0,73%
• Leading industries are banks, telcos and automotive	13	9,49%
○ Strategical	0	0,00%
○ Digital champions should drive digital in organizations	3	2,19%
○ Increase in acceptance with inclusion in company strategy	1	0,73%
○ Innovation is about new things, not defence	1	0,73%
○ The digital journey must start internal to organization	5	3,65%
○ Tactical		
○ A lack of understanding inhibits digital growth	9	6,57%
○ Implementation is limiting growth	4	2,92%
○ Internal resistance to change	10	7,30%
○ Organizational wide acceptance is limiting the growth	2	1,46%
○ Operational		
○ The digital culture change should happen first	10	7,30%
• Internal focus to transform	5	3,65%
Total	137	100,00%
Source: Francois Volschenk (2018)		

4.8 CATEGORY FOUR – The Opportunities or Threats from Digital Innovation

In this question of the interview, Part B-4, participants were requested to give their opinion on the potential opportunities or threats from digital innovation. To add more specificity to the research subject, Figure 4.8A illustrates the inside-out perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.8A
The Focus Area of the Perception of Opportunities or Threats



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.8C of Appendix J1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part B-4 were categorized into 5 groups. Table 4.8D in Appendix J2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.8E in Appendix J3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

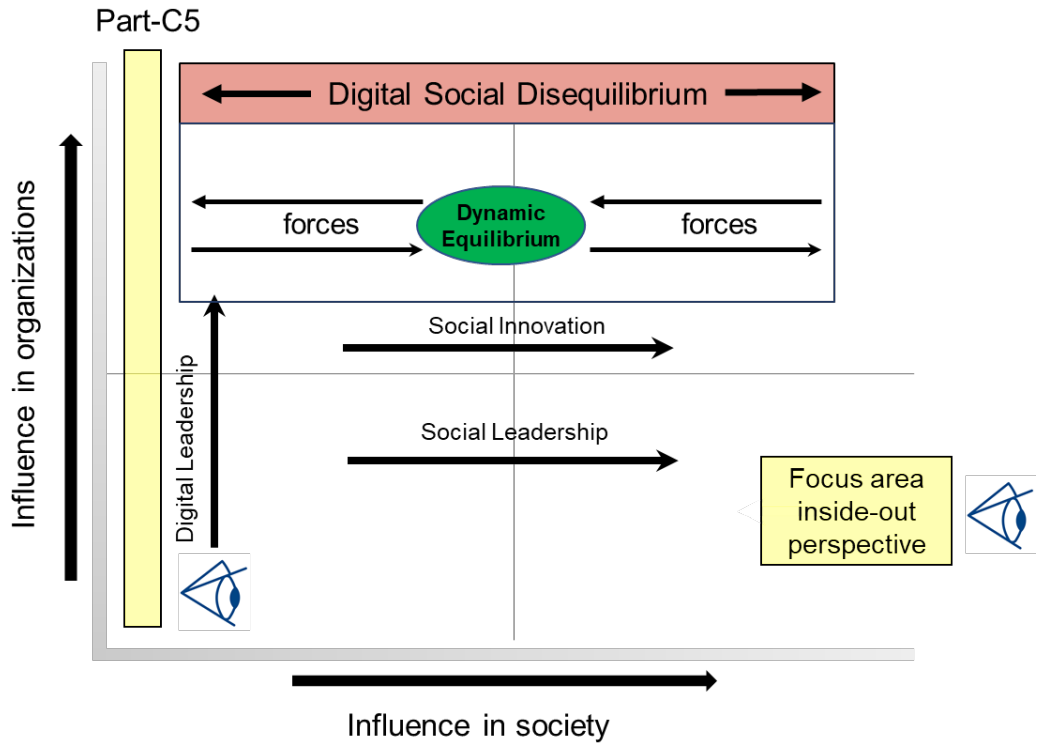
Table 4.8A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 24 items in 5 categories of the perception of opportunities or threats from digital innovation. Table 4.8A illustrates that digital is seen as *both opportunities and threats* at 17.78%, while 11.11% indicates *digital requires people to re-invent themselves to learn,* the *growth opportunities are created with digital* is at 9.63%, and *new opportunities are subject to embracing digital* and *it is an individual choice and mindset* both at 8.15%.

Table 4.8A The Opportunities or Threats from Digital Innovation		
Coded terms (n=40)	Frequency	Percentage
Part B-4: Digital is an Opportunity or Threat		
○ Both opportunities and threats	24	17,78%
○ Digital change should be carefully implemented		
○ Anticipate the psychological influence	1	0,74%
○ Digital innovation should not be a monopoly	1	0,74%
○ Organizational change planning	1	0,74%
○ The digital mindset	2	1,48%
○ Transparent communication	3	2,22%
○ Opportunities		
○ Digital can enhance almost anything people do	7	5,19%
○ Growth opportunities are created with digital	13	9,63%
○ Higher level thinking	6	4,44%
○ New opportunities are subject to embracing digital	11	8,15%
○ Only new opportunities	8	5,93%
○ The nature of jobs will change	2	1,48%
○ Digital requires people to re-invent themselves to learn	15	11,11%
○ Employees will become contractors	1	0,74%
○ Human nature is survival	1	0,74%
○ It is an individual choice and mindset	11	8,15%
○ Threats	7	5,19%
○ Digital introduces new threats like security	1	0,74%
○ Digital pose a threat	1	0,74%
○ Fear of change drives uncertainty	3	2,22%
○ Mundane and repetitive jobs are threatened	9	6,67%
○ People feel threatened to be replaced	7	5,19%
Source: Francois Volschenk (2018)		

4.9 CATEGORY FIVE – The Change on People in Organizations

In this question of the interview, Part C-5, participants were requested to give their opinion on the change by digital innovation on people in organizations. To add more specificity to the research subject, Figure 4.9A illustrates the inside-out perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.9A
The Focus Area of the Changes on People in Organizations



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.9C of Appendix K1. The responses were

coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part C-5 were categorized into 3 groups. Table 4.9D in Appendix K2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.9E in Appendix K3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.9A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 26 items in 3 categories of the change on people in organizations with digital. Table 4.9A illustrates that *people see digital as part of organizational culture* at 17.53%, *digital enable individuals to contribute more in organizations* at 15.46% and *improved productivity* and *mobility of the workforce* both at 9.28%.

Table 4.9A
The Change on People in Organizations with Digital

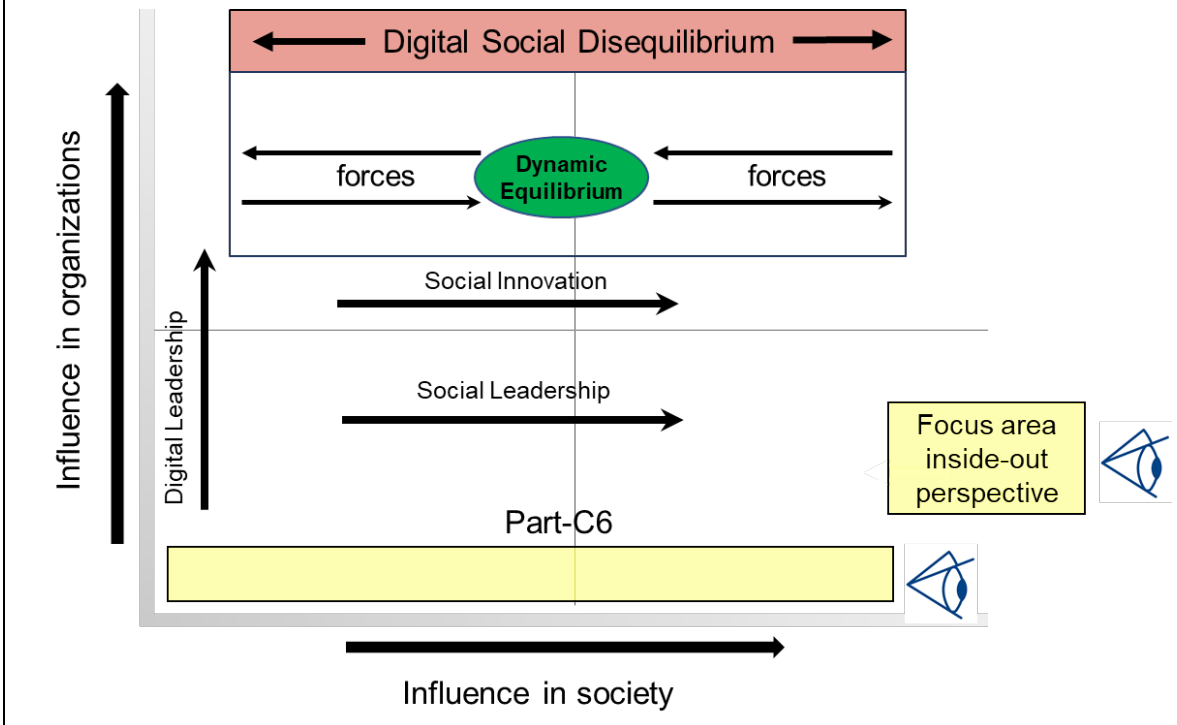
Coded terms (n=40)	Frequency	Percentage
Part C-5: Changed People Organization		
○ Changes to people		

○ Digital has made people adapt to change faster	2	2,06%
○ Paranoia about security	1	1,03%
○ People are influenced by exposure to digital	3	3,09%
○ Revolutionised decision making	3	3,09%
○ Short-term focus	3	3,09%
○ Changes to the workforce in the workplace		
○ Brought communication closer between individuals	5	5,15%
• Improved data capabilities	1	1,03%
• Improved communication	1	1,03%
• Improved collaboration tools	1	1,03%
○ Certain jobs have already been replaced by digital equivalent	2	2,06%
○ Created new opportunities	4	4,12%
○ Digital enable individuals to contribute more in organizations	15	15,46%
○ Digitization and not digital transformation yet	4	4,12%
○ Improved productivity	9	9,28%
○ Mobility of the workforce	9	9,28%
• Enhanced work-life balance	1	1,03%
• Limitations of mobility	1	1,03%
• Specialist skills available to organization through mobility	1	1,03%
○ No significant change	3	3,09%
○ Organizational culture has changed	2	2,06%
○ People expect flexibility due to digital changes	2	2,06%
○ People see digital as part of organizational culture	17	17,53%
○ The value mindset	4	4,12%
○ The real opportunities of digital underutilized	3	3,09%
Total	97	100,00%
Source: Francois Volschenk (2018)		

4.10 CATEGORY SIX – The Change on People in Society

In this question of the interview, Part C-6, participants were requested to give their opinion on the change by digital innovation on people in society. To add more specificity to the research subject, Figure 4.10A illustrates the inside-out perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.10A
The Focus Area of the Changes on People in Society



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.10C of Appendix L1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-

codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part C-6 were categorized into 3 groups. Table 4.10D in Appendix L2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.10E in Appendix L3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.10A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 28 items in 3 categories of the change on people in society with digital. Table 4.10A illustrates *connected people to information* at 12.88%, while *people in society cannot live without digital* is at 8.33%, and the possibility of *new dangers from digital* and *the work-life balance has been changed* both at 6.82%.

Table 4.10A
The Change on People in Society with Digital

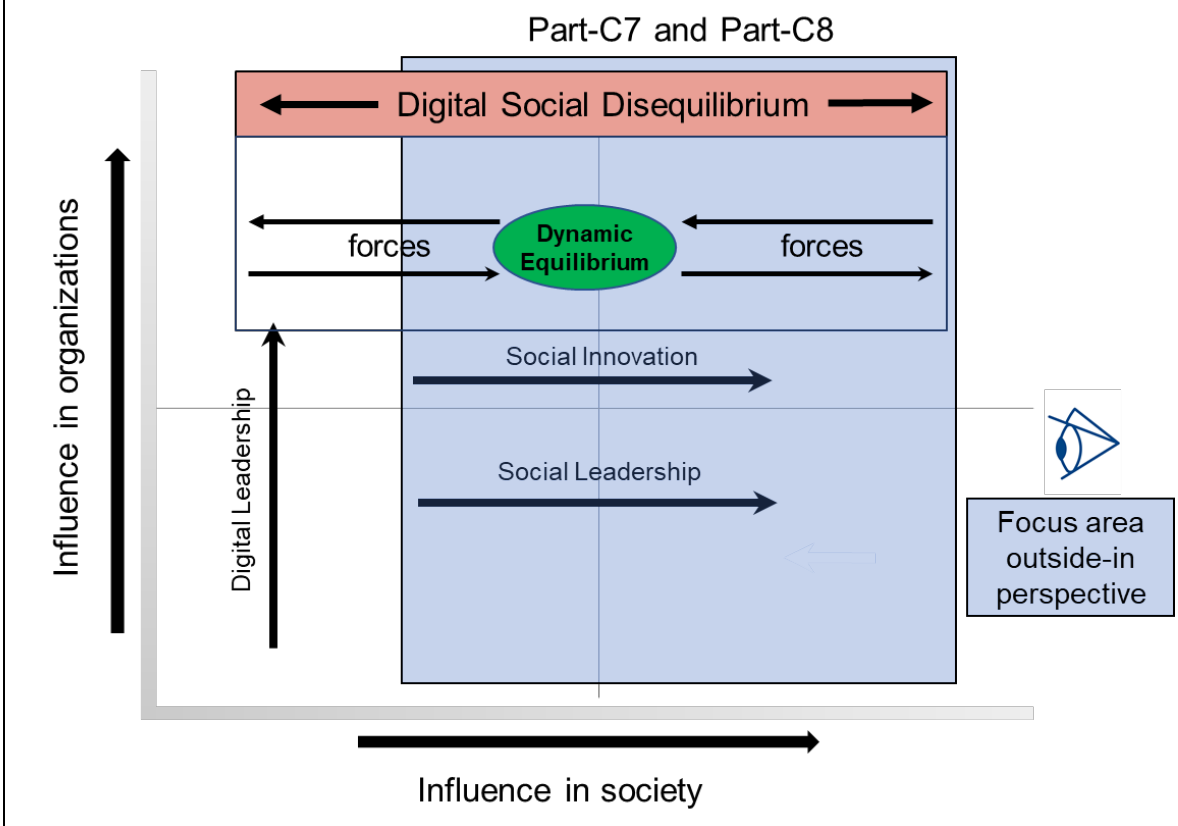
Coded terms (n=40)	Frequency	Percentage
Part C-6: Changed people in society		
○ Influence on people		
○ Enabled humans with new opportunities	8	6,06%
• Equaliser with new opportunities	2	1,52%
○ Influencer of thoughts and minds of people	4	3,03%

○ Learning has changed forever	1	0,76%
○ New dangers from digital	9	6,82%
• Challenging for parents in the digital age	3	2,27%
• Everything now - reduced long-term thinking	1	0,76%
• Fear of digital domination	2	1,52%
• Increase in impersonality	6	4,55%
• Reduced privacy	1	0,76%
○ People drive the social change through digital.	6	4,55%
○ Socially, creativity has become a problem	2	1,52%
○ The work-life balance has been changed	9	6,82%
○ Society has adopted digital change	7	5,30%
○ Application frenzy in society	6	4,55%
○ The expectation of applications to make life easier	6	4,55%
○ Improved connectivity	4	3,03%
○ Life is lived at a faster pace	6	4,55%
○ People in society cannot live without digital	11	8,33%
○ Social media platforms created	8	6,06%
• Social media posting can be detrimental	5	3,79%
○ The influence of information / data		
○ Connected people to information	17	12,88%
• Informed societies and knowledgeable consumers	1	0,76%
• Knowledge is power	1	0,76%
○ Miscommunication	0	0,00%
• Created channels for "fake" news	6	4,55%
Total	132	100,00%
Source: Francois Volschenk (2018)		

4.11 CATEGORY SEVEN – Mitigation of the Potential Negative Influences of Digital Innovation on People

In this question of the interview, Part C-7, participants were requested to enumerate ways to mitigate the potentially negative influence of digital innovation on people in organizations. To add more specificity to the research subject, Figure 4.11A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.11A
The Focus Area of the Mitigation of the Negative Influence of Digital



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.11 of Appendix M1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part C-7 were categorized into 3 groups. Table 4.11D in Appendix M2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.11E in Appendix M3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.11A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 32 items in 3 categories of the mitigation of the negative influence of digital. Table 4.11A illustrates *education on digital innovations* at 10.45%, to *limit the exposure of individuals to digital content* at 9.70% and *control the flow of data* and *positive planned social change through influence* both at 8.21%.

Table 4.11A
The Mitigation of the Negative Influence of Digital

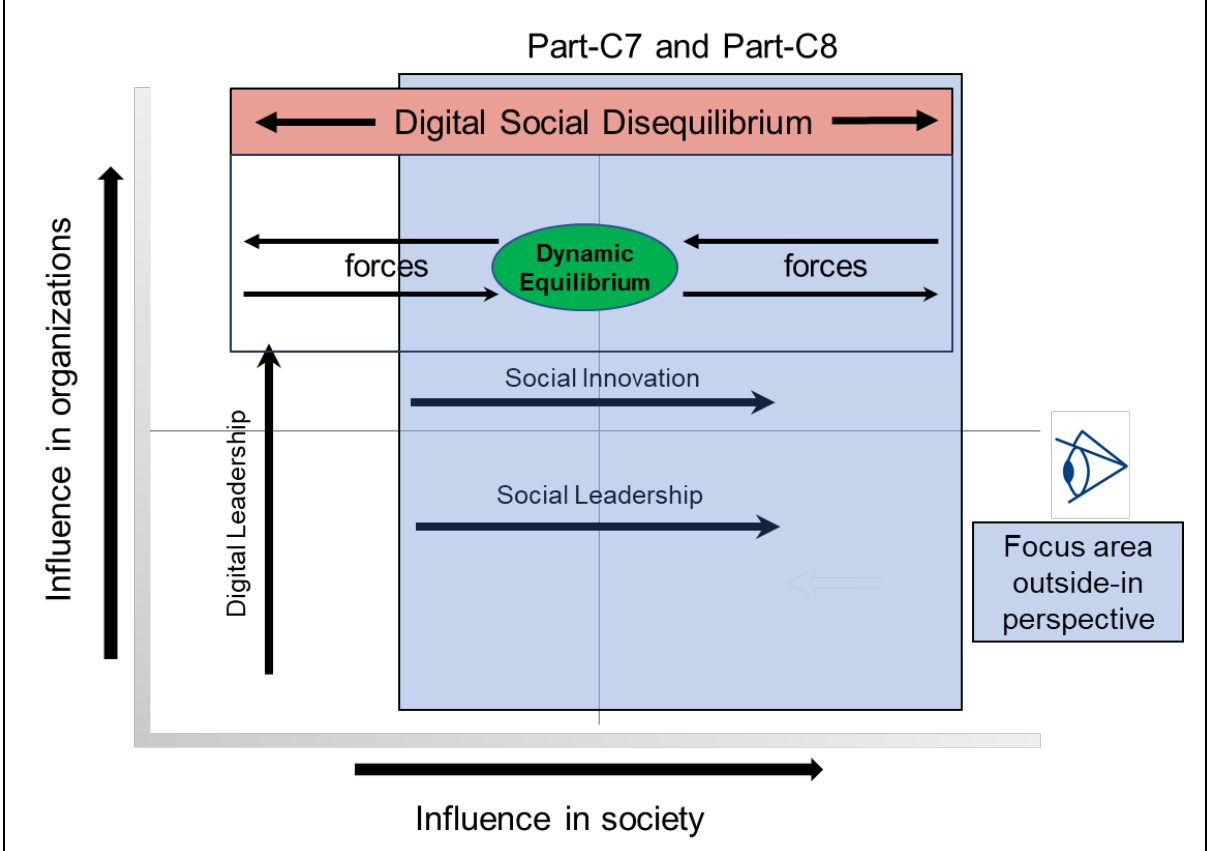
Coded terms (n=40)	Frequency	Percentage
Part C-7:Mitigate Negative Influences of Digital Innovation		

○ Awareness		
○ An honest holistic approach	7	5,22%
○ Create consciousness of the impact on health	1	0,75%
○ Important to recognize and accept it as soon as possible	9	6,72%
• Digital will happen	1	0,75%
• Impact and influence	5	3,73%
○ Society is too much on digital devices	5	3,73%
○ Approach		
○ Bring humanity back into technology	4	2,99%
• Values and principles	1	0,75%
○ Cannot restrain people	4	2,99%
○ Do not replace the real world with a virtual world	3	2,24%
○ Drive change through trust	6	4,48%
○ People should take accountability for their actions	4	2,99%
○ Positive approach	9	6,72%
○ Action		
○ AI and advanced analytics to improve negative influence	5	3,73%
○ Control the flow of data	11	8,21%
• Security measures	3	2,24%
• Protect the youth	3	2,24%
• Governance	2	1,49%
• Socially acceptable content	1	0,75%
• Remove anonymity from the internet	1	0,75%
○ Digital should not be forced on anybody	2	1,49%
○ Education on digital innovations	14	10,45%
○ Limit the exposure of individuals to digital content	13	9,70%
○ Organizational control	3	2,24%
• Guidelines for acceptable behaviour	1	0,75%
• Trusted sites	1	0,75%
○ Positive planned social change through influence	11	8,21%
• Educate youth on social acceptable behaviour	1	0,75%
• Social programs to educate	3	2,24%
Total	134	100,00%
Source: Francois Volschenk (2018)		

4.12 CATEGORY EIGHT – The Main Stakeholders of Digital Innovation

In this question of the interview, Part C-8, participants were requested to enumerate the main stakeholders of the impact of digital innovation on people in organizations and society. To add more specificity to the research subject, Figure 4.12A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.12A
The Focus Area of the Main Stakeholders to Mitigate Potential Negative Influence of Digital Innovation



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.12C of Appendix N1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part C-8 were categorized into 4 groups. Table 4.12D in Appendix N2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.12E in Appendix N3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

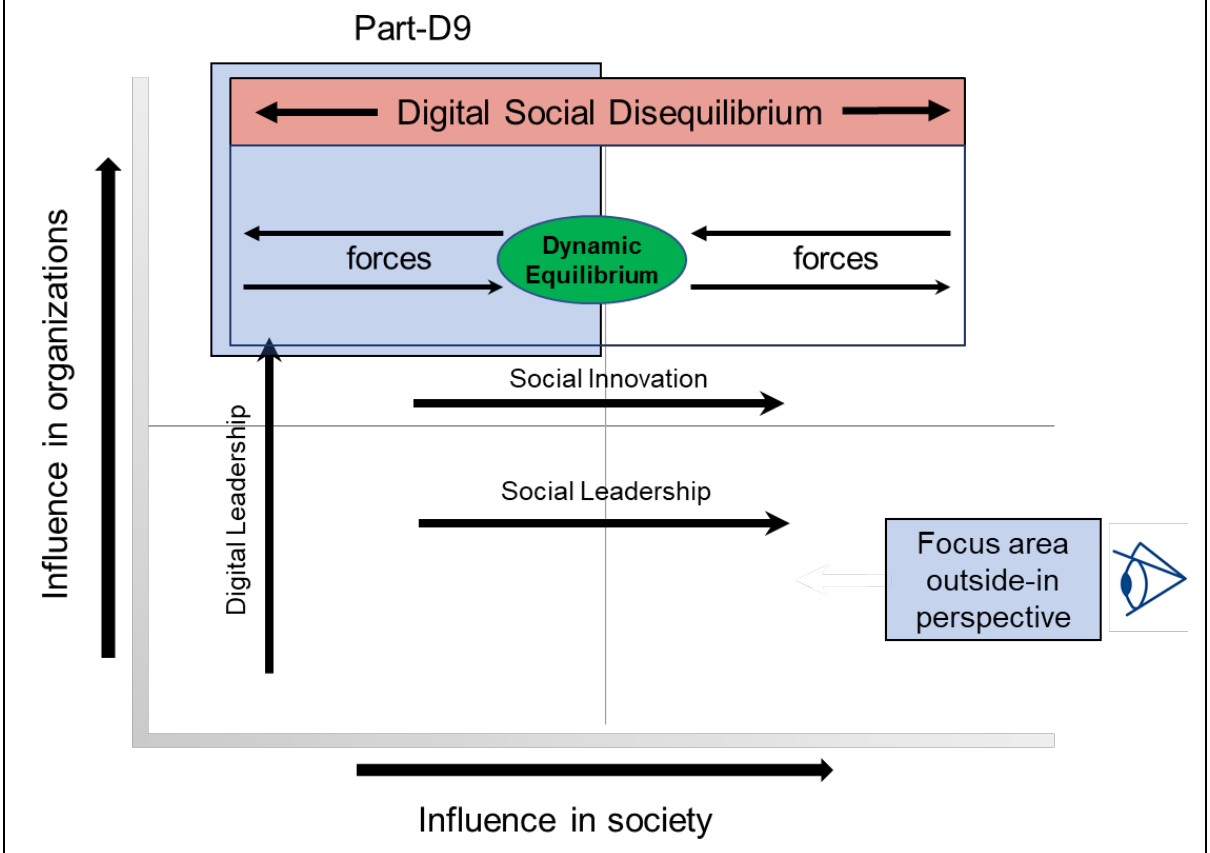
Table 4.12A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 20 items in 4 categories of the main stakeholders to mitigate the potentially negative influence of digital innovation. Table 4.12A illustrates that the *government* is the highest at 21.05%, followed by *digital innovators* at 15.79% and *business leaders, C-level executives* at 15.04% and *everyone* at 13.53%.

Table 4.12A The Main Stakeholders of Digital Innovation		
Coded terms (n=40)	Frequency	Percentage
Part C-8: Main Stakeholders		
○ Government	28	21,05%
○ Awareness needs to be driven more than regulation.	1	0,75%
○ Infrastructure essential	3	2,26%
○ Policies / Combined efforts	1	0,75%
○ Political parties and politicians	4	3,01%
○ Humankind		
○ Celebrities or public figures	1	0,75%
○ Everyone	18	13,53%
• Contextualize the importance of humans	1	0,75%
○ Mentors	1	0,75%
○ Millennials	3	2,26%
○ Parents	4	3,01%
○ Society collectively	11	8,27%
○ Organizational level		
○ Business leaders and C-level executives	20	15,04%
○ Customers or users	2	1,50%
○ Digital innovators	21	15,79%
Application developers	1	0,75%
○ Network operators	2	1,50%
○ Teachers, schools and educational bodies	11	8,27%
Total	133	100,00%
Source: Francois Volschenk (2018)		

4.13 CATEGORY NINE – Requirements for Digital Leadership

In this question of the interview, Part D-9, participants were requested to give their opinion on thought leadership or good leadership in digital innovation. To add more specificity to the research subject, Figure 4.13A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.13A
The Focus Area of Thought Leadership for Digital Leaders



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.13C of Appendix O1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part D-9 were categorized into 5 groups. Table 4.13D in Appendix O2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.13E in Appendix O3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

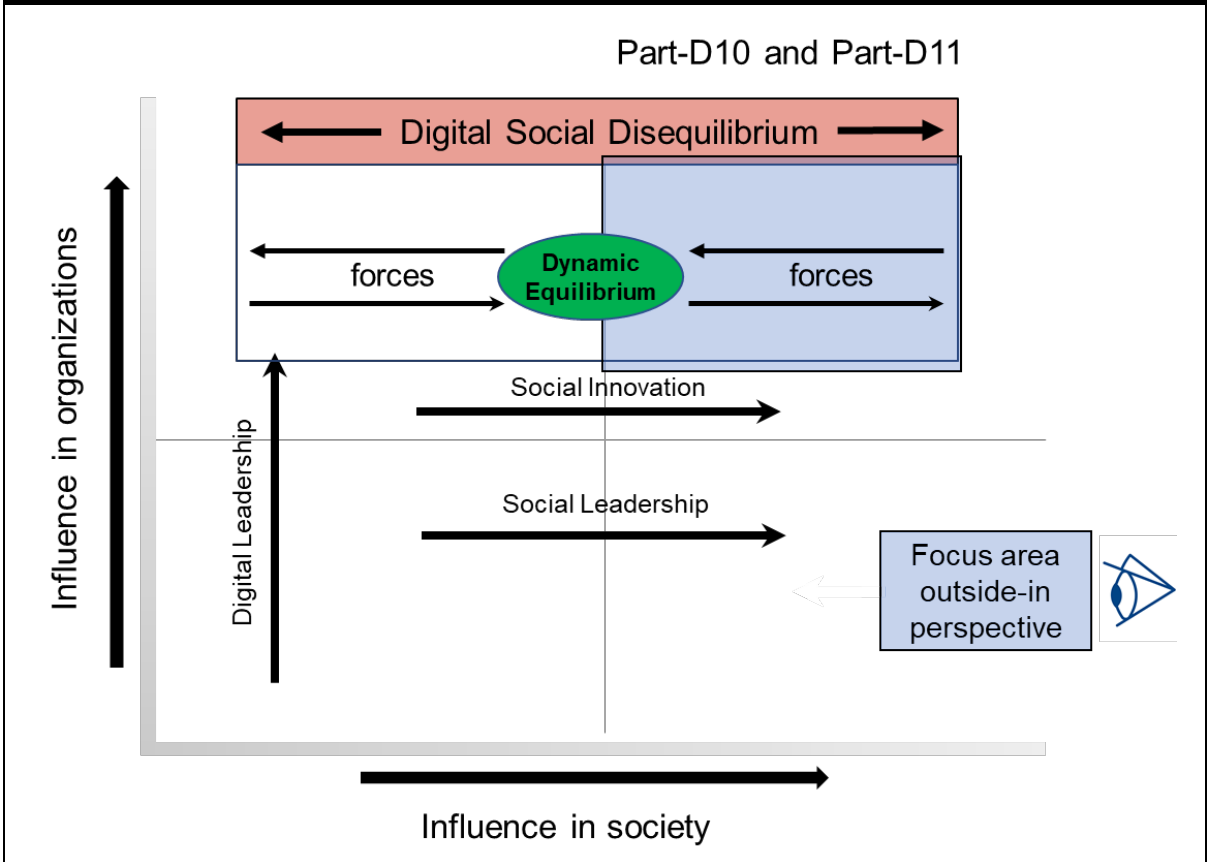
Table 4.13A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 29 items in 5 categories of the focus area of thought leadership for digital leaders. Table 4.13A illustrates a *digital mindset and digital culture* at 14.77%, a *human-centred approach to digital innovation* at 9.40% and that *a leader is a disruptor* with an *open mindset* and *communicate the significance of digital* all at 8.05%.

Table 4.13A Thought Leadership for Digital Leaders		
Coded terms (n=40)	Frequency	Percentage
Part D-9: Digital leader: thought and good leadership		
○ Mindset		
○ Understand the significant size of digital market	1	0,67%
○ Leader is a disruptor	12	8,05%
○ Experimentation	7	4,70%
• Fail fast	5	3,36%
• Agile	1	0,67%
• Freedom of expression	1	0,67%
○ Open mindset	12	8,05%
○ Balanced view	11	7,38%
• Digital leadership is similar to traditional leadership	4	2,68%
• Responsible communication	2	1,34%
• Realistic real-world expectations	3	2,01%
• Visionary	1	0,67%
○ People		
○ Human-centred approach to digital innovation	14	9,40%
• Think about generations in digital thinking	4	2,68%
• Acknowledge employees as the enablers of digital innovation	6	4,03%
○ Communicate the significant of digital	12	8,05%
○ Process	0	0,00%
○ Compete effectively in new digital economy	5	3,36%
○ Digital mindset and digital culture	22	14,77%
○ Technology		
○ Promote use of digital technology	4	2,68%
• Digital marketing	2	1,34%
○ Cognitive of the latest technology	10	6,71%
○ Entrepreneurial spirit	4	2,68%
○ Information		
○ Document digital initiatives	2	1,34%
○ Constant learning environment	4	2,68%
Total	149	100,00%
Source: Francois Volschenk (2018)		

4.14 CATEGORY TEN – The Socially Responsible Digital Leader

In this question of the interview, Part D-10, participants were requested to give their opinion on what should be expected from a leader with regards to Socially Responsible Digital Leadership. To add more specificity to the research subject, Figure 4.13A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.14A
The Focus Area of the Socially Responsible Digital Leader



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.14C of Appendix P1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part D-10 were categorized into 4 groups. Table 4.14D in Appendix P2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.14E in Appendix P3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

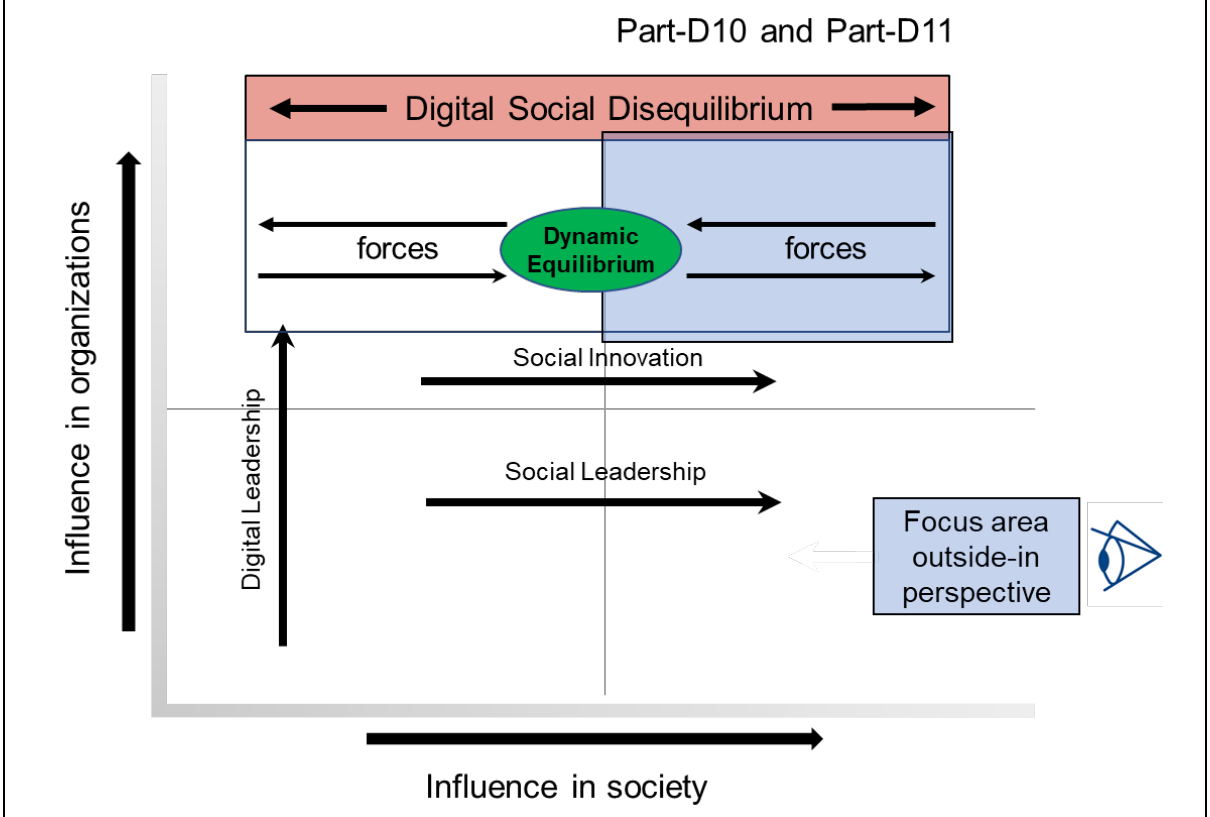
Table 4.14A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 33 items in 4 categories of the potential impact of the socially responsible digital leader. Table 4.14A illustrates to have a *responsible digital culture* at 13.45%, be *a leader with values and principles* at 10.53%, *transparency in educating about the negative* at 9.36%, *positively influence more people* at 6.43% and having a *human-centred approach* at 5.85%.

Table 4.14A The Socially Responsible Digital Leader		
Coded terms (n=40)	Frequency	Percentage
Part D-10: Expectation Socially Responsible Digital Leader		
○ A leader with values and principles	18	10,53%
○ Accountable	2	1,17%
○ Ethics	5	2,92%
○ Honesty	5	2,92%
○ Integrity	2	1,17%
○ Transparency	4	2,34%
○ Positively influence more people	11	6,43%
○ Enable individuals	4	2,34%
○ Guidance	1	0,58%
○ Personal investment	1	0,58%
○ Social reputation management	3	1,75%
○ Responsible digital culture	23	13,45%
○ Anticipate the influence	4	2,34%
○ Awareness	3	1,75%
○ Digital corporate governance	1	0,58%
○ Digital Education	2	1,17%
○ Do not force digital on anyone	2	1,17%
○ Encourage peoples' involvement and responsibility	5	2,92%
○ Human-centred approach	10	5,85%
• Personal communication where possible	1	0,58%
○ Promote Learning	9	5,26%
• Get involved with schools to educate	4	2,34%
• Mitigate negative risks through new skills	7	4,09%
• Tertiary education on digital influence	2	1,17%
○ Re-purpose in organization where possible	1	0,58%
○ Responsible communication	2	1,17%
○ Think digital - but do not be digital	1	0,58%
○ Transparency in educating about the negative	16	9,36%
○ Sustainable society	8	4,68%
○ Digital should not be all about money	5	2,92%
• Maximum impact vs maximum profit	1	0,58%
○ Permanent accountability	5	2,92%
○ Societal thinking is not always rational	3	1,75%
Total	171	100,00%
Source: Francois Volschenk (2018)		

4.15 CATEGORY ELEVEN – The Mitigation of the Negative Influences of Digital Innovation on People by Digital Leaders

In this question of the interview, Part D-11, participants were requested to give their opinion on requirements for leaders to act responsibly to mitigate the potentially negative influence of digital innovation on people in organizations. To add more specificity to the research subject, Figure 4.15A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.15A
The Focus Area of the Mitigation of the Negative Influences on People by Digital Leaders



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.15C of Appendix Q1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part D-11 were categorized into 4 groups. Table 4.15D in Appendix Q2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.15E in Appendix Q3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

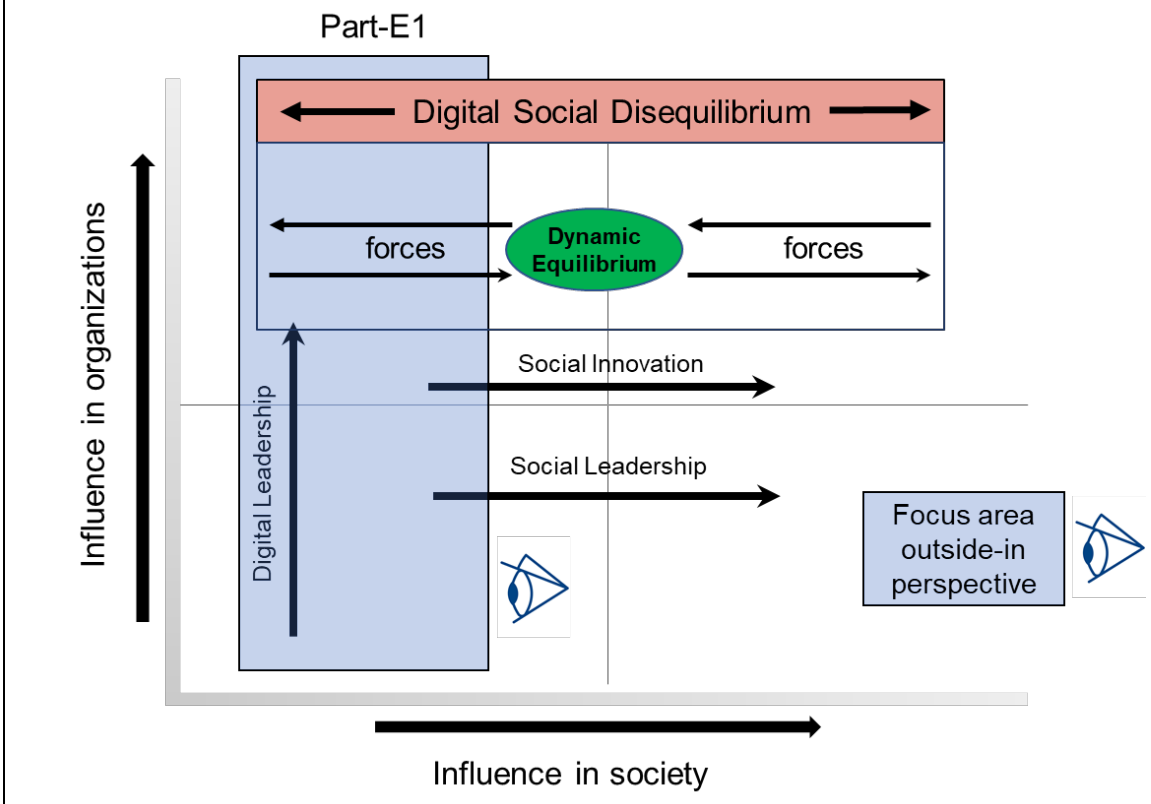
Table 4.15A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 20 items in 4 categories of the mitigation of the negative influence on people by digital leaders. Table 4.15A illustrates *creating opportunities for human growth* at 17.16%, to *cultivate digital learning culture* at 14.93%, *protect employees as much as possible* is at 11.94% and *embrace the change* and *societal mentality of responsibility and improvement* both at 8.21%.

Table 4.15A The Mitigation of the Negative Influences of Digital Innovation on People by Digital Leaders		
Coded terms (n=40)	Frequency	Percentage
Part D-11: How digital Leader minimize the negative influence		
○ Be the leader ahead of the rest in understanding	3	2,24%
○ Cultivate digital learning culture	20	14,93%
• Enable training and upskilling	9	6,72%
• Research and development	2	1,49%
○ Creating opportunities for human growth	23	17,16%
• Assist and inform to adopt	6	4,48%
• Enable to adapt	5	3,73%
• Use experience of people positively	2	1,49%
○ Digital leaders should become enablers for entrepreneurs	7	5,22%
• Development	2	1,49%
• Enablement	3	2,24%
○ Embrace the change	11	8,21%
○ Protect employees as much as possible	16	11,94%
• People are differentiators where digital is not	1	0,75%
○ Natural evolution and change will come	5	3,73%
○ Change is constant - it will happen	4	2,99%
○ Humans will re-invent themselves	1	0,75%
○ Societal mentality of responsibility and improvement	11	8,21%
○ Personal growth responsibility	1	0,75%
○ Taxation of digital workers	2	1,49%
Total	134	100,00%
Source: Francois Volschenk (2018)		

4.16 CATEGORY TWELVE – Digital Leadership through Digital Innovation

In this question of the interview, Part E-1, participants were requested to give their opinion on how digital leaders are using digital innovation to improve the people, process and technology in organizations. To add more specificity to the research subject, Figure 4.16A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.16A
The Focus Area of Digital Leadership through Digital Innovation



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.16C of Appendix R1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part E-1 were categorized into 3 groups. Table 4.16D in Appendix R2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.16E in Appendix R3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

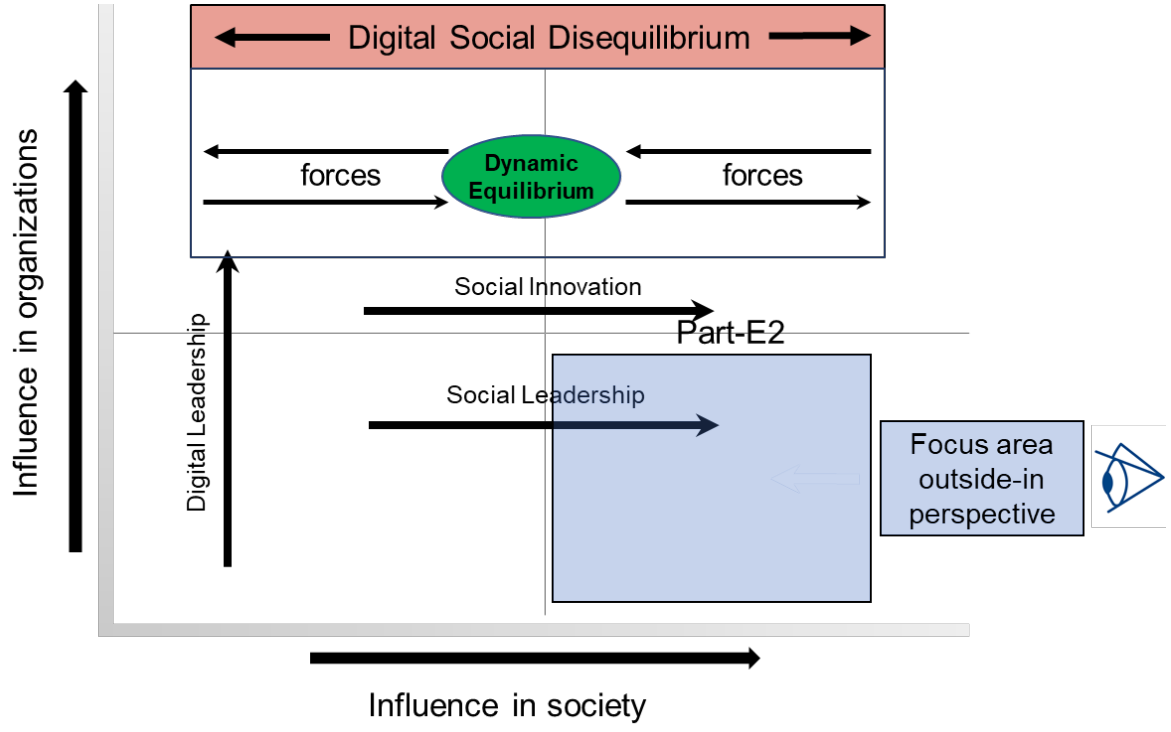
Table 4.16A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 27 items in 3 categories of digital leadership through digital innovation. Table 4.16A illustrates that *digital innovation is only technology - people and process lack* at 15.31%, *digital innovation must integrate people, process and technology* at 11.22%, *the people-oriented approach to digital innovation is lacking* at 8.16% and *people must be part of the journey* both at 7.14% and *fear of change limits potential* at 6.12%.

Table 4.16A Digital Leadership through Digital Innovation		
Coded terms (n=40)	Frequency	Percentage
Part E-1: Digital Leadership Influence		
○ Digital innovation must integrate people, process and technology	11	11,22%
○ Continuous improvement is required	1	1,02%
○ Digital champions should drive the innovation	2	2,04%
○ Digital innovation is in silos in organizations	3	3,06%
○ Digital innovation is only technology - people and process lack	15	15,31%
○ Incredible opportunities	2	2,04%
○ Organizational-wide change is required	3	3,06%
○ The ecosystem extends beyond the internal organization	1	1,02%
○ Digital leaders are critical to drive digital innovation	3	3,06%
○ Digital innovation is still inefficient	3	3,06%
• Decrease development cycle and be agile	2	2,04%
• Leaders should embrace change	1	1,02%
• Limited knowledge on digital innovation	3	3,06%
• Slow adoption rate	5	5,10%
○ Digital is a priority in many organizations	1	1,02%
○ Fear of change limits potential	6	6,12%
• Lack of understanding	2	2,04%
• Resistance to change	2	2,04%
○ Some digital leaders limited to cost reductions	5	5,10%
○ The people-oriented approach to digital innovation is lacking	8	8,16%
• Communication of digital strategy	1	1,02%
• Motivate people to disrupt	1	1,02%
• Organizational culture change required	2	2,04%
• People must be part of the journey	7	7,14%
• Soft skills need to be addressed	4	4,08%
○ Leaders don’t influence the innovation	2	2,04%
Innovators innovate	2	2,04%
Total	98	100,00%
Source: Francois Volschenk (2018)		

4.17 CATEGORY THIRTEEN – Social Leadership

In this question of the interview, Part E-2, participants were requested to give their opinion on social leadership and the actions of leaders towards positive and actionable solutions to societal issues. To add more specificity to the research subject, Figure 4.17A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.17A
The Focus Area of Social Leadership



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.17C of Appendix S1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part E-2 were categorized into 2 groups. Table 4.17D in Appendix S2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.17E in Appendix S3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

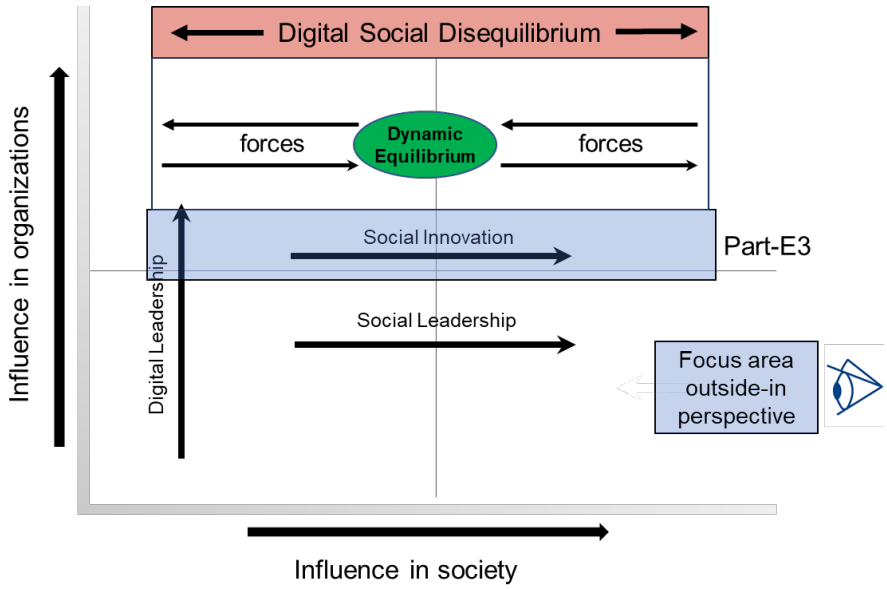
Table 4.17A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 17 items in 2 categories of social leadership. Table 4.17A illustrates there are *currently minimal efforts by leaders* at 19.20%, *leaders are not acting for the best interest of society* at 7.20%, that *initiatives are not successfully implemented, innovate for permanent change, incentivise social growth for businesses* at 4.00% respectively and *leaders should lead by example* at 3.20%.

Table 4.17A Social Leadership		
Coded terms (n=40)	Frequency	Percentage
Part E-2: Social Leadership		
○ Current	35	
○ Leaders are not acting in the best interest of society	9	7,20%
○ Currently minimal efforts by leaders	24	19,20%
○ Initiatives are not successfully implemented	5	4,00%
○ Government has started with incentives	2	1,60%
○ Future	21	
○ Start within organizations	1	0,80%
○ Leaders should lead by example	4	3,20%
○ Involve the youth	1	0,80%
○ Worldwide impact	1	0,80%
○ Focus to improve infrastructure	3	2,40%
○ Leaders should be skilled to understand the requirements	2	1,60%
○ Improve education	2	1,60%
○ It is the right thing to do	3	2,40%
○ Innovate for permanent change	5	4,00%
○ Balance society	2	1,60%
○ Incentivise social growth for businesses	5	4,00%
Total	125	100,00%
Source: Francois Volschenk (2018)		

4.18 CATEGORY FOURTEEN – Social Innovation

In this question of the interview, Part E-3, participants were requested to give their opinion on social innovation and how leaders can leverage from social innovation to create or improve business opportunities. To add more specificity to the research subject, Figure 4.18A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.18A
The Focus Area of Social Innovation



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.18C of Appendix T1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-

codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part E-3 were categorized into 5 groups. Table 4.18D in Appendix T2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.18E in Appendix T3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.18A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 29 items in 5 categories of social innovation. Table 4.18A illustrates that *social needs drive digital* at 16.38%, that *social innovation creates incredible opportunities* at 15.52%, social innovation needs a *positive social culture change* at 7.76%, while *social innovation is a long-term investment* and *address the issues in society* are both at 6.03%.

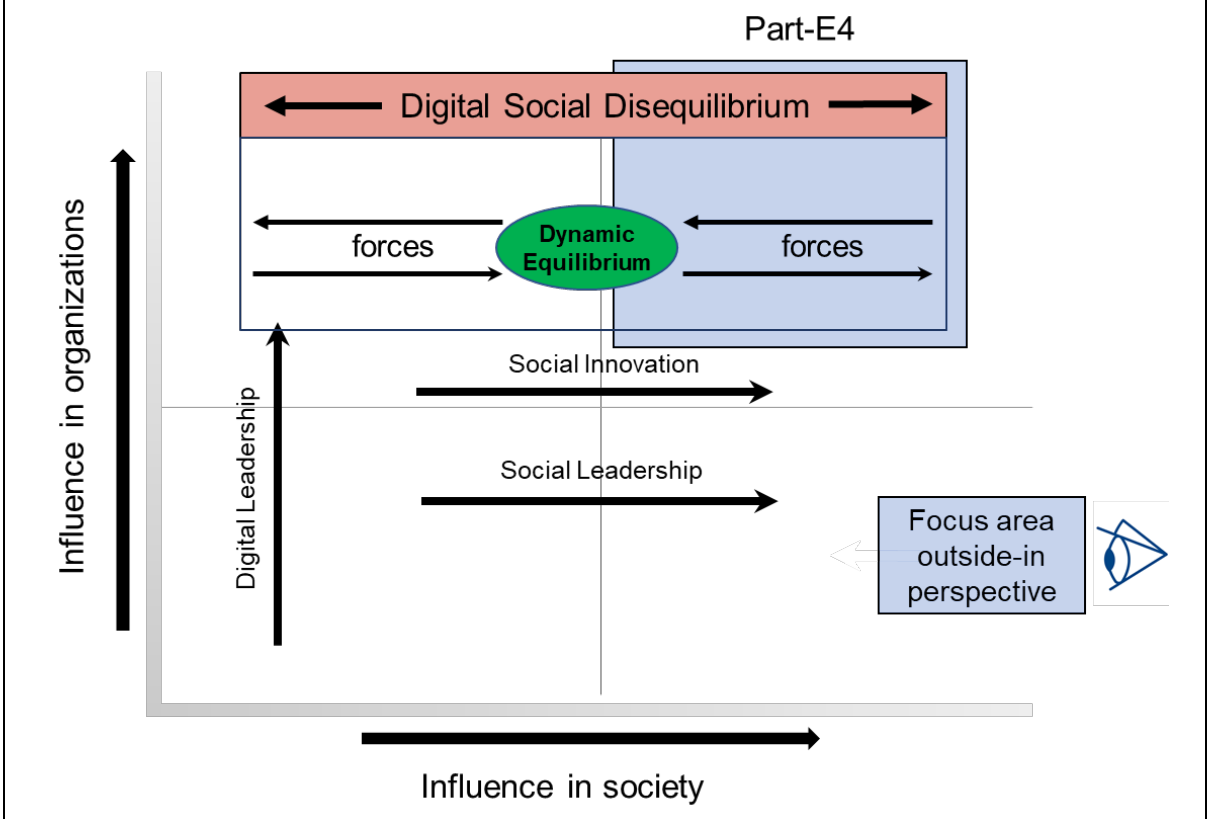
Table 4.18A Social Innovation		
Coded terms (n=40)	Frequency	Percentage
Part E-3: Social Innovation		
○ A positive social culture change	9	7,76%
○ A permanent culture change is required	2	1,72%

○ Community based development	6	5,17%
• Collaborate with society to resolve issues	2	1,72%
• Involve all generations	1	0,86%
○ Costs will decrease with economies of scale	1	0,86%
○ Government should embrace all efforts	2	1,72%
○ Improve the life experiences of people	1	0,86%
○ The education of society is critical	2	1,72%
○ Social innovation creates incredible opportunities	18	15,52%
○ Create brand loyalty	1	0,86%
○ Create opportunities for society	4	3,45%
○ Great opportunities for organizations	2	1,72%
○ Innovation towards mobile money is going to lead societal change	2	1,72%
○ Perpetual enabler for societal growth	3	2,59%
○ Social innovation is a long-term investment	7	6,03%
○ It is not only about money	1	0,86%
○ Learn from previous initiatives	1	0,86%
○ Long-term approach	5	4,31%
○ Society must be involved	1	0,86%
○ Social innovation needs to build entrepreneurs	5	4,31%
○ Enabler to build future entrepreneurs	5	4,31%
○ Social needs drive digital	19	16,38%
○ Address the issues in society	7	6,03%
○ Applications on digital platform can change society	1	0,86%
○ Digital Technologies can improve society	2	1,72%
○ Infrastructure is an enabler	2	1,72%
○ Social innovation could decrease R&D costs	2	1,72%
○ Social innovation is good for reputation	2	1,72%
Total	116	100,00%
Source: Francois Volschenk (2018)		

4.19 CATEGORY FIFTEEN – Social Capital

In this question of the interview, Part E-4, participants were requested to give their opinion on social capital comment on the importance and influence of social capital. To add more specificity to the research subject, Figure 4.19A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.19A
The Focus Area of Social Capital



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.19C of Appendix U1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part E-4 were categorized into 8 groups. Table 4.19D in Appendix U2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.19E in Appendix U3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.19A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 37 items in 8 categories of social capital. Table 4.19A illustrates *the new voice of society* is at 18.18%, *the start and end of consumer consumption* is at 9.09%, *collaboration is the new norm* and *the influence of social capital or social networks* both at 7.69% and is *influential* at 6.29%.

Table 4.19A Social Capital		
Coded terms (n=40)	Frequency	Percentage
Part E-4: Social Capital		
○ A reality more than a necessity	2	1,40%
○ Can utilize employees to improve organization	2	1,40%
○ Collaboration is the new norm	11	7,69%
○ A focused approach to knowledge and co-operation	4	2,80%
○ Geographical convenience	3	2,10%
○ Applications as enabler	2	1,40%
○ Incubator for innovative thinking	4	2,80%
○ Social capital is a collaboration explosion	2	1,40%
○ Potential to involve the whole of society	1	0,70%
○ Coopetition can be a differentiator	1	0,70%
○ Collectivism contributes to human growth	7	4,90%
○ Address common needs	2	1,40%
○ The wisdom of the crowd	1	0,70%
○ Social capital is an enabler	1	0,70%
○ Information on social platforms are trivial	4	2,80%
○ The magnitude of information could reduce efficiency	2	1,40%
○ Social interaction is generally non-work related	1	0,70%
○ The influence of social capital or social networks	11	7,69%
○ Uncontrollable	2	1,40%
○ Potentially dangerous or harmful	8	5,59%
○ Fast distribution and impact	1	0,70%
○ Generally a selfish agenda	1	0,70%
○ The new voice of society	26	18,18%
○ Collaboration with society	2	1,40%
○ Common cause	1	0,70%
○ Fulfil the human need for association	1	0,70%
○ Influential	9	6,29%
○ Large audience and fast distribution	4	2,80%
○ Less influential for well-informed individuals	1	0,70%

○ To limit negativity governance is required	1	0,70%
○ The start and end of consumer consumption	13	9,09%
○ Availability of data analytics improve efficiency	1	0,70%
○ Focused organizational reputational tool	2	1,40%
○ Influential	5	3,50%
○ Large spending capabilities	1	0,70%
○ Power to the people	2	1,40%
○ Understanding the customer	1	0,70%
Total	143	100,00%
Source: Francois Volschenk (2018)		

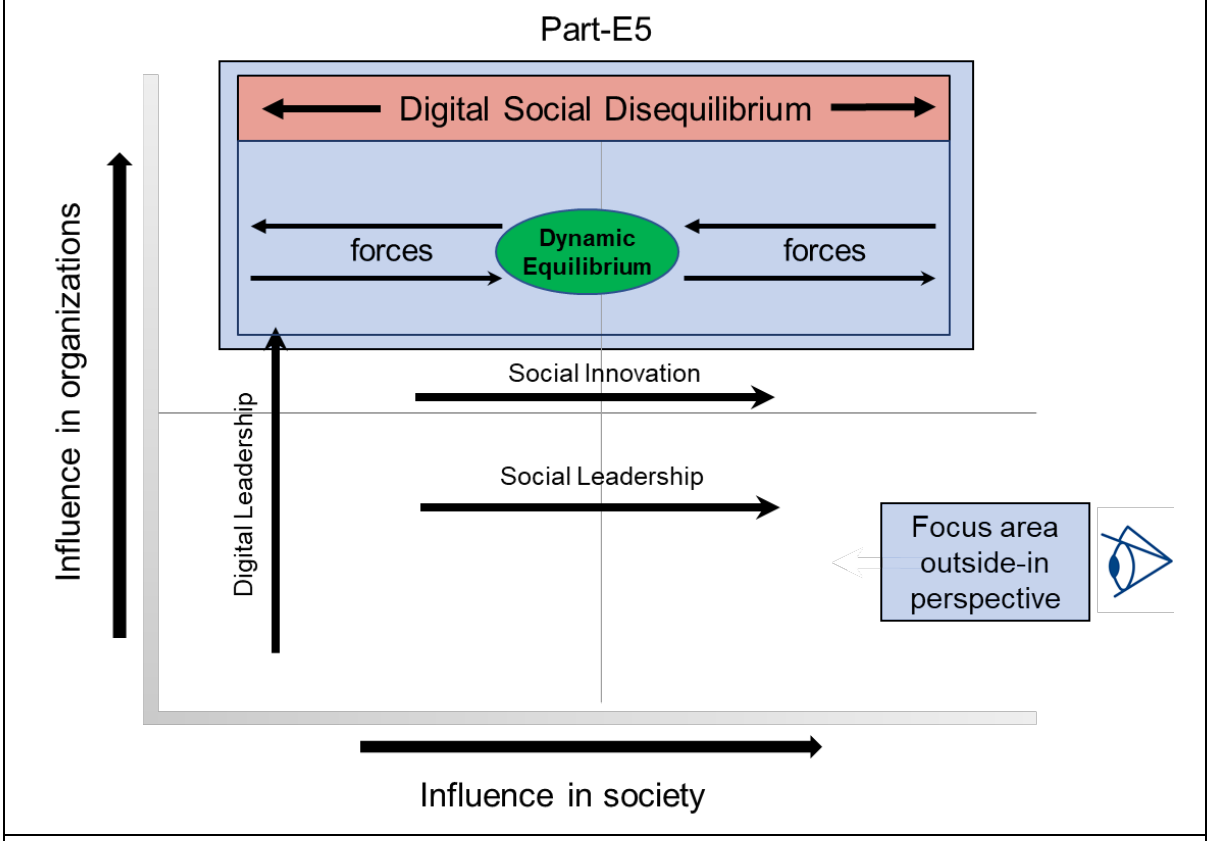
4.20 CATEGORY SIXTEEN – Digital Social Dynamic Equilibrium

In this question of the interview, Part E-5, participants were requested to give their opinion on Digital Social Dynamic Equilibrium and to enumerate the forces involved from a digital leadership and societal side to reach equilibrium. To add more specificity to the research subject, Figure 4.20A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.20C of Appendix V1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. The codes were categorized into two main groups of Digital Social Dynamic Equilibrium – Concepts and Digital Social Dynamic Equilibrium – Forces. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to allow for the

visual presentation of the information to synthesize information into related groups of codes.

Figure 4.20A
The Focus Area of Digital Social Dynamic Equilibrium



Source: Francois Volschenk (2018)

Digital Social Dynamic Equilibrium (DSDE) - Concepts

The main codes of the first portion of part E-5 were categorized into 3 groups. Table 4.20Di in Appendix V2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.20Ei in Appendix V4 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the

conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question. Table 4.20Ai presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 20 items in 3 categories of Digital Social Dynamic Equilibrium concepts. Table 4.20Ai illustrates that *leaders should embrace DSDE* at 25.33%, DSDE is a *dynamic process* at 9.33%, while *investigate the boundaries of DSDE* and DSDE is *a leadership tool for performance improvement* both at 8.00% and finally DSDE is a *reason to exist* at 6.67%.

Table 4.20Ai
Digital Social Dynamic Equilibrium - Concepts

Coded terms (n=40)	Frequency	Percentage
Part E-5i: Digital Social Dynamic Equilibrium		
○ Dynamic process	7	9,33%
○ Digital will expand exponentially in the foreseeable future	2	2,67%
○ Continuously strive for equilibrium	2	2,67%
○ Forced regulation will not assist in reaching equilibrium	2	2,67%
○ DSDE possible subject to “the machine” not controlling	3	4,00%
○ Leaders should embrace DSDE	19	25,33%
○ Continuous awareness of society	2	2,67%
○ Digital Social Dynamic Equilibrium is the key	4	5,33%
○ Investigate the boundaries	6	8,00%
○ Leadership tool for performance improvement	6	8,00%
• Improve probability of success	2	2,67%
○ Reason to exist	5	6,67%
○ Responsible digital capitalism	4	5,33%
○ The influential leader	1	1,33%
○ Long-term and short-term influences	3	4,00%

○ Common goals	1	1,33%
○ Incentivise adoption and future innovation	1	1,33%
○ Protect humanity against digital dominance	1	1,33%
○ Look beyond technology only	1	1,33%
○ Continuous awareness creation	3	4,00%
Total	75	100,00%
Source: Francois Volschenk (2018)		

4.20.1 Digital Social Dynamic Equilibrium – Digital and Social Forces

The main codes of the second portion of part E-5 were categorized into 2 groups. Table 4.20Dii in Appendix V3 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.20Eii in Appendix V5 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.20Aii presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 50 items in 2 categories of digital forces and societal forces defined as the Digital Social Dynamic Equilibrium forces. Table 4.20Aii illustrates the most significant digital forces as *real solutions for requirements* and *open communication* at 4.79%, while the *value proposition* and *convenience* are both at 4.19%. The most significant societal forces are *society's understanding of digital is limited at 7.78%*, *value perception* and *the negative influences should be limited* both at 5.99%, *limited awareness of society*

about digital influence at 4.19% and *social capital* and *ethical requirements* both at 3.19%.

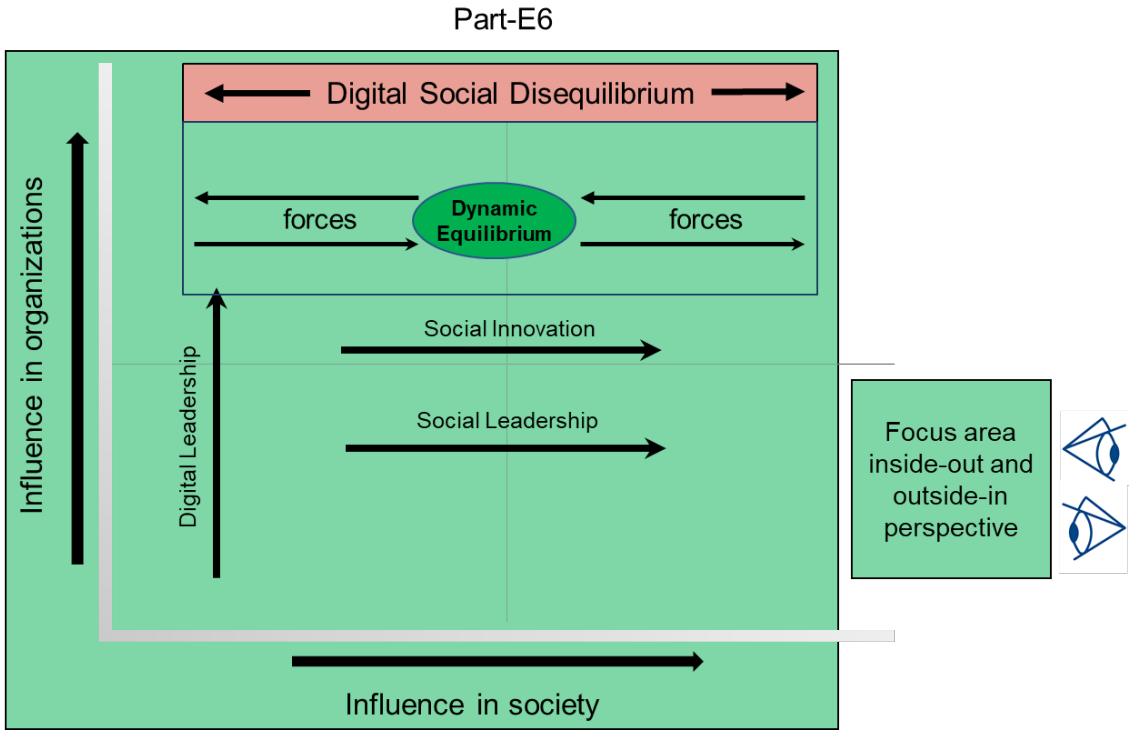
Table 4.20Aii Digital Social Dynamic Equilibrium - Forces		
Coded terms (n=40)	Frequency	Percentage
Part E-5ii: Digital Social Dynamic Equilibrium		
○ Digital forces		
○ Digital competency	1	0,60%
• Enabler for innovation	4	2,40%
• Governance assurance	2	1,20%
• The public image of the leader	2	1,20%
• Real solutions for requirements	8	4,79%
• Risk management	1	0,60%
○ Open communication	8	4,79%
• Realistic expectations	4	2,40%
○ Value proposition	7	4,19%
• Convenience	5	2,99%
• Solving societal issues	3	1,80%
○ Values and principles	4	2,40%
• Awareness	1	0,60%
• Empathy	3	1,80%
• Honesty	3	1,80%
• Integrity	1	0,60%
• Mentorship	1	0,60%
• Non-monetary commitments	2	1,20%
• The right thing to do	2	1,20%
• Transparency	8	4,79%
• Trust	4	2,40%
○ Societal forces		
○ Choice of alternatives	2	1,20%
○ Legislation	1	0,60%
○ The negative influence should be limited	10	5,99%
• Ethical requirements	6	3,59%
• Perceived security	2	1,20%
• Responsible marketing	1	0,60%
• Trust	2	1,20%
○ Loyalty	2	1,20%

○ Resistance to change	2	1,20%
○ Social capital	6	3,59%
• The realization of real influence is missing	1	0,60%
○ Society's understanding of digital is limited	13	7,78%
• Limited awareness of society about digital influence	7	4,19%
• Coaching within society of responsible behaviour	1	0,60%
• Each party will selfishly pursue own objectives	1	0,60%
• Education requirements	1	0,60%
• Empower people to allow them more freedom.	4	2,40%
• Lack of understanding	3	1,80%
• Society should use in their favour	1	0,60%
• Understanding of guidelines or frameworks	2	1,20%
○ Survival instinct	1	0,60%
○ Value perception	10	5,99%
• Consumption-based pricing	1	0,60%
• Money	3	1,80%
• Perception of convenience	4	2,40%
• Perception of savings	3	1,80%
• Termination of services	3	1,80%
Total	167	100,00%
Source: Francois Volschenk (2018)		

4.21 CATEGORY SEVENTEEN – The Socially Responsible Digital Leadership Framework

In this question of the interview, Part E-6, participants were requested to give their opinion of the Socially Responsible Digital Leadership framework and why leaders should use the framework. To add more specificity to the research subject, Figure 4.21A illustrates the outside-in and inside-out perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

Figure 4.21A
The Focus Area of the Socially Responsible Digital Leadership Framework



Source: Francois Volschenk (2018)

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.21C of Appendix W1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to visually present the information to assist with synthesizing the information into related groups of codes. The codes of part E-6 were categorized into 4 groups. Table 4.21D in Appendix W2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.21E in Appendix W3 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question.

Table 4.21A presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 31 items in 4 categories of the Socially Responsible Digital Leadership framework. Table 4.21A illustrates *bi-directional influences to a common goal* at 10.79%, the *creation of compass for success* at 8.63%, *society can keep digital leaders accountable at* 7.91%, *positives results thought defined goals* and *commitment to society* both at 6.47% and *society should use this to improve growth* at 5.76%.

Table 4.21A The Socially Responsible Digital Leadership Framework		
Coded terms (n=40)	Frequency	Percentage
Part E-6: Socially Responsible Digital Leadership		
○ Guidelines for a digital leader		
○ A defined framework adds credibility	6	4,32%
○ Best practice	3	2,16%
○ Creation of acceptable boundaries	4	2,88%
○ Expedite reaching Digital Social Dynamic Equilibrium	7	5,04%
○ The guideline should be publicly available	1	0,72%
○ Improved digital leadership	3	2,16%
○ Influence direction of thinking of leaders		
• Creation of compass for success	12	8,63%
• Digital leaders guided by values and principles	5	3,60%
• Enable leaders with an essential framework	3	2,16%
• Pragmatic approach	2	1,44%
• Understanding the social influence is more important than ever	3	2,16%
○ Model the impact of strategies	7	5,04%
• Align strategies to agreed societal values	2	1,44%
• Emphasize the breadth of influence of actions	1	0,72%
• Predictive failure modelling tool	1	0,72%
○ Successful implementation requires full understanding	1	0,72%
○ People are guided and influenced by frameworks	7	5,04%
○ Non-compliance could influence sustainability	2	1,44%
○ The framework should be prescriptive	5	3,60%
○ The framework should be descriptive but not forced as prescript	3	2,16%
○ Positives results thought defined goals	9	6,47%
○ Define acceptable practices	1	0,72%
○ Bi-directional influences to a common goal	15	10,79%
○ A new quality standard	3	2,16%
○ Create stakeholders understanding	3	2,16%
○ Commitment to society	9	6,47%

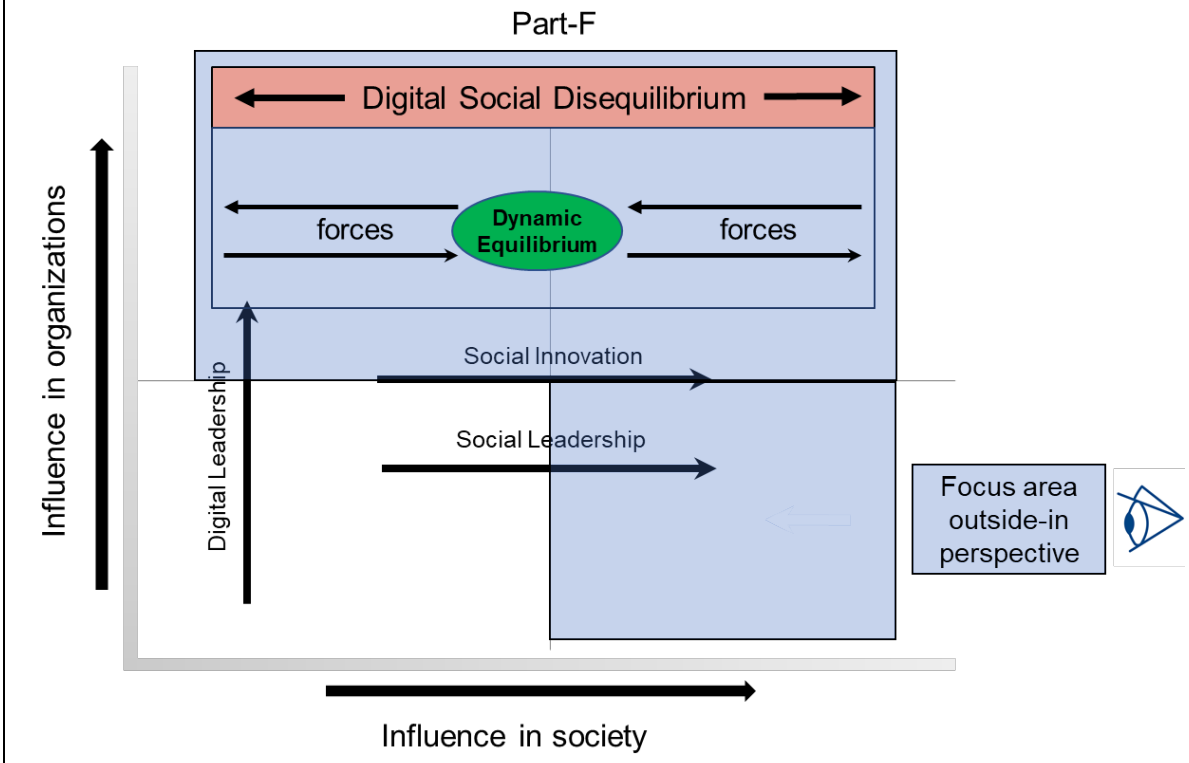
○ Society can keep digital leaders accountable	11	7,91%
○ Society should use this to improve growth	8	5,76%
○ The voice of society can be heard	2	1,44%
Total	139	100,00%
Source: Francois Volschenk (2018)		

4.22 CATEGORY EIGHTEEN – The Perception Why Digital is Required in the World

In this question of the interview, Part-F, participants were requested to give their opinion on why digital innovation is required in the world from an organizational and societal level. To add more specificity to the research subject, Figure 4.22A illustrates the outside-in perspective of the interview question, that better informs the Socially Responsible Digital Leadership framework in the illustrated area.

The colloquial responses of the participants were collected and transcribed with the relevant responses documented in Table 4.22C of Appendix x1. The responses were coded per interview question with MAXQDA Pro Analytics 18 into codes and sub-codes. The codes were categorized into two main groups of The Why of Digital – Organizational Level and The Why of Digital – Societal Level. Concept maps were created using MAXMaps in MAXQDA Pro Analytics 18 to allow for the visual presentation of the information to synthesize information into related groups of codes.

Figure 4.22A
The Focus Area of the Perception Why Digital is Required



Source: Francois Volschenk (2018)

4.22.1 The Why of Digital – Business Perspective

The main codes of the first portion of part F were categorized into 5 groups. Table 4.22Di in Appendix X2 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.22Ei in Appendix X4 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments

were assigned to the code in question. Table 4.22Ai presents the frequency and percentage of the coded segments according to the collected responses from the participants. The table lists the 19 items in 5 categories of the perception of why digital is required at the organizational level. Table 4.22Ai illustrates that *digital improve effectiveness and efficiencies* at 21.92%*, digital is happening and is inevitable* at 17.81%, *digital is a revolution* and *improved communications* at 10.96% and that *digital is the new norm* at 6.85%.

Table 4.22Ai
The Perception Why Digital is Required – Organizational level

Coded terms (n=40)	Frequency	Percentage
Part Fi: Why Digital?		
○ Businesses require digital to remain relevant	4	5,48%
○ Improve effectiveness and efficiencies	16	21,92%
○ Improve customer service delivery.	1	1,37%
○ Defined the new way of doing business	1	1,37%
○ Digital is happening and is inevitable	13	17,81%
○ Digital is here to stay	1	1,37%
○ Digital is the new norm	5	6,85%
○ To survive, we need to embrace digital	2	2,74%
○ Improved communications	8	10,96%
○ Personal communication channels improved	1	1,37%
○ Customer communication improved	1	1,37%
○ Could block false information	1	1,37%
○ Digital is a revolution	8	10,96%
○ Improve governance of all information	3	4,11%
• Blockchain as permanent audit trail	3	4,11%
○ Taking the world out of stagnation	1	1,37%
○ Digital currency, government and voting possible	1	1,37%
○ Digital could start living on its own	1	1,37%
○ We probably do not need digital at all.	2	2,74%
Total	73	100,00%
Source: Francois Volschenk (2018)		

4.22.2 The Why of Digital – Societal Perspective

The main codes of the second portion of Part-F were categorized into 4 groups. Table 4.22Dii in Appendix X3 represents a summary of coding by category of the characteristics from the responses of the participants. Table 4.22Eii in Appendix X5 details the code matrix browser that provides an overview of the segments of documents per participant that were assigned to a specific code. The symbols at the conjunction points of the code matrix represent the number of coded segments that were coded within a specific code. The larger the symbol, the more coded segments were assigned to the code in question. The table lists the 31 items in 4 categories of the perception of why digital is required at the societal level. Table 4.22Aii illustrates that *digital makes life easier* is at 16.41, *digital is a social equalizer or enabler* at 10.16%, *digital enable human capabilities and opportunities* and *make life better* both at 8.59%, *improved quality of life* at 7.81% and *free up time for better things* is at 7.03%.

Table 4.22Aii
The Perception Why Digital is Required – Societal Level

Coded terms (n=40)	Frequency	Percentage
Part Fii: Why Digital?		
○ Digital to improve humanity	4	3,13%
○ Survival	6	4,69%
• Enable exploration of alternative environments	1	0,78%
• Improve human to equip them for survival	1	0,78%
○ Society is better	1	0,78%
○ Enable human capabilities and opportunities	11	8,59%
○ Human improvement above others	2	1,56%

○ Drive economic growth for economic inclusion of more people.	1	0,78%
○ Enable impoverished society members	1	0,78%
○ Older generations have much to gain from digital	1	0,78%
○ Improve quality of life	10	7,81%
○ Improve knowledge through access to information	5	3,91%
○ Makes life better	11	8,59%
○ Makes life easier	21	16,41%
○ Free up time for better things	9	7,03%
• Less wasting of time	2	1,56%
• Increase available time with family	2	1,56%
• Create leisure time	2	1,56%
○ Wealth creation	1	0,78%
○ Increase personal convenience	4	3,13%
○ Personal comfort	1	0,78%
○ Human nature to evolve	4	3,13%
• Technology and innovation are required for development	2	1,56%
○ Social equalizer or enabler	13	10,16%
○ Breaks down boundaries	5	3,91%
○ Social equalizer	1	0,78%
○ Human centricity enabled	1	0,78%
○ Enabler to achieve social expectations	1	0,78%
○ Could create reason to belong for people	1	0,78%
○ Opportunities for those who embrace it	1	0,78%
○ Reduced barriers to entry in the market	2	1,56%
Total	128	100,00%
Source: Francois Volschenk (2018)		

4.23 CATEGORY NINETEEN – Quantitative Data Distillation

The quantitative analysis is informed by the responses in Part-E of the interviews of the rating of potential influences of the factors that influence the Socially Responsible Digital Leadership framework.

4.23.1 The Influence Factors Rating scale

The description of the Likert scale rating of 0 to 7 is categorized from *no influence* to *extreme influence* in Table 4.23.1.

Table 4.23.1
The Influence Factors Rating Scale

Scale	Rating scale	Digital Leadership	Social Leadership	Social Innovation	Social Capital	Digital Social Dynamic Equilibrium	SRDL Framework
0	No influence						
1	Very low influence						
2	Low influence						
3	Influence						
4	Medium influence						
5	High Influence	Larger than 5 (p=0,001)	Larger than 5 (p=0,001)	Larger than 5 (p=0,0001)	Larger than 5 (p=0,0001)		
6	Very high influence					Larger than 6 (p=0,005)	Larger than 6 (p=0,0001)
7	Extreme influence						

Source: Francois Volschenk (2018)

The t-test per influence factor tests if the responses are larger than a specific value in the rating scale. The results in the table indicate that Digital Leadership, Social Leadership, Social Innovation and Social Capital are larger than 5 ($p<0.001$) at a confidence level of 99%, therefore considered as *high influence*. Similarly, Digital Social Dynamic Equilibrium and SRDL framework are larger than 6 ($p<0.01$) at a confidence level of 99%, therefore considered as a *very high influence* with details of descriptive statistics from Minitab 18 available in Appendix Y4.

4.23.2 Digital Leadership compared to Digital Social Dynamic Equilibrium

The statistical test for the perception of the potential influence of the defined Digital Social Dynamic Equilibrium compared to the influence of Digital Leadership only is tested in Appendix Y6 with a t-test for the difference. Digital Social Dynamic Equilibrium is significantly larger than Digital Leadership ($p=0.019$) at a confidence level of 95%. Importantly, the result confirms that the Digital Social Dynamic Equilibrium has a perceived higher influence than Digital Leadership, thereby confirming from a quantitative perspective the significance of Digital Social Dynamic Equilibrium for digital leaders to consider in future.

4.23.3 Digital Leadership compared to the SRDL framework

The statistical test for the perception of the potential influence of the defined Socially Responsible Digital Leadership (SRDL) framework compared to the influence of Digital Leadership is tested in Appendix Y7 with a t-test for the difference. Digital

Social Dynamic Equilibrium is significantly larger than Digital Leadership (p=0.03) at a confidence level of 95%. Importantly, the result confirms that the Socially Responsible Digital Leadership framework has a perceived higher influence than Digital Leadership, thereby confirming from a quantitative perspective the significance of the defined Socially Responsible Digital Leadership framework for digital leaders to consider in future

4.24 CATEGORY TWENTY – Significant Statements from Participants

This section presents specific interview statements into a discourse that privileges the specific ideas of participants and better informs the research subject. Twelve significant statements are listed below, listed per organizational level of the participants as defined in the group of employees and managers and the group of executives.

4.24.1 Group of Employees and Managers

1. "Digital enhances the need that we create ourselves." - Interview-104
2. "True innovation is taking the same information given to all and finding alternate value propositions within." - Interview-122
3. "The moral fibre of society need to remain while digital is disrupting society." - Interview-125
4. "I believe digital is a revolutionary innovation that has and will continue to propel humankind towards a more prosperous future." - Interview-137

4.24.2 Group of Executives

5. "Digital is a positive revolution without war" - Interview-110

6. "The traditional corporate mindset is: this is the way I have done things, this is the way I do things, I know I have got to cut my cost base, and I know I have got to innovate digitally to do that, but I am monolithic." - Interview-113

7. "Know about digital, mitigate the influence, drive the positives and socialize it. That is the next big thing to balance it." - Interview-113

8. "Digital channels offer no differentiation. It is your product, people and service that makes all the differentiation in the customers' mind." - Interview-116

9. "Digital Social Dynamic Equilibrium is efficiency with harmony" - Interview-118

10. "Digital Social Dynamic Equilibrium is the nucleus of fully understanding digital innovation."

- Interview-119

11. "Being a socially responsible digital leader is as simple as knowing what is right and wrong." - Interview-127

12. "Social capital is a collaboration explosion." - Interview-127

The significant quotes were included in the coded segments, coded and categorized as part of the phenomenological investigation.

4.25 SUMMARY OF CHAPTER FOUR

The findings of the responses to the semi-structured interviews were analysed, coded and categorized into frequency distribution tables and code matrix browsers that provided an overview of the document segments that were assigned to a specific code. Chapter Four detailed the influences of digital innovation on people in organizations and society, digital innovation in South African organizations, effective digital leadership, the influences of digital leadership, social leadership and social innovation, the influence of social capital, the significance of Digital Social Dynamic Equilibrium, introduced the forces of Digital Social Dynamic Equilibrium, the concept of Socially Responsible Digital Leadership framework and the perception why digital is required.

Chapter Five synthesizes and integrates the discoveries to better inform on the implications of the research beyond the outcomes. Furthermore, the next chapter integrates the examination findings with the added value to the discourse in the field of Socially Responsible Digital Leadership considering various influence factors including the Digital Social Dynamic Equilibrium to formulate a new framework.

CHAPTER FIVE

SYNTHESIS AND INTEGRATION

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Final submission to the Dissertation Committee
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CHAPTER FIVE - SYNTHESIS AND INTEGRATION

5.1 OVERVIEW

The present research was conducted in geographically dispersed organizations throughout South Africa. The sample size included forty executives, managers and employees within a minimum experience of five years in digital innovation. The research was conducted through personal interviews, telephone interview or Skype call method. Furthermore, follow-up interviews were conducted with twenty-four of the forty respondents initially interviewed. The research was able to collect and generate a set of variables relating to digital innovation, leadership and the social impact of digital innovation on people in organizations and society.

The dissertation attempts to answer the following main research question:

> "What are the characteristics of a new conceptual framework that describes Socially Responsible Digital Leadership in a technologically disruptive context?"

This Chapter presents a combination of different considerations of concepts, essential influence factors and resultant themes presented in Chapter Four to form a coherent synthesis of the research findings. A distillation process of identifying the essential influence factors helps to construct the framework, and thereby the chapter responds to the research question. The subsequent sections will synthesize and

present the findings and construct a new framework for Socially Responsible Digital Leadership. The proposed framework presents the influence factors with characteristics for the Socially Responsible Digital Leadership that can guide digital leaders, government, society, individuals and other stakeholders to expedite reaching the defined Digital Social Dynamic Equilibrium. The framework is a significant contribution to the existing body of knowledge of digital leadership incorporating social responsibility.

5.2 THE IDENTIFICATION OF FINDINGS

The information on participants was presented in Table 4.4.4.1, Table 4.4.1.2, Figure 4.4.1.3, Figure 4.4.1.4, Figure 4.4.1.6 and Table 4.4.1.7 of Chapter four based on the socio-demographic information of the semi-structured interviews. The research requirement of a minimum of 5 years of digital experience was achieved for all the participants. Surprisingly, the average years of experience are more than 10 years for the digital professionals and 70% of the participants have more than 10 years of digital experience. The participants were well represented over the various age groups. At an average age of 44 years, including some young digital professionals, the wealth of experience was evident in the responses. In terms of the type of profession, a variety of job positions including technical, sales, administrative and executive informed a broader perspective from the different participants. The four Chief Executive Officers that contributed to the research shared their extensive experience from different perspectives through exposure to different industries. The gender distribution is skewed pre-dominantly towards the male gender with only six

female participants. The low percentage is, unfortunately, a fair reflection of female involvement in digital roles in South African organizations. Furthermore, due to the small number of female participants, no comparisons can be made on gender differences.

The leadership experience for all forty participants is an average of 12 years, where 85% of the participants had more than 5 years and 70% had more than 10 years of leadership experience. The average leadership experience of executives is an average of 17 years. Six individuals had less than five years of leadership experience but contributed to the research with their expectations of digital leaders from their perspective. The primary job function shows that the majority of participants are technical as was expected from digital professionals. Importantly, the broader viewpoints from sales, administrative or executive orientation contributed to a more diverse perspective of the full influence of digital innovation on people in organizations and society from an outside-in and an inside-out perspective.

Finally, the knowledge and experience of the participants were evident in their understanding of the considerable influence of digital innovation on people in organizations. The influence of digital on people in society was informed by the participants through their knowledge and experience, ontological perspective and understanding of the anthropological perspective of humanity.

5.3 THE INFLUENCE AND IMPACT OF DIGITAL INNOVATION

The influences and impact of digital innovation are presented as the influence of digital innovation on people in organizations, the influence of digital innovation on people in society, the mitigation of the potential negative influences of digital innovation and the main stakeholders of digital innovation.

5.3.1 The Influence of Digital on People in Organizations

The combined findings from an outside-in and inside-out perspective from the answers of the semi-structured interviews as represented in Table 4.5A and Table 4.9A collectively discovered the main elements that describe the influence and impact of digital innovation on people in organizations.

5.3.1.1 The influence of digital innovation on people

A common view amongst interviewees was that people are generally influenced by exposure to digital and that digital has made people adapt to change faster. Some interviewees argued that the abundance of technology and constant change had given some people only a short-term focus, while several interviewees believe that the availability of information has revolutionized decision making. There was a sense amongst interviewees that the breach of security of personal data had increased the paranoia about security.

5.3.1.2 Factors that influence the impact of digital innovation

The attitude of people will influence what will happen in the constant change introduced by digital disruption. Digital innovation can define an organization by implementing the technologies and methodologies to improve efficiency. The company culture in organizations should cultivate a growth mindset of innovation. Some interviewees believe consumer-thinking in organizations has been introduced in organizations, with the mindset that all services from personal lives also need to be always available at work. New generations that embrace technology will increase the potential future impact of digital innovation. As a result, digital will have an even more significant influence on future generations in organizations.

5.3.1.3 The influence of digital innovation on people in the workplace

The organizational culture in organizations has changed, but due to the intricate and prolonged nature of changes, some people take it for granted that people have not changed. Furthermore, people expect flexibility due to digital changes and see digital as part of organizational culture. Communication has been brought closer between individuals through improved communication, data capabilities and collaboration tools. The required skills in organizations will change with digital disruption with certain jobs that have already been replaced by a digital equivalent. Leadership in organizations will change due to the value mindset of consumers and employees. Digital innovation has created new opportunities for individuals to contribute more to organizations. Furthermore, the mobility of the workforce has facilitated an enhanced work-life balance through flexibility in working hours. Productivity has improved but is

limited to digitization and not digital transformation, that means that the real opportunities of digital are still underutilized.

5.3.1.4 The positive impact of digital innovation

The direct positive impacts of digital innovation are faster and improved communication with higher efficiencies and productivity to work smarter for enhanced work experiences. Digital innovations enable individuals to satisfy needs through convenience and availability. Cultural diversity has increased through the seamless integration of remote parts of the organization. The availability of information supports better decision making. Importantly, some interviewees believe that individuals that embrace digital will be able to think on a higher level.

5.3.1.5 The negative impact of digital innovation

The perceptions of people will influence the impact of digital innovation, while non-digitally oriented people could struggle in future to adapt. People that are reluctant to change feel threatened by digital. Although people are now always on and available, interpersonal communication has deteriorated as digital can potentially hinder the interaction of people with each other. Some interviewees feel that people are more controlled and monitored with abundant technology and in some instances, this has reduced productivity. There was a sense amongst interviewees that the workforce could decrease as digital innovation could make some jobs redundant.

5.3.1.6 Synthesis of the section

The evidence presented shows that people are generally influenced by exposure to digital innovation. Importantly, the attitude of people will influence both adoption in

organizations and how the constant change will have a change in the people. The organizational culture in organizations has changed with either new opportunities presented or the fear of replacement of certain jobs. The positive impact of digital innovation includes improved communication, collaboration and efficiencies. The challenge presented to people is how to leverage from the changes to have a positive impact on their own lives. There was a sense amongst interviewees that people are generally reluctant to change and some individuals feel threatened by digital innovation.

New generations that embrace digital innovation will further impact future changes on people in organizations that should be carefully planned and managed by digital leaders. Importantly, skills needed with digital transformation will change in future. In contrast, employees have more of an individual perspective through their fear of substitution for specific jobs.

5.3.2 The Influence of Digital on People in Society

The combined findings from an outside-in and inside-out perspective from the answers of the semi-structured interviews as represented in Table 4.6A and Table 4.10A collectively discovered the main elements that describe the influence and impact of digital innovation on people in organizations.

5.3.2.1 Society has adopted digital change

The interviewees agreed that people in society could not live without digital. Life is lived at a faster pace with improved communication methods and connectivity. There is an application frenzy in society, with the constant expectation of applications to make life easier. People are now connected to information that leads to learned societies and knowledgeable consumers. The proliferation of the availability of information has created a wealth of available knowledge for society. Social media platforms were created where society is exposed to miscommunication through the creation of channels for fake news.

5.3.2.2 The impact on people in society

Digital information shapes minds where knowledge can be regarded as power. Digital innovation will only increase in the future, but there is a general lack of understanding of the impact. The virtual world will have an influence including but not limited to the invasion of privacy of individuals. Digital innovation has enabled the proliferation of online services with multiple disruptive digital platforms. The impact of digital depends on the purpose that can either be a positive impact or negative depending on the intentions of the initiators. Digital is an influencer of the thoughts and minds of people. Socially, creativity has become a problem with a copy and paste mentality. The work-life balance has been changed with increased mobility that is positive, but the always-on has negative consequences for other individuals.

5.3.2.3 Positive impact on people in society

Digital innovation is an enabler or equalizer in opportunities for everyone, but the key is the willingness of individuals. Mobile technology has enabled opportunities that allow people in society greater opportunities with a broader communication circle. Digital innovation has improved individual experiences with improved personal safety and security, more affordable technology for more people, opportunities for education, access to information, improved convenience and increased individual productivity. Learning has changed forever with incredible opportunities available through online education.

5.3.2.4 Negative impact on people in society

The fear of digital domination where digital can replace some human capabilities through Artificial Intelligence. People spend too much time on mobile devices. Instant gratification is expected where everything should be available at the click of a button. The downside of social media is that specific postings can be detrimental. Some people create digital personas and live in virtual reality. The negative individual experiences include an inhibitor for social interaction and impersonality, excessive control over people, higher stress levels, increased peer pressures, reduced privacy, reduced productivity or laziness and security concerns. The overload of potentially useless information with all the available digital channels adversely influence people. Furthermore, potential new dangers from digital have created challenges for parents in the digital age.

5.3.2.5 Synthesis of the section

People have generally accepted digital in society through the extended use of technologies in their everyday lives. Two divergent and conflicting discourses emerged with the acceptance of people of digital innovation in their personal lives as people in society cannot live without digital, while in organizations they feel threatened by the proliferation of technology. The improved communication and mobility have created a constant expectation of applications that make the lives of people easier. The positive influence of digital has enabled improved individual experiences through more affordable technology with improved convenience and quality of life. The negative influence is the excessive use of mobile devices that have a negative influence on personal social interaction. People create digital personas and replace human interaction with social media or digital communication.

5.3.3 Mitigation of the Negative Influences of Digital Innovation on People

The combined findings of the semi-structured interviews answers represented in Table 4.8A and Table 4.11A collectively discovered the main elements that describe the mitigation of the negative influences of digital innovation on people. The proposed AAA Mitigation strategy is described as the three principles of awareness, approach and action.

5.3.3.1 Awareness

Awareness starts with an honest, holistic approach that creates a consciousness of the impact of digital innovation on people. It is important to recognize and accept as soon as possible that digital will happen. Moreover, the digital change should be carefully implemented by anticipating the psychological influence. A common view amongst interviewees was that society is spending too much time on digital devices and create awareness of what to expect and understand the potential impact and influence of digitalization in the world. Digital requires people to re-invent themselves to learn. Digital will create both opportunities and threats.

Opportunities from digital innovation - Digital can enhance almost anything people do by creating growth opportunities and enhancing higher level thinking. The new opportunities are subject to embracing digital as the nature of jobs will change.

Threats from digital innovation - Digital introduces new threats like security concerns and invasion of privacy. Fear of change drives the uncertainty that digital can pose a threat. People feel threatened to be replaced especially in mundane and repetitive jobs.

5.3.3.2 Approach

Digital leaders should bring humanity back into technology with a positive approach. Digital transformation is an individual choice and mindset, and people cannot be restrained or limited, but people should also take accountability for their actions. The digital mindset should be driven by values and principles and the real world should not be replaced with a virtual world. Importantly, some interviewees emphasize that digital innovation should not empower monopolies.

5.3.3.3 Action

Change should be driven by trust, transparent communication and careful organizational change planning. The positive planned social change will happen through the influence that educates the youth on socially acceptable behaviour with social programs to educate. Control the flow of data with security measures that protect society and especially the youth, improve governance, promote using socially acceptable content and remove anonymity from the internet. Furthermore, control digital content with guidelines for acceptable behaviour and trusted sites. Some interviewees suggested that Artificial Intelligence (AI) and advanced analytics can be used to improve negative influence. Importantly, human nature is survival and individuals should re-invent themselves continuously to adapt to the constant change.

5.3.3.4 Synthesis of the section

The researcher posits that the negative influences can be addressed through the proposed AAA approach of awareness, approach and action. The awareness needs to be done in a transparent way that communicates both the positive and negative influences of digital innovation on people. The approach needs to be human-centred with defined values and principles of digital innovators. Actions should be done in a responsible manner that builds trust while maintaining full accountability by digital leaders.

5.3.4 The Main Stakeholders of Digital Innovation

The findings of the semi-structured interviews answers represented in Table 4.12A discovered there are four main stakeholders pillars that can influence the impact of digital innovation on people in organizations and society.

5.3.4.1 Government pillar

The awareness of the impact of digital innovation on people needs to be driven by policies, while some interviewees suggest that regulation is not enough. The combined efforts of government with organizations are promulgated with notions of special rebates or tax reliefs as incentives to motivate business leaders to support the efforts. Political parties and politicians could use the fear of people of the changes brought on by digital disruption to promote their social responsibly with positive ideologies. Importantly, governments have a responsibility to provide the infrastructure to facilitate the opportunities for the people from digital innovation.

5.3.4.2 Humankind or societal pillar

Due to the extensive nature of digital transformation, e.g. the pervasiveness to privacy, everyone should be made aware of the influence or impact. It is important to contextualize the opportunities and threats that could change the well-being of people. It is suggested that mentors, public figures, celebrities and parents actively communicate with the whole of society and specifically with millennials the potential impact of digital innovation.

5.3.4.3 Organizational pillar

There was a sense amongst interviewees that the primary stakeholders at the organizational level should be digital innovators. The importance of application developers to understand the implications of the applications was also highlighted. Business leaders and C-level executives should cognitively drive responsible behaviour from a strategic level that positively influences customers and application users.

5.3.4.4 Educational pillar

Education should start from an early age on the full positive and negative influence of digital innovation by schools and teachers. The role of educational bodies was highlighted and the psychological influence should be included in learning.

5.3.4.5 Synthesis of the section

Overall, almost everybody involved can be considered stakeholders through the widespread influence of digital innovation on people in organizations and society. The pragmatic view corroborates with the illustration of the influence of the digital revolution in Table 2.5 as pervasive to privacy, threatening of work opportunities and social well-being. Surprisingly, governments are highlighted as the most significant stakeholder that could increase awareness and maintain order through regulations. Importantly, governments should cognitively build digital infrastructure to improve the positive influence on society.

5.4 DIGITAL INNOVATION IN SOUTH AFRICAN ORGANIZATIONS

The findings from the answers of the semi-structured interviews as represented in Table 4.7A discovered the main elements that describe the inside-out viewpoint of digital innovation in South African organizations including the level of digital innovation maturity, limiting factors, initiatives requirements and suggestions for organizational implementation.

5.4.1 The Level of Digital Innovation Maturity

The consensus amongst interviewees is that digital innovation is slow in South Africa, while some participants feel that digital innovation is at an acceptable level. Moreover, it is perceived that South Africa is lagging against the largest organizations in the world. Digital innovation is in silos in organizations without an integrated and holistic approach. The growth is limited through a generally conservative approach, while digital innovation is sometimes inhibited by adverse societal action. There was a sense amongst interviewees that industries with advanced digital transformation include banks, telcos and automotive manufacturers.

5.4.2 Initiatives Required to Drive Digital Innovation

Digital transformation should be expedited with investments in innovation hubs. The education of people should be prioritized to speed up reaching higher levels of digital skills. The importance of customer-centricity as a critical component of a digital strategy was highlighted by some interviewees.

5.4.3 Limiting Factors for Digital Innovation

Digital transformation is misunderstood through a lack of knowledge, limited available skills or due to a traditional limiting corporate mindset. Furthermore, some organizations proclaim that digital is not a magic fix for all problems that limit their creative thinking of the potential opportunities for their organizations. Due to the geographic distribution of people across the country, the prohibitive cost of development has resulted in the under-development of available infrastructure.

5.4.4 Suggestions for Organizational Implementation

Organizational implementation is suggested from a strategical, tactical and operational level.

5.4.4.1 Strategical

Digital innovation will increase in its organizational acceptance with its inclusion in a company strategy. The digital journey must start internal to an organization, while it is implemented internally to maximize efficiencies. Furthermore, digital champions should drive digital innovation in organizations. Digital innovation is about the creation of new things and a defence strategy will not be effective in the digital era.

5.4.4.2 Tactical

The organizational-wide acceptance of the possibilities of digital innovation is limiting the potential growth because of human fear of substitution or internal resistance to change. Moreover, a lack of understanding inhibits digital growth in organizations.

Furthermore, due to limited experience and skills available in organizations the implementation of digital technology is slow.

5.4.4.3 Operational

The digital culture change should happen first with a discerning internal focus to transform the organization.

5.4.5 Synthesis of the Section

The evidence presented shows that digital innovation in South African organizations is currently slow. Although there are opportunities in specific industries, the general adoption of digital innovation is limited due to a lack of understanding or education. Current limitations include a traditional corporate mindset, resistance to change or cost reduction strategies. A common view amongst interviewees was that organizational implementation should be driven at the strategic, tactical and operational levels. The digital journey should start internal to an organization with organization-wide implementation to be successful. The practical view aligns with the proposed Digital Congruency Model as proposed in Section 2.7 that suggest different approaches at the strategic, tactical and operational levels to implement digital transformation.

5.5 THE INFLUENCE OF DIGITAL LEADERSHIP, SOCIAL LEADERSHIP AND SOCIAL INNOVATION

The influence factors of digital leadership, social leadership and social innovation as identified in the academic bricolage and illustrated in Figure 2.6.2 are individually analysed below:

5.5.1 Digital Leadership

The findings from the answers of the semi-structured interviews as represented in Table 4.16A discovered the main elements that describe the influence of digital leadership on digital innovation.

5.5.1.1 Suggested improvements for digital leadership

A Common view amongst interviewees was that it is critically important that digital innovation must integrate people, process and technology to maximize the opportunities from the availability of data. Continuous improvements are required to extend the digital ecosystem beyond the internal organization through advanced digital maturity. The limited focus of digital innovation as only technology without integration with people and process limits the overall efficiencies from digital innovation. Some interviewees promote that digital champions should drive the transformation. Importantly, to leverage from the incredible opportunities of digital innovation organization-wide change and acceptance are required. Digital innovation

is still inefficient due to the inability of digital leaders to decrease the development cycle and improve their agility in organizations.

5.5.1.2 Importance of digital leadership

There is a consensus amongst interviewees that digital leaders are critical to driving digital innovation. In contrast, some interviewees believe that leaders do not influence the innovation as it is innovators that innovate. Where leaders embrace change, digital transformation is a priority in the organization. In contrast, limited knowledge of digital innovation has caused a slow adoption rate in other organizations. Importantly, the fear of change limits the potential of digital growth through resistance to change, a lack of understanding or some digital leaders are limiting innovation due to cost reductions.

5.5.1.3 The people-oriented approach to digital innovation is lacking

People in organizations should be motivated to disrupt. The organizational culture should change, and people must be part of the journey with effective communication of the digital strategy. Some interviewees emphasize in the digital era the soft skills of people should be increased.

5.5.1.4 Synthesis of the section

Digital leaders are essential to drive digital innovation. Importantly, people, process, technology and information should be integrated for any future implementation. The evidence from the research confirms the importance of the people-oriented approach in new organizational cultures to take part in the digital journey.

5.5.2 Social Leadership

The findings of the semi-structured interviews answers represented in Table 4.17A discovered the main elements that describe the influence of social leadership both currently and in the future.

5.5.2.1 Current

Leaders are not acting in the best interest of society, with generally minimal efforts by leaders to lead with a social mindset. While the government has started with incentives, initiatives are generally not successfully implemented.

5.5.2.2 Suggestions for the future

Social leadership starts within organizations and leaders should lead by example. Leaders should be skilled in understanding the requirements. Social leadership is simply the right thing to do and could have a worldwide impact. Education on social responsibility should be prioritized, with involvement from an early age. The focus should be to improve the infrastructure for permanent change. Some interviewees suggested that organizations should be incentivized to promote social growth.

5.5.2.3 Synthesis of the section

A common view amongst interviewees was that currently, leaders are not doing enough in terms of social leadership. Leaders have limited knowledge and should be incentivized with government initiatives. Organizations should be incentivized to promote social growth to have a worldwide impact.

5.5.3 Social Innovation

The findings of the semi-structured interviews answers represented in Table 4.18A discovered the main elements that describe the influence of social innovation.

5.5.3.1 Social Innovation is about positive social culture change

A permanent culture change is required to promote collaboration with society to resolve issues. Community-based development will drive social innovation by involving all generations of people. The education of society is critical to motivate and justify that using social innovation will improve the life experiences of people. Organizations could decrease costs due to the economies of scale. Governments should embrace all efforts of social innovation with incentives for organizations.

5.5.3.2 Social innovation creates incredible opportunities.

Social innovation creates opportunities for organizations and society. Organizations create brand loyalty and society are enabled to grow. Social innovation towards mobile money will enable society to improve interaction and trade opportunities. Importantly, social innovation is a perpetual enabler for societal growth.

5.5.3.3 Social innovation is a long-term investment

Social innovation is not only about money but about a sustainable long-term approach. Society must be involved as social innovation is good for the reputation of organizations. Social innovators should learn from previous initiatives success and failures. Social innovation needs to build entrepreneurs or be an enabler to build future entrepreneurs.

5.5.3.4 Social needs drive digital

Digital technologies can improve society by addressing the issues in society. The needs of society drive the required digital change. Infrastructure is an enabler and applications on digital platforms can change society. From a commercial perspective, social innovation could decrease research and development costs for organizations.

5.5.3.5 Synthesis of the section

Social innovation is primarily about the creation of a positive social culture change. Collaboration with communities to drive permanent change is critical. The opportunities created by social innovation can be an organizational enabler for cost reductions due to economies of scale and increased market possibilities. Social needs drive digital innovation and governments should be involved in the creation of infrastructure as an enabler of social innovation.

5.6 THE INFLUENCE OF SOCIAL CAPITAL

The findings from the answers of the semi-structured interviews as represented in Table 4.19A discovered the main elements that describe the influence of social capital.

5.6.1 Collaboration is the New Norm

Social capital is a collaboration explosion and an incubator for innovative thinking. The effective utilization of social capital should be a focused approach to improved knowledge and co-operation by potentially involving to the whole of society. Digital

innovation has enabled the potential of co-operation with the removal of geographical boundaries that could enable coopetition as a differentiator. The proliferation of applications is an enabler for improved collaboration.

5.6.2 Collectivism Contributes to Human Growth

Social capital is an enabler for opportunities to address everyday needs. Moreover, the wisdom of the crowd for collaboration enables collectivism that contributes to human growth.

5.6.3 The Start and End of Consumer Consumption

Social capital opens new routes to substantial spending capabilities. Moreover, the availability of data analytics will improve marketing efficiency. Due to the influential nature of social capital, it is critical to understand the customer. It is recommended that big data and data analytics will only grow in importance to understand the customer. The power of social capital can be utilized by employees as a focused organizational reputational tool.

5.6.4 The New Voice of Society

Social capital is a reality more than a necessity but also opens new markets through its enablement of fast distribution and communication. The new voice of society is influential but improved governance is needed to limit negativity. Social capital fulfils the human need for association and allows for a group of individuals to collectively

pursue a common cause. Some interviewees believe that social capital is less influential for well-informed individuals that are better informed or less prone to misinformation. The availability of data and open nature of social media facilitate social capital to give power to the people.

5.6.5 The Influence of Social Capital or Social Networks

The uncontrollable nature of open platform and communication makes social capital potentially dangerous or harmful. The fast distribution and worldwide impact could be used for selfish agendas that are untruthful. Furthermore, the information on social platforms are trivial and social interaction is generally non-work related. Importantly, some interviewees emphasize that the magnitude of information could reduce the efficiency of communication.

5.6.6 Synthesis of the Section

Collectivism and collaboration are enablers for future opportunities for individuals in society. The significance of the influence of social capital was emphasized by most interviewees. Organizations should leverage from the power of social capital to improve brand loyalty, reputation and grow future opportunities. The new voice of society is considered influential. Consequently, organizations should navigate and predict the complex interactions of social capital to mitigate negative influences.

5.7 EVALUATING EFFECTIVE DIGITAL LEADERSHIP

The combined findings from the answers of the semi-structured interviews as represented in Table 4.13A, Table 4.14A and Table 4.15A collectively discovered the main elements that describe effective Socially Responsible Digital Leadership.

5.7.1 The Digital Mindset

The digital mindset requires an open and balanced view. Digital leadership is similar to traditional leadership but with added visionary requirements to understand the significant size of the digital market. Responsible communication should deliver to realistic real-world expectations.

5.7.2 Responsible Digital Culture

Digital leaders should anticipate the influence of digital innovation to create awareness by educating the positive while being transparent in educating about the negative. There is a sense amongst interviewees that leaders should encourage peoples' involvement and responsibility through a human-centred approach, but do not force digital on anyone. Re-purpose people in an organization where possible or mitigate the adverse risks through the new enablement of new skills. Importantly, think digital, but do not be digital through the personal connection with people and personal communication where possible. Promote learning by getting schools to educate and promote responsible learning at tertiary institutions on digital influence. Protect employees as much as possible by remembering that people are the

differentiators and realizing that digital is not. Digital corporate governance includes responsible communication and social reputation management.

5.7.3 Leaders with Values and Principles

The values and principles of digital should include accountability, ethics, honesty, integrity and transparency. Leaders should positively influence more people by enabling individuals through guidance and personal investment.

5.7.4 The Digital Leader is a Disruptor

The disruptor leader embraces the constant change by supporting rapid experimentation with agility to fail-fast, continuous research and development investment. Digital leaders should cultivate a digital learning culture with freedom of expression. Creating opportunities for human growth by enabling continuous training and upskilling to use the experience of people positively. Inform people of the adoption needed, but more importantly, assist and enable them to adapt. Furthermore, disruptive digital leaders should become enablers for entrepreneurial development.

5.7.5 Integrate People, Process, Technology and Information

5.7.5.1 People

Communicate the significance of digital while maintaining the human-centred approach to digital innovation. Acknowledge employees as the enablers of digital

innovation. Furthermore, digital leaders should integrate thinking about generational demographic cohorts, e.g. millennials, in digital leadership strategies.

5.7.5.2 Process

The digital mindset and digital culture should be integrated and implemented in organizations to compete effectively in the new digital economy.

5.7.5.3 Technology

The digital leader should promote the use of digital technology and be cognitive of the latest technology. Technology enables the entrepreneurial spirit for success in the digital era.

5.7.5.4 Information

Digital leaders should use data to transform organizations and industries. The constant learning environment should be made available to all employees and all digital initiatives should be documented. Digital marketing on a peer to peer basis is the future of marketing. Information is more than an internal focus by using information and data to improve or create customer experiences.

5.7.6 Sustainable Society

Digital should not be all about money, but it should be about the maximum impact more than the maximum profit. Change is constant and digital will happen, but

humans will always attempt to re-invent themselves. Digital leaders have permanent accountability as nothing can be taken back in the public domain. Societal thinking is not always rational, while sustainability requires the long-term commitment of all stakeholders. There is a requirement for a societal mentality of responsibility and improvement with the acceptance of responsibility by every individual.

5.7.7 Synthesis of the Section

The digital mindset requires an open and balanced view to create a vision for digital transformation. The implementation should be driven by a responsible digital culture and a human-centred approach. Importantly, people are the differentiators in any organization and not digital. The importance of the integration of people, process, technology and information was emphasized as a critical part of digital leadership. The premise of a sustainable society is proposed that keep digital leaders permanently accountable for their actions.

From a societal perspective, individuals have a responsibility for personal improvement and personal growth. A common view amongst interviewees is that digital leaders should be disrupters that embrace the constant change. Individual leaders should have values and principles that personifies a digital learning culture with freedom of expression. As disruptors and innovators, digital leaders should further be enablers for entrepreneurial development.

5.8 THE SIGNIFICANCE OF DIGITAL SOCIAL DYNAMIC EQUILIBRIUM

The significance of Digital Social Dynamic Equilibrium is explained as the concepts and forces of the Digital Social Dynamic Equilibrium.

5.8.1 Digital Social Dynamic Equilibrium (DSDE) – Concepts

The findings from the answers of the semi-structured interviews as represented in Table 4.20Ai discover the main elements that describe the concepts of the Digital Social Dynamic Equilibrium.

5.8.1.1 Long-term and short-term influences

The Digital Social Dynamic Equilibrium enables the creation of constant awareness of common goals between digital innovators and society. The benefits of reaching equilibrium in the DSDE should incentivize its adoption by digital leaders. Furthermore, future innovation should look beyond technology only. The premise is that DSDE protects humanity against digital dominance by creating awareness in society about digital influence and coaching within the society of responsible behaviour. While the understanding in society of digital is limited, DSDE should be used by society in their favour to empower people for improved decision-making.

5.8.1.2 DSDE is a dynamic process

Digital transformation will expand exponentially in the foreseeable future. Digital forces and societal forces will each selfishly pursue their own objectives.

Consequently, it is vital for society to force towards for the equilibrium continuously. Forced regulation will not assist in reaching equilibrium as it is a dynamic process. The realist notion of one interviewee is that DSDE is only possible subject to *the machine* not controlling everything.

5.8.1.3 Leaders should embrace DSDE

Digital Social Dynamic Equilibrium is the key to create constant awareness in society of the influence of digital innovation in organizations and society. There was a sense amongst interviewees that the DSDE could serve as a leadership tool for performance improvement by investigating the boundaries of digital innovation, thereby improving the long-term probability of success. The equilibrium creates a reason to exist long-term for organizations. One interviewee suggested that the influential leader should consider DSDE as responsible digital capitalism.

5.8.2 Digital Social Dynamic Equilibrium (DSDE) - Forces

The findings of the semi-structured interviews answers represented in Table 4.20Aii discover and describe the forces of the Digital Social Dynamic Equilibrium.

5.8.2.1 Digital forces

Digital competency is a qualifier for positive digital forces. It is imperative that governance assurance and risk management are prioritized to guarantee the protection of data. Improved communication has facilitated platforms with open communication that could be an enabler for innovation with fast feedback from

consumers. Furthermore, the value proposition of organizations is open to public scrutiny and should, therefore, conform to the realistic expectations with real solutions to the requirements of consumers. Solving societal issues can be influential and convenience is a prominent issue of what consumers want to be addressed. The values and principles of an organization in the open digital domain will be scrutinized. Importantly, the following are non-negotiable digital forces including honesty, empathy, integrity, transparency and trust. Furthermore, the public image of the leader, constant awareness of customer requirements and non-monetary commitments are positive forces. The most essential inherent digital force “it is the right thing to do” is a simple but very effective general guiding principle for future digital leaders.

5.8.2.2 Societal forces

The infinite choice of alternatives in the free market is a significant societal force. Furthermore, social capital is a strong influence although the realization of the real power of social capital is still limited. The value perception forces of the digital service include the perception of convenience and savings, requirements for consumption-based pricing, ease of payment and termination of services. Positive societal forces include the perception of digital innovators that limit the negative influence, strict ethical requirements, perceived security, responsible marketing, loyalty and the most critical required force of trust. The use of legislation to protect society is a strong societal force. Resistance to change by customers can be a positive or negative societal force. Furthermore, the survival instinct of humanity is a strong societal force.

5.8.3 Synthesis of the Section

The Digital Social Dynamic Equilibrium creates constant awareness for the common goals of digital innovators and society. The long-term and short-term influences should be understood by digital leaders to improve adoption of digital innovation while aligning with societal requirements. Digital will expand exponentially in the future. Consequently, the DSDE could protect humanity against digital dominance. The equilibrium can serve as a company objective and leadership tool for effective leadership to improve performance towards long-term sustainability.

The Digital Social Dynamic Equilibrium is a dynamic process that involves the complex interaction of digital and societal forces in a constantly changing world to reach an equilibrium that is in balance when the greater good of humankind is achieved. The equilibrium anticipates various influence factors, like normal business requirements, but just more prolific through the constant change and availability of information. Digital leaders should investigate acceptable boundaries of actions from a societal perspective to pro-actively improve efficiencies in digital innovation. Furthermore, the values and principles portrayed by the digital organizations will be publicly scrutinized that increase the importance that it should be guided by ethical principles including honesty, empathy, integrity, transparency and trust. Individuals are generally selfish and as a result, the societal forces will reflect individual requirements for convenience, ease of use and increased value perception. Importantly, the introduction of social capital as a social enabler for the voice of people should protect humanity from digital monopolies.

5.9 THE SOCIALLY RESPONSIBLE DIGITAL LEADERSHIP FRAMEWORK

The findings from the answers of the semi-structured interviews as represented in Table 4.21A discovered the main elements that describe the Socially Responsible Digital Leadership framework.

5.9.1 The Setting of Guidelines for the Digital Leader

The framework should be publicly available as a defined guideline to improve its credibility. A defined framework is a pragmatic approach that creates acceptable boundaries that expedite reaching Digital Social Dynamic Equilibrium. The framework will improve digital leadership to align with best practice principles. Furthermore, a framework influences the direction of thinking of leaders by creating a compass for success to guide digital leaders with the required values and principles. Understanding the social influence is more important than ever. Moreover, the framework allows leaders to model the impact of strategies to align the strategies to agreed societal values. Importantly, the framework emphasizes the breadth of influence of actions that could be used for predictive failure modelling tool. The successful implementation needs a full understanding of the mechanics and interdependencies of the framework.

5.9.2 People are Generally Guided and Influenced by Frameworks

Non-compliance by an organization to accepted frameworks and guidelines could influence their sustainability. A common view amongst the interviewees was to

improve the effectiveness of the framework; it should be prescriptive with regulatory requirements. In contrast, some participants feel that the framework should be descriptive but not forced as a regulatory requirement. The definition of a new quality standard similar to ISO certification is a pragmatic alternative.

5.9.3 Positives Results are Possible with Defined Goals

Defined acceptable practices generally lead to positive results. The creation of stakeholders understanding with a commitment to society should lead to positive results. Positive results should be forthcoming from the bi-directional influences towards a common goal by organizations and society.

5.9.4 Society can Keep Digital Leaders Accountable

Society should use the framework to improve growth. The framework contributes to the voice of society to be heard, social capital importance as an influence and it should drive socially responsible behaviour.

5.9.5 Synthesis of the Section

Collectively, people are guided and influenced by frameworks of acceptable behaviour. The defined Socially Responsible Digital Leadership framework creates a holistic view of the influence factors from a digital and social perspective to reach the defined equilibrium. The creation of stakeholder understanding and commitment from digital leaders and society should lead to positive results. Importantly, the premise of

social capital introduces the bi-directional influence between organizations and society. As a result, corporate social responsibility is no longer a one-directional influence from organizations, but a bi-directional mechanism between organizations and society.

Society should use the framework to keep digital leaders accountable because everyone knows what is expected to reach the equilibrium. The framework is both descriptive and prescriptive in formulating the components, interaction and desired objectives of Socially Responsible Digital Leadership.

5.10 THE WHY OF DIGITAL INNOVATION

The “why” of digital innovation is explained from a business and societal perspective.

5.10.1 The Why of Digital – Business Perspective

The findings from the answers of the semi-structured interviews as represented in Table 4.22Ai discovered the main elements that describe the perceptions of why digital innovation is required from a business perspective.

5.10.1.1 Digital is a revolution

It is postulated by some interviewees that digital can take the world out of stagnation. Full digital transformation will improve the governance of all information, e.g. by using blockchain as a permanent audit trail. Furthermore, digital currencies and digital

voting should become a possibility if the near future. The increase in available information improves the abilities of governments. One interviewee suggests that with the possibilities of Artificial Intelligence (AI), digital could start living on its own. In contrast, some people philosophize that humanity probably does not need digital at all.

5.10.1.2 Businesses need digital to remain relevant

Digital is happening and is inevitable. The proliferation of technology has proven that digital is here to stay and is the new norm of innovation for businesses. Digital has defined the new way of doing business with improved effectiveness, efficiencies and means to improve customer service delivery. Businesses need to embrace digital to survive.

5.10.1.3 Enabled integration of improved communications

Personal communication channels improved, and internal and external organizational communication has improved. The improved availability of information, collaboration tools and digitization and digitalization have permanently changed the business landscape.

5.10.2 The Why of digital – Societal Perspective

The findings from the answers of the semi-structured interviews as represented in Table 4.22Aii discover the main elements that describe the “why” of digital innovation.

5.10.2.1 Enable human capabilities and opportunities

Digital has enabled human capabilities and opportunities and for the benefactors human improvement above others. The application of digital can drive economic growth for economic inclusion of more people to enable impoverished society members. Ironically, it is postulated that older generations have much to gain from digital that will only increase in the future. Furthermore, digital improves humanity because with digital society can live better lives. With the exploration of alternative environments, it is possible for humans to equip themselves better for survival.

5.10.2.2 Social equalizer or enabler

Digital is a social equalizer by breaking down boundaries. The reduced barriers to entry in the market are creating opportunities for those who embrace digital innovation. Digital is an enabler to achieve social expectations of human centricity, where it could create reasons for people to belong to various social groups that were previously impossible.

5.10.2.3 Improve the quality of life

The improvement of available knowledge through access to information has increased personal convenience and comfort. The convenience with less wasting of time on frivolous activities has freed up time for better things like leisure time or spending more time with family. It is in human nature to evolve. The proliferation of technology and innovation enable the development. Importantly, digital makes life easier and better for people.

5.10.3 Synthesis of the Section

From a business perspective, digital innovation is a revolution. Improved communication and availability of information, digitization and digitalization have permanently changed the business landscape. Businesses have no choice but to embrace digital transformation to remain relevant in the digital era. From a societal perspective, digital is a social enabler and equalizer by breaking down geographical and cultural boundaries. The application of digital can drive economic growth with the economic inclusion of more people while enabling impoverished society members. The reasons for the “why” of digital in society corroborate with the positive influence of digital innovation in society including improved personal convenience that enhances the quality of life in society.

5.11 CONSOLIDATION OF THE SYNTHESIS WITH QUANTITATIVE DATA

To corroborate some of the findings of the semi-structured interviews the additional sources of data from the desk research including the content analysis, literature review and the professional focus of the literature review were used. Pragmatic capabilities deal with matters realistically, based on practicality instead of theoretical considerations. (Cooke-Davies, 2014). Considering the intended use by intended users, a pragmatic application is applied below to make conclusions in the context of the research. Importantly, individual variations or unique themes are as crucial as commonalities about the phenomenon researched (Hycner, 1985). The composite summary below synthesizes prominent discourse from the literature review,

professional focus, content analysis and semi-structured interviews to categorize the practical applications of what, who, where, when how and why of the Socially Responsible Digital Leadership Framework.

5.11.1 Who the Stakeholders are that Influence Digital Innovation

The components are informed by the theoretical framework combined with information from the literature review in Section 2.6.2.1 and the semi-structured interviews from Section 5.3.4.6. The four digital leadership styles introduced by Libert et al. (2015) are Commander, Communicator, Collaborator and Co-Creator. Importantly, the digital divide emphasizes the importance of the Collaborator and Co-Creator in the digital era. The Collaborator co-operates with customers and employees with an emphasize on innovation that taps into the innovation of people to create new intellectual capital. This aligns with the research results that people are the real differentiators and that a people-oriented approach is required. The Co-Creator has a network type approach that allows rapid scaling and innovation with prominent levels of participation. The collaboration between organizations and society or customers in social capital through collaboration as the new norm aligns with the Co-Creator as a defined successful digital leadership style.

From the semi-structured interviews, the stakeholders can be divided into the four groups of government, education, organization and individual. Surprisingly, the government was identified as the most important stakeholder to promote awareness, compliance and infrastructure growth for digital innovation. Educational stakeholders

should educate both digital innovation and the influence of digital innovation from an early age. Organizational stakeholders should implement digital innovation with a human-centred approach that promotes people as the key differentiators for organizations. Moreover, digital innovators have a responsibility to society to mitigate the negative influence of digital disruption on people. Overall, everyone can be considered a stakeholder within the context of the acceptance of digital innovation in society.

5.11.2 What are the Important Components of the Framework

The components are informed by the theoretical framework combined with information from the literature review, professional focus, content analysis and the semi-structured interviews. The components of the framework are divided into the categories: (1) influence factors that include digital leadership, social leadership, social innovation and social capital; (2) influences on people in organizations and society; (3) the Digital Social Dynamic Equilibrium with digital and societal forces; (4) a strategy of awareness, approach and action to mitigate the potential negative influences of digital innovation and (5) identified the characteristics of Socially Responsible Digital Leadership.

The results from the semi-structured interviews correlate with the findings from the quantitative analysis in Section 4.23 that identify the influence factors of digital leadership, social leadership, social innovation and social capital as *high influence* (larger than 5 on the Likert scale at 99% confidence level) in Table 4.23.1. Moreover,

Digital Social Dynamic Equilibrium and the Socially Responsible Digital Leadership framework are tabled as a *very high influence* (larger than 6 on the Likert scale at 99% confidence level) as critical components of Socially Responsible Digital Leadership.

5.11.3 Where the Framework should be Implemented

The components are informed by the theoretical framework combined with information from the literature review and the semi-structured interviews. The digital innovation literature review introduced the Digital Congruency Model in Section 2.3.7 that illustrates an integrated organizational approach at the strategic, tactical and operational level. The findings of the semi-structured interviews corroborate with the premise of the Digital Congruency Model by postulating that integration at the three levels is limiting the potential of digital innovation. Moreover, the importance to start digital transformation internally in an organization was highlighted in the field research.

5.11.4 When Organizations should Start Implementing the Framework

The components are informed by the theoretical framework combined with information from the literature review and professional focus. The evidence provided in the professional focus of the largest digital organizations in the world illustrate the early adopters of digital transformation are highly successful. In contrast, the professional focus has also indicated that the societal forces from the unethical

actions by organizations will negatively influence the organization through a decline in market capitalization. Moreover, the results from the quantitative analysis in Section 4.23.3 and Section 4.23.4 conclude that the perceived importance of the Digital Social Dynamic Equilibrium and the Socially Responsible Digital Leadership framework is larger than Digital Leadership only. Consequently, organizations should expedite efforts for digital transformation responsibility to seize future opportunities for business growth.

5.11.5 How the Framework should be used by Stakeholders

The components are informed by the theoretical framework combined with information from the literature review and the semi-structured interviews. The Digital Congruency Model in Section 2.3.7 suggests a digital mindset that is entrenched in organizations through a digital culture and implemented by integrating people, process, technology and information into a sustainable eco-system. The findings from the semi-structured interviews corroborate with the available discourse on digital leadership but emphasize the importance of a people-oriented approach to digital transformation. The framework provides guidelines for Socially Responsible Digital Leadership that enable new opportunities for organizations. On the other hand, society can use the framework to keep digital leaders accountable for their actions. Importantly, digital leaders that integrate the influences factors, digital and societal forces in a company strategy should achieve long-term socially acceptable sustainability as defined in the Digital Social Dynamic Equilibrium.

5.11.6 Why it is Essential to Implement the SRDL Framework

The components are informed by the theoretical framework combined with information from the literature review, professional focus and the semi-structured interviews. The why of digital innovation as concluded in section 5.10.3 lists the organizational and societal perspective of the perceived benefits and advantages of digital innovation. The defined Socially Responsible Digital Leadership framework creates a holistic view from a (digital) organizational and societal perspective on how to reach Digital Social Dynamic Equilibrium. The digital forces represent the influences of digital innovators as implemented by digital leaders, while the societal forces introduce social capital and other social forces. Importantly, the Digital Social Dynamic Equilibrium defines the necessary balance between the concepts of social justice and digital transformation for the greater good of humankind.

5.12 CONTRIBUTION TO KNOWLEDGE

The integration of findings from the content analysis, the literature review of academic domains and the professional focus and the semi-structured interviews from the fieldwork informed the praxis gap that led to the generation of the Socially Responsible Digital Leadership Framework as illustrated in Figure 5.12. While perceptions and thinking are generally individual-based, the researcher postulates that the process of thinking through perception involves other social and cultural artifacts that inevitably becomes social.

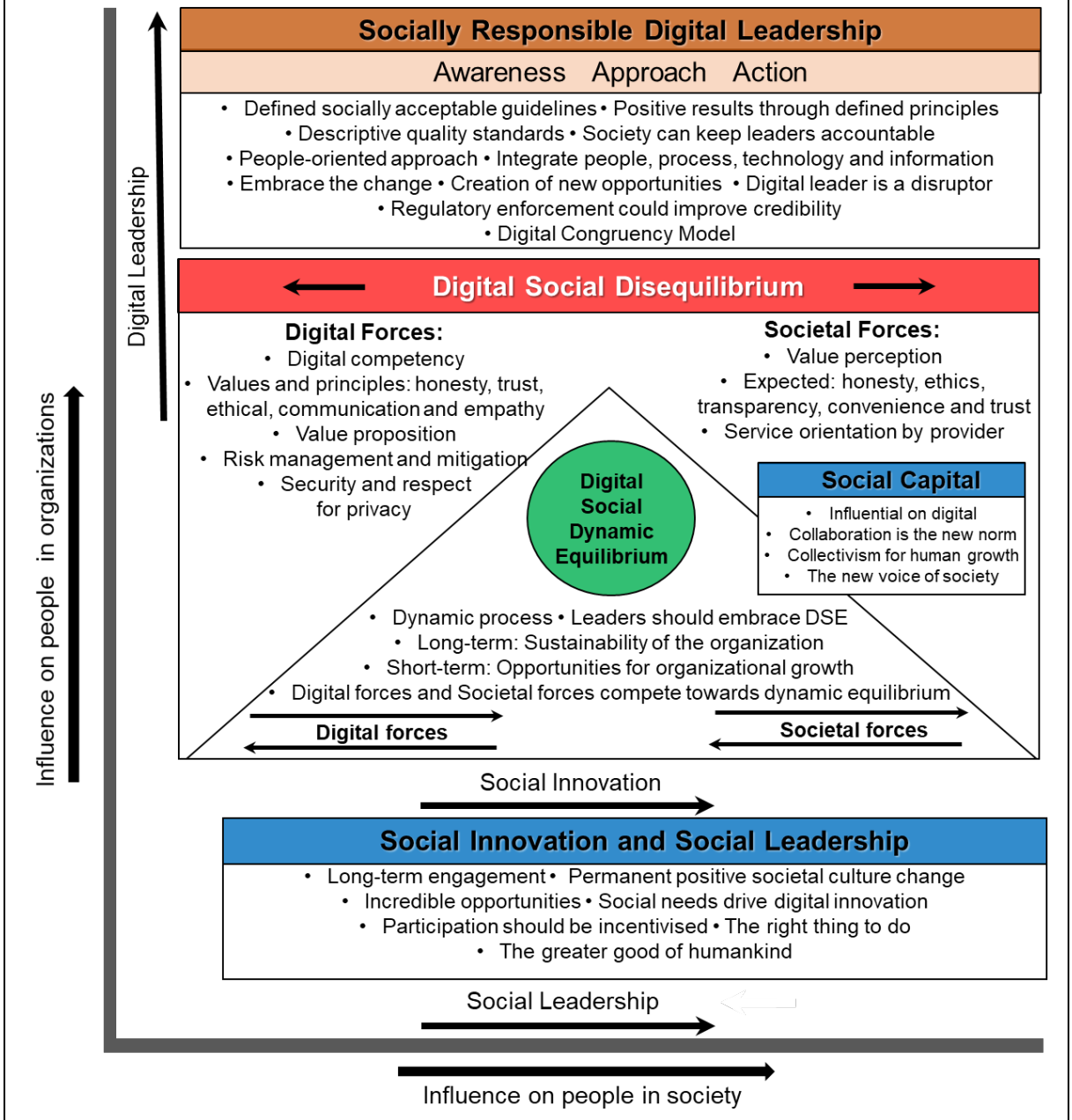
Furthermore, the research was guided by guiding principles including epistemology, ontology and an appropriate research methodology to derive meaning from the research. Importantly, congruence was explicitly established between the investigation of the phenomenon through the research methodology, the ontological nature of the phenomenon's reality and the knowledge and experience (epistemology) applicable to the research. The epistemology involved understanding the context and environment as defined as the influences in organizations and society. The ontology resided in the social construct of human interaction in the world. The mixed methods research design that integrates qualitative and quantitative research was consequently accepted with an emphasize on the inductive approach to discover new insights into the phenomenon.

The interpretive paradigm as employed by the qualitative approach is concerned with understanding the world as it is from the subjective experiences of individuals, therefore, understanding social behaviour and focus on the implied meaning. The evidence presented for the influence of digital on people in organizations and society shows that people are generally influenced by exposure to digital innovation. Importantly, the attitude of people will influence both adoption in organizations and how the constant change will have a change in the people. The organizational culture in organizations has changed with either new opportunities presented or the fear of replacement of certain jobs. The positive impact of digital innovation includes improved communication, collaboration and efficiencies. The challenge presented to people is how to leverage from the changes to have a positive impact on their own

lives. There was a sense amongst interviewees that people are generally reluctant to change because some individuals feel threatened by digital innovation. New generations that embrace digital innovation will further impact future changes on people in organizations that should be carefully planned and managed by digital leaders. Importantly, skills needed with digital transformation will change in future. In contrast, employees have more of an individual perspective through their fear of substitution for specific jobs.

People have generally accepted digital in society through the extended use of technologies in their everyday lives. Two divergent and conflicting discourses emerged with the acceptance of people of digital innovation in their personal lives as people in society cannot live without digital, while in organizations they feel threatened by the proliferation of technology. The improved communication and mobility have created a constant expectation of applications that make the lives of people easier. The positive influence of digital has enabled improved individual experiences through more affordable technology with improved convenience and quality of life. The negative influence is the excessive use of mobile devices that have a negative influence on personal social interaction. People create digital personas and replace human interaction with social media or digital communication. The interpretive bricolage of the research unfolded as the components were added inductively by connecting the dots of information to form the Socially Responsible Digital Leadership Framework as illustrated in Figure 5.12.

Figure 5.12
The Socially Responsible Digital Leadership Framework



Source: Francois Volschenk (2018)

In order to better assist digital leaders in using the Socially Responsible Digital Leadership framework effectively, the descriptive, informative and prescriptive components of the framework are described below:

5.12.1 Descriptive

The following components of the framework can be recognized: (1) the influence factors of digital leadership, social leadership, social innovation and social capital; (2) Digital Social Dynamic Equilibrium (including digital and societal forces); (3) the mitigation strategy (to limit negative influence of digital innovation) of awareness, approach and action and (4) Socially Responsible Digital Leadership characteristics. The core of the framework is the Digital Social Dynamic Equilibrium with the positive and negatives of both digital and societal forces. The influences of digital innovation on people in organizations are listed as information that could assist digital leaders in the formulation of digital strategies.

5.12.2 Informative

The understanding of the dynamic nature of the framework is illustrated through the complex interaction of influence factors and the forces of Digital Social Dynamic Equilibrium. The core of the framework is the balance illustrated as the equilibrium in the Digital Social Dynamic Equilibrium. Digital Social Dynamic Equilibrium is an ever-changing dynamic process due to the complex interactions of the influence factors and the digital and societal forces. The directions of the influence factors are shown to visually assist the reader on the positive effects, or inverse negative effects of the actions.

5.12.3 Prescriptive

The prescriptive course of action for digital leaders is to use the framework for a better understanding and commitment to social responsibility. Moreover, the

framework is useful as a guideline to better inform decision-making and strategies. Furthermore, a published and generally accepted framework could hold digital leaders accountable for unacceptable actions or behaviours with the prescriptive requirements of the proposed framework.

5.12.4 Congruency of the Praxis Gap

The triangulation of the research data from the literature reviews, content analysis and interview processes has been considered and analysed. Consequently, it can be concluded that the academic knowledge is congruent with the practical application in the field on a commercial basis. The salient congruent characteristics are highlighted from a digital innovation, leadership and social justice perspective in the following paragraphs.

People feel threatened by the influence of digital innovation in organizations and society. The research by Frey and Osborn (2015) shows that a significant quantity of jobs is threatened by digital innovation through replacement with digitization. Furthermore, developing countries are likely to find a larger share of their jobs at risk with the possibility to automate mundane jobs. Moreover, people in society embrace digital innovators as researched by Statista (2018) that the largest organizations in the world are digital organizations. The proliferation of digital innovation in the world with a profound influence on people in organizations and society aligns with Hearsum (2015) that the influence of digital is socially constructed by stakeholders and society.

The Socially Responsible Digital Leadership framework does not replace traditional leadership theories but rather corroborates with various leadership authors.
The five dimensions of authentic leadership as described by George (2003) aligns with the requirements of the socially responsible digital leader. Firstly, authentic leaders are driven by passion with a sense of purpose and knowing what they are about and where they are heading. Similarly, digital leaders are disruptors that change direction for organizations. Secondly, authentic leaders have values. The importance of values and principles for digital leaders were emphasized by some participants of the research. Thirdly, authentic leaders build relationships with others and have a connectedness with their followers by sharing experiences, listening and communicating with followers. Collaboration is the new norm in the digital era that is further illustrated by the digital and social forces of the Digital Social Dynamic Equilibrium. Fourthly, authentic leaders have self-discipline with focus and determination. Digital leaders should lead by example and have a long-term approach through determination to achieve success. Finally, authentic leaders have heart and compassion with sensitivity to the needs of others and the willingness to help. The importance of the people-oriented approach was agreed by most interviewees.

Yukl (2006) states that leadership is a process to create change and defines leadership “as the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” (p.8). Furthermore,

transformational leaders appeal to higher order needs of followers thereby engaging the follower across every dimension (James M. Burns, 1978). The common view amongst interviewees was that people need to accept that they should change and accept responsibility for their personal growth. Moreover, according to House (1977), charismatic leaders typically exert enormous influence and power, especially in crisis-type situations. In the digital era, the only constant is change were strong digital leadership will navigate people towards a socially acceptable solution with shared goals from organizations and society.

Uhl-Bien, Marion and McKelvey (2007) suggest complexity science informs that traditional leadership models are products of bureaucratic paradigms that are only effective in real production-based economies. As an alternative to traditional leadership models, complexity leadership could assist in the understanding and visualization of unspecified future states to enable directing the whole organization to it. In the digital economy, consumers have different demands, including a more services-oriented approach. Moreover, Osborn and Marion (2009) propose that an approach favouring a mix of models and exploring a range of leader contexts better explain the complexities of leadership. The holistic approach of the Socially Responsible Digital Leadership framework enables digital leaders to integrate a plethora of leadership concepts to connect the dots.

The Miller (2001) pluralist social justice idea suggests that the market can distribute to individuals what they deserve, that individuals are responsible for their own

destiny, rewards are proportionate to individual efforts and talented and hardworking individuals deserve the fruits of their labour. Similarly, the premise of the Digital Social Dynamic Equilibrium corroborates with Miller that the market can distribute fairly and proportionate to efforts. In the same vein, Nozick (1974) suggest that redistribution is just as long as there is no injustice in the acquisition or transfer of resources. Again, in corroboration with Libertarianism that accentuates distribution according to the individual property ownership and importantly, Digital Social Dynamic Equilibrium suggest social justice without any redistribution. Furthermore, the underlying premise of Rawls is that of society is a fair system of social co-operation over time from one generation to the next (John Rawls, 1958). Digital Social Dynamic Equilibrium is the continuous competing of digital forces and societal forces to reach equilibrium for the maximum good of humankind.

The Nash equilibrium applied to Digital Social Dynamic Equilibrium shows the results of the strategic actions by each party (digital forces and societal forces) for their own selfish goals. Each party is doing what they possibly can, even if that does not mean the optimal outcome for society. Importantly, support by society and digital organizations of the principles of Digital Social Dynamic Equilibrium will lead to growth in both digital influence and social capital to reach an equilibrium. Furthermore, Hayek viewed the existence of the spontaneous order as a counter to the claim that any beneficent social order needed to be constructed. Similarly, Digital Social Dynamic Equilibrium is not a planned constructed action, but the digital and societal forces contest to achieve the equilibrium.

5.13 SUMMARY OF CHAPTER FIVE

After a comprehensive analysis of the research findings, the results have revealed the new paradigm of socially responsible digital leadership defined in the new Socially Responsible Digital Leadership framework and aided with the definition of the Digital Social Dynamic Equilibrium. In addition, the critical influence factors for socially responsible digital leadership have been identified, analysed and the salient features listed. Furthermore, the research showed the lack of understanding of the major influence of social capital could prohibit companies from long-term sustainability. Furthermore, the prominent discourse from the literature review, professional focus, content analysis and semi-structured interviews were synthesized into the practical applications of what, who, where, when how and why of the Socially Responsible Digital Leadership framework.

To the best knowledge of the author gained through the thorough investigation of the literature, it is believed that the present research is the first detailed research focused on defining the Digital Social Dynamic Equilibrium including an introduction of digital forces and societal forces. In addition, the present research developed a new Socially Responsible Digital Leadership framework that not only addresses the underlying relationships and influences but also details the requirements to expedite progress towards the Digital Social Dynamic Equilibrium. The Socially Responsible Digital Leadership framework is descriptive, informative and prescriptive that could enable digital leaders to improve the implementation of the framework in practice. Furthermore, the academic knowledge is congruent with the practical application in

the field on a commercial basis. Moreover, by incorporating influence factors in the framework, the present research brings a more refined, theoretically and empirically based conceptualization of sustainable digital leadership by incorporating social responsibility.

Chapter Six will review the concepts of Socially Responsible Digital Leadership and Digital Social Dynamic Equilibrium, and explore the conclusive nature of the findings to provide recommendations for future research.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

Dr. Francois Volschenk, DBA
Final submission to the Dissertation Committee
Monarch Business School Switzerland
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CHAPTER SIX – CONCLUSION AND RECOMMENDATIONS

6.1 REVIEW AND SUMMARY OF THE RESEARCH PROCESS

This last chapter presents the research process, summarizes the research, purpose and significance of the research and summarize the salient findings. The validity and reliability, critical evaluation of the research findings and future recommendations are presented prior to the final summary of the chapter. The prominence of the availability of digital technologies has enabled platforms in disruptive digital business models that can empower customers to increase productivity. The digital agenda involves organizations and individuals in the organizations that influence individuals, and importantly, the collective unit of individuals are influenced in society. The digital leaders in organizations should act responsibly in the application and management of digital disruption in society. The research investigated the social responsibility for digital leadership through a phenomenological study in South African organizations.

In summary, the main research question is restated as follows:

> "What are the characteristics of a new conceptual framework that describes Socially Responsible Digital Leadership in a technologically disruptive context?"

To answer the research question, a literature review, content analysis and interviews have been conducted. A total of forty participants were purposefully selected by a process to identify whereby individuals that have experience in digital technologies in South Africa and interviewed.

The present research has extensively investigated the theoretical and empirical literature on leadership, digital innovation and social justice. Following the extensive review of the literature within the fields of digital leadership, social responsibility and leadership a common trend was established that isolated the gaps in the existing literature in this field. The research contributes to reducing the existing gaps in the literature through the generation of a conceptual framework for Socially Responsible Digital Leadership that may be used by business leaders to assist in understanding the influence of digital innovation on individuals and act responsibly in reaching Digital Social Dynamic Equilibrium. The framework includes reference to the Digital Congruency Model that can enable digital leaders to improve the implementation of digital transformation in an organization.

6.2 THE SIGNIFICANCE BEHIND THE RESEARCH FINDINGS

The significance behind the present research findings brings forth the message of digital influence on individuals in organizations and society and the importance of digital leaders to act responsibly within the context of constant change. The responsible leaders need to cognitively understand that the proliferation of

technology may have significant negative influences on individuals in organizations and society that could have devastating effects on humankind.

From the professional focus the potential negative impact on jobs (Frey & Osborne, 2017), the increased social media influence on news (Pew Research Center, 2018), the alarming mobile device usage increase (Statista, 2018) and the phenomenal growth of digital organizations (PwC, 2017) raise concerns on digital disruption. The foregoing emphasizes the need for the development of a framework or model on Socially Responsible Digital Leadership to highlight the effect of the influence of digital, create awareness of potential effects and solicit co-operation between digital leaders and society to resolve potential issues pro-actively.

The research discussed new elements and gained more profound insights into the constituents of leadership, digital innovation, social justice and generalized the concepts of digital leadership, social leadership and social innovation. Some of the findings of the present research have brought to the fore the importance of the identification of Digital Social Dynamic Equilibrium as a guideline for leaders to act more responsibly by identifying the digital and societal forces that influence the reaching of the equilibrium. Through the interpretive bricolage and inductive nature of the qualitative methods, the present research is able to present a set of comprehensive findings that reflect original perspectives based on the knowledge and experience of digital professional as interviewed.

The present research has uncovered nine main findings:

1. An understanding of the influence of digital disruption on individuals in organizations and society;
2. Introduction of the notion of bricolage of academic domains as a creative, innovative and individualized inductive process to discover additional discourse on the academic domains;
3. The perception of the current state of digital transformation in South African organizations;
4. The essential characteristics of good digital leadership;
5. The generation of the Digital Congruency Model to enable a digital leader to implement digital transformation in an organization;
6. The identifications of stakeholders that could decrease the potential negative influences of digital innovation;
7. The formulation of Digital Social Dynamic Equilibrium that explains the balance between digital influence (incorporating digital leadership) and society (with social capital);
8. The premise that Digital Social Dynamic Equilibrium gives a voice to society with the introduction of a bi-directional approach to social responsibility, compared to the traditional unilateral approach of corporate social responsibility;
9. The generation of a new Socially Responsible Digital Leadership framework that can be used by stakeholders, leaders, managers and academics.

It is anticipated that the findings of this research can improve the understanding of digital leadership incorporating social responsibility by stakeholders, business leaders, government, academics and employees. Furthermore, it is hoped that the findings of the present research have generated new insight that will stimulate

scholars and researchers around the globe to examine the impact of digital disruption on people in organizations and society.

6.3 THE LIMITATIONS OF THE RESEARCH

The present research may include some personal bias from the participants in the investigation as well as measured limitations such as the interpretation of the intensity of responses. The field of digital innovation is a very young profession, which may have an influence the orientation and identification of participants within the field of social responsibility. The field research was only conducted in South African organizations that could limit global generalization. Future research should be expanded to multiple countries and diverse cultures to determine the perceptions of diverse cultures.

Nevertheless, the research was conducted theoretically and systematically under the supervision of accomplished scholars, specialized and qualified supervisors who have extensive experience in research of this nature across different domains. These supervisors have taken meticulous efforts in ensuring that the researcher follows through in satisfying the objectives of the present research set out in Section 1.7 and in providing the answer to the research question.

6.4 CONTRIBUTION TO DIGITAL LEADERSHIP THEORY

The present research has made a significant and specific contribution to the knowledge in the field of digital leadership, digital transformation, social

responsibility, Digital Social Dynamic Equilibrium research and scholarship. In the next paragraphs, we will discuss some of the contributions of the present research to leadership, digital leadership and social responsibility literature and scholarship.

The literature review acknowledged that leadership literature had not defined the influence of digital innovation on people in organizations and society. The measurement of the influence on people has generally been limited to quantitative research by answering what the influences were on people. The complexities of human behaviour people were investigated to discover why people perceive the influence of digital innovation as opportunities or threats. The present research, therefore, addresses the methodological gap with a combination of mixed research methods including both quantitative and qualitative research methods.

Furthermore, the present research has introduced more rigour to the field and has made it possible for the researcher to explore the different possible relationships between the constituents of digital leadership and social responsibility in a manner that traverses different levels of analysis. By employing a phenomenological research method rooted in grounded theory through the qualitative research method, the researcher has been able to extract theories from the observed phenomenon and generate a new conceptual framework for Socially Responsible Digital Leadership. The present research has enriched the knowledge in the digital leadership field through the incorporation of influences in organizations and society, social responsibility as a bi-directional constituent, digital and societal forces on the

phenomenon being studied. The introduction of Digital Social Dynamic Equilibrium closes the gap in the existing body of literature on the balance between digital disruption and society with the new theory that illustrates the intrinsic and extrinsic forces involved.

The conceptual framework developed from this research can be used by various stakeholders of digital leadership, to redesign or align company policies and strategies by incorporating the digital and societal forces to expedite efforts to attempt and reach Digital Social Dynamic Equilibrium. From a societal perspective, the people influenced by digital innovation can collectively use the framework as an advocacy tool to leverage more co-operation between digital organizations and the stakeholders in society to contribute more.

6.5 DIGITAL SOCIAL DYNAMIC EQUILIBRIUM: DEFINITION AND THEORY

The research as inspired by Denzin (2012) that said: ” research scholars have an obligation to change the world, to engage in ethical work that makes a positive difference (p.86)”, formulates the definition and theory of Digital Social Dynamic Equilibrium.

6.5.1 The Definition of Digital Social Dynamic Equilibrium

The Digital Social Dynamic Equilibrium involves the complex interaction of digital and societal forces in a constantly changing world to reach a dynamic equilibrium to maximize socio-economic value.

6.5.2 The Theory of Digital Social Dynamic Equilibrium

The continuous complex interaction of digital and societal forces through digital innovation and leadership to reach a dynamic Digital Social Dynamic Equilibrium to maximize socio-economic value.

As stated in Section 2.6.3, the theory and framework comply to the five characteristics of a theory or framework that Kuhn (1977) proposes namely accuracy, consistency, scope, simplicity and prolificity (fruitfulness). Firstly, accuracy through influence factors and forces of the Digital Social Dynamic Equilibrium that were informed by the literature review and demonstrated from the semi-structured interviews with participants. Secondly, the context of the DSDE was contextualized from an outside-in and inside-out informed by epistemology (knowledge and experience), ontology (the nature of humans) and anthropology (behaviour of humans). Thirdly, the scope extends beyond the researched observation, with a broader application to influences in various contexts. Fourthly, it is simple, as illustrated by the concise description of the phenomenon of Digital Social Dynamic Equilibrium. Lastly, the is prolific with the disclosure of the previously un-noted relationships between the influences and influence factors.

6.6 RESEARCH VALIDITY AND RELIABILITY

As stated in Chapter Three – Section 3.4 validity is related to the accuracy of research findings, while reliability refers to the repeatability of the research findings (LeCompte & Goetz, 1982). The present research has identified and mitigated the

threats associated with validity and reliability concerning the use of semi-structured interviews. The potential threats to the use of interviews include:

- Observer-caused effects;
- Effects of interviewer's bias;
- Limitations of exposure to specific portions of the phenomenon;
- Human mind complexities and limitations; and
- Low objectivity.

The present research has mitigated these threats through:

- Careful selection of respondents based on in-depth background research;
- Pre-testing the semi-structured interview including rephrasing, removal and changing of questions;
- Adoption of a semi-structured and follow-up interviews format;
- Maintaining professional interpersonal behaviour throughout the research;
- Adoption of a controlled environment to conduct the interviews;
- Respect for participants to answer all the questions in the allocated time;
- Digital recording of all interviews; and
- Observation and note taking, with emphasize to highlight salient remarks.

In addition to the above, and to secure the reliability and validity of the research findings, the present research has ensured compliance with the four categories of trustworthiness of credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985). In the next paragraphs, the four criteria are discussed in relation to the present research with the original terms of LeCompt and Goetz (1982) indicated in brackets.

Credibility (Internal validity): concerns the believability of the research results by linking the results with reality. The congruency with reality was established through a combination of triangulation or bricolage (Denzin, 2012), peer debriefing (Lincoln & Guba, 1985) and thick description (Tracy, 2010). The combination of triangulation was performed by the researcher as a methodological, theoretical, critical and interpretive bricoleur. The various methods of triangulation checked the consistency of findings with qualitative and quantitative data in a study. The qualitative approach enabled the researcher to elucidate the complementary aspects of the phenomenon. The peer debriefing involved challenging the researcher thorough analytical probing to help uncover certain biases, perspectives and assumptions by the researcher. The debriefing process helped the researcher to become aware of attitude towards participants during interviews, thereby improving on interaction during follow-up interviews. Tracy (2010) argues that thick description is one of the most important means to achieve credibility in qualitative research. Details were provided to the participants before the interview of complex specificity of specific terminology as presented in the semi-structured interviews.

Transferability (external validity): is a demonstration that the research findings can be applicable to other contexts. The transferability was addressed by the research design that incorporates the professional focus that investigated the influence of digital innovation in the world. This corroborates with the South African context to validate the use of replication logic.

Dependability (reliability): is a demonstration that the findings are consistent and can be replicated (Creswell & Miller, 2000; Lincoln & Guba, 1985). The operations of the examination including the identification of participants, development of the database and information gathering were verified during the data collection.

Confirmability (objectivity): refers to the extent to which the research findings are independent. This is determined by the degree to which the findings are derived from the respondents' responses free from the bias and motivation of the researcher (Creswell & Miller, 2000; Lincoln & Guba, 1985). The transparency in publishing the coded segments confirms the objectivity of the researcher.

The researcher applied bricolage, as propagated by Denzin (2012), as an overarching framework for the research. Firstly, as a theoretical bricoleur, the research was informed by the three academic domains as informative knowledge of the interpretive paradigms as conducted by the literature review. Secondly, the methodological bricolage performed an array of diverse tasks, including semi-structured interviews, intensive self-reflection and iterations of introspection. Thirdly, as critical bricoleurs by interpreting the hermeneutic nature of the interdisciplinary inquiry, the boundaries were extended to the bricolage of the academic domains of digital leadership, social leadership and social innovation. Finally, and most importantly as an interpretive bricoleur, the researcher understood the research is an interactive and inductive process informed and shaped by people in the applied

context. The dots of information were connected through the categorization and sequencing to represent the parts to the whole as illustrated in the SRDL framework.

6.7 FUTURE RECOMMENDATIONS

The present research was carried out to examine the characteristics of a new Socially Responsible Digital Leadership framework that assists in explaining the influences and relationships of digital leadership, social leadership, social innovation and social capital on reaching Digital Social Dynamic Equilibrium. The researcher recommends that the outcome of this research could be applied as a basis for future research within the domain of digital leadership, social responsibility and digital innovation studies.

1. Testing the new developed Socially Responsible Digital Leadership framework by considering the complexities to reach Digital Social Dynamic Equilibrium. The components as presented in the contextual presentation of the influence on people in organizations and society need to be further investigated. Guidelines to prioritize strategies for implementation of the components can be developed to assist digital leaders and other stakeholders further.
2. Extending the level of analysis beyond the micro and meso level by including the macro level. It is recommended for future research to extend to the macro level to include government, political leaders and regulatory bodies informed by the identification of the main stakeholders of the social impact of digital innovation.

3. Investigation of the phenomenon from the grounded theory approach to develop the Digital Social Dynamic Equilibrium should be extended with multiple case studies in various countries. Multiple case studies across various countries will constitute a stronger case that can be generalized in the rest of the world. Global findings on the study of Digital Social Dynamic Equilibrium will contribute further to a deeper understanding of the concepts.
4. To truly test the diversity of the framework, it should also be analysed in diverse settings and outside of the digital industry. The influences on different cultures and different levels of digital maturity in organizations will add more to the understand and implementation of the Socially Responsible Digital Leadership framework. The research should be replicated to examine the implication of the differences in the priorities of the framework.
5. Further investigation is recommended to identify additional digital forces from digital innovation and societal forces of the Digital Social Dynamic Equilibrium. The identified forces should also be analysed to improve the understanding of the positive and negative effects of forces to expedite reaching the Digital Social Dynamic Equilibrium.
6. The research should be extended to a more balanced gender composition to investigate the perceptions of female participants on the influence of digital innovation on people in organizations and society, Digital Social Dynamic Equilibrium and the Socially Responsible Digital Leadership framework.

6.8 SUMMARY OF CHAPTER SIX

This chapter presents the summary and conclusion of the present research. The main research question was restated, and it was outlined how the research addresses the research objectives by answering the main research question and enrich the literature in this field. We have also considered how the present research addresses the existing gaps in the literature, assists in deepening the literature in this field and expanding the horizon of our critical variables in the study. Furthermore, we have discussed the potential limitations and presented the possible avenues for future research.

The present research contributes primarily to the knowledge in the research field through the definition and theory of Digital Social Dynamic Equilibrium and the generation of the Socially Responsible Digital Leadership framework. The framework introduces guidelines for bi-directional engagement by digital leaders and other stakeholders. The guidelines of the framework could assist organizations to capitalize from the digital integrated communication and information capabilities of the digital revolution to remain competitive in the future through defined social acceptable principles. Societal forces were introduced for society to leverage from digital innovation as social equalizers or enablers that create new opportunities to improve the quality of life ultimately.

Keeping in mind the noted conclusions and recommendations it is anticipated

that Socially Responsible Digital Leadership could develop further into an academic domain. The identified characteristics that are unique to digital disruption, the digital industry and digital leadership could potentially stimulate dialogue on the new paradigm of Digital Social Dynamic Equilibrium. The constant change introduced by digital disruption will require improved collaboration between the academic and professional communities to expedite the implementation of research results into practice. It is believed that the result and the findings of the present research will be useful to current and future business leaders to understand better the mechanisms that explain the social influences of digital transformation on individuals in organizations and society.

The introduction of Digital Social Dynamic Equilibrium illustrates the importance of reciprocity between digital leaders and society to achieve mutually beneficial solutions. Furthermore, may we reflect on the positive and negative influences of digital innovation while continually being reminded of the words by F. Scott Fitzgerald, “the test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time, and still retain the ability to function” (Fitzgerald, 1945, p.1). In conclusion, as humanity now hold the two opposing ideas of digital and social in mind, may we collectively retain the ability to function as humanity in the future responsibly.

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APPENDICES

APPENDIX A: Introduction Letter

UGSM-Monarch Business School
Faculty of Management
Graduate & Postdoctoral Office
Flurstrasse 1, PO Box 30,
CH-6332, Hagendorn-Zug
Switzerland
Tel: 0041 41 780 08 82
Fax: 0041 41 560 82 28

24 May 2018

Mr./Ms. xxxxxxx
Company XYZ

Dear Mr./Ms. xxxxxxx,

Subject: Interview for Ph.D. Research
"Social Responsible Digital Leadership: An Investigation into South African Organizations"

I have retrieved your contact information from LinkedIn. I am pursuing a Ph.D. in Digital Leadership. The Topic of the research is "Social Responsible Digital Leadership: An Investigation into South African Organizations".

I have selected you to discuss your area of expertise relating to digital innovation/transformation and/or leadership within your position relating to the research topic. The research would be an anonymous volunteer interview lasting approximatively 30 minutes (via telephone, Skype or face to face) to answer approximatively 20 questions about the subject.

The interview questionnaire is attached hereto for your perusal.

Kindly confirm your availability to share your valuable knowledge and experience.

Thank you in advance for your availability.

Best regards,

Dr. Francois Volschenk
Associate Dean of the Faculty
Monarch Business School Switzerland
http://umonarch.ch/faculty-member/dr-volschenk/
Email: dr.volschenk@monarch-university.ch
Mobile: +27824445111

- Sola Virtus Nobilitat -

APPENDIX B: Consent Letter

CONSENT TO PARTICIPATE IN RESEARCH STUDY

TITLE OF RESEARCH:" Socially Responsible Digital Leadership: An Investigation In South African Organizations."

INVESTIGATOR: Dr. Francois Volschenk, DBA, Monarch Business School Switzerland.

PURPOSE OF STUDY: Determine by using both qualitative and quantitative research methods the characteristics of a new "Socially Responsible Digital Leadership" conceptual framework that assists in explaining the relationships between digital innovation, social justice and leadership to improve the positive influences or mitigate the negative influences of digital disruptions on individuals in organizations and society.

PROCEDURES: 30 to 40 minutes recorded telephonic, face-to-face or Skype interview, and where needed a follow-up interview by telephone or face-to-face for clarification.

RISKS AND BENEFITS: The questions pose no potential risk to the subjects. The experience could have educational value for organizations and the participants. Furthermore, it will encourage other scholars to expand the knowledge of the currently underdeveloped research field.

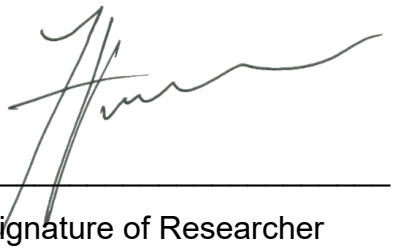
CONFIDENTIALITY: All test data will be computer coded and used for analysis only. Original information will be destroyed. All information collected will always remain anonymous and confidential. Furthermore, the information will solely remain the property of the Monarch Business School.

COSTS/COMPENSATION: There will be no cost to you beyond the time and effort required to complete the interview described above. Additionally, no compensation is promised now or in the future.

RIGHT TO REFUSE OR WITHDRAW: At any point in the interview, participants may refuse to continue. Participants may quit or change the interview at any time, even after the interview started.

QUESTIONS: You are welcome to contact me at any point in time with any questions about the research. The researcher can be reached at +27824445111 or by email at dr.volschenk@monarch-university.ch.

CONSENT: The signature below or written consent via email will indicate that you agree to volunteer as a research subject and that you have read and understood the information provided above.

_____	_____
Date	Signature of Participant
20-May-2018	
_____	_____
Date	Signature of Researcher

APPENDIX C: Introduction Email and Appointment Setup

From:

To:

Subject: Assistance with Ph.D. Research - Interview

Dear XXXX

I have received your contact information from xx xxx concerning my research dissertation. I am pursuing my Ph.D. in Digital Leadership. The Topic of the research is ‘Socially Responsible Digital Leadership: An Investigation into South African Organizations’’.

I have selected you to discuss your area of expertise relating to digital leadership and/or your formal leadership position within the research subject. The research would be an anonymous volunteer interview lasting approximatively 30 - 40 minutes of time (via telephone or face to face) to answer approximatively 18 questions about the subject.

Kindly confirm your availability to share your knowledge and experience. Thank you very much in advance for your availability.

Best regards,

Dr. Francois Volschenk

APPENDIX D: Semi-structures Interview Questions

Part A: Participant Profile

1. Name: _____
2. Gender: _____
3. Title: _____
4. Job Description: _____
5. Position: _____(Executive/Management/Employee)
6. Age: _____ (Age range)
7. Years of experience in management/leadership: _____
8. Years of experience in any digital/digital innovation: _____

Part B: Questions related to Digital Innovation

1. In your opinion, what is the potential impact of digital innovation on people in organizations?
2. In your opinion, what is the potential impact of digital innovation on people in society?
3. How would you describe digital innovation in South African organizations?
4. Does digital innovation pose a threat to people, or can it provide new opportunities?

Part C: Questions related to Social Responsibility in Organization and Society

5. In the past 5 to 10 years has digital innovation changed people in organizations? If yes, how?
6. In the past 5 to 10 years has digital innovation changed people in society? How?
7. What can be done to mitigate negative social influence on people through digital disruption?
8. Who are the main stakeholders that can influence the social impact of digital innovation?

Part D: Questions related to Leadership

9. How would you describe thought leadership/good leadership in digital innovation?
10. What should be expected from a leader with regards to Socially Responsible Digital Leadership?

11. According to recent statistical research, digital disruption could decrease jobs by approximately 50% globally. How can digital leaders act responsibly to minimize the negative influence on people in organizations and society? Assume: Digital will happen

Part E: Rate (from 0-7 from less to better) on the influence of the below. Comment further based on your Knowledge and Experience

Rating

- **Digital Leadership through Digital Innovation** ☐

  How are leaders utilizing Digital Innovation to improve people, process and technology?

- **Social Leadership** ☐

  Are leaders acting to create networks of engagement, performance and growth towards positive and actionable solutions to societal issues? If yes, how?

- **Social Innovation** ☐

  How can leaders leverage from social innovation to create/improve business opportunities?

- **Social Capital** ☐

  The importance of social capital/social networks as a "feature of social life through networks, norms and trust that enable participants to act together more effectively to pursue shared objectives." Important: the influence of social capital?

- **Digital Social Dynamic Equilibrium** ☐

  How can leaders improve performance through efforts to expedite the reaching of "Digital Social Dynamic Equilibrium (DSDE)? What forces are involved from leadership and from the social side?

  DSDE=balance between forces of digital and society

- **The Significance of Socially Responsible Digital Leadership Framework** ☐

  What is the significance of a Socially Responsible Digital Leadership Framework/Model to reach Digital Social Dynamic Equilibrium? Why should leaders use the SRDL framework?

Part F: Why do you think we have digital/why is digital in the world?

Signature of participant: Date:

_____ _____/_____/ 2018

APPENDIX E: 10 World-changing Social Innovations

According to Mulgan et al. (2008), the world-changing social innovations are:

1. The Open University – and the many models of distance learning that have opened education across the world and are continuing to do so.
2. Fair trade – pioneered in the UK and USA in the 1940s-80s and now growing globally.
3. Greenpeace – and the many movements of ecological direct action which drew on much older Quaker ideas and which have transformed how citizens can engage directly in social change.
4. Grameen – alongside BRAC and others whose new models of village and community-based microcredit has been emulated worldwide.
5. Amnesty International – and the growth of human rights.
6. Oxfam: the spread of humanitarian relief.
7. The Women's Institute (founded in Canada in the 1890s)– and the innumerable women's organizations and innovations which have made feminism mainstream.
8. Linux software – and other open source methods such as Wikipedia and Ohmynews that are transforming many fields.
9. NHS Direct and the many organizations, opened up access to health and knowledge about health to ordinary people.
10. Participatory budgeting models – of the kind pioneered in Porto Alegre and now being emulated, alongside a broad range of democratic innovations, all over the world.

APPENDIX F: Social Media as a Source of News

Table 2.5.2.2B
Social Media as a Source of News

		Age				Education			Gender			Income		
Country	Total	18-29	30-49	50+	DIFF*	Less	More	DIFF	Men	Wom	DIFF	Lower	Highe	DIFF
Average	**33,1**	**53,9**	**37,2**	**14,4**	**39,4**									
Argentina	51	76	60	23	53	38	68	30	51	53	-2	44	66	22
Australia	41	62	53	23	39	37	50	13	34	48	-14	34	50	16
Brazil	41	66	48	16	50	21	64	43	41	41	0	31	54	23
Canada	42	59	54	25	34	35	48	13	39	45	-6	40	48	8
Chile	44	73	50	20	53	16	56	40	42	46	-4	36	56	20
Colombia	35	51	37	14	37	13	49	36	36	33	3	22	42	20
France	36	71	46	13	58	33	40	7	35	35	0	32	38	6
Germany	21	45	29	9	36	22	19	-3	21	22	-1	22	21	-1
Ghana	25	39	20	4	35	14	56	42	33	17	16	13	26	13
Greece	26	60	36	6	54	19	46	27	28	25	3	18	30	12
Hungary	25	41	33	12	29	22	35	13	29	22	7	19	26	7
India	15	27	12	3	24	5	36	31	22	8	14	4	19	15
Indonesia	19	42	13	0	42	8	44	36	21	17	4	12	26	14
Israel	38	47	46	22	25	33	42	9	38	38	0	20	45	25
Italy	34	66	49	13	53	32	46	14	34	33	1	24	42	18
Japan	20	49	27	9	40	18	24	6	25	15	10	15	26	11
Jordan	36	36	38	29	7	30	43	13	33	38	-5	32	46	14
Kenya	22	34	17	2	32	9	53	44	28	16	12	17	32	15
Lebanon	52	69	59	26	43	34	65	31	49	54	-5	52	54	2
Mexico	37	58	37	9	49	24	56	32	40	34	6	29	52	23
Netherlands	35	62	48	17	45	34	38	4	35	35	0	34	36	2
Nigeria	21	26	22	10	16	4	31	27	27	16	11	17	31	14
Peru	33	49	32	12	37	10	43	33	36	29	7	20	47	27
Philippines	27	49	22	4	45	7	39	32	26	27	-1	18	34	16
Poland	30	72	35	7	65	27	39	12	27	32	-5	21	35	14
Russia	36	69	38	19	50	27	42	15	34	38	-4	30	42	12
Senegal	19	27	17	6	21	13	48	35	23	15	8	13	28	15
South Africa	31	44	30	11	33	19	47	28	31	29	2	21	41	20
South Korea	57	73	64	45	28	47	66	19	58	57	1	46	65	19
Spain	38	69	44	20	49	34	47	13	32	44	-12	36	42	6
Sweden	40	66	48	27	39	39	42	3	36	44	-8	30	44	14
Tanzania	10	14	8	5	9	4	37	33	14	6	8	5	14	9
Tunisia	20	38	18	6	32	19	45	26	29	13	16	15	32	17
Turkey	45	65	50	20	45	27	68	41	48	42	6	42	52	10
UK	36	72	38	21	51	35	41	6	35	37	-2	35	42	7
U.S.	39	54	48	26	28	35	45	10	36	42	-6	36	44	8
Venezuela	34	47	42	12	35	20	48	28	35	35	0	34	40	6
Vietnam	48	81	44	3	78	29	77	48	45	50	-5	34	66	32

Retrieved from : http://www.pewglobal.org/interactives/media-habits-table/

Source: Francois Volschenk (2018)

APPENDIX G: The Potential Impact on People in Organizations

Appendix G1: Coded Segments from the Interviews with Participants

Table 4.5C Coded segments of the Potential Impact on People in Organizations	
Document Name	Coded segments from interviews (Part-B1)
Interview 101	I think that the most important impact you can have on the positive side is creating a culture of working smarter, not harder, using specific digital innovation and capabilities to improve the effectiveness and efficiency of people doing their jobs, and delivering on deadlines. I do however believe there is also a negative consequence to it, and the negative around it is that digital innovation could potentially have an impact whereby people do not speak to each other in organizations or pick up the phone anymore to speak to each other. For example, email these days people rely more on emails as a communication method rather than a telephone and in the past, emails were merely created just as a follow-up reminder making sure that you follow up with a formal response to a conversation that you had. Potentially hinder the interaction of people with each other.
Interview 102	Coming from an era before the internet, before cell phones, the positive impact is obvious. Not only could people in organizations increase efficiency, increase productivity and improve improves communication ability, they could also integrate remote parts of the organization seamlessly. For instance, warehousing in Durban, Nelspruit and Johannesburg could now be linked to a single ERP system, managing finance, logistics and HR. Looking into the future, the potential impact is where logical robots and AI will do menial administrative work at much higher efficiencies, whilst supporting decision making through analysing patterns in big data that the human mind cannot grasp.
Interview 103	The ones that embrace it will think on a higher level. Ones that do not embrace it will be eliminated in a lot of organizations or they will do just basic tasks which they are doing currently but a lot of those will be taken away, so they will probably lose their jobs. In my opinion what will happen is digital innovation depends on, there will be two sets of people, one set that will embrace it, other set that will not embrace it.
Interview 104	Positive impact on people in the cognitive/innovative sectors. Enhanced work experience through mobility and flexibility. Faster communication. Digital innovations to satisfy needs. In labour intensive industries people can be impacted negatively as digital innovation often focus on labour intensive work. In turn, improvement in labour intensive industries produce cheaper products for people to buy. Perception of people will influence the impact of digital innovations in an organization. If the individual is reluctant to change they are less likely to accept new innovations. Therefore, it is important to have a culture that cultivates a growth mindset where people can learn and are open to change. A culture where the dominant logic can be challenged is imperative for acceptance of new innovations. Especially disruptive technologies. It is a highly dependent on industries and mindset, so what I have learned over the years is that in a labour-intensive environment, digital innovation has a higher impact when it comes to negative impact. Then in a cognitive environment where people are encouraged to innovate.
Interview 105	I see a massive potential for it because the go-to-market is much faster. Everyone is using their mobile phones, so you can reach a much bigger audience much faster by using a digital platform. The traditional technical leaders, your CIO's and that kind of

Table 4.5C Coded segments of the Potential Impact on People in Organizations	
	person, they are not really so much focused on the human element of technology in the environment.
Interview 106	People in organizations that embraces the path to digital transformation are the individuals who are helping their organizations to grow to the next level. Because at the end of the day it is all about a mindset change.
Interview 107	I think from a consuming experience that is going to be, people are going to experience more consumer-like experience in the workplace. They who hold manual jobs – there is going to be a disappearance of a lot of work in in the background i.e. where clerks work. They are going to experience applications on demand on their phones. They are going to have access to information to do business on their phones, real-time, 24/7. People will have to become more innovative and will have to use IT as an enabler. These days Excel spreadsheets and paperwork will probably disappear.
Interview 108	The current impact in organizations is the insecurity in the adoption of digital innovation. People feel that by adopting to digital innovation will put their current work at risk. Digital innovation is used for business decisions and social activities to enable revenue growth.
Interview 109	There is nothing that we do that does not involve digital communication in some form or another. To make it easier for your employees to talk to one another, to communicate, to ask for things, to get feedback, everyone is using mobile, everyone is using digital – it is the way we have got to go. My 10-year old is quite comfortable to browse the internet, look for stuff that he wants – he does not need help with that anymore.
Interview 110	I think people can plan better around themselves. The positive impact is that people can progress a lot quicker, leverage less off their experience and focus more on innovation to be more disruptive. The more we start adopting digital devices, and embrace it, the better for all of us.
Interview 111	From a digital perspective today's everyone can pretty much to anything because they have access to a bunch of knowledge. For me, digital innovation in an enterprise means that anyone, and anything you think can be done on demand in order to meet specific objectives or a desired outcome. To do their own jobs not only a lot quicker but also to diversify to become a digital company delivering whatever service they need to.
Interview 112	Digital defines an organization. I think for me digital is everything in an organization, I think 90% of what you do is digital nowadays. People are more controlled and monitored. It makes everything they do easier. Work smarter, more efficiently
Interview 113	Work smarter, more efficiently. More productively.
Interview 114	In South Africa, the problem is people are reluctant to change, so we find that the process is difficult to actually kick start and getting everybody onboard. They do not want to embrace change. Especially with your senior people. There is a big resistance to change in fear of losing their jobs. The elderly is obviously afraid of losing jobs, so it is negative for them. The younger guys are more willing, because they are more exposed to the new technology at an early age.
Interview 115	External and internal impact. Jobs will change with due capabilities. As workspace changes the key question becomes what is with your workspace. I think we are not talking about jobs anymore. We are talking about skills or functions. What capabilities can we bring to the table. That capabilities defines you. How and where can we deploy that capability. What is going to happen what I see is that a task that

Table 4.5C Coded segments of the Potential Impact on People in Organizations	
	can be easily automated will require less manager intervention so people who will be working will be more effective. For a start-up point of view, there are some services today, because of the new technology today (cloud, AI) where the cost is at a minimum. Short-term and long-term impact. On the short term it is about productivity. With new tools, the new capability is available and substantially increase the productivity in the workspace.
Interview 116	This is a bit of a loaded one, because if I remove more blue-collar type of activities at the end create a workspace where among creating more skills we demand, which then forces people to then be more skilled in general. Improved efficiency with the result of profit growth. Removal of simple tasks and human error can be reduced.
Interview 117	In the past all things digital rested on the shoulder of the CIO or the techies in the back rooms somewhere – its shifting more towards the traditional business leaders going to have digital leadership skills but I would not say either of those parties are doing to change the company culture. Resistance always just primarily comes from change. If you introduce a new technology into an environment, whether it is good for you or not, because it is different you are going to get the initial resistance until you get the people to understand it. Fear of the unknown more than anything else. I think a lack of education, ignorance and understanding has a big factor. The fear that technology is a threat to society in terms of jobs, is also a bit of a negative impact. There is also negative side of it. When technology is not well applied in a work environment it becomes a barrier and a frustration sometimes. Sometimes people are expected to use technology and they are not equipped to do it, or they do not want to do it, then it becomes a bit of a barrier. You would have to consider the kind of work that people were expected to do 20 or 30 years ago, with less technology they have a much better work experience today, they are much better equipped. I think the effect that technology has had in the workplace has been to create a better work environment. Digital leaders will be become the new business leaders. You cannot run a business where you don't understand the issue.
Interview 118	A lot of the leaders that are in the workplace today, grew up in this corporate command-and-control environment. In most of the emerging digital organizations, actually they have competitive advantages, they do not have that hierarchy and command-and-control as a management system. Therefore, most organizations are also battling to make those transitions because the people that must drive transition grew up in a different type organization and limit the change. It is no doubt that psychologically that the shift to digital must happen, but it is been held back by leaders and their incentives. Agility and autonomy and actually smaller autonomous teams are the order of the day. It is going to fundamentally require different types of skills than those that are available today. Digital is going to shrink the workforce. Digital transformation is going to require society to re-adjust a lot faster than it is capable of doing. The current hierarchy, through different psychological approaches, on how people think about things influences digital acceptance in organizations. It is going to require different types of leaders than the ones that are in most workplaces.
Interview 119	The impact and changes are massive, because it is happening. It is the way you do things, that is the influence. It is going to change the way we do things. It can have a negative spin on it if it does not get implemented carefully. It is how you adopt is, how you align with it.
Interview 120	It depends on the age group. You will see different impacts on the age groups you are working with. We see a positive impact when looking at millennials. Older employees obviously have a less agile mindset. And I think there will be a challenge. The earlier generation excel through digital innovation in the workplace.

Table 4.5C Coded segments of the Potential Impact on People in Organizations	
Interview 121	People are worried about their jobs through automation. Some people are embracing the opportunities from digital innovation.
Interview 122	You can and will massively increase your domain by embracing the digital marketing and social media tools available today. We should make it available to the people at a click of a button. Everyone is connected and hungry for information.
Interview 123	Those that are willing to choose to be part of digital disruption as the adapters have got great opportunities to get ahead of the times. People have the opportunity to individually differentiate themselves either voluntarily or through the company strategy. I think it is a much more dynamic environment to be part of. Those that are willing to choose to be part of digital disruption as the adapters have got great opportunities to get ahead of the times. I believe the impact would be a different kind of person that will come to the forefront.
Interview 124	I believe that a lot of people see the value in digital innovation or see the possibilities in digital innovation, but the discomfort is in their own personal capabilities in them moving from point a to point b. Have people lost their jobs because of mechanization and automation and industrialization at all – I do not think so, I think it just created new opportunities because there are different jobs. Anything new and different, people see as a threat. The reason they see it as a threat is because people do not like change. Eventually they will change because the world has changed, but it is discomfort when something is new and uncomfortable and coming to terms with what is uncomfortable. People with any new way of thinking people must come to terms with this new way of thinking.
Interview 125	Businesses will have to adopt to the change to remain relevant. Mobile availability enables organizations to reach their customers.
Interview 126	The transition from current state to the new digital era will take long and will require a massive shift in thinking. Staff will feel threatened and concerned that they might be replaced during this shift. Digital innovation will make people's jobs in organizations easier and quicker to get things done.
Interview 127	It is how do we make people more effective. If you start within the organization, making the people more effective using digital means, then I think we are achieving the right objective. Effective implementation communication allows people to identify how technology improved them and improved processes and businesses and by that it shows that technology works.
Interview 128	Very significant, especially the younger people that could utilise it quite effectively and then for the older people there is some adopters coming through as well.
Interview 129	Their actions are now broadcast to a wide audience. People need to stay abreast of new digital innovation that deliver faster reaction and value to customers. We need to evaluate which digital platforms will give us delta value over delta cost and which ones are not. Increased productivity is expected. People are expecting it should be easier business with digital innovation these days. The pace and expectation to learn quickly is increasing exponentially.
Interview 130	If and when digital innovation is introduced in a manner that creates fear of job losses, it may negatively impact on productivity as people may find themselves disengaged or disempowered in their jobs. With digital innovation, new start-ups are disrupting the market and creating genuine threats to existing businesses that have not invested in the digital transformation or are not agile enough to navigate the volatile and complex digital landscape. Digital has radically changed the way conduct business, access and consume content and communicate, there are new opportunities to expand or create depth in jobs, by that if the mundane

Table 4.5C Coded segments of the Potential Impact on People in Organizations	
	administrative work can be digitised, this leaves people with more time for focus on qualitative and meaningful work
Interview 131	Potential job loss due to automation. Reskilling of individuals are required e.g. focus on jobs like data science.
Interview 132	Increased productivity and collaboration. You can't run a business where you don't understand the issue. Leaders must understand the technical side of digital transformation too.
Interview 133	There is a challenge for people, it would definitely change the requirement in terms of their skill set, it could have an impact on that. They would have to adapt. It would open opportunities for people. For some it could have a negative impact as it could lead to redundancy of jobs.
Interview 134	Digital has a significant impact and create the ability to transform industries. Digitalization of many processes make people re-think the way of doing business in the old ways and they come up with completely new industries. Digital changes the way we do things, simplifies and automates things. Lower skills will disappear. It is a massive threat for some people in the world. There is also job creation in other areas where highly skilled jobs will grow.
Interview 135	The potential impact can be negative and positive, depending on where the innovation is applied.
Interview 136	When people have the feeling that it has a positive impact on their work, the positive feelings will flow over into their personal lives as well, making them feel that they have achieved more than what they could have in the past by way of digital innovation. There could also be a potential negative impact on people in organizations whom find it difficult to adapt to changes, especially if they have done their work in the same manner for years, they know one or two ways only – the thought of having to deal with something new could be intimidating and start to have a negative effect on their work, before the "transition" has even begun. This could be minimised by timeous, early introduction of the planned technologies or digital innovation to properly prepare people for the road ahead – allow enough time for adoption, questions and "trial implementations". "
Interview 137	It has streamlined a lot of things. It has made certain things a lot easier and certain things harder. There could also be a potential negative impact on people in organizations whom find it difficult to adapt to changes, especially if they have done their work in the same manner for years, they know one or two ways only – the thought of having to deal with something new could be intimidating and start to have a negative effect on their work, before the "transition" has even begun.
Interview 138	There will inevitably be some winners and losers, but the onus will be on the organizations to upskill their employees. Digital innovation could render some jobs redundant. Digitalisation will create efficiencies which will make organizations more productive. I do believe that new jobs will also be created in the process.
Interview 139	Makes people in organizations more efficient. Tasks can be completed quicker thereby creating new opportunities for people. Certain generations adapt easier to the changes brought by digital innovation. Cost savings for companies with efficiencies.
Interview 140	Skill sets have changed, and people reshaped to transform to the digital changes.
Source: Francois Volschenk (2018)	

Appendix G2: Categorization of the Coded Segments

Figure 4.5D
Categorization of Coded Segments

Part B-1: Potential impact on people in organizations

- Constant change
- Consumer-thinking in organizations
- Created unique opportunities for all
- Digital defines an organization
- Generations influence the impact
- Leadership styles will change with digital
- Mobile communication has increased the market size
- Negative
    - Non-digitally oriented people will struggle in future
    - People are now always on
    - People feel threatened by digital
    - Poor communication
    - Potentially hinder the interaction of people with each other
    - Reduced productivity
    - The workforce will decrease
        - Digital innovation could render some jobs redundant.
- People are more controlled and monitored.
- People reluctant to change
- Perception of people will influence the impact
- Positive Impact
    - Digital innovations to satisfy needs
    - Enhanced work experience
    - Faster communication
    - Improve communication
    - Increase efficiency/ Work smarter
    - Increase productivity
    - Increased cultural diversity
    - Integrate remote parts of the organization seamlessly
    - Support decision making
    - The ones that embrace it will think on a higher level
- The attitude of people will influence what will happen
- The company culture should cultivate a growth mind
- The required skills will change with digital
- Use digital innovation to improve efficiency

Source: Francois Volschenk (2018)

Appendix G3: Code Matrix Browser

Figure 4.5E
Code Matrix Browser of the Potential Impact on People in Organizations

Source: Francois Volschenk (2018)

APPENDIX H: The Potential Impact on People in Society

Appendix H1: Coded Segments from the Interviews with Participants

Table 4.6C
Coded Segments of the Potential Impact on People in Society

Document Name	Coded segments from interviews (Part B-2)
Interview 101	Digital can either make your life great, or it can be disastrous to your existence, or even to the planet if you think about it. The negative I specifically believe is just that within society the digital is in a way making people not talk to each other so It's acting as an inhibitor for social interaction rather than what It's positive just due to the fact that people uses social media sites interacting rather than meeting each other socially and having a one-on-one conversation. The downside of it is that people are more in their mobile phones or tablets than what they are actually not talking to each other.
Interview 102	Information could be shared at the speed of light. Open access to education and the ability to acquire skills and learning without having to attend institutions. Safety and security can be automated in early warning fire alert systems, medical alert systems and personal tracking and safety of children. All of these technologies have become more and more affordable which means that it will impact more communities, irrespective of income levels.
Interview 103	The next phase will be to limit that to what's socially acceptable. It's is the next step around – that is where you will see Facebook, Twitter users busy dropping the amount of users because there is too much happening. It will do its ups and downs as we go along. In society, people are already embracing a lot of digital around us and that is the one thing that will not stop. It will get more and more. People want to try and get rid of some of the digital aspects in their lives, so they can have a normal conversation again. People will embrace it from a society perspective because it will make their lives more convenient. Convenience could probably be the most important factor, communication has been the previous bigger factor and I think what is happening is, is that we have got an environment where there is too much information around.
Interview 104	Distrustfulness due to cyber-attacks. In society as whole, many people in society are unaware of the actual impact, people just take it for granted. People are unable to build physical relationships, there is a theory that states that we are supposed to live in societies and communities of 100 people, that's the rule of thumb. The negative impact of digital innovation is creating a society where instant gratification is expected. Faster turn-around expected. Higher stress levels. More pressure at work. People create digital personas. Information overload. Never disconnect. Digital innovations also allow people in society greater opportunity as information is easily accessible. You can find any information on the internet, you can deploy any application and communicate with whomever you want. Digital innovation has allowed small organizations to compete with multinational organizations allowing people in society greater opportunities to start businesses, do market research or simply do homework. Digital innovation has greatly improved the end-users experience by providing information and services at the tip of your fingertips where almost anything is just a click away. More access to information. Improved knowledge. Society as a whole becomes more productive.
Interview 105	Because everyone else out there, when they see new app that has been advertised, a lot of people then go and load/install the app to try and see what they can do with it, and they move on.

Table 4.6C Coded Segments of the Potential Impact on People in Society	
Interview 106	To me I see two kinds of impacts/ outcomes. The ones willing to change and the others pushing back because of" I am happy where I am" more afraid of change I think.
Interview 107	Your digital innovation is all contained in your phone. All your applications, all your social life, anything that you start to experience on a device that you have in your hand – camera, integrated with your Facebook. Virtual reality is the next phase that is coming. People are going to start to “live” in virtual reality. Your digital innovation is all contained in your phone. All your applications, all your social life, anything that you start to experience on a device that you have in your hand – camera, integrated with your Facebook. I think people will become less social. Again, people are becoming less socialised. Their socialisation is happening via their phones and It's probably going to be more with virtual reality. Spending more time looking at their device and communicating via their device than actually communicating face to face.
Interview 108	Digital innovation is delivering social interaction, news and collaboration much faster to individuals and business giving society the ability to be much more informed.
Interview 109	I still prefer to pick up the phone and talk to you rather to send an email or WhatsApp. But I am one of the few that want to do that. I think people are not going to be speaking to one another so much anymore. People want to talk via the digital framework, via the web. One-to-one communication is not a favourite way of communicating. It is just the way that the world is going. The world used to be such a huge place, but digital almost eliminates boundaries.
Interview 110	People in our society are becoming less personally communicative, and more digitally. It makes the relationships of having inter-personal relationships like face-to-face even less. We are hooking up with people that we don’t generally interface with on a day to day basis anymore, we interface with them via the digital media. It allows us to communicate with a broader spectrum.
Interview 111	From a socio-economic perspective digital can assist people to run their own business and help the economy. It gives people the ability enriches themselves and enable themselves to do more. Digital is an enabler.
Interview 112	I think people, on average spend two hours per day on social media, on mail etc., so everybody is using digital all the time. I think in society you can’t work without digital in any sense that I know. Negative impact as well, because you are controlled now. You can't leave your phone; your phone is always with you.
Interview 113	For me it’s the impact at the moment, it's more on the social media side. If I look at the generation gap, people today, the older generation like myself are not good on social media. Whether I view it or not, if I am talking to somebody whom have seen something, who has a conversation, for me that is the impact. I think cognitively in the back of people’s mind it shapes decisions. The next generation is using the incorrect information from digital instead of using the right information. We have seen all the mundane stuff in social media to clutter data and information instead of using digital for the right reasons to add information and to grow humanity, now we are cluttering it with a lot of useless information. If I look at a younger generation, they are bombarded with even as much, if not more, and they cannot get through it all.
Interview 114	I would say if you don’t change your way of working in any organization, you don’t change to a digital way of working you will be left behind.
Interview 115	Expectations of instant gratification and results. The increase in societal skills has an impact as well, where the education level over time should be increased with digital proliferation in society in general. For the consumer, improves the service levels and consumption immediately.

Table 4.6C Coded Segments of the Potential Impact on People in Society	
Interview 116	If I just must look around technology has pretty much brought a positive influence on society. It has empowered people with capabilities they haven't had. Even though it connects people it does break down social cohesion, a lot of people don't talk anymore. They are better connected with each other but also to my own point, there is also a negative influence in that people are losing touch with each other. They communicate digitally but they don't communicate physically and emotionally anymore. They are better connected with each other.
Interview 117	Society is always good in re-adjusting themselves. Digital transformation is going to require society to re-adjust a lot faster than it is capable of doing, which is actually going to cause a big misalignment in the harmony of how we live together in the world. In their capacity as consumers of products and services it is going to happen faster.
Interview 118	People start behaving differently. We see it already. Overall, I think it is positive, but I wouldn't like to say "managed" properly because then it is putting a responsibility in a certain place, but it is the realization of the significant influence that it will have on society. People would for instance go out for dinner and not speak a word to each other, and just be busy on their mobile phones.
Interview 119	If we look at data, the ability to interact with data in real-time matter. Utilization of data for insights in real-time removes the need for human element. The impact to people in society would be that we see less of a need for human interaction as technology progresses. The challenge with things like the arts for instance, which is obviously an emotional vertical, requiring a lot of human interaction and I think that should be a concern for us. Society is turning into an instant gratification-oriented society.
Interview 120	For me it's the impact at the moment, it's more on the social media side. If I look at the generation gap, people today, the older generation like myself are not good on social media. Whether I view it or not, if I am talking to somebody whom have seen something, who has a conversation, for me that is the impact. I think cognitively in the back of people's mind it shapes decisions. The next generation is using the wrong information from digital instead of using the right information. We have seen all the mundane stuff in social media to clutter data and information instead of using digital for the right reasons to add information and to grow humanity, now we are cluttering it with a lot of useless information. If I look at a younger generation, they are bombarded with even as much, if not more, and they cannot get through it all.
Interview 121	People are consuming lots of digital services without understanding the real influence it has in their lives. People are spending too much time on their phones. The impact is good as it brings everything together.
Interview 122	It is a pivotal step toward the global residency statement we find ourselves in. Non-governed information sharing will put power back in the hands of the people. If we can keep the system from censoring free information, then our society can move forward on equal grounds with equal access to all information.
Interview 123	It will create different ways of conceptualizing things with different mindsets. I think it gives people much more opportunities. I think people that are growing up in this age really have got the advantage, or people that adapt into it have the advantage from going through the flow of the trends over time.
Interview 124	First thing is security. You need to be able to secure yourself in a reasonable manner and you need to think very strongly about security when you think about digital. Positives are that you can get closer to people with digital innovation now more than what you ever could before.
Interview 125	It has changed the way we live, work and play. The mobile phone availability has had a profound impact that it enables people to do so much more. Digital leverages from

Table 4.6C Coded Segments of the Potential Impact on People in Society	
	mobile to deliver services. People tend to relate to strangers in the digital space but struggle to have personal relationships.
Interview 126	Digital innovation affects the way society interacts. Digital causes more pressure to fit in. With digital innovation, suddenly every individual has a voice and a means of getting their opinion across.
Interview 127	It is quite scary, depending which way you look at it. The exposure that smartphones and digital has created on society means that people as young as they need to be, are exposed everything at a far younger age. People have stopped talking to each other, people can't communicate anymore, they have more issues. I think it has put huge pressure on society and people, and generally they are only exposed to good things, the most beautiful people and other things which is not always a good thing. I don't believe it's the right or a good thing from that aspect in terms of exposure. On the other hand, the digital explosion has resulted in information being freely transferred to generations across the globe which is positive.
Interview 128	I think there is significant risk coming through that people don't always understand what digital innovation can cause to them especially from a social privacy perspective – people don't always understand the implications. You can just look at people around and their utilization of technology of mobile phones, and their evasiveness of it around people.
Interview 129	The pace and expectation to learn quickly is increasing exponentially. People are comparing themselves more to others. If you look at people, the things that make people happy is connections, economy and competence. If you look at gaming and social media, you get connection out of it, autonomy, you can get competent at these things, but there is no tangible output for society. It's creating a false sense of belonging. There is a lot of that happening now digitally. People are organizing them in different groups. Negatively - there is less privacy and security. There is unfortunately decreased productivity and more wasted time with the whole impact of gaming and social media on society. Their actions are now broadcast to a wide audience.
Interview 130	Instant gratification is expected by the younger generation. It has given people greater liberty in terms of how the use their time. Digital has certainly made the world a much smaller and connected place, where like-minded people can find and support each other. Digital innovation creates opportunities for improved quality in education. Digital innovation creates opportunities for distance digital learning, which means that poor students need not stress about how they can afford residence accommodation in the cities, as well as related costs of attending university or tertiary education in the cities.
Interview 131	Equaliser in opportunities for everyone. Instantaneous gratification is expected by individuals. Frictionless interaction in fulfilling needs without other human interaction. Key enabler to willing individuals.
Interview 132	Access to information will result in better education and health.
Interview 133	A lot of the technologies can lead to higher isolation of people. People are disconnected from each other. They always communicate digitally even if they are with people. This to me is a negative, and potentially dangerous impact. I think it does bring immense beneficial services to people in society i.e. healthcare.
Interview 134	The real digital disruption is yet to come. It could lead to massive job losses and it will change, or certain jobs will disappear.

Table 4.6C Coded Segments of the Potential Impact on People in Society	
Interview 135	When people have the feeling that it has a positive impact on their work, the positive feelings will flow over into their personal lives as well, making them feel that they have achieved more than what they could have in the past by way of digital innovation – there is a sense that increased value is added. If people see there is a personal benefit or gain to them to use the technology/digital innovation, they will use it. Some people might become more isolated and so busy with interaction on devices that they lose touch of reality. You start to live past each other, face to face conversations decrease, you might eventually become emotionally detached. Unfortunately, self-control when using digital technology is a big challenge for all ages. Communication methods improved and is easy to use. Digital innovation should mostly have a positive impact on society, provided that the intentional use of such innovation is used for the fair and honest benefit of a person or group.
Interview 136	A lot of the mundane type roles and things that people used to do in the past has been taken over by systems of applications. The negative parts of it are cybercrime and invasion of privacy. Children that are on their phones the whole time – there are long term side effects at the end. The way people use to interact with each other – now the younger people prefer to sit and WhatsApp each other instead of picking up the phone and talking to each other. Some of the things that have come out of it made people more aware of what is going on around them. It's been a good thing and improved a lot of things in the working environment. There is information available 24/7, you have the ability to chat to family members or friends or connect to people across the globe.
Interview 137	I believe the digital trend will continue. When one looks at the historical impact of digital innovation, one of the most powerful effects of the utilization of technology has been the intrusion of privacy. Digital innovations such as social media and open platforms come to mind. People are more likely to be distracted by mobile devices during work hours than ever before. It has of course also had its benefits, especially on how convenient it has made everyday tasks like Takealot or Amazon for shopping, Uber for transport and Netflix for Home entertainment.
Interview 138	More new services are constantly available through digital innovation. Information is available more readily. It makes life easier.
Interview 139	People expose themselves on digital platforms with personal information while information is not protected. There are a lot of intrusion with the proliferation of the internet with information and data like search engines. People have changed across the full spectrum of generations with interactions on digital devices. Increased access to information including augmented reality to utilize available information for new innovations.
Interview 140	The influence of digital is dependent on your core principles, what it can be used for. The impact depends on the purpose. That can either be positive or negative.
Source: Francois Volschenk (2018)	

Appendix H2: Categorization of the Coded Segments

Figure 4.6D
Categorization of Coded Segments

Part B-2: Potential impact on people in society
- Impact on people in society
  - Digital information shapes minds
  - Digital innovation will only increase in future
    - Lack of understanding of the impact
    - Proliferation of services
    - The virtual world will have an influence
  - Enabler or equaliser in opportunities for everyone.
  - Invasion of privacy
  - Mobile technology has enabled opportunities
  - People cannot function in society without digital
    - Messaging has even replaced phone calls
  - The impact of digital depends on the purpose
    - Positive or negative impact
- Positive Impact
  - Allow people in society greater opportunities
  - Broader communication circle
  - Digital innovation has improved individual experiences
    - Improved personal safety and security
    - Improved opportunities for education
    - Improved access to information
  - Improved convenience
  - Improved individual productivity
  - Key enabler to willing individuals.
  - More affordable technology for all
- Negative Impact
  - Digital can replace human capabilities
  - Inhibitor for social interaction
  - Instant gratification is expected
  - Negative individual experiences
    - Excessive control on people
    - Higher stress levels
    - Increased peer pressures
    - People create digital personas / Virtual reality
    - Reduced privacy
    - Reduced productivity or laziness
    - Reduced security
  - Overload of potentially futile information
  - People too much on mobile devices

Source: Francois Volschenk (2018)

Appendix H3: Code Matrix Browser

Figure 4.6E
Code Matrix Browser of the Potential Impact on People in Society

Source: Francois Volschenk (2018)

APPENDIX I: Digital Innovation in South African Organizations

Appendix I1: Coded Segments from the Interviews with Participants

Table 4.7C
Coded Segments of Digital Innovation in South African Organizations

Document Name	Coded segments from interviews (Part B-3)
Interview 101	South Africa is slow to adopt digital thinking in the sense of how it can improve business rather than how It's going to disrupt business. I think it is very painful in acceptance. I think adoption of digital innovation within the context of South African organizations are very slow.
Interview 102	Digital innovation in South African organizations also spark off industrial action, as unions and collective employee organizations see their future threatened by digital innovation. This means that we lag behind in many areas as we cling to the past, have a mentality of “if it isn’t broken why fix it” and are quite resistant to change. South Africa organizations do not embrace innovation as rapidly and as proactively as many of the economic giants of the world.
Interview 103	What I have seen in digital innovation in South African is that organizations are very limited. The guys are starting to embrace it and are probably five years behind some of the corporates overseas. I think it's been a slow acceptance. In the banking industry we have got some that have embraced it, started from scratch and they have taken some of the lunges of the ones that’s been there for ever and a year - so some will embrace it, some won’t. To get it right is over an extended period of time and you have to change the culture throughout, and again, a lot of those guys will make it, and a lot won’t make it. I think the biggest problem in especially the bigger organizations is that you can embrace it on a top level if the middle and lower management are not part of it, it is failing. Middle management and employees are trying to protect themselves.
Interview 104	Digital innovation is lacking in South Africa. This can be due to lack of education. Digital culture mindset is lacking.
Interview 105	Everyone is too scared of change and a lot of the decision-makers that sit and make the calls are still stuck in the old mindset of "this is the traditional way of doing things, this is how we want to do it". The adoption of digital innovation in South African organizations are very slow at this point in time.
Interview 106	Being a consultant for many companies for many years we in South Africa in many places/industries are still set in our old ways.
Interview 107	I think most South African organizations are far behind because they are using old systems. I know of a bank that is in development in one of the smaller towns in South Africa that is totally digital, and it is one of the Exco members of a prominent bank developing this. So, this is going to take your traditional businesses, big to small businesses – it will be a huge challenge for them.
Interview 108	Newly formed organizations utilize digital innovation much more due to the start-up costs of infrastructure and services compared to old and stable organizations. South Africa is 4 years behind digital innovation. The reason for this is the culture is very tangible and people would still like to see feel and touch what they own. However old organizations with old folk are realizing that they need to start adopting digital transformation as they are starting to see a decline in revenue as new players enter their market with cheaper technology.

Table 4.7C Coded Segments of Digital Innovation in South African Organizations	
Interview 109	I think a lot of the organizations are playing catch up. There are very few organizations that are driving the digital way of life.
Interview 110	I think we have only started to scratch the surface now in South Africa as far as organizations goes. As we are rolling it out we are becoming more mature about it and I think that in South African organizations, the adoption thereof has now really become frugal.
Interview 111	The demand for digital is there, but I think it is slow and there are challenges and skills shortages associated to getting companies to get more into digital innovative state. My opinion on it is that it is too slow in comparison to other countries that I have lived in e.g. the U.S. and U.K., digital information from descriptive perspective. I think one company that really does it well is a prominent bank.
Interview 112	I think are a bit behind on digital in South Africa. I personally think, because I work with Google in America, and I think they are far ahead that what we are doing currently in South Africa, so I think there is still a road to grow in South Africa, we are a bit behind the curve at the moment.
Interview 113	Corporate is slow on the uptake, they want to get there but don't know how to get there or their processes and red tape is in the way. Slow. Mediocre compared to the rest of the world. If I look at enterprise market, enterprise market is on the uptake. And the only reason for this is, is that they have the money to transform it. They are stuck in their old mindset. Management don't think about the power of digital and going the old circle of it. Just doing the basic things, as cheap as possible.
Interview 114	I think the companies tend to realize this they do not know where to start, they do not know how to get to a full digital enterprise, how to transform to that, so they sort of engage with unnecessary projects and initiatives that doesn't add any business value. It depends on what industry you are talking about. If you are talking about mineral mining or metals industry, it's very premature. Customers like automotive are very mature. Their standard products for those discrete customers in automotive industry, electronics is very mature, you talk about cell phone companies, companies making PCB boards, IT companies – these companies are very mature. I would say if you don't change your way of working in any organization, you don't change to a digital way of working you will be left behind. Companies have focused a lot on automation and control systems, however they lack the innovation to integrate your automation layers with the business and adding value to the business at the end of the day.
Interview 115	I'm actually very impressed with the level of digital innovation in South Africa. I think there is a real openness and a desire to try new things. When you see different areas when you talk about cyber security, digital identity, services, there is a big scene of innovation that is forming.
Interview 116	In sectors where it is a luxury, or something you want to aspire to like the public sector, it is potentially low, the maturity is quite low. All industries have a probability of being digitally disrupted in terms of mundane task replacement, forms, administrative cards, production lines, mining, agriculture – a lot of that has been automated and becoming more automated. In sectors that demand or can afford digital innovation (insurance, banking sectors) I think the level of innovation is fairly high.
Interview 117	I think businesses in South Africa are not really in a space where they are using technology and innovation to do new things. They are using it to keep up with the rest of the world. Innovation doesn't really come from a place of defence. Innovation needs to come from a place of creating new things.
Interview 118	The medical industry is where it should be moving faster because there is no reason today why you should actually just get a diagnosis of what you are suffering from by just

Table 4.7C Coded Segments of Digital Innovation in South African Organizations	
	holding onto your phone with a plugged in device an then the phone actually goes through a whole lot of big data and then determine based on a database what you could be suffering from and actually then recommend that you should go to get at the pharmacy. It's close to non-existent. Different industries have approached it differently, in the financial services industry where I operate, we have been forced to actually digitalize lot faster. I will say in the financial services industry, financial services, telecommunications are probably leading the pack in terms of digital transformation and innovation to actually get there faster and probably moving a lot faster than all the other industries.
Interview 119	The full context of digital, digitalization and digital transformation is still not realized in South Africa.
Interview 120	I think digital innovation in South Africa is in its infancy. We still have a lot of work to do in this market. The two verticals that are really excelling or catching up would be the telco and financial sectors, but the rest of the vertical are still lacking.
Interview 121	Maturity is at an acceptable level and even the government is involved in digital innovation initiatives. Certain industries in South Africa are up to date, e.g. the banks and telecommunications companies. The potential impact is misunderstood, driven through uncertainties, but the adoption rate is increasing.
Interview 122	It is still in the very early adoption phase. We have some great developers locally applying AR/ML and automation at the front end of their focus and should be able to buffer some of the economic downturns if we can implement and adopt the movement.
Interview 123	Current trends basically relate to automating things but it's not transforming the actual business as such. People are trying to package various concepts into digital, varying from straight forward automating things to machine learning to AI, but I don't think there is really an overall correct view of what digital transformation means in society in South African businesses yet. I don't really think there is an understanding of the actual nitty gritty yet.
Interview 124	People within different organizations are on different types of their journeys. What I think on South African organizations, everybody is worried about the outward facing stuff, what I believe South African organizations have forgotten about, or spending less focus on is the internal side. They put big data platforms and create this whole "just for you" stuff so they can get to their consumers better. It's all a great idea, but they forget about their own people. Their own people are the last ones that they try to get onto this digital journey. They have systems in place, try to buy new stuff, all the customer facing stuff they are focusing on, but goes to their own people last. It is the people within your organization that know internally what processes are broken. It's the people within your organization that you need to be able to transform first before you can think of transforming your customers. It's the people within your organization that you need to be able to transform first before you can think of transforming your customers. The very large organizations know they need to transform digitally. They are using old systems, old practices, their systems are not holding the right amount of information, long time information and they couldn't market to their customers better. Anything new and different, people see as a threat.
Interview 125	South African organizations are early adopters in certain sectors like banking and telecommunications. Generally, the cultural change is limiting growth. People feel threatened within organizations. Digital challenges include certain legacy decisions where the people are reluctant to change to protect their own interest in South African

Table 4.7C Coded Segments of Digital Innovation in South African Organizations	
	organizations. Unfortunately, internal business units in large organizations oppose change to protect current income streams.
Interview 126	Customers are finding it challenging on how to articulate a digital innovation strategy. Enterprise customers are finally looking at digital innovation in order to improve service levels and offerings. Large enterprise customers are embracing it and have included digital innovation as part of their strategy moving forward.
Interview 127	I believe in South Africa, certainly in the telco and banking industry, I think we could almost be considered first world in a whole lot of the stuff. So that fact that we have that we have first world banking systems and have for many years, is that digital innovation, digital transformation or just clever IT people and clever South African people putting the stuff together?
Interview 128	I don't think is always as far ahead as our international peers. On the telco side I think we are doing quite well.
Interview 129	South African businesses are part of a global community and we are adapting quickly to global learnings of doing business.
Interview 130	The emergence of mobile banking and digital wallets has also made life that much easier. I'd say that there's been a wave of digital innovation with multiple start-up opportunities opening up for the youth and even previously disadvantaged. It's also meant that for most large organizations the competition to meet the demands of their customers have increased that much more, as customers have the power of choice and therefore to meet their demands, organizations need to become deliberately customer centric instead of product driven. The champions of industries that fail to transform risk extinction if they continue to meet the needs of a dwindling population group, it's proven to no longer be relevant in this era.
Interview 131	Compares well to Europe but lagging the US. In South Africa, more can be done in terms of innovation hubs and incubators.
Interview 132	Slow, current government is hampering quick adoption.
Interview 133	Many organizations do not have a grasp on this. They do not really fundamentally understand what digital innovation or transformation is and what that really means in their business. In certain instances, e.g. payment solutions in Africa I think they are ahead. They are struggling, and do not understand this.
Interview 134	The older companies are just doing the basics. Sometimes digitizing current processes only. We have seen a couple of banks that are different that has launched. Businesses realise it is like automation, and they need to re-think their business. Every organization attacks it in their own way.
Interview 135	Most South African organizations lack the necessary expertise in proper digital innovation, followed by the concern of transformation of the intended or planned digital innovations. Organizations have their existing "proven" business models and plans which they are keeping to and might not want to risk their business or revenues if major changes are to be made. Digital innovation possibilities in South Africa could be explored and identified if organizations involve expert digital innovators (in line with the product/service which the organization offers). Employees might decide to resign due to their poor knowledge of digital innovation in the workplace and the fear of the unknown, while there might also be many people in organizations that would want to grow with the company in the digital era. Organizations might not be aware of digital innovation possibilities for their products or services and/or the beneficial impact it could have on

Table 4.7C Coded Segments of Digital Innovation in South African Organizations	
	the organization. Employees might decide to resign due to their poor knowledge of digital innovation in the workplace and the fear of the unknown, while there might also be many people in organizations that would want to grow with the company in the digital era.
Interview 136	The level of maturity could be behind because of the underdeveloped infrastructure. If you look out there, if you compare it to what is going on in the States and in Europe, we are still a bit behind the other countries. Some companies are at the forefront like banks and telco's.
Interview 137	Digital transformation in South Africa is lagging behind the rest of the world. Processes should be put in place to expedite transformation in South Africa. Something that needs to be done in order to get up to speed with what is happening in the rest of the world, and to become more competitive, is for organizations in South Africa to digitally transform.
Interview 138	South Africa is generally behind, but some industries are on par with their international peers. Digital innovation can assist different industries to align with company strategies, for example technologies to deliver cleaner or greener energy. The intent of most organizations, although limited in implementation, is to use digital for business growth.
Interview 139	Generally lagging behind the world. With the latest waves like big data, cloud and platform South Africa are still lagging behind the big digital organizations in the world (like most other countries too). Banking, automobiles and the health industry are doing good. While some organizations are technologically advanced, the ecosystem of the organization have not transformed yet to digitalization. Digital champions should drive the digital transformation in parallel with business as usual activities. While some organizations are technologically advanced, the ecosystem of the organization have not transformed yet to digitalization. Organizational culture and traditional ways and approaches limit the potential growth in organizations.
Interview 140	People that feel threatened still believe digital will replace humans, including themselves. Digital transformation is not a magic fix for all organizations. There is no holistic understanding of digital transformation. Understanding of digital can inhibit the implementation of digital in organizations.
Source: Francois Volschenk (2018)	

Appendix I2: Categorization of the Coded Segments

Figure 4.7D
Categorization of Coded Segments

Part B-3: Digital Innovation in SA

- Digital maturity in South Africa
  - Conservative approach
    - Digital innovation inhibited by negative societal action
    - Digital is not a magic fix for all problems
    - Lack of digital skills
    - Stuck in old ways
    - Traditional corporate mindset
    - Under-developed infrastructure
  - Digital innovation is at acceptable level in South Africa
  - Digital innovation is slow in South Africa
    - Digital transformation is misunderstood
    - Lagging against largest organizations in the world
  - Digital transformation should be expedited
    - Invest in innovation hubs
  - Industries with advanced digital transformation
    - Customer-centricity is critical
    - Leading industries are banks, telcos and automotive
- Strategical
  - Digital champions should drive digital in organizations
  - Increase in acceptance with inclusion in company strategy
  - Innovation is about new things, not defence
  - The digital journey must start internal to organization

Tactical

- A lack of understanding inhibits digital growth
- Implementation is limiting growth
- Internal resistance to change
- Organizational wide acceptance is limiting the growth

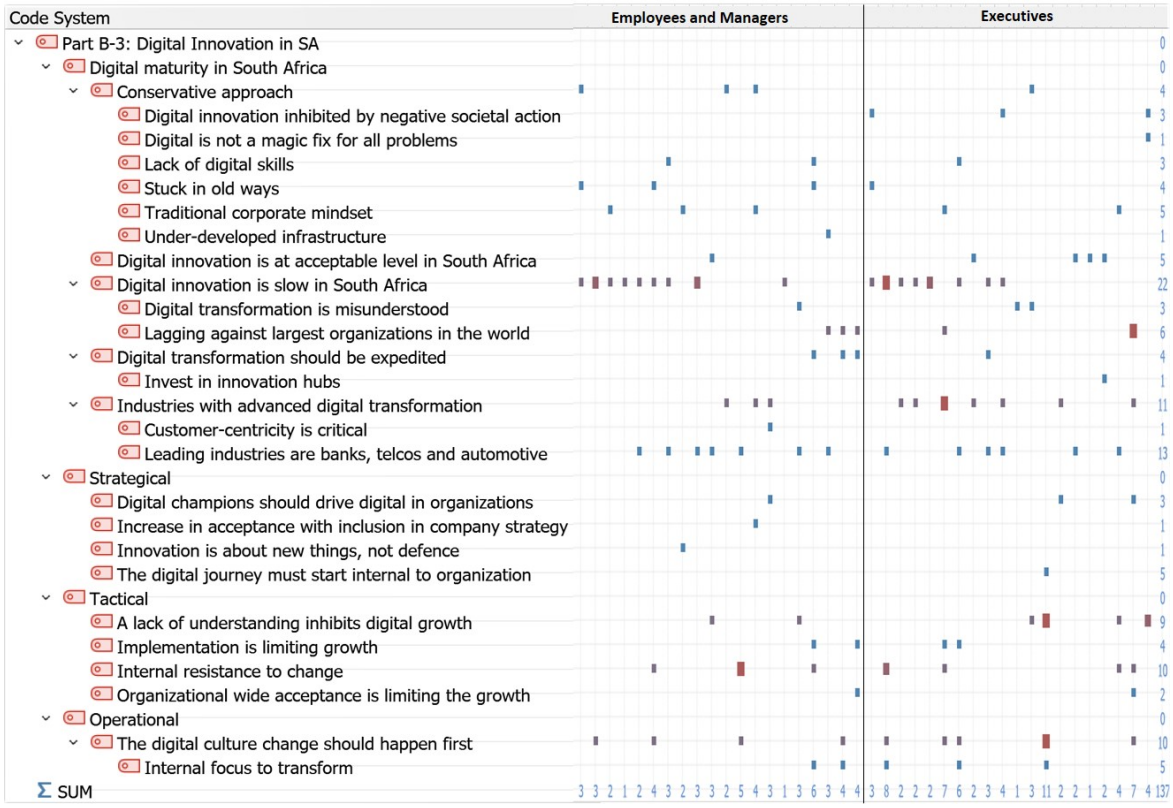
Operational

- The digital culture change should happen first
  - Internal focus to transform

Source: Francois Volschenk (2018)

Appendix I3: Code Matrix Browser

Figure 4.7E
Code Matrix Browser of Digital Innovation in South African Organizations



Source: Francois Volschenk (2018)

APPENDIX J: Opportunities or Threats from Digital Innovation

Appendix J1: Coded Segments from the Interviews with Participants

Table 4.8C Coded Segments of Opportunities or Threats from Digital Innovation	
Document Name	Coded segments from interviews (Part B-4)
Interview 101	I think there is a positive and a negative to the impact that digital innovation can have on people within organizations. An enabler that makes things easier. New opportunities definitely exist within digital innovation. New threats also become relevant due to security individual/organizational or actually national security becomes more threatened through digital than what it was in traditional mindset.
Interview 102	Both. If simple logic is applied, these positive factors should create much-needed growth which will lead to more jobs and new jobs created, albeit in different categories. The opportunity of becoming more responsive, more effective, more efficient and more profitable. Businesses will always need people, but similar to every industrial revolution, the nature of jobs change. The potential negative impact on job security.
Interview 103	You either take it as a threat or as an opportunity. It will it provide new opportunities and will make you think on a higher level. To embrace it, is to go through a learning curve, and go through teaching yourself a new degree. If you don't go through that whole process, you will not embrace it. You will not get to the next level. You need to get digital to do the basics for you that you can ensure that you are one step and one level above what they do. You either take it as a threat or as an opportunity. A threat becomes an opportunity if you embrace it. I have seen is that people close to retirement just do not care, they try, and just get to retirement. Digital poses a threat to people.
Interview 104	It depends on the perception of the individual. Digital has created a culture of a growth mindset. Digital has created a culture of a growth mindset. Digital enhances the need that we create ourselves. A positive mindset and acceptance to change will have a more positive experience.
Interview 105	In my personal opinion I think it has provided new opportunities. The guys that are still stuck in the old way of doing things, for them, they see it as a threat, but if you open their minds, or, if you show them how and wat can improve, the possibilities and just change their Mindshift a little, they will also change into new opportunities.
Interview 106	If you apply digital innovation correct with a smooth "roll over", showing the value of new opportunities to the people, I believe that people will get to the mindset change. Change is still scary.
Interview 107	There is a huge amount of new opportunities. I think employees can become mostly contractors.
Interview 108	The perception is that people will lose their current way of income in adopting digital innovation, hence them being reluctant to adapt. With the adoption there is new opportunities to "make life easier". However, one of the big challenges is to educate people on digital innovation as it is currently a big unknown.
Interview 109	I think it is new opportunities. It is the way that business is going to be communicating. New opportunities are subject to companies embracing digital. It's not a question if you are going to have to change, it's a question of when you are going to. But people must. Organizations have to.
Interview 110	People don't mind what they use, as long as it is easy, they will use it. I think it provides new opportunities, if people embrace it properly.

Table 4.8C Coded Segments of Opportunities or Threats from Digital Innovation	
Interview 111	It will open doors to new technologies and services we never knew can be created.
Interview 112	You can actually use digital to enhance anything you do. It can assist you in anything you do. I will always provide new opportunities.
Interview 113	People are always threatened instinctively but there are plenty of new opportunities. It is driving change whether they like it or not. So, they will adapt. The fear of the unknown.
Interview 114	We try to actually change that mindset and engage with them. They can add value in different areas of the enterprise. I think it could definitely provide new opportunities. As mentioned some people see it as a threat. Especially the elderly.
Interview 115	It brings more opportunities than threats.
Interview 116	Yes and no. The ability for human creativity, and what that has in organizations certainly is an opportunity. There are opportunities to have much more differentiated products, services and capabilities especially on the servicing side of businesses, it also becomes much stronger. The new opportunities that it does create are new gaps in workforce environment that machines will take care of, but it then brings in cognitive jobs that are then required, where the cognitive ability to switch across real-time decision making where ultimately the human brain is the best at doing the response in time. Automation does pose a threat to blue collar, low-skilled employee base, which then has a negative effect on employment in the country and especially given the fact that we are sitting with fairly high levels of unemployment.
Interview 117	There are opportunities and threats. There is definitely a threat if the technology is being monopolized by centralized big companies. Overall if you look at the improvement in quality of life technology has brought, it far outweighs the negative impacts. Overall if you look at the improvement in quality of life technology has brought, it far outweighs the negative impacts. It is like anything new in life. If you can learn how to use it, enhance it, it will be of benefit. It is obviously a threat to people that cannot, or do not want to adapt.
Interview 118	There is no doubt that it is going to bring more opportunities in the longer term than threats.
Interview 119	It has two sides to it. I believe it is positive. I see the positive in things, to me is there is a positive impact on it, it is how you embrace it. It could have a negative effect if it is not managed or transformed properly.
Interview 120	It can provide new opportunities if you look at things like globalization being a perfect example. We should see this as a positive and try and move towards the opportunities that there would be. A person with unique skills can build a global enterprise from a local level.
Interview 121	Both. New jobs should be created by digital to compensate for the reduction of repetitive jobs. It poses a threat as people worry about losing their jobs.
Interview 122	Although areas like automation tends to raise eyebrows, the key to adoption is to ensure those free minutes available as a result, is utilised in the digital space. For every position freed up by automation, a multitude of new functions become available without major costs.
Interview 123	There are opportunities and threats. It depends how it is brought into an organization. If there is limited impact on people, or if there is a major impact throughout the company, I think to adapt and to be fair to all people that are involved, you need a proper organizational change to bring that into play. Once again it will be like in the wild the

Table 4.8C Coded Segments of Opportunities or Threats from Digital Innovation	
	cunning system the people that want to go with the new age way of thinking will adapt to that seamlessly and people that will kick against it will be left behind.
Interview 124	There are more opportunities than threats. Almost everybody, if you take them on a journey to what the benefits are, and take the time to show people what benefits can be gained, then obviously you get their buy in.
Interview 125	Both opportunities and threats. Digital is an enabler for new opportunities by organizations to enter new industries.
Interview 126	Both. Digital can create opportunities in new areas to support the digital strategy within organizations. Digital innovation is perceived by people to replace their jobs.
Interview 127	Data can produce stuff, but it's smart people that can turn the data into meaningful information that can change the course of a business. If you embrace it, fantastic, you will have a future and your company will have a value in you. I'm a firm believer that attitude determines your future. It poses a threat to a certain grade of persons/people that are not capable of changing.
Interview 128	A bit of both. I think there is significant opportunities that you can get through it, including some additional new jobs and new opportunities for people. People who are not ready for change will be threatened by it.
Interview 129	There are positive and negative aspects. The pace and expectation to learn quickly is increasing exponentially. Repetitive jobs are threatened.
Interview 130	It only poses a threat when data isn't managed efficiently, where you may find hackers steal people's data for example, identity theft, cyber bullying and fraud.
Interview 131	Opportunities and threats– double edged sword. There are many benefits, for example being diagnosed by a digital doctor (AI) and being helped to a cure. It does pose a threat to humanity – we might make ourselves obsolete and get to an automated society where AI rules and robots do the work.
Interview 132	New opportunities with solutions that add value to consumers.
Interview 133	Both. New opportunities for sure with the right mindset. It could also mean negative impact on a person whom would need to adapt their skills set.
Interview 134	Opportunities and threats. For society as a whole it makes things easier. It is new opportunities for new companies, new entrance into the market by doing something differently. It is new opportunities for new companies, new entrance into the market by doing something differently. If you are a low-skilled worker, you are threatened. If you are a low-skilled worker, you are threatened.
Interview 135	The potential impact can be negative and positive, depending on where the innovation is applied. This has a psychological impact on people and need to be approached with care and understanding. Initial introduction by organizations would be the announcement of "going digital", which could reflect as an act of self-enriching of the organization. To most this poses an initial threat – the first that comes to mind is "I will no more have a purpose at my workplace". Digital innovation enhances and adds to our experiences and needs in life. It is the individuals own choice to use it, or not to use it. If it makes a positive change in their lives they will use it. If they do not need or want it, they do not have to feel forced to use it. The first reaction of a digitally un-informed individual would be negative.
Interview 136	Both. Anything that you can automate or that you can place with a process or a system – those are the people you should look at upskilling. On the other side, it is job creation,

Table 4.8C Coded Segments of Opportunities or Threats from Digital Innovation	
	but it is more on the skilled side where there are programmers and people who work with the systems, IT related matters, Telecoms. On the other side, it is job creation, but it is more on the skilled side where there are programmers and people who work with the systems, IT related matters, Telecoms. On the other side, it is job creation, but it is more on the skilled side where there are programmers and people who work with the systems, IT related matters, Telecoms. People that skill up can still find work in the organization that they are working for. On the other side, it is job creation, but it is more on the skilled side where there are programmers and people who work with the systems, IT related matters, Telecoms. People that skill up can still find work in the organization that they are working for. Low skilled workers, people that are doing menial jobs in the workforce are affected.
Interview 137	Opportunities and threats. Innovation will drive new opportunities. Opportunities in the management of the new processes where there will always be human intervention in the new technologies for execution. Mundane tasks and repetitive tasks that can be replaced by software.
Interview 138	Digital provides opportunities to learn new skills. It provides new jobs derived from digital innovation subject to people's personal attitudes.
Interview 139	Both opportunities and potential threats. New opportunities to re-shape and re-train people with the new opportunities that digital can provide. People should build the capability for survival with the right attitude to remain relevant in future. New opportunities to re-shape and re-train people with the new opportunities that digital can provide. People should build the capability for survival with the right attitude to remain relevant in future. Attitude will drive your appetite to re-train and re-shape yourself into the new digital era. It poses a threat to current mundane or repetitive jobs, with improved efficiencies to do more with less people.
Interview 140	Opportunities and threats. Digital can provide new opportunity by embracing it with the right mindset.
Source: Francois Volschenk (2018)	

Appendix J2: Categorization of the Coded Segments

Figure 4.8D
Categorization of Coded Segments

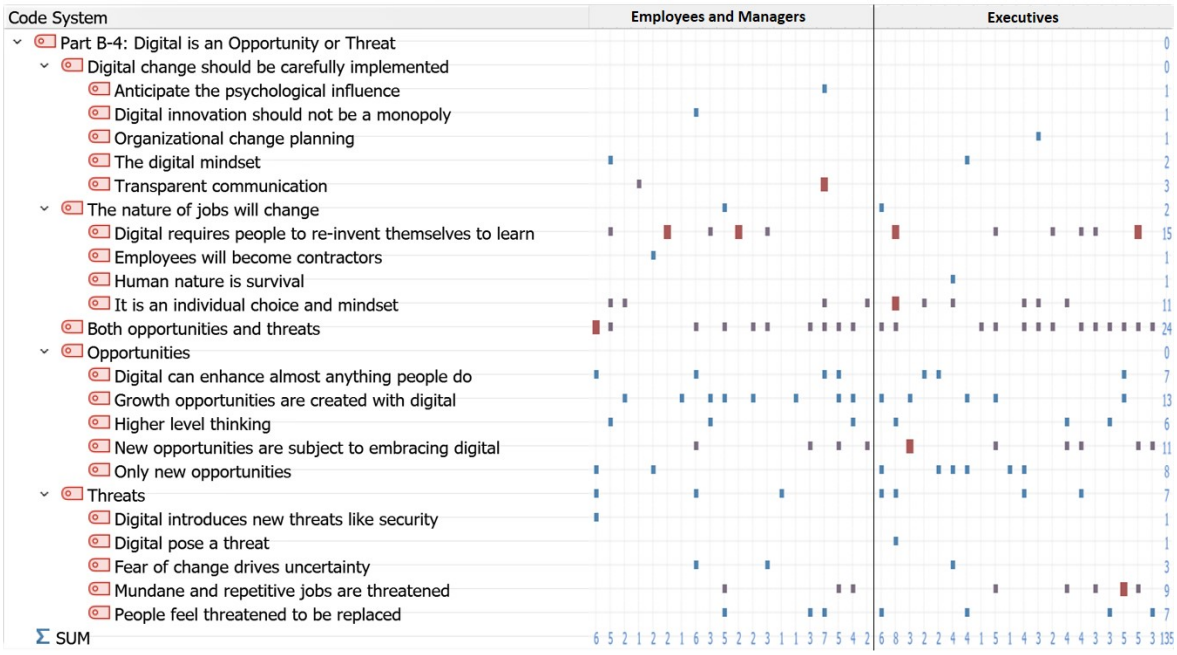
Part B-4: Digital is an Opportunity or Threat

- Both opportunities and threats
- Digital change should be carefully implemented
  - Anticipate the psychological influence
  - Digital innovation should not be a monopoly
  - Organizational change planning
  - The digital mindset
  - Transparent communication
- Opportunities
  - Digital can enhance almost anything people do
  - Growth opportunities created
  - Higher level thinking
  - New opportunity is subject to embracing digital
  - Only new opportunities
- The nature of jobs will change
  - Digital requires people to re-invent themselves to learn
  - Employees will become contractors
  - Human nature is survival
  - It is an individual choice and mindset
- Threats
  - Digital introduces new threats like security
  - Digital pose a threat
  - Fear of change drives uncertainty
  - Mundane and repetitive jobs are threatened
  - People feel threatened to be replaced

Source: Francois Volschenk (2018)

Appendix J3: Code *Matrix Browser*

Figure 4.8E
Code Matrix Browser of Opportunities or Threats from Digital Innovation



Source: Francois Volschenk (2018)

APPENDIX K: The Change on People in Organizations from Digital

Appendix K1: Coded Segments from the Interviews with Participants

Table 4.9C Coded Segments of the Change on People in Organizations	
Document Name	Coded segments from interviews (Part C-5)
Interview 101	I believe yes, it has brought people closer to each other in organizations across the globe. Delivery mechanisms easier to your front door to deliver on what you need to in context of your organization. The power of digital has not truly been realised to the extent of how it can really enhance an experience or efficiency to be effective within an organization. People are not using the enablement through digital to make decisions. People are not using the enablement through digital to make decisions.
Interview 102	Integration of data storage with advanced analytics of data have revolutionised decision-making. Digital innovation has made organizations both vulnerable for cyber-attacks and more paranoid about security. Digital innovation has made organizations both vulnerable for cyber-attacks and more paranoid about security. Communication has been streamlined, where IP telephony allows a company to act as a single site whilst being geographically separate. The availability of high-speed data connectivity has made seamless remote access to the workplace possible, affecting the way that employees can work, e.g. home office workers. The availability of high-speed data connectivity has made seamless remote access to the workplace possible, affecting the way that employees can work, e.g. home office workers. Systems such as integrated design and 3D printing has revolutionised product development and prototyping. The availability of high-speed data connectivity has made seamless remote access to the workplace possible, affecting the way that employees can work, e.g. home office workers. Systems such as integrated design and 3D printing has revolutionised product development and prototyping. Organizations now have access to scarce skills in job platforms that can do the work at a fraction of the cost remotely in other countries
Interview 103	I think it is limited in South Africa in any case. It has been just getting into the basics of digital. I mean just maybe a test try to automate some of the manual workloads this type of thing, so it probably digitization at this stage versus going through a whole digital innovation. At the organizations people have linked into it, closely linked, they had closed IT infrastructure that didn't allow for a lot of digital innovation, so I think it is very limited.
Interview 104	Communication via fax and then via email have vastly increased the rate of exchange of information. This increased turn-around time and productivity. Access to information increases productivity. Improved experience through mobility.
Interview 105	Because of their mobile phones they can load the apps, now they can do things faster on their phones rather than going the traditional way of waiting for a job card, printing or writing it down – everything is now on the phone, on the fly, it's there.
Interview 106	More productive due to automation.
Interview 107	People have become more desk-bound and more IT bound. I think people are sitting more in front of their PC's reading their emails all day, that is what they do. They are not out in front of customers.
Interview 108	The deployment of business services and communications have improved peoples' interaction with each other.

Table 4.9C Coded Segments of the Change on People in Organizations	
Interview 109	The way people are interacting, and the way people are looking for stuff.
Interview 110	People are more productive and contribute more towards their organizations. What it has done is, it has enabled people to be more mobile.
Interview 111	Digital has made people adapt to change faster. It's helped people have an impact on the business a lot better as well and from a digital innovation perspective, as long as everyone knows what the business is trying to do and how they fit in the better, they can have an impact on that. It has helped people understand processes in companies better to improve productivity. Digital has enabled people and opened their mindset to a broader business perspective rather than just doing repetitive tasks.
Interview 112	You cannot work in an organization without any digital innovation that developed in the last 10 years. People accepted it. The older generation does have a problem with it, but the newer generation are growing up with it, it is part of their culture.
Interview 113	People are influenced by exposure. From an organization perspective, if the organization is innovative, digitizing and an automating, people are influenced by that leadership-thinking and leadership role. People are more open to use different methods of either communicating or transacting.
Interview 114	Companies have focused a lot on automation and control systems, however they lack the innovator a vendor perspective, the initial mindset was I need to sell this product, I need to push this box over the table, customer need to buy it, customer need to be convinced it is a good product. On to integrate your automation layers with the business and adding value to the business at the end of the day. From a vendor perspective, the initial mindset was I need to sell this product, I need to push this box over the table, customer need to buy it, customer need to be convinced it is a good product. It is now going into executive selling where you are selling value to the customer, that value that would eventually resolve into selling products. That mindset is something that needs to change from a vendor perspective.
Interview 115	Digital is an enabler for social growth. You can work from home, while on leave, you have the same tools than what you have at the office. You can work from home, while on leave, you have the same tools than what you have at the office.
Interview 116	The new opportunities that it does create are new gaps in workforce environment that machines will take care of, but it then brings in cognitive jobs that are then required, where the cognitive ability to switch across real-time decision making where ultimately the human brain is the best at doing the response in time. The market is more demand-driven consumption that can be easily fulfilled.
Interview 117	The cognitive levels of people in organizations have increased. If you just compare a typical business administrator, how they would do their job 10 or 20 year ago and how they do their job now, they quality of the work they do is more thoughtful work. There certainly is no shortage of functions that you can provide remotely, on your own, from home using technology and a computer. It's good to say I'm a specialist and can work from anywhere and work for anyone, but if I don't have a contract with one employer that is going to guarantee me an income at the end of the month, then I am going to be a little bit scared to work that way. I would like to think it has changed a lot of people from being paper pushers to information managers.
Interview 118	We have always been survivors and have demonstrated this, but one of the other ways to guarantee human survival is that you always have to wipe out a sizeable portion of humility to ensure survival.

Table 4.9C Coded Segments of the Change on People in Organizations	
Interview 119	Even technology upgrades, as digitization with the drive behind it as a cost saving, is an enabler for digital transformation. People have changed and just use it, without them realizing it.
Interview 120	It's a reality where people remotely engage, and work and all the technologies enable that. Absolutely, as an example, the remote worker is very real these days. Absolutely, as an example, the remote worker is very real these days.
Interview 121	Because of social media and other applications there is emerging social applications with business applications.
Interview 122	I can raise my productivity by 25% by purely cutting physical travel time. Demos in the cloud means I can sit at a customer site and showcase our solutions where previously I would have needed to book all the resources into a single or two sessions and hope all can still make it. Yes, the balance between home life and work life has been greatly enhanced as we no longer need to be physically available for every meeting.
Interview 123	I think it's definitely enhanced the way of doing business with operating accessibility to different platforms to new ways. It has probably at best made life easier for individuals, and once again, if they are willing to adapt to the change that was implemented. It has probably at best made life easier for individuals, and once again, if they are willing to adapt to the change that was implemented.
Interview 124	It's gives us more information to make quicker, better or more informed decisions. Yes. Looking at manual and repetitive tasks – with tools that OEMs provide you can automate some things. It would mean people can move upward in the value chain.
Interview 125	The impact is how business is conducted. It is a mechanism for survival. It has changed people where people want to use data to assist with their daily jobs.
Interview 126	I think this is only starting to take effect as the real focus on digital is only taking place now.
Interview 127	Companies that allow that flexibility has changed their company culture with increased mobility. There is a whole new class of workers coming into the environment and into the workforce that demand things completely different to what they did 5-10 years ago. Employees want flexible working hours, be able to work from home, access to social media, they are almost dictating how stuff should work.
Interview 128	It has caused a bit of a paradigm shift for people, especially your mid-level management. People start expecting certain technologies, they start expecting a certain reality. They think about things differently based on the digital innovation that happens around them.
Interview 129	If you look at listed companies, they have to publicise all their quarterly earnings and expectations. Everything is kind of what is happening now over the short term in organizations. Everything is kind of what is happening now over the short term in organizations. Productivity has and will continue to increase. People are expecting it should be easier business with digital innovation these days. People need to stay abreast of new digital innovation that deliver faster reaction and value to customers.
Interview 130	When the organizational culture permits such change, it creates greater job satisfaction as new capabilities are required and employees are afforded the opportunity to grow. In the past the culture in organizations was that the leader is always right. Innovation is leading whereby the hierarchy is changing in organizations. Survivors of this era will be leaders who understand that their competitive advantage is their people, and the context within which they create for those people to thrive in. It also means faster production timelines and possibly increased revenue and indirectly increase in employee financial gains.

Table 4.9C Coded Segments of the Change on People in Organizations	
Interview 131	Some jobs are already being handed over to bots – especially in functions like policy admin where there are a lot of repetitive tasks – bots 15 to 20 times as fast as humans in these settings. The risk of digital innovation e.g. call centres, is that caretakers and providers of families could be the first to be replaced with automation.
Interview 132	Ideas are shared and easily distributed. Yes, collaboration is higher than before.
Interview 133	From my engagement with clients, I have not seen a change. I think they try and approach things differently, but I don't think it has fundamentally changed people or changed how they are thinking.
Interview 134	It changed people in organizations a lot. Almost anything should be possible via phones. Applications on cell phones is a first option. People are demanding diverse ways of doing things in companies as well, not wanting to do our ancient systems.
Interview 135	Digital innovation provides an environment where work can be done faster, more efficient and more accurately. When employees get their work done efficiently and on time, they generally have a more positive attitude towards co-workers. Digital innovation decreases workload on most people. Digital could be done from locations other than your office. The technology provided by organizations to employees are resulting in higher quality of work, more flexibility, increased productivity and human errors are minimized.
Interview 136	The ability to do all that type of things like improved communications and productivity have influenced people positively. People are more connected with the world and what is going on around them. It has opened new avenues. The ability to work from home, work remotely, to interact with staff in other offices worldwide.
Interview 137	It has increased employees' abilities to make faster decisions due to various means of communication/information being at their fingertips. i.e. Skype, WhatsApp, Internet connectivity from their cell phones.
Interview 138	The redeployment of people to other functions inevitable with all the triggers of transformation. It is not only about the adoption of technology but also improves systems with the use of data. The changes in technology and processes have to be followed by people as a natural progression.
Interview 139	Within companies that do not embrace digital, people inside the organization have not changed. Organizational culture has not changed in organizations because of digital.
Interview 140	It has increased employees' abilities to make faster decisions due to various means of communication/information being at their fingertips. i.e. Skype, WhatsApp, Internet connectivity from their cell phones.
Source: Francois Volschenk (2018)	

Appendix K2: Categorization of the Coded Segments

Figure 4.9D
Categorization of Coded Segments

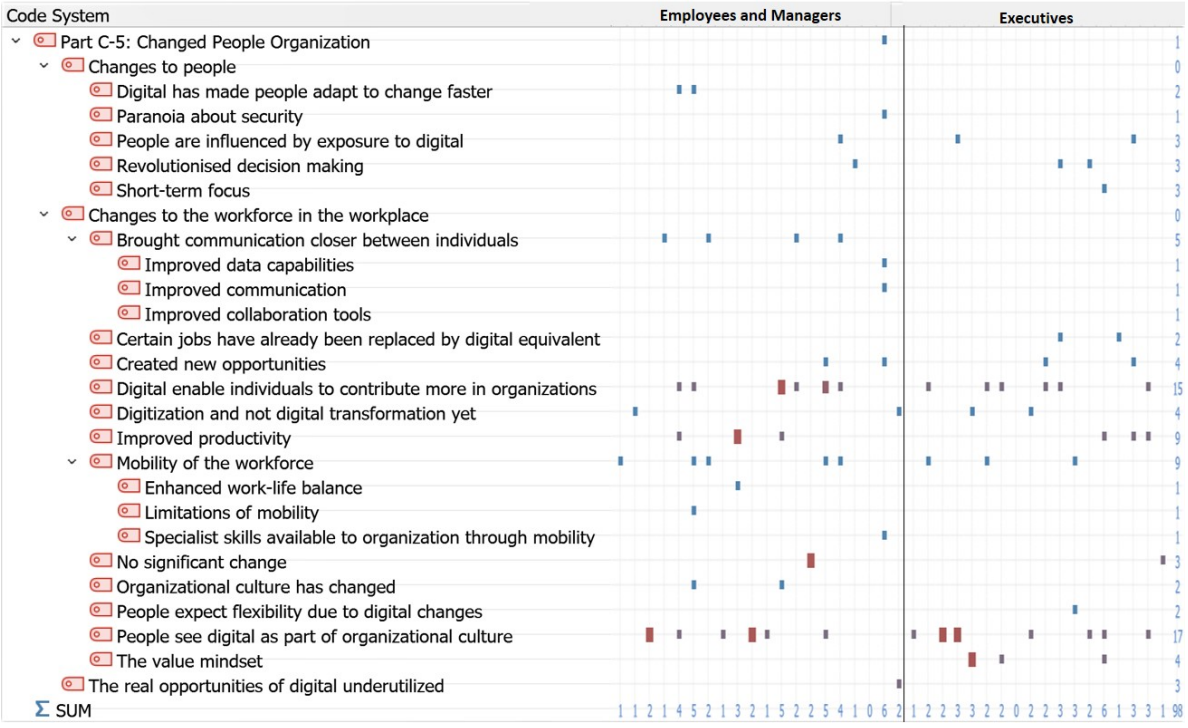
Part C-5: Changed People Organization

- Changes to people
  - Digital has made people adapt to change faster
  - Paranoia about security
  - People are influenced by exposure to digital
  - Revolutionised decision making
  - Short-term focus
- Changes to the workforce in the workplace
  - Brought communication closer between individuals
    - Improved data capabilities
    - Improved communication
    - Improved collaboration tools
  - Certain jobs have already been replaced by digital equivalent
  - Created new opportunities
  - Digital enable individuals to contribute more in organizations
  - Digitization and not digital transformation yet
  - Improved productivity
  - Mobility of the workforce
    - Enhanced work-life balance
    - Limitations of mobility
    - Specialist skills available to organization through mobility
  - No significant change
  - Organizational culture has changed
  - People expect flexibility due to digital changes
  - People see digital as part of organizational culture
  - The value mindset
- The real opportunities of digital underutilized

Source: Francois Volschenk (2018)

Appendix K3: Code Matrix Browser

Figure 4.9E
Code Matrix Browser of the Change on People in Organizations



Source: Francois Volschenk (2018)

APPENDIX L: The Change in Society on People from Digital

Appendix L1: Coded Segments from the Interviews with Participants

Table 4.10C Coded Segments of the Change on People in Society	
Document Name	Coded segments from interviews (Part C-6)
Interview 101	It has opened doors of exposure to certain things that you might not want within the society context that could be potentially dangerous and negative to children. It has connected people to information. People can be more informative, in real-time, rather than having to wait for communication or formal types of traditional postal services. People can be more informative, in real-time, rather than having to wait for communication or formal types of traditional postal services. It has also opened the door for false news. It has connected people to information.
Interview 102	In schools, textbooks have been replaced by tablets, teacher-led learning has moved to video-led learning, learning management systems and easy access to knowledge. Social media platforms have led to easy and viral activist movements that have both positive and negative ramifications. The positive is giving people the power of collective speech. The negative is that the collective activism is focused on the destruction of the status quo without offering a constructive collective solution. The opinion of other users of a product, researched online has a far greater impact on a buying decision than a billboard. The possibility of using this approach to censor information that is real but can tarnish reputations of political parties, products or people is also possible (more likely probable). Digital innovation has led to informed societies and knowledgeable consumers. On the negative, phenomena such as “fake news” are proliferating the same digital innovation space, as society does not readily have the ability to discern between factual and fake.
Interview 103	It shows more in the younger generations where you almost get an addiction on internet, Facebook, Twitter, Instagram and all of that and from a society perspective. It has definitely had a big impact and people’s behaviour. People do not switch off anymore. You do not have that break between work/life.
Interview 104	My biggest problem with the digital innovation is the social media. Interconnectivity of all people has diluted our ability to think for ourselves.
Interview 105	If you look at the number of apps that is readily available on the internet nowadays, it is insane how many apps there are out there, and people just love it. I had a chat with a friend of mine who says if 1% of America likes an app or an idea that you have created, you become a billionaire overnight because there is just so many people out there, so people have started to adopt to that, or change their mindset in that sense in society, so you know that if there is an app out, It's going to make my life easier. People are all now hunting for this “app” that is going to make life easier for them.
Interview 106	Communication improved significantly.
Interview 107	All the young people “live on their phones”. There are games apps – they play games collaboratively. People use to experience it in their home life, and in work life it will become similar. The experience is exhilarated. The information is exhilarated. They have a much richer experience of life than what we had in reading books.
Interview 108	Some innovation introduced IOT giving people the ability to interact with systems, vehicles and social interconnectivity allowing society to apply it and get revenue from various sources.

Table 4.10C Coded Segments of the Change on People in Society	
Interview 109	People drive the social change though digital. The people drive what is happening. Society drives organizations. Because the organizations always play catch-up.
Interview 110	It has impacted people from a perspective of making them more available, which has an impact on their personal time. One has got to be much more regimental about taking time off, switching off from a digital perspective, but it has impacted positively on productivity and efficiencies. The big thing about it is the social media adoption – it is expanding the personal accountability because once it is out there on social media, it is out there. Social media is, people don't have to stand up in front of an audience, they can hide behind an avatar and post what they are thinking, and I think that has opened a lot for the people who can't open. With that, quite a few people are posting bad comments etc. on social media and having to pay the repercussion thereof. It has also caused a serious challenge with accountability for comments and photos, because you cannot take it back.
Interview 111	I think people are trying to communicate via digital means more and dealing with humans. I don't think digital has helped people work with people. It has connected more people now than ever before. More people have access education, you have access to Google, and you have access to Google you have access to the world.
Interview 112	People in society now adopt digital in everything they do, so it is part of what you do. If you organize a meeting or even a party at home, you use digital – everything is about digital. People can't live without digital. Society cannot switch off digital. People are so used to it, that they can't switch it. It is their own choice.
Interview 113	People are more open to adapting to clever digital transformation. Some people cannot operate without digital. If you look at adoption of different digital workflows, people are more open to using different methods of either communicating or transacting based on their social media experience. There is a very large trend in my mind that the impact on society (over-information), not the right information, miss-information, information designed to directly influence people's decisions. If I look at how people use social media platforms to influence specifically and political areas, huge misinformation, over-information, misdirected information, yet that information has an impact on people's decisions.
Interview 114	Society is embracing digital innovation. If you just look at the way we use mobile technology today, we want newer applications fast, the demand is high for vendors and manufacturers to be able to create these applications for our customers and being flexible enough to enable customization of specific needs at the same quality of even higher quality. If you just look at the way we use mobile technology today, we want newer applications fast, the demand is high for vendors and manufacturers to be able to create these applications for our customers and being flexible enough to enable customization of specific needs at the same quality of even higher quality. People want products and changes to products, new versions of products into the market, faster. The demands are higher.
Interview 115	Health and education capabilities are changing and growing.
Interview 116	The past 5 to 10 years from a personal and peer perspective, we have definitely migrated more from managing our affairs by email and computers towards our smartphones, this is therefore very innovative in that you can be available almost 24/7. The reality is that people now are available 24/7. The work-life-balance aspect comes into question. There are blurred lines between work and home. Consumption patterns are becoming more demand-driven. We have seen it recently on social media with all the fake news. People are more gullible than what we give them praise for.

Table 4.10C Coded Segments of the Change on People in Society	
Interview 117	Overall if you look at the improvement in quality of life technology has brought, it far outweighs the negative impacts. It has given them access to communications, information and so forth. There is a broader perspective of the world. There is more information available. People are more informed.
Interview 118	Where it is going to land a lot harsher, is in society in general, but in different ways, so, society as consumers of goods and services, already actually are digitally savvy because the way they consume products and services is already in a digital manner. What I observe is that the way they interact with their mobile devices is that they don't use buttons, they use voice prompts and all those things, so actually that fundamentally changes their buying patterns, how they think about things. Previously, my daughter and I went to the toy store together to buy things, now, with my 6-year-old son, we still do the same things, but online.
Interview 119	It is also how people adopt the change in digitalization or technology from their point of view. It has changed people. If I see how people do things without thinking twice about it, it is just being like a natural evolution type of thing, you find generation gaps where it doesn't. People do not realize how they have adopted and changed. If you ask someone a question now, the first thing they do is go on Google. Information is available.
Interview 120	Socially yes, and creativity has become a problem. Driving innovation with a remote office dynamic is challenging. Services and social interaction have to be immediate and always on. Nobody waits for anything anymore.
Interview 121	The social applications have made people used to using applications, and that trend is continued in the business environment. People are spending too much time on their phones.
Interview 122	Connectivity and access to information has changed 100% of the traditional world we used to convey business in. Before I walk into a car dealer, I know exactly what I want as I spent four weeks researching it. There is no need for a large "on the floor" sales presence.
Interview 123	Things are more accessible to a wider area of the community. It has given a much different way of thinking and looking at things.
Interview 124	It has changed society a lot. I know more about people now than what I have ever known before.
Interview 125	Data is used by individuals to complement their daily personal needs. An incredibly significant impact in society through the supply of new services.
Interview 126	Yes, the world has transformed into a digital era. Just about everything functions digitally.
Interview 127	It becomes more difficult for parents to manage and control their kids. It has a direct impact on society. It has affected how people interact with each other and affected social skills. It has a direct impact on society. It has affected how people interact with each other and affected social skills. I call it the widespread access to information and useful information/bad information.
Interview 128	The pace has increased over the last couple of years, and it is gradually increasing.
Interview 129	The way it has changed people in the last 5 to 10 years it has created a new breed of couch potatoes, on the one side and a breed of super-learners on the other side. I think is made of more cognizance of privacy and security, so it is changing us, we are looking at it differently, and it is changing the way that we parent. People are ignorant and are still trying to catch up with implementing new rules of interacting and using the digital

Table 4.10C Coded Segments of the Change on People in Society	
	platform. People have stopped looking at long term views. People have less privacy. People have less time away from work and rest. And it has become the social the norm. On a positive, sharing of information and knowledge is easy. Everything these days is like a reaction to the latest thing that has popped up on the news or platforms in terms of business. It is almost like a total over-reaction to things.
Interview 130	Creating infrastructures in a rural village can improve the quality of life of the individuals through the increase in available technology with alternative solutions for current problems. Empower people with technology. Almost everything has changed in society where knowledge is power.
Interview 131	Enables humans with new opportunities. Equaliser with new opportunities. Influencer of thoughts and minds of people.
Interview 132	People can educate themselves for work, health, mental and physical benefits. Yes, people have better access to information.
Interview 133	People, especially the younger generation are very disconnected. They think if they have friends on some platform, it is a friend. People might also become unrealistic in their expectations. Anything and everything must be app-based, and organizations can't always do that. Because of what people have seen what can be delivered digitally, they are expecting innovative solutions to come to the front. If it is digital innovation through social networking, I think there has been a massive impact on society.
Interview 134	People are influenced as digital innovation simplifies their lives. Digital speeds up our lives. The mediums available to access information and data has also changed. Yes, it changed people, mainly through information flow, access to information and data. Everything is available to everyone.
Interview 135	Several applications are available to use to make our lives easier and save us time in doing certain tasks. This allows more time to spend on other matters that are important to us. With digital you could be missing out on LIVING. Understand and appreciate the impact and value of personal human contact and keep the work-life-balance. Family members have more frequent contact with each other, even if it is only a text message. Families living far apart are more connected. It has changed people in society. Information is readily available. Society is more aware and informed of what is happening around the world. It gives society the power to effortlessly obtain information.
Interview 136	It's just being able to connect people up together, that is one of the great things – the ability to see what your friends and family are doing across the world. I do believe it changed people, especially the newer generations.
Interview 137	People have become extremely reliant on social media.
Interview 138	Some people are threatened with the fear that digital may take over the world. The convenience of digital is new availability of services to society.
Interview 139	Younger generations are constantly exposed to applications including gaming that impact people.
Interview 140	Yes, it changed people from different generations by enabling them to access things not previously possible like mobile communication with video calls, social media to connect with family and availability of information via the internet. People that understanding digital use it to enhance their personal lives.
Source: Francois Volschenk (2018)	

Appendix L2: Categorization of the Coded Segments

Figure 4.10D
Categorization of Coded Segments

Part C-6: Changed people in society
- Influence on people
  - Enabled humans with new opportunities.
    - Equaliser with new opportunities.
  - Influencer of thoughts and minds of people
  - Learning has changed forever
  - New dangers from digital
    - Challenging for parents in the digital age
    - Everything now - reduced long-term thinking
    - Fear of digital domination
    - Increase in impersonality
    - Reduced privacy
  - People drive the social change through digital.
  - Socially, creativity has become a problem
  - The work-life balance has been changed
- Society has adopted digital change
  - Application frenzy in society
  - Expectation of application to make life easier
  - Improved connectivity
  - Life is lived at a faster pace
  - People in society cannot live without digital
  - Social media platforms created
    - Social media posting can be detrimental
- The influence of information / data
  - Connected people to information
    - Informed societies and knowledgeable consumers
    - Knowledge is power
  - Miscommunication
    - Created channels for "fake" news

Source: Francois Volschenk (2018)

Appendix L3: Code Matrix Browser

Figure 4.10E
Code Matrix Browser of the Change on People in Society

Source: Francois Volschenk (2018)

APPENDIX M: Mitigation of the Negative Influences from Digital

Appendix M1: Coded Segments from the Interviews with Participants

Table 4.11C Coded Segments of the Mitigation of Negative Influences from Digital Innovation	
Document Name	Coded segments from interviews (Part C-7)
Interview 101	I would say control the flow of data in the sense of controlling the information, not necessarily regulating it, but controlling it through certain security measures. Whomever releases the information need to put the right measures in place to control what is out there e.g. trusted sites, verified sites, certified sites, certified content.
Interview 102	The very same advanced analytics engines and AI platforms that are the product of digital innovation and disruption can be used to fight the impact of negative social influence. Not only identifying suspicious content, but also moderating this is a potential solution.
Interview 103	I.e. if you look at Apple now the news that released, they want to try and limit how much time you spend on it. There are available apps now saying that you can have internet time if you exercise. There is now almost new digital stuff to try and mitigate the digital stuff that has happened, and they are trying to prevent you from driving and talking. Mitigating negative influences is probably the big question now in society. There is not a simple answer. We need to try and get back to be humans and I am not sure how to get it right. It is a problem in society at the moment. If I look at my daughter, if we go away the first question she asks is if the place has wi-fi/internet, and she is 12, so that has an enormous impact on your younger generation and older generation. We are all addicted on our apps that we have.
Interview 104	Education on how to safely use digital innovations. Consider security and cybercrime, and the influence on privacy and governance. Digital innovation needs to include digital ethics in the design phase.
Interview 105	The social influence, a lot of people use social apps to negatively to badmouth people, so the way that I see you can mitigate that negativity, although it's a lot work in the back end that happens, to make them, or to give a positive outlook instead of people complain about it. You need to be on the ball and on the game to present that where they go and expose those company names on social media and things like that.
Interview 106	One must look at the whole picture, the positive and negative impacts that digital innovation will have on the people going forward.
Interview 107	You are going to have to take kids away from digital – you will have to remove them from phones for a period and force them to play outside, participate in a sport. I think it will have to be deliberately managed, otherwise children and people will just fall away.
Interview 108	With digital disruption social controls needs to be introduced. Currently everyone has a voice and an opinion causing confusion in society.
Interview 109	You must understand it is not a bad thing, we have already said that it creates opportunities. See the opportunities, don't look at the threats. Don't see the negativity, don't look at it the bad way, take the opportunities and embrace it. Accept the impact it has on people. You can't fight it. You can't change it. Do the best you can to get the most out of this situation. You are not going to change it. You might as well embrace it and get the most out of it.
Interview 110	I would not say that we need to monitor and police social media, for then it restraints people. They need to be accountable for what they publish. They need to be accountable for what they publish. I think people need to take accountability. The more these people

Table 4.11C Coded Segments of the Mitigation of Negative Influences from Digital Innovation	
	get exposed, and the mistakes get exposed and opened, the more people will become aware that they cannot just freely publish. With one or two more cases that will be heard, and people put on trial and made examples of, that is how it will be protected.
Interview 111	One the one end it creates a social impact negatively, you can limit that, I think you can create a platform eventually where people can communicate, connecting with people's individual needs but also bringing people together. Communicate the benefit and the new enablers that will come from that, or the new opportunities that will arrive from that innovation. Communicate this is where the world is going, this is the potential, this is the benefit and we are going to take away some of the manual burden. Communities are important, trying to always connect with people, having start up type sessions with the latest and greatest companies and people doing good things and understanding how they can fit into the digital age.
Interview 112	Resistance to change is always a problem in any society. I think people don't like change, but if changes to a positive effect, I think they will use it.
Interview 113	I don't think people lose their jobs because of digital, I think it is a misconception. It enhances what you do, it creates bigger opportunities, more opportunities for jobs.
Interview 114	I look at programmes that run in lets called it first world countries, i.e. Japan for example where they now have clinics to destress people from technology because it is so in their face. It can only be through social programmes. It can only through the influences of wiser people that influence the younger generation. I look at the young generation and how they adopted and how stressed they get when they cannot reach a level in a game. You have got to coach that. Know about digital, mitigate the influence, drive the positives and socialize it. Bring humanity back into technology. You are not going to do that through any other platform other than human interaction and human responsibility. The over-exposure to technology cannot be policed. It can only be peer and parental influences, mentors, people who can stand out, and can be trusted.
Interview 115	I think it is a matter of building trust with customers and it is not about presenting anymore, it is about showing what you can do. It is about having live demonstrations of your offerings and having live roadshows. The customers don't want to see PowerPoint presentations anymore, they want to see it working. That is very important.
Interview 116	It is important to have a very small ethic on how data is being used in what form and how customer information is being collected. The more data begins to become available, or personal data becomes available. How is technology being used. How do you enable fair competition where data capabilities are becoming more of a utility? Contents – the message can be spread so easily on social media, bad content, news etc. that can face a bad outcome.
Interview 117	Our ability to trust is too easy these days and I think that is a problem. We don't verify where the message is coming from. There is a fundamental dynamic shift in inter-human relations because of digital. Your physical health is being impacted, and even mental health is affected. Digital has influenced the amount of screen time that we use ourselves.
Interview 118	Digital innovation needs to be educated. Educate and prepare them for the future of work and show them what is possible with technology as opposed to just having the technology out there in society and people will figure it out. Inform people because most of the negative effects are just based on the facts that people don't know what is possible.
Interview 119	This problem of opportunity is a thing that need to be solved jointly, not only by the private sector/entities, but also by government as well. Because it has a total societal impact i.e. when you listen to how some governments think about the job impact that will actually happen as a result of this, if you are a government, you cannot simply just sit

Table 4.11C Coded Segments of the Mitigation of Negative Influences from Digital Innovation	
	back and say well, and private sector can also just say well, we are just focusing on our efficiencies because it will actually have society going out of sync. The first thing we need to do is, we need to talk a lot more around the positives. We need to identify what the positives and opportunities could look like in the system.
Interview 120	Create awareness of the potentials. It is an extremely powerful means of technology. It's about awareness.
Interview 121	The launch of free digital academies, enabling society to evolve at the same pace of technology.
Interview 122	Allow people to be freed from the constant flow of information from technology through defined rules or guidelines. Relevant, controlled and governance on the distribution of information. Digital should have an integrated approach to involve the growth of people to grow with digital in education with new curriculums. The negative influence is the constant need to check phones and emails. The developers of applications should include settings to protect users from over-exposure to digital. People need a break to get away from the constant presence of information, but it remains a personal choice. Technology does not innovate, people innovate. The answer is how should people be influenced to innovate for the best of humankind.
Interview 123	We need a mechanism that will help us mitigate the false inputs and maybe AI and block chain can help in this space. If the Bell Pottinger reputational drive in SA was flushed out early as "fake news" the current race issues would have been a lighter shade of grey. Just like schooling helps young people make sense of and correctly categorize information, we should adopt the same strategy to ensure we understand what information is accurate and what is "fake news". Once we have a safe and transparent way of navigating around the false information and consistently hit the relevant information, then we will really elevate humanity to the next level.
Interview 124	Within the corporate environment if it is strategic of nature you are going to have to grow it through planned change to get the efficiencies from digital. You can create an environment to motivate themselves through positive organizational change.
Interview 125	Not every person wants to be treated in the same way or have the same personalities. You must spend a lot of time to figure out how people think and how they would react. Digital disruption is a continuous process. It is the fundamental stuff that need to stay consistent.
Interview 126	A holistic approach is required to involve all stakeholders in understanding the influence of digital. There can be a negative effect on young people with over exposure to digital disruption.
Interview 127	Always be clear about the purpose and direction and the benefits of why it is being done.
Interview 128	See more control from the big boys, Google, Facebook, as to what people can see. Maybe they could control it. Some sort of control on what could be seen and experienced. Try and normalise content. There are controls that can be put in place (available apps, i.e. tracking for children) with the control of the parents, and consent of the children.
Interview 129	Education is the primary drive for people. We focus quite a lot on education around privacy, security, storage of information, where it is kept and what people can do with it, reading the actual policy state. There is quite a lot more that can be done to help people. We tend to, as digital leaders, focus on our businesses and not focus on the consumer or the user and educate them more broadly than just to focus on my business. And, to check on their software, so education for me is the biggest drive and the most important thing you can do. There is quite a lot more that can be done to help people. We tend to,

Table 4.11C Coded Segments of the Mitigation of Negative Influences from Digital Innovation	
	as digital leaders, focus on our businesses and not focus on the consumer or the user and educate them more broadly than just to focus on my business.
Interview 130	AI will have a significant impact in the way that social media platforms actually patrol these things going forward. The way firewalls are working these days, if you are not posting content on a respected server, it's got proper legislation and reacts to anything that is reported to them. You cannot post any contents anymore.
Interview 131	Influence the negative new behaviours e.g. fake news. Mitigate addiction to social media. The creation of new jobs or skills.
Interview 132	Control or censor children's access to the "bad side" of the digital disruption. Remove anonymity on the internet. There should be guidelines that regulate acceptable behaviours.
Interview 133	A good starting point would be general education and awareness. Specific organizations can do specific things, pointed and focused, but a good starting point is general education. Government need to be involved, the larger organizations need to be involved and they need to understand very well what the impact is of technologies and what they are bringing to market.
Interview 134	Economic growth. You must create other industries and jobs. If digital leads to higher productivity and economic growth, you will have money to have for other investment areas. The digital disruption and the social impact will happen.
Interview 135	Allow enough time for adoption, questions, "trial implementations" understanding and acceptance. Through guidance, regulations, governance and educating society from an early age on the potential negative influences and the consequences of human actions and reactions when using technology. This could be minimised by timeous, early introduction of the planned technologies or digital innovation to properly prepare people for the road ahead.
Interview 136	Through education. Some sort of regulation or government getting involved. And if you look at the younger generation, at a school level start educating and give them a good understanding how to handle it. I don't think you can change the culture, but I think people need to be made aware of the impact. Educate on what is socially acceptable because the younger generation might think it is normal to do certain things.
Interview 137	Although difficult, limit people to digital influence e.g. social media usage. Focus should be given to balance people's usage of digital to align with personal or business benefits. Limit young people to digital exposure to protect them. The usage of digital innovation for non-productive tasks should be more efficiently controlled. Implement organizational controls to limit use.
Interview 138	Change in the education process. Schools needs to educate the young generations to enable them to find work in the new digital world when they come out of school.
Interview 139	Guide and shape younger generation through knowledge and experience to limit time spent in front of digital devices. The man/machine interaction has become a significant problem in society. The younger generation grew up with technology and interact with digital devices. Digital leaders need to play a prominent role to balance individuals between the virtual- and real world.
Interview 140	The education of the youth should start early to create an understanding of the influence and potential consequences. Values should be taught to children from an early age to keep humanity and compassion for others intact. Physical activities should not be replaced by virtual reality.
Source: Francois Volschenk (2018)	

Appendix M2: Categorization of the Coded Segments

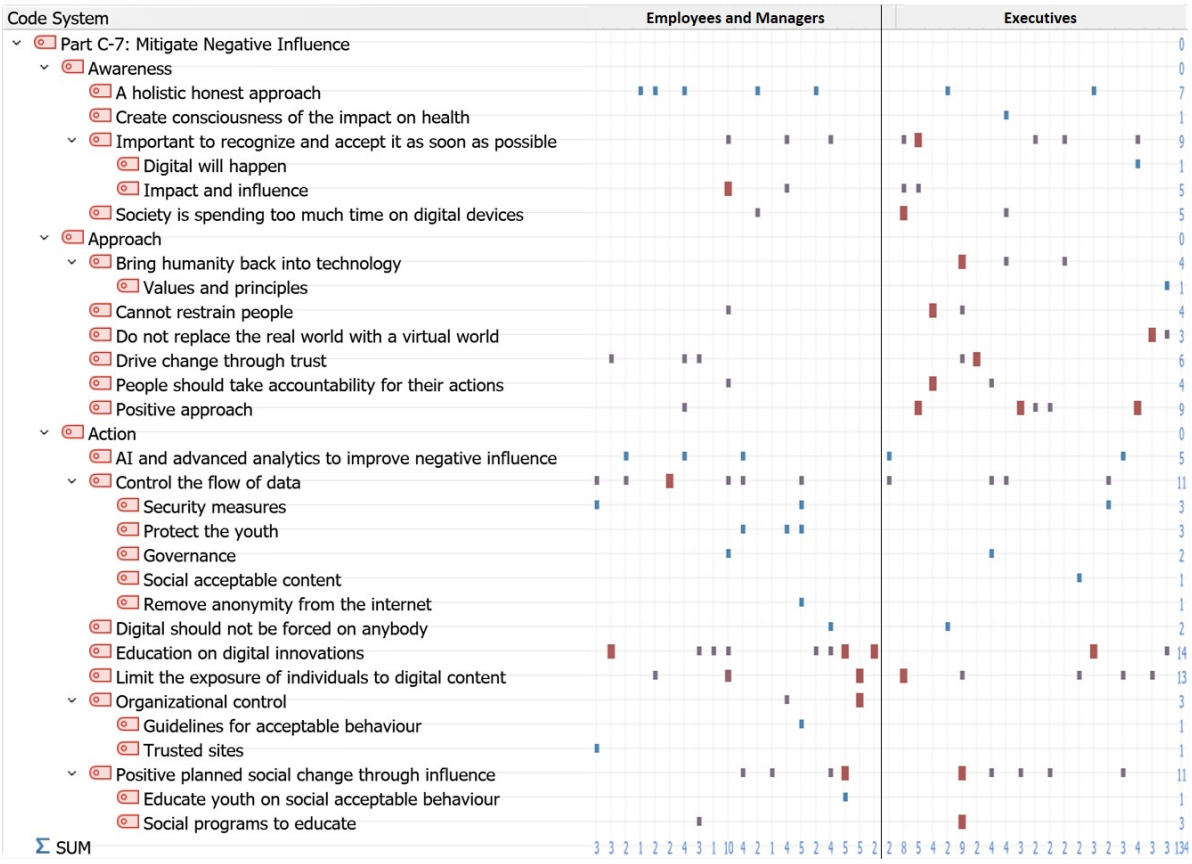
Figure 4.11D
Categorization of Coded Segments

Part C-7: Mitigate Negative Influence
- Awareness
  - A holistic honest approach
  - Create consciousness of the impact on health
  - Important to recognize and accept it as soon as possible
    - Digital will happen
    - Impact and influence
  - Society is spending too much time on digital devices
- Approach
  - Bring humanity back into technology
    - Values and principles
  - Cannot restrain people
  - Do not replace the real world with a virtual world
  - Drive change through trust
  - People should take accountability for their actions
  - Positive approach
- Action
  - AI and advanced analytics to improve negative influence
  - Control the flow of data
    - Security measures
    - Protect the youth
    - Governance
    - Social acceptable content
    - Remove anonymity from the internet
  - Digital should not be forced on anybody
  - Education on digital innovations
  - Limit the exposure of individuals to digital content
  - Organizational control
    - Guidelines for acceptable behaviour
    - Trusted sites
  - Positive planned social change through influence
    - Educate youth on socially acceptable behaviour
    - Social programs to educate

Source: Francois Volschenk (2018)

Appendix M3: Code Matrix Browser

Figure 4.11E
Code Matrix Browser of Mitigation of Negative Influences from Digital Innovation



Source: Francois Volschenk (2018)

APPENDIX N: The Main Stakeholders of Digital Innovation

Appendix N1: Coded Segments from the Interviews with Participants

Table 4.12C Coded Segments of The Main Stakeholders of Digital Innovation	
Document Name	Coded segments from interviews (Part C-8)
Interview 101	Everybody who uses it. Everybody that taps into digital flow can influence it.
Interview 102	The first that comes to mind is government – both national and local. However, this may present circular logic, as the social influencing of the effect of digital media can be abused by political parties, just as political parties can be abused by it. (The PR attack of "White Minority Capital" is a classic example of this). Businesses. It is to their benefit that they operate in the space of social influence. Educational bodies.
Interview 103	The users yes, but ultimately, the users via their addiction is saying in social media that it is a problem to actually do that. So that is why some people are actually just cutting Facebook, Twitter (17% down). End users are influencers of digital innovation. They are the influencers of digital innovations, but they are not the ones that will fix the negative influence of it. When you purchase something, you look at what they say, what rating to they give it, 1 2 3 4 or 5 and then we actually listen to "them" - whoever they are. The guys that created the innovation. And they are now trying to mitigate it. Because they see the negatives of it.
Interview 104	Public figures. Chief executive officers and other leaders.
Interview 105	The stakeholders in the whole society who influence are people who complain a lot. The perceptions are driven by negativity sometimes, where people only respond to negative comments.90% of the time it could be leaders, but it could also be the guys that come out with new apps.
Interview 106	The people. Society.
Interview 107	It has got to be Google, Amazon, Facebook. I think they are influencing it in a negative way, they want people to spend more time digitally. The stakeholders will be the executives of the big companies. That is what it is going to be – the guys want money out of it.
Interview 108	The main stakeholders are the developers of digital innovation, this will include software manufacturers, telecommunications and the banking industry.
Interview 109	So as directors or executives you need to say, ok, so this how our people want to communicate – I can either fight it, or I can embrace it. You need to get it to work for you rather than to try and work against it and understand where it is going.
Interview 110	They can be drowned but they can also be made to look really good in the social media and influence their followers. Political parties and politicians. Promote future ideology easy through digital influence. It's the new millennials that are coming out and how they are addressing it. It's individuals who can grow their brands on the social media side of it, the same with young, vibrant entrepreneurs. It's individuals who can grow their brands on the social media side of it, the same with young, vibrant entrepreneurs. I think if they can make special offers and basically embrace digital media by actually creating blogs etc. I think that becomes a major influence.

Table 4.12C Coded Segments of The Main Stakeholders of Digital Innovation	
Interview 111	It starts from understanding what the digital mindset is from a governments' perspective and how that will influence people. I think if the government is digitally enabled or tech savvy, then obviously it affects a lot of people not just from a process perspective, but it also creates more jobs. The stakeholders are everyone. Anyone can innovate, anyone can be a stakeholder to create new technology. It's a combination of everyone in the country that needs to be a stakeholder in creating digital innovation or adapting to it or accepting it or creating it. It depends if you want to impact a specific country or a specific household or digital innovation globally. There should be multiple universities that create "incubators" for innovation.
Interview 112	I think government, as they have laws that influence what we can and cannot do, and then we have the network providers, and the obviously data companies that provide data services. Governments have an influence. Although we are saying data itself doesn't have a negative influence, the fact that people try and block it or control it has a negative impact. The network operators. They provide more data or less data depending on where you are. In some places in Africa, data is a problem, in South Africa it is better or less of problem. The networks control at the moment, that your data expires within 30 or 60 days, I think it has a negative impact on what we are trying to do. There are certain things that prohibits us.
Interview 113	Parents. Society. Leaders of organizations in socializing.
Interview 114	C-level personnel. If the drive is not from the c-level, digital innovation will not happen.
Interview 115	Government. Entrepreneurs. Cyber Security specialists. Academia.
Interview 116	Government regulations. Awareness needs to be driven more than regulation.
Interview 117	Government – they have a role play in education, providing education towards digital jobs. Government should be responsible to create digital infrastructure and services. Access to technology is as important as access to communication or to transport infrastructure. It's a new set of services almost that government need to start providing citizens just as a basic enabler to participate in a digital economy. Government should be responsible to create digital infrastructure and services. Private business today is responsible for that, but I think that it needs to change. It must change that the fundamental services in a society is provided by government and digital services is going to be one of those fundamental services. In future you are going to be dependent on digital infrastructure to live so therefore the must be government supported infrastructural elements in our society around digital technology. People want to see that their skills a person are going to be useful to an employer somewhere, so they have renewed influence on how you would approach the technology. Employers are the ones providing the promise of a livelihood and a job. Education. You cannot build a workforce of the future with skills of the past. There is a role that they would have to play.
Interview 118	Government to play a re-enforcement role in terms of just what the positives could look like and not go into political rhetoric and use this to gain political points. The politicians, people do listen to politicians. Government. The private sector.
Interview 119	Government, they enable through legislation, control the spread. Government should create more infrastructure. They have a primary social responsibility in terms of that. Corporate elements – they have a social responsibility as to who they sell their products to or who they are enabling with it.

Table 4.12C Coded Segments of The Main Stakeholders of Digital Innovation	
Interview 120	On an organizational level it would be the Chief Digital Officer and Digital Advisors.
Interview 121	Government. Businesses will produce what customers want but needs to do it responsibly. The customer dictates what businesses do and is therefore very important.
Interview 122	National Governments. Each one of us need to be responsible in the information we circulate. Industry experts and leaders. Hopefully, AI can create the map of useful information vs bad information.
Interview 123	Anyone who is in a leadership position or in a forward-thinking type of environment.
Interview 124	Everybody. Social influencers.
Interview 125	Government from a regulatory perspective. Digital innovators like banks and telcos to responsibly implement for their customers. Digital innovators like banks and telcos to responsibly implement for their customers.
Interview 126	Consumers. CEO. Technology suppliers.
Interview 127	Large digital companies. Application developers to address the issues of constant exposure.
Interview 128	Most can impact it. There is very few that cannot impact it. If you educate well in your organization, you can get some interesting ideas from very interesting places.
Interview 129	Government with new legislation and severe penalties. Celebrities, as people that are followed quite often on these platforms. Parents. Company executives. The people that host digital platforms have a big responsibility. Digital providers. Schools by expanding their bullying policies on their platforms.
Interview 130	Government should improve infrastructure as an enabler for society. Government regulating bodies though policies with the guidelines even on the cost of infrastructure, e.g. in South Africa with ICASA maximum rates for data. Government with information protection act and the minimizing of cyber-crimes. Digital innovators should solve societal issues, e.g. the payment system in South Africa with the payment of social grants. Schools should actively influence for learning and e-learning.
Interview 131	Government through regulation. Individuals through their own responsible behaviour. Society through collective protest or actions.
Interview 132	Government. Private companies responsible for platforms.
Interview 133	Government. Every individual. The large organizations. Large commercial organizations can add a very big impact through socially responsible leadership. Universities – with some of their research projects that they run in the communities can have an influence.
Interview 134	Government. All the players need to take the impacts into account and grow the economy through defined policies. Political parties will be able to reach more people faster with digital. The same players that make differences in society, are the ones in the digital society that makes a difference. Almost everybody can make a difference. Corporates.
Interview 135	Government. Organizations. The users of digital innovation. Innovators. Educational institutes.
Interview 136	Government, regulators. It is the generations that are coming, and the younger kids to try and, maybe in education or laws that can protect people in certain circumstances. Organizations that are worth a lot that can actually help people out. Some of the organizations that have profited from this digital revolution, start looking at doing work

Table 4.12C Coded Segments of The Main Stakeholders of Digital Innovation	
	relating to helping people in situations where they might have been affected by what has happened.
Interview 137	Government for example censorship and control of internet traffic. Digital corporations. Education sector, schools and universities.
Interview 138	Government to facilitate the education system. Private education institutions.
Interview 139	Mentors that can help society to live more balanced. Parents. Leaders in industries.
Interview 140	Education and understanding should come from all levels. Parents. Leaders in organizations need to be responsible how technology is used not to threaten individuals. Teachers at school.
Source: Francois Volschenk (2018)	

Appendix N2: Categorization of the Coded Segments

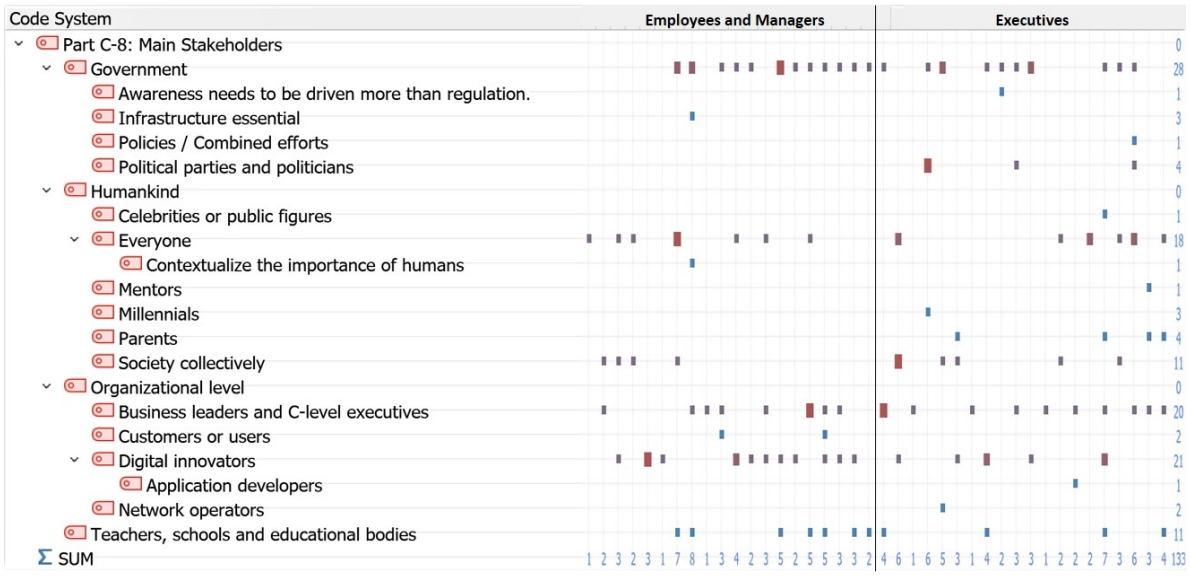
Figure 4.12D
Categorization of Coded Segments

Part C-8: Main Stakeholders
- Government
  - Awareness needs to be driven more than regulation.
  - Infrastructure essential
  - Policies / Combined efforts
  - Political parties and politicians
- Humankind
  - Celebrities or public figures
  - Everyone
    - Contextualize the importance of humans
  - Mentors
  - Millennials
  - Parents
  - Society collectively
- Organizational level
  - Business leaders and C-level executives
  - Customers or users
  - Digital innovators
    - Application developers
  - Network operators
- Teachers, schools and educational bodies

Source: Francois Volschenk (2018)

Appendix N3: Code Matrix Browser

Figure 4.12E
Code Matrix Browser of the Main Stakeholders of Digital Innovation



Source: Francois Volschenk (2018)

APPENDIX O: Requirements for Digital Leadership

Appendix O1: Coded Segments from the Interviews with Participants

Table 4.13C
Coded Segments of Requirements for Digital Leadership

Document Name	Coded segments from interviews (Part D-9)
Interview 101	Open to any new thought from digital innovation that might be plausible or possible within the context that is being heard or seen but tested within context of what you know and what you have experienced. A good digital leader should be open to anything and test anything. Adopt thinking digital or have a digital mindset. Promote usage of digital innovation and digital ideas.
Interview 102	Though leadership will entail the ability to grasp the positive as well as the negative impact of digital innovation on the spheres of business, society and on people. Thought leadership should entail a pragmatic approach to modelling the threats as well as the opportunities, whilst always considering society and the fear of change.
Interview 103	You need to just follow a process over a period of time and then make sure that you take all aspects into considerations, your people, your processes, the technology is obviously part of it but ultimately the whole digital stuff is around information you are getting out of it making sure that what you are trying to get out of your digital innovation and then driving that and It's going to be to test a lot of things. Fail a lot of times so you need to create a culture of failure. The people aspect is by far the most import part of it and you unfortunately have to be tough as part of this because not all your leaders will be good digital leaders going forward. Make sure that you can compete effectively against the guys in the environment that you can actually carry on, and you need to add value in the environment, so you need to act responsibly so anytime in the new society, if you do something stupid, you will be caught out very quickly , so you have to be a responsible corporate citizen and you have to have integrity and the basics which we all talk about. Most important aspect is to firstly embrace it yourself, ensure that from the top down you have the embracing throughout the organization. Ultimately if you do not have your whole team as part of a driving digital, it is not going to work. You need to create a different culture inside your organization to be able to be successful.
Interview 104	A good digital leader should guide the employees towards a sustainable society where the goals are always clearly communicated, and the objective are clear. Digital leaders should promote an environment that cultivates innovation. Promote an environment that cultivates innovation. Innovation needs to be part of the strategic-management agenda. The digital leader should provide a clear objective what the end state is and clear communicate it.
Interview 105	You need to have an open mind. People cannot be stuck in traditional ways of doing things. They need to be open for new possibilities, new challenges and things like that. Because if you have a leader that is still stuck with his old mindset of traditional way of doing things, he is going to enforce is on his team. If you have a leader that is openminded, a go-getter that wants to improve everyone's way of doing things, he is going to encourage his team to do the exact same thing.
Interview 106	The role of IT within organizations has changed dramatically. This shift presents each business with its own set of challenges and good leadership will need to know how to adapt to the new challenges and how to drive it forward I think.
Interview 107	That is to make sure that you take your company on the right path, but you have to stay in the future to lead them on that path. A good leader will know his company will be seen

Table 4.13C Coded Segments of Requirements for Digital Leadership	
	in the marketplace and how it needs to be seen from a digital perspective and lead them there over time. So, take the out the old systems, or integrate them to get them to that future.
Interview 108	A good leader will know his company will be seen in the marketplace and how it needs to be seen from a digital perspective and lead them there over time. So, take the out the old systems, or integrate them to get them to that future.
Interview 109	I feel that there is quite a big lack that although leadership has made a decision we are going into a digital era, or we are moving into digital innovation, there is the lack of filtering it down, communicating it back down into business, into society where we are going. I have stated one comment that everyone has a voice, but you need to sort of channel that voice into one direction. Leadership need to adopt digital innovation and need to take into account the impact of the workforce. Leadership need to adopt digital innovation. Give suitable guidance to the staff on direction on adopting processes.
Interview 110	Understand where society is going with it and use that to your advantage. No longer is it having a goal of 5 to 10 years. Your journey along the way has got to be embracing where the digitization is going to get you to your final goal. It's understanding where it is going, and not fighting it. Embracing it, making use of it.
Interview 111	How do they disrupt the existing environment, the existing markets etc. So, you are looking for a disruptor. You have got to have the right thinking about less is more, and what I mean less is more is suddenly I am not looking at embracing a consumer space of a 100 000, I am now considering a consumer space of 100 000 000. So, instead of charging R10 for an item, you can charge 10c, and make more money, so you have got to have that mentality and they have got to understand how to finance, how to work that in and have a complete understanding of the whole market and how they are going to do it. You are looking for someone that has got a proper understanding of digital, of the digital market etc. If you are looking at a digital leader, that person needs to understand what the digital market is all about, where they are going. It has really boiled down their ability to be entrepreneurial and disruptive at the same way.
Interview 112	Good thought leadership in a state where a company needs to innovate is just setting the scene and vision of where they see the company is going and not creating panic within that organization. From a leadership perspective, leaders set the vision and make people part of that journey as to where you want to go with innovation. The company needs to transform, and there need to become something new and everyone that work at the company should understand that and giving them peace of mind, this is the vision of the organization, this is the benefit to you as an employee and this is how we are going to empower and enable you. But it is then helping people get to that point and giving them the comfort and the confidence and trust that we are not innovating to replace you or what you bring to the organization, we want to use that impact elsewhere. Setting the vision and creating a plan for people to be part of that vision for me, makes a significant difference. Employees are also key stakeholders on helping a company transform and become digital.
Interview 113	Research is very important. People normally think research is a waste of money, but without research you cannot be up to date. A leader should be up to date with all the latest technology, all the time, because things changes within a second now. You must be up to date all the time.
Interview 114	You must understand it before you can be socially responsible for it and you have to drive the right activities and the right actions as a leader to put the right digital transformation strategy in place. Understanding digital innovation.
Interview 115	They get together once a month to discuss thought leadership in that specific industry and then that will launch innovation and changes to the offerings and maybe launch new

Table 4.13C Coded Segments of Requirements for Digital Leadership	
	project to actually enable additional requirements that may be needed in that specific industry. A different mindset to incorporate generations in market analysis will be useful. It's a nice thing to add in your verticals/parallels of the industries maybe put a segmentation on generations. Employing the youngest of the youngest – they come up with innovation and ideas for innovation. We have established a global digital enterprise Thought Leadership Team and within this Thought Leadership Team we have got specific thought leaders in specific industries. A leader needs to be extremely knowledgeable on this topic.
Interview 116	Critical transformation skills and vision. Understand the problems you must solve. Knowledgeable. Technical mastery.
Interview 117	Digital thought leadership is driven in unstructured ways and non-traditional formats. We need to create the pathways for skills to be much higher than where they are at a basic bit level. For an organization, my differentiation will not be on what my competitor can purchase off the shelf, it will be in what creative solution my people have delivered. That will be my competitive edge. For an organization, my differentiation will not be on what my competitor can purchase off the shelf, it will be in what creative solution my people have delivered. That will be my competitive edge. With social media platforms essentially, what they are doing is procuring out their services on from a thought leadership point of view to drive the messaging from the private sector, public sector or wherever it is. That is one of the ways in which thought leadership is simulated in mass society in this point in time. From a good leadership role model point of view, I'm leaning towards from a societal point of view there is the digital mediums and non-traditional mediums, where the growth is now focused on the digital mediums.
Interview 118	You can never spend too much time training people. You must train people every day. Things are moving so fast you just must have a continuous development programme. Leaders should put more thought into what they are going to do with an opportunity, whether for good or for bad. Our leaders, particularly digitally orientated leaders are becoming very disconnected from the real social issued from the ground and it is very easy to hide behind a computer or a ballot sheet. People are becoming disconnected from society running these businesses. True leadership is not taking your eyes off the bottom line and the profit objectives but importantly, don't lose sight of the people that's in "the village". People are becoming disconnected from society running these businesses. What is expected from leaders is to understand social issues, understand the world that they live and that that world doesn't go away when you log off your computer in the evenings.
Interview 119	Digital transformation and innovation are a relatively young subject in academia in general, I don't really believe that there are any experts because where will they have built the expertise. I believe that there are those that have had better exposure than others, and we are all learning all the time. Thought leadership is the ability to acknowledge what you know, but also most importantly do be open minded to the realities of that.
Interview 120	From a corporate perspective digital disruption has got to be right from the top. Specific generations will have different adoption rates to digital transformation. Some of the ideas or innovations come from bottom up, but the adoption of it, the strategizing, culture has got to be from the top.
Interview 121	I think the right approach to leadership and digital innovation would be to articulate the art of the possible. Enabling the digital innovation by providing the correct tools and leading the individuals to apply the technology it works.

Table 4.13C Coded Segments of Requirements for Digital Leadership	
Interview 122	Sound business principles. Constantly drive new innovation. Job creation to grow the business. The entrepreneurial spirit drives innovation.
Interview 123	The main driver at a senior level tends to be profit focussed therefore it is of utmost importance that we understand the massive role digital innovation can play in this space. People will pay a lot for ease of use and convenience. By adopting this ourselves instead of just trying to convince other to adopt, we will enforce adoption much in the same way as GDPR enforces compliance. We should then focus on the method of generating that profit above the actual profit and the traditional approach of “working the deal”.
Interview 124	And it’s a quantum balance between over investing or rather growing it a pay-as-you-go type environment. Do some stabs at new initiatives see what the effects of it because it’s an environment where there are no right or wrong answers like we said earlier It's almost greenfield situation. Rather go in a trial type of environment. I think though leadership in that environment is taking the risk to be ahead of the game. Within the corporate environment if It's strategic of nature you are going to have to grow it through planned change to get the efficiencies from digital.
Interview 125	Move beyond current barriers. Having a mentality of everything is open. Looking at the long term.
Interview 126	Mobilize the employees in the journey to understand the true impact and communicate the potential benefits. Good leadership is about vision about digital.
Interview 127	A clear plan needs to be documented and good leaders will embrace the technologies available to them to implement digital innovation as well as staff who are required to carry out the strategy. Thought leadership regarding forward thinking/thinking out of the box in order to gain competitive advantage is required.
Interview 128	The guys that don’t get it or embrace it either don’t exist or are falling behind/disappear, and the guys that adopt and embrace it, make it happen. Good leaders thrive, then the companies thrive because they understand what the technology can do for the company.
Interview 129	When you allow people to experiment, when you allow people freedom of thought, freedom of expression and to explore innovative ideas, allow them to fail and allow them to fail fast. You will see that what management or top management might implement is often not what is happening on the floor in terms of innovation. You need to create the right environment for people. I think the best innovation comes when you allow people a little freedom. You need to create the right environment for people to go through that innovation and once you have done that, and you create a forum for people who are guaranteed that management won’t fight about failure but will encourage them to try and try again, then you start creating moment around your digital innovation.
Interview 130	A digital leader is someone who is a leader of new ideas, but also implementing it in a responsible manner.
Interview 131	In all look at respecting human values – this cut across cultures and religions.
Interview 132	Gain a realistic understanding of what digital innovation can and cannot do.
Interview 133	Understanding technology is the most important first step in digital innovation.
Interview 134	The same as in other industries and all other disruptions. It’s just another vehicle – I do not think it is unique at all. Nothing changed according to me. Leaders must be more cautious around all sorts of communication. There is a huge influence on people

Table 4.13C Coded Segments of Requirements for Digital Leadership	
	because it is so widespread. I do think that it makes a competitive environment. Digital remove barriers to entry to enable entrepreneurs.
Interview 135	Continuously expand knowledge of digital innovation in diverse services and products/sectors, stay informed. Be realistic. Use information carefully. Be open to others' opinions and ideas. Be aware of needs, and requirements. Set a clear vision, help others to also accomplish it. Use initiative.
Interview 136	Some of the ideas and things might not work, and the direction that you think it's going towards might change again, there might be another game player coming or someone with a new idea out there. You will be looking at someone that is tech savvy, who understands the market, the trends and has the vision to drive your company in that direction, knowing all the game changers or the steps required to make it work. But the importance is being able to identify that and prepare yourself, and not be the last one to go that route. If they actually put a little bit of thought in it and look at what is the disruption, who is it going to affect, good or bad, you can sort of maybe see the warning flags beforehand and maybe what you are attempting you can somehow modify it slightly so that the impact can be less, especially if it is not a good disruption. You must have a good understanding of the technology out there.
Interview 137	I believe for any innovation to be successful it needs to be meaningfully different. The business alignment needs to be ensured with people in the organization to successfully execute on the digital strategy.
Interview 138	Invest in research and development for future opportunities. Companies should create awareness of digital disruption. Think about the influence of digital and how the organization can positively use it for new opportunities.
Interview 139	Leaders should be a disruptor to achieve a competitive advantage in the market by utilizing the available people, process and information.
Interview 140	The attitude why digital is required in an organization should be communicated with employees. The key is that leaders is not a replacement for humans. Enable individuals to grow with digital transformation.
Source: Francois Volschenk (2018)	

Appendix O2: Categorization of the Coded Segments

Figure 4.13D
Categorization of Coded Segments

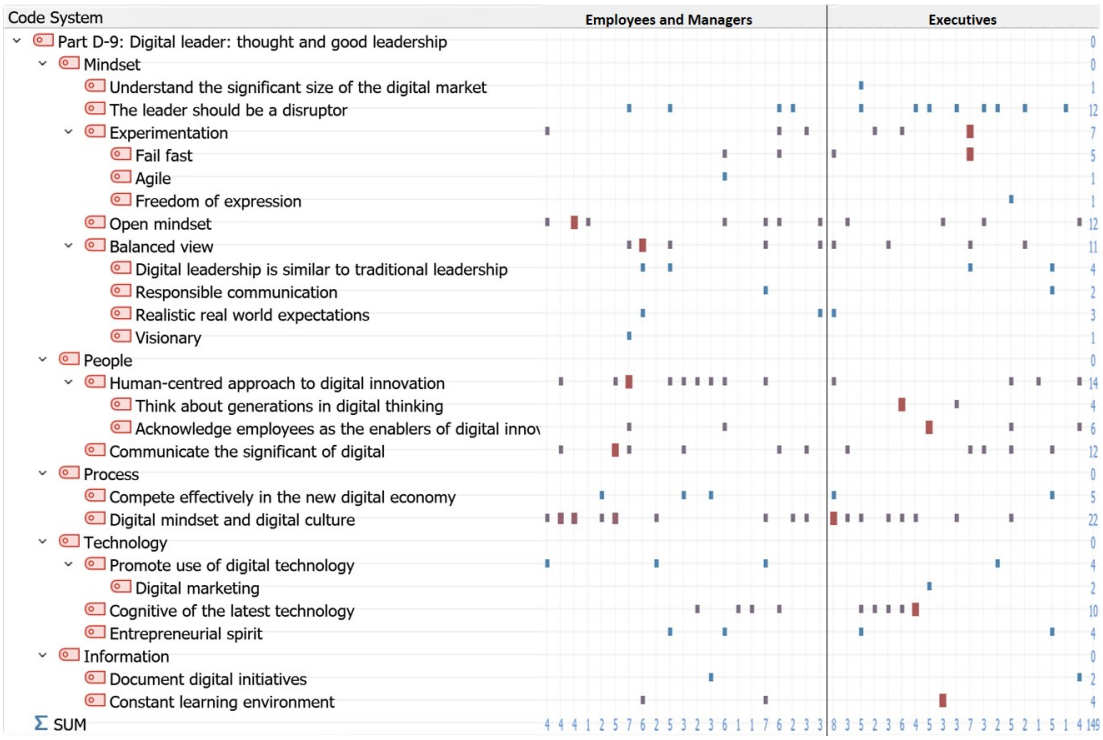
Part D-9: Digital leader: thought and good leadership

- Mindset
  - Understand the significant size of the digital market
  - Leader is a disruptor
  - Experimentation
    - Fail fast
    - Agile
    - Freedom of expression
  - Open mindset
  - Balanced view
    - Digital leadership is similar to traditional leadership
    - Responsible communication
    - Realistic real-world expectations
    - Visionary
- People
  - Human-centred approach to digital innovation
    - Think about generations in digital thinking
    - Acknowledge employees as the enablers of digital innovation
  - Communicate the significant of digital
- Process
  - Compete effectively in the new digital economy
  - Digital mindset and digital culture
- Technology
  - Promote use of digital technology
    - Digital marketing
  - Cognitive of the latest technology
  - Entrepreneurial spirit
- Information
  - Document digital initiatives
  - Constant learning environment

Source: Francois Volschenk (2018)

Appendix O3: Code Matrix Browser

Figure 4.13E
Code Matrix Browser of Requirements for Digital Leadership



Source: Francois Volschenk (2018)

APPENDIX P: The Expectations from Socially Responsible Digital Leadership

Appendix P1: Coded Segments from the Interviews with Participants

Table 4.14C Coded Segments of Expectations of Socially Responsible Digital Leadership	
Document Name	Coded segments from interviews (Part D-10)
Interview 101	Cultivate a culture of thinking digital but not being digital. Teach a different way of obtaining skills, experience and thinking about your career. Inform people of the negative, inform them of what could potentially be. Teach the digital mindset in terms of how the skills sets going forward into the digital age needs to change, accommodated within your leadership circle, or in the sense of as much as you think outside of the box on digital innovation.
Interview 102	The inevitability of digital innovation and change should not be used as an excuse to railroad the person or push the person towards an outcome – it should always be used as a guiding light, enticing them to a better or a possible future. Guiding a way that embraces both the pros and the cons in such a way that the person is always in a better position, whether perceptually or actual. Socially Responsible digital leadership should entail keeping the person at the centre of the picture – how the person can be affected, impacted and empowered – both negatively and positively.
Interview 103	In general, they need to have a view around society, what impact it has in any case, so that should be pretty much the same as you had previously if you had the right mindset. You will have a lot more responsibilities, you will do a lot more social events, social interactions, so you have to be responsible in what you do, and how you do it. You have accountability, and you have to be cautious in what you say and what you do because It's there forever.
Interview 104	In the work environment there should be a sense of upliftment amongst all employees. That is everyone need to reach the finish line at the same time. Due to the education system that is based on the industrial era, the end results should be aimed towards the fulfilling not only economic requirements but also Corporate and Social Responsibilities. Sustainable society – to develop for the future. You can do whatever you need to achieve your goal if you do not get in the way of anyone else trying to achieve their goals.
Interview 105	A while ago you had the old discussion about social equilibrium, how things move, and you have to take that into consideration, if you don't, you put yourself in a negative spot from the word get go. They need to take into consideration that society is a bit messed up. Society out there thrive on negative things, so you need to take that into consideration. Someone could get short-term benefits because of irrational societal behaviour, but in the long-term, rational thinking will prevail.
Interview 106	Take leadership/ charge in showing that a mindset change is possible and not always harmful.
Interview 107	They should make sure they understand how the applications impact social life and how it impacts children that they are working with.
Interview 108	Communication, and lead the digital innovation. Give it down in small pieces and make sure that people understand the unknown in going to digital innovation. Do not just force digital down on people but lead responsibly to educate.
Interview 109	As leaders you can reach more people or influence more people. Our lives are almost now available to everyone. So, your life is almost in the electronic age, It's out there. People

Table 4.14C Coded Segments of Expectations of Socially Responsible Digital Leadership	
	know what you did, where you are, what you are doing, more so than ever before. You need to understand your responsibilities and what you are putting out there. And that is the responsibility from leadership. A leader does have responsibilities. His social responsibility is to understand where he is going and how can you assist it. Think about the doors that can open. Not only for people like us but for schools, how easy is it to reach millions of people. You could never do that in the past. Now it is at a click of a button, at your fingertips you can communicate with millions of people. The should be more education in schools and awareness of the impact of the digital world. Our lives are almost now available to everyone. So, your life is almost in the electronic age, it's out there. People know what you did, where you are, what you are doing, more so than ever before.
Interview 110	A leader has got to be open and honest. It has got to mean something to me as a person who is going to be influenced by a digital leader. A leader has got to be open and honest.
Interview 111	You can show people the digital picture but if you don't help them get there and socialise it and work with them I don't think you are going to get very far. Communicating by email doesn't have the same impact that you can have with people around you that can be your local community, society or people in the office. It's talking about approaching the society and maybe the communities around you that you are going to impact to say that this is what you want to do.
Interview 112	Leaders should know what the influence on society in everything is they do, any new thing that changes, leaders need to know what the impact would be on society. We could have a society that is very unhappy, and the society can go against anything new if you do not have the buy-in of people. The people are important.
Interview 113	As a human being I should be caring about who I am influencing. You must drive the right activities and the right actions as a leader to put the right digital transformation strategy in place. Whether it be within your organization or whether it be for the broader circle of society. Accountability, responsible ownership that, if I am going to live it as an organization I have got to believe it, believe in it. There should be an understanding of what is the impact or social responsibility towards driving that innovation. Digital transformation for people today means monetizing their digital experience. "What's in it for me" from a buck perspective. Ownership. Wrong direction can cause the wrong activity and wrong behaviour in the long run.
Interview 114	We can have a cutting edge in that regard with digital innovation, but beside that I think it's important that we infiltrate the universities and maybe even schools with digital thinking. We need to engage with universities, which we are doing at the moment and introducing this topic at a very young age while the students are busy studying and I think it is our responsibility to train these people from an early age into this and have them make digitalization topics as part of their curriculum. Digital is a tool. You can use it in a positive way, and in a negative way.
Interview 115	Be ethical and have moral understanding. Digital is a tool. You can use it in a positive way, and in a negative way. It is up to the digital leaders to really make sure that the tools that land in our hands are used for the better matter of society. Be accountable for the influence you create.
Interview 116	Our skilled average across each country needs to be elevated because digital disruption will influence that bottom of the pyramid jobs that we currently have. There should be definitely invest into making accessibility of education much better and not just at the tertiary level but obviously at the secondary- and primary levels as well.
Interview 117	Leaders may argue they have this piece of technology and I can use it right now to automate this process and make a ton of money or you can say I have this piece of technology and I can do the following things that has an impact on society or the place

Table 4.14C Coded Segments of Expectations of Socially Responsible Digital Leadership	
	where we operate and generate an income. You need to get people to solve for impact and solve for maximum impact as opposed to solving maximum profit.
Interview 118	What people have always appreciated is just a balanced truth. Honesty and transparency. A lot of things can be done with pro-active re-purposing and re-training people for the new world. In the short term you make sure that you re-purpose people but not only to work in your organization but to prepare them to take advantage of other opportunities outside the market, and I believe it is quite a pragmatic approach. The role that leaders must play is to be realistic around opportunities, and around challenges that will be faced. Because what people need is inspiration with transparency. We didn't automate all those processes, but we have managed to re-train all those people as plumbers and electricians. They are self-employed, but we give them the business that we have in the insurance business. So, if a geyser breaks they are the ones that go and respond, but they are now running their own business and they can hire people.
Interview 119	Honesty, transparency, openness and telling people what to expect. All digital transformation must be done in honesty. It's the a-z of the influence of digitalization and helping employees understand it. It's the awareness of what comes with it. Managing the risk, vocalizing the risk. Managing the risk, vocalizing the risk. Don't just ignore the problem or only address the benefit of the new direction.
Interview 120	We need to ensure that we keep that social interaction above and behind everything with all the digital innovation we are driving. Explaining the importance of the human interaction and social elements. I think that is something we really need to be cognizant of and not discard. Free training is a responsibility of the organizations that create these technologies. Explaining the importance of the human interaction and social elements.
Interview 121	Holistic approach beyond the bottom line to factor in all other factors of the socio-economic influence on society. Education should align with the new requirements with specific courses for the youth. Innovative new ways to teach the youth of what to expect from digital innovation with a balanced approach that include technology. Mitigate negative perception of digital with education.
Interview 122	To have a social reputation management function that will vet and confirm all information shared. The key would be to ensure organizations of the world are kept to account for the vetting process of information.
Interview 123	If that means going into rural environments like for example the department of health and implementing the system. I think more of those type of environments will come to the forefront. It is to obviously make available what is out there to the wider community.
Interview 124	Leaders positively impact lives and expect good outcomes. Leaders take people on the journey with them.
Interview 125	Integrity above all that aligns with the company ethos. Responsibility, specific in marketing activities. Digital marketing communication is unregulated, but the responsibility and accountability should still remain with the leaders of the organization. Awareness on the full impact of digital innovation.
Interview 126	The education of staff as to the importance of digital transformation. The benefits to organizations must be clearly communicated to staff in order to eliminate the concerns of job losses, and in order to assist staff with the transformation process.
Interview 127	Being a socially responsible digital leaders is as simple as knowing what is right and wrong. If the principles and fundamentals are there from a company/employee situation, a parent/child situation, from a principal/student situation, the challenge that I have with the concept is the "new norm" is completely to what it was 10 years ago.
Interview 128	It can all start from that bit of personal investment for a person. Instead of focusing inwards in your company, try and help your staff, and through helping them, help yourself.

Table 4.14C Coded Segments of Expectations of Socially Responsible Digital Leadership	
	I believe that educating people around the risk around them as a person and utilising that to make them more valuable for your company.
Interview 129	Leaders should expand their corporate governance to incorporate a new digital initiative in their different organizations. If you value privacy for instance, then you are not going to go and “spam” 20 000 people every month and don’t want to hear from them.
Interview 130	Build experiences of the future of digital innovation to open the eyes of the youth to opportunities. Investing in strengthening young people with opportunities through learning programs.
Interview 131	Integrity above all.
Interview 132	Leaders should be guided by ethics. The morality of a leader influences the responsible actions.
Interview 133	A leader needs to identify where there are opportunities to get involved with in society, also to very clearly understand if he is now in an organization embarking on this, understand what impact it could have and then build some programme to support society and educate them on that. As well as internally in organizations. If that road has an impact on employees you must definitely have something in that programme to support the employees and educate, re-tool them. Somehow instate a programme to prepare people for what the solution can give them and what the negative impacts could be.
Interview 134	Be honest, ethical and accountable. Use integrity. Guide and give direction. Guide and give direction. Create awareness of the possibilities and reality of digital innovation. Encourage user responsibility. Be human when you have to follow this route. Determine what the affected employee would need to get back onto his/her feet again and provide support to them. Educate society of the potential dangers of digital innovation and the risks. Respect the values of different societies. Contribute to society in a way that will have a positive, real impact in their lives, not just money-oriented.
Interview 135	Use integrity.
Interview 136	Guide and give direction.
Interview 137	The ability to look at the disruption that you are causing, achieving what you want to achieve and just looking at the fall out – is your workforce going to diminish, or are you going to affect people in certain regions in the world where factories are going to close or jobs are moving and so on, and looking at some way of actually helping those people who will be affected. I think just maybe being more socially responsible for the companies’ actions. Money drives a lot of this – it is what people get out of it, and how we can profit.
Interview 138	Furthermore, ethical and moral values need to be top mind for any leader who takes part in digital innovation because repercussions of the innovation could have a significant impact on Its users. Leaders should have a moral compass to guide them. The behaviour of leaders to guide employees in the right direction. Forward thinking to anticipate the influence of technology on people. Learn from previous mistakes through reflection on the influence of digital.
Interview 139	Mitigate the negative factors of the impact on people through education. Transparency to ensure that any negative information about the influence of digital is made public. Leaders have a social responsibility to use technology with accountability for their actions.
Interview 140	Leaders should be ethical and responsible information of individuals with appropriate guaranteed safety. Leaders have a social responsibility to use technology with accountability for their actions.
Source: Francois Volschenk (2018)	

Appendix P2: Categorization of the Coded Segments

Figure 4.14D
Categorization of Coded Segments

Part D-10: Expectation Socially Responsible Digital Leader

- Leader with values and principles
  - Accountable
  - Ethics
  - Honesty
  - Integrity
  - Transparency
- Positively influence more people
  - Enable individuals
  - Guidance
  - Personal investment
  - Social reputation management
- Responsible digital culture
  - Anticipate the influence
  - Awareness
  - Digital corporate governance
  - Digital Education
  - Do not force digital on anyone
  - Encourage peoples' involvement and responsibility
  - Human-centred approach
    - Personal communication where possible
  - Promote Learning
    - Get involved with schools to educate
    - Mitigate negative risks through new skills
    - Tertiary education on digital influence
  - Re-purpose in organization where possible
  - Responsible communication
  - Think digital - but don't be digital
  - Transparent in educating about the negative
- Sustainable society
  - Digital should not be all about money
    - Maximum impact vs maximum profit
  - Permanent accountability
  - Societal thinking is not always rational

Source: Francois Volschenk (2018)

Appendix P3: Code Matrix Browser

Figure 4.14E
Code Matrix Browser of Expectations of Socially Responsible Digital Leadership

Source: Francois Volschenk (2018)

APPENDIX Q: Mitigation of the Negative Influences of Digital

Appendix Q1: Coded Segments from the Interviews with Participants

Table 4.15C Coded Segments of the Mitigation of the Negative Influences of Digital	
Document Name	Coded segments from interviews (Part D-11)
Interview 101	Start cultivating new skill sets and new thinking now for the children of the future and the junior people within organizations of the future so that by the time that digital is the norm, instead of the buzzword. Knowledge to a better way of doing it and your schools, universities, everyone has adopted in a sense a root change in terms of how we learn, how we provide our skill sets, in what skill areas we work. I think leaders should become accustomed to providing a certain buffer within the period that the transformation is happening.
Interview 102	This is where responsible digital leadership should be focusing. Creating the platform for such an environment. Digitization that promotes education and development. More people can now grow into newly created jobs that are different in nature from the jobs lost to digitisation efficiency. Societal mentality of productivity and enterprise, not of hopelessness or a sedentary lifestyle orientation. The leaders need to entice the people to embrace and seek opportunities. If the state can sustainably pay a liveable wage from tax, individuals can now create new value and add to their income, as their basic needs are catered for. If the psyche of the being is considered, where their self-perception and sense of dignity is strongly influenced by what they do and the value they create, then, having basic needs met, they can now move to the next levels of Maslow's hierarchy of needs – where they can reach self-actualisation at their level of talent, capability and ability. If the psyche of the being is considered, where their self-perception and sense of dignity is strongly influenced by what they do and the value they create, then, having basic needs met, they can now move to the next levels of Maslow's hierarchy of needs – where they can reach self-actualisation at their level of talent, capability and ability. Responsible leaders should embrace the taxation of digital workers – as the benefit to society should be bolstered through tax. Irrespective of capitalistic motives in implementing digitisation, logical and physical robots, the outcome will be a more socialistic society.
Interview 103	You need to make sure that you are with the times that you can create jobs in your environment, so you must almost be quicker in your digital journey to ensure this happens. If you create more efficiencies – I always say, I'm not saying it should happen, because people adapt as quick as things happen around them or that is what is supposed to happen, so there is always a portion of people of people who will not adapt and that will happen in any case. I think people need to act quicker and do things faster. There will be consequences of the digital disruption, so you must embrace it – that is the most important part of it. I mean, the way you have to be responsible is that you have to ensure that your company does not go down, so that is the first step, otherwise you lose 100% of your staff.
Interview 104	New specialized jobs are emerging such as data governance, IT legislation, IT security, cloud computing. There needs to education programmes available for individuals who has not had access to be part of the digital revolution – equality. Digital is a mindset. Digital also creates more jobs that did not exist before. People should have equal opportunity to ensure equality.
Interview 105	All jobs could fall away but it could create new jobs. So now the job changes, where It's not someone that is now running to do something, it is now actually a system that is doing it in the back-end. So, putting that guy to say, well, instead of just concentrating moving the

Table 4.15C Coded Segments of the Mitigation of the Negative Influences of Digital	
	tape, now look at the blueprints, start looking at configuring blueprints on how it should do it, so I don't take your job away, I take your "old" job away, but I'm giving you a new responsibility. The thing is, a lot of people are saying it is going to decrease the jobs by 50%, If you change the mindset of these guys, and say, you know what, this is the traditional way you did things, these are the new legs in digital, start concentrating on that – now you won't decrease the jobs, All jobs could fall away but it could create new jobs. The threat of job losses is one way of how job losses can be decreased, by changing the people's mindsets by saying, listening, digital is happening, we need to stop thinking in a traditional way of how back up used to be. I.e., someone runs with a tape, put it in a machine, backs the tape up, takes it out, and puts it down there, that's now all digital media, and it gets digitised.
Interview 106	If one look at the stats, if It's in your power, start upskilling your people that will be affected with the latest digital innovation trends.
Interview 107	If you look at social corporate responsibility that is one way of looking after it, taking that money and re-investing it in people whom are affected by this. I think people need to be re-trained to operate in a digital environment. You could apply the redundant jobs to run small little businesses off your digital platform, to deliver your services as entrepreneurs. Digital leaders should become enablers for entrepreneurs. Digital. It's integrating. It's automating, it's making things faster. Because the impact is coming. You are either going to become a digital organization or disappear. A lot of your menial jobs will disappear, it will be automated, and there should be new jobs that is created out of this, and we have to get them involved in these new jobs.
Interview 108	Leaders will have different ways in generating revenue, they will have different ways wherever they closed off certain legacy jobs, or old jobs, there will be different revenue streams using digital adoption in generating jobs for people, or some form of revenue for people to carry on. Nowadays you have millennials – there people are all on phones, they are busy working on these things, there is a lot of social interaction, and revenues get generated from that. You can create the positions, so people might not be doing the same thing, but they are still going to have jobs.
Interview 109	Once again, my view on this point is that you must find the opportunities. You can create the positions, so people might not be doing the same thing, but they are still going to have jobs.
Interview 110	If we think out of the box and we create warehouses or fitment stores, in other words, instead of standing there, what you do is you are lining up people to experience whatever it is they need to experience, whether it is shopping for clothes, or suitcases or whatever. So, you really have to focus on re-purposing people and optimising their performance and their productivity. That is a difficult one because you have to re-purpose people. To me it is all about re-purposing, it's extracting out how we can do more with less, but that doesn't mean less people. For me it is all about re-purposing, it's extracting out how we can do more with less, but that doesn't mean less people. What it means is, if we re-purpose out people properly, and digital leaders should understand this, it's all and well to go and create a new online business and then suddenly there is another new 100 000 online businesses in South Africa, and we take away retail, society would still want to go and touch, see items.
Interview 111	The old legacy jobs of forefathers and what they were doing I think they will definitely be replaced with technology, but I think as they are replaced new jobs will be created. At the rate of technology old jobs will be replaced where your function will be something else, but more opportunities are available. For the young millennials, life and experiences need to be fluid and, on the go, and it is about how does it make you feel as a human being.

Table 4.15C Coded Segments of the Mitigation of the Negative Influences of Digital	
Interview 112	What I think is, that if you bring in digital, there can be a lot of job creation because of that new innovation with entrepreneurs enabled by digital. I don't think that the reducing of the current jobs is any problem. They need to need to train their people better. There could be new courses at universities. What I think is, that if you bring in digital, there can be a lot of job creation because of that new innovation with entrepreneurs enabled by digital.
Interview 113	The big thing for me is in to recognising the other opportunities in helping individuals adopt and adapt to those other opportunities where they are being directly threatened. So, the number of people required for that specific element will drop, understood, accepted. Digital will happen there is no doubt about that.
Interview 114	I think digitalization can create jobs because the point of digitalization is to increase revenue, shorter times to market, increase the product brand, and if you can do that, then it is not about saving money anymore, it is about making money. So, at the moment you are in a position where you are increasing your revenue, you can create digital jobs and I think a big part of it would be market related research.
Interview 115	You need to provide visibility. People are not fools – they can see it coming. Digital enables entrepreneurs much better than before.
Interview 116	Digital channels offer no differentiation. It is your product, people and service that makes all the differentiation in the customers' mind.
Interview 117	Yes, but whether it will take away 50% of jobs, to that point that is going to depend on how the leader chooses to use the technology. Don't be evil, don't be greedy. Acting responsibly is a matter of keeping the people in mind. This idea that you go to university or college and walk out of there and then you think you are set for life, and a job – it doesn't work that way anymore. You must, especially in the digital field, reskill yourself every few years completely to be able to keep up.
Interview 118	Open and help the people on the journey.
Interview 119	An adaptive approach with education from the youngest age to prepare the youth. Importantly the human aspect should always be a focus. The youth almost teach themselves how to use technology, the concern is how to prepare a child to be able to make a living in 20 years. Identify gaps where people with cognitive abilities will be relevant.
Interview 120	By automating I can replace the original resources with a low-cost infallible system while reallocating the original resources to the innovation function. If we don't automate or digitise certain functions, then trying to be innovative will mean that additional resources will need to be considered at a growing cost. Traditional jobs will be replaced but utilising those resources to push and deliver innovation is the key. Automation on the other hand has to take place to allow the move to the new area.
Interview 121	It's a matter of if you are talking of organizational now it boils down to change management again, organizational change management, it creates positive messages, it creates wins upsides, and I think it is to keep people involved in a process. I think it creates new opportunities as it creates opportunities to reskill.
Interview 122	I don't see a decrease of 50% in jobs. They will rather move upwards in the stack. Lower level jobs will decrease but higher-level jobs will start opening. It allows more people to be entrepreneurs.
Interview 123	I think leaders can give guiding principles with policies to minimize the negative impact of people. Protect employees is much as possible.

Table 4.15C Coded Segments of the Mitigation of the Negative Influences of Digital	
Interview 124	Clear articulation on how digital will create further opportunities for growth both for employees and the organization. Education on digital innovation within organizations is important. Digital leaders will need to rollout a complete change management plan which must include education on the benefits of digital innovation and how the organization will restructure to accommodate for the strategy.
Interview 125	You can see what is coming, re-direct, institute training, continue with processes. A leader of organizations and society should be strong enough, wise and strategic enough to understand the impact and influence that digitalization is going to have and manage direct the ship accordingly, with minimal impact.
Interview 126	What does the future look like, what are the kind of investments people should make in themselves to be ready for that future. A good digital leader helps these people run ahead of that curve, not behind that curve. Humans can always re-invent themselves to do whatever they want to do. There is a couple of very interesting tech talks around the same concepts where people talk about, can a human do what a machine can't do, and I think digital leaders should spend some time in educating their staff on those opportunities.
Interview 127	I do not agree that jobs will be decreased by 50%. I think people will come up with new jobs. I think companies will have to spend more on R&D to come up with new things and new ways to employ people. There might be an impact with regards to tax on companies over the longer term to provide more of a social net for these people that become redundant. Pretty much society will have to take care of them to a certain extent. Digital is not a new thing, it has repeated itself in society. People will have to start acting more responsible with their money, because they might not be relevant for that long. They will have to learn quicker and act more responsibly with their own funds.
Interview 128	Improve workforce planning to understand the potential requirements and start upskilling individuals to address the requirements. Enable employees already for the future by upskilling them for the future.
Interview 129	Influence educational institutions towards new relevant jobs. Reskill workforce with new capabilities.
Interview 130	Increase the skillset of current workforce to become more widely skilled.
Interview 131	Within an organization it is the leader's responsibility to identify the impact it could have upfront and then make every effort possible to re-tool the existing people to enable them to adapt to the changes in the organization. Create new opportunities for the future for employees where at all possible.
Interview 132	Start cultivating new skill sets and new thinking now for the children of the future and the junior people within organizations of the future so that by the time that digital is the norm, instead of the buzzword. Knowledge to a better way of doing it and your schools, universities, everyone has adopted in a sense a root change in terms of how we learn, how we provide our skill sets, in what skill areas we work. I think leaders should become accustomed to providing a certain buffer within the period that the transformation is happening.
Interview 133	This is where responsible digital leadership should be focusing. Creating the platform for such an environment. Digitization that promotes education and development. More people can now grow into newly created jobs that are different in nature from the jobs lost to digitisation efficiency. Societal mentality of productivity and enterprise, not of hopelessness or a sedentary lifestyle orientation. The leaders need to entice the people to embrace and seek opportunities. If the state can sustainably pay a liveable wage from tax, individuals can now create new value and add to their income, as their basic needs are catered for. If the psyche of the being is considered, where their self-perception and sense of dignity is

Table 4.15C Coded Segments of the Mitigation of the Negative Influences of Digital	
	strongly influenced by what they do and the value they create, then, having basic needs met, they can now move to the next levels of Maslow's hierarchy of needs – where they can reach self-actualisation at their level of talent, capability and ability. If the psyche of the being is considered, where their self-perception and sense of dignity is strongly influenced by what they do and the value they create, then, having basic needs met, they can now move to the next levels of Maslow's hierarchy of needs – where they can reach self-actualisation at their level of talent, capability and ability. Responsible leaders should embrace the taxation of digital workers – as the benefit to society should be bolstered through tax. Irrespective of capitalistic motives in implementing digitisation, logical and physical robots, the outcome will be a more socialistic society.
Interview 134	Productivity will lead to higher profits and fairer competition and it will lead to other industries. By taking the gains, the money available is still there, and create other industries and opportunities.
Interview 135	Make fair decisions on positions and have workable solutions that benefit the organization as well as the individual. Some employees might have years of practical experience and valuable knowledge that can be incorporated in a digital environment. Motivate employees to be a part of the process. Include employees in the transformation process, listen to their ideas and inputs. Analyse employee skills to identify new possibilities and utilize it within the organization to create new opportunities'-train and educate on digital technology. Explain the reasons for transformation and future benefits and ensuring sustainability of the organization, share the short- and long-term goals. Identify and assess the impacted jobs within the organization. Expect initial negativity from employees. Understand the problems and fears of employees whom' s positions might become redundant and the effect it will have on their personal lives and their families. Where there is definite job redundancy, there will be costs involved. Offer severance packages to employees that's job will be replaced completely by digital innovation, where there is no opportunity for placement at any level or other position within the organization.
Interview 136	I think the idea is especially in organizations where they are looking at heading in that specific route and they know, fine, we have 10 000 call centre people in play – what do we do with it – do we have the possibility to upskill and use it somewhere else or what avenues do we have. The change involves AI, big data and medical things, if you look at what is happening on that front, it will have on impact on certain jobs in certain areas.
Interview 137	I believe organization need to upskill their employees in order to maintain relevance. The education system also needs to update their curriculum in order to make sure graduates have relevant skills in this day and age.
Interview 138	Assist with the development of new skills e.g. decision-making and cognitive abilities.
Interview 139	New opportunities will be unlocked with digital innovation for individuals to acquire the skills in the digital era. Digital innovation will used to create better efficiencies to reduce cost with a direct influence on certain individuals with specific jobs. Society should be more responsible in interacting on the internet and digital platforms.
Interview 140	It is irresponsible to say to 50% of people they will be replaced. Leaders should motivate individuals to reskill themselves for the changes that are anticipated. People should take responsibility for their own future by being pro-active to enable themselves.
Source: Francois Volschenk (2018)	

Appendix Q2: Categorization of the Coded Segments

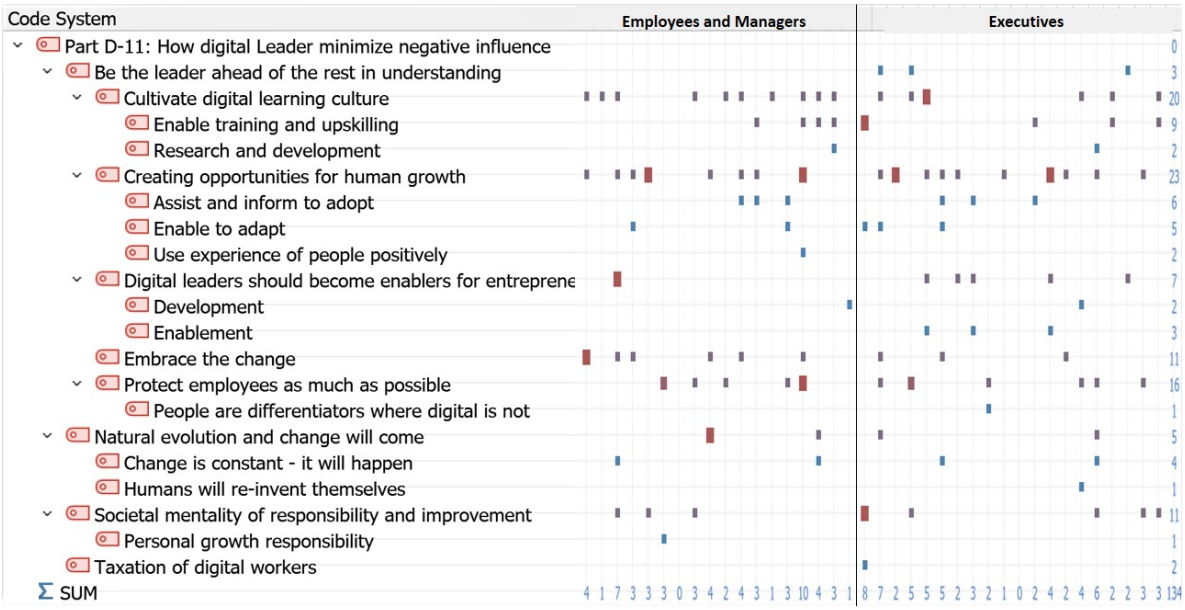
Figure 4.15D
Categorization of Coded Segments

- Part D-11: Digital Leader minimize negative influence
  - Be the leader ahead of the rest in understanding
    - Cultivate digital learning culture
      - Enable training and upskilling
      - Research and development
    - Creating opportunities for human growth
      - Assist and inform to adopt
      - Enable to adapt
      - Use experience of people positively
    - Digital leaders should become enablers for entrepreneurs
      - Development
      - Enablement
    - Embrace the change
    - Protect employees as much as possible
      - People are differentiators where digital is not
  - Natural evolution and change will come
    - Change is constant - it will happen
    - Humans will re-invent themselves
  - Societal mentality of responsibility and improvement
    - Personal growth responsibility
  - Consider the taxation of digital workers

Source: Francois Volschenk (2018)

Appendix Q3: Code Matrix Browser

Figure 4.15E
Code Matrix Browser of the Mitigation of the Negative Influences of Digital



Source: Francois Volschenk (2018)

APPENDIX R: Digital Leadership Through Digital Innovation

Appendix R1: Coded Segments from the Interviews with Participants

Table 4.16C Coded Segments of Digital Leadership Through Digital Innovation	
Document Name	Coded segments from interviews (Part E-1)
Interview 101	I believe people within my immediate context, still only focus on technology when you talk digital and there is no improvement in the sense of people and process
Interview 102	Through resistance to change and lack of understanding, coupled with a fear of the reaction of unions and labour movements, it is sub-optimal.
Interview 103	We are keeping the same guys and we are not changing the top people to change and they haven't changes so that is why people are not embracing it for the whole organization. I don't the guys that oversee digital innovation have the knowledge and capabilities and not only the guys in charge, the whole organization top level, has to be digitally orientated. There are individuals that are embracing it, but not everybody.
Interview 104	Enabled enhanced experience where employees can work from anywhere, less repetitive work, ease of accessibility. Less repetitive work, so you can focus on cognitive work, ease of accessibility, experience.
Interview 105	The adoption in South Africa is very slow. But, there are certain companies that feel that digitisation is very important to them to make their life easier. Leaders are very important to drive digital innovation. A good leader doesn't just lead, he encourages his team.
Interview 106	Motivate people to think out of the box. Leaders should empower people to think differently and get people to collaborate across boundaries.
Interview 107	People are a lot more non-interacting with each other from a digital innovation point of view each organization currently have their own digital innovation strategy, but there is no synergy between all of them if you look at the telco's, banks and social media. People need to adopt with a dash of speed because we have got all the latest and greatest innovation available at out fingertips, but to adopt into that is going to be a problem. Digital adoption in new organizations, means businesses is an instant, new organizations will be formed immediately using digital innovation products by doing whatever it is to get up and running and start generating revenue. In South Africa, everything is still a little bit tangible, people are not moving fast enough. Currently within the South African market, people are 3 to 4 years behind digital innovation. The mere fact that come from our society, whether it's been cultural or history, we still want to see, feel and touch whatever we do. We still want to touch a server, feel a server, still want to sit with 20 people in a room and develop code.
Interview 108	You can create digital innovation a lot easier. You can reach out, and touch people's lives so much more in some form or another. It's just so much easier.
Interview 109	I can be sitting, ordering an Amazon product and get it delivered to my hotel in Las Vegas and then bring it through myself or I can have it delivered to London or wherever I want, and I think those networks have now started to filter out, not just in the Amazon environment. I think internationally, everyone is starting to leverage digital innovation and focusing in on that. I think it is high on the agendas how leaders are digitalizing but also in services, people, logistics, everything. It is very standing out and influences society as well. I think the process has not started and I think especially in the South African framework we have had a lower level at the moment, but we are moving very closely the in progress of moving up.

Table 4.16C Coded Segments of Digital Leadership Through Digital Innovation	
Interview 110	The lack of helping people to grasp and gravitate towards the technology, and use the technology properly is most probably the biggest problem in my view. It's that socio-economic responsibility helping people understand the vision and where we are going and the enablement of using the new technology is probably where we are lacking most. There is a lack on the soft skills.
Interview 111	Leaders need to do a lot of things to be able to change. There is obviously a thing that the people also need to buy in, so I am not 100% sure they do.
Interview 112	Because right now the focus on that is cost reduction. What's in it for me, how do I reduce cost, that's my mandate, that's my KPI, I do it. Leaders don't influence the innovation. The innovation come, and they lead it afterwards.
Interview 113	Digitalization involves, is not a technical solution, it's about involving every stakeholder at every level, involving every process in the organization, possibly changing processes, it involves technology, it involves everybody working towards the same goal to become a unified enterprise. Digitalization has a concept of continuously improving that you have done in the past, so taking historical data back into your design of your plant or process or whatever it may be and continuously improving that, and that is digitalization, being able to be better than what you were with the previous round. Digitization has wrongfully just concentrated on technology and some people just miss the bigger picture.
Interview 114	They are attempting to do it, but not doing it effectively. There are still constraints, could be costs, lack of expertise, adoption in the market, fear of transformation.
Interview 115	I think the promise of the bottom line returns is very exciting for leaders, it's doers like myself who have to worry about how we do it.
Interview 116	Technicians are there to solve a technical problem and that is what they are going to focus on. The business leaders on the other side are more focused on the processes and business and those kinds of things and they don't understand the technology. I think people are using technology to improve processes greatly and obviously improving technology with technology is a solid 7, but improving people with technology is a low, and rating is a 3. I do not see a lot of signs of success that people are using technology to improve people.
Interview 117	What you are seeing is there is probably 40 – 50% where it is really happening, but you also have a case where people are just packaging and still calling it that.
Interview 118	The technology is there but the people and process side lower the successful impact of implementation.
Interview 119	Digital transformation of organizations should not only be a technology focussed discussion. It certainly speaks towards technology, people and process. Transformation must speak and take into consideration, speak towards all three these pillars, in doing that you would certainly be able to decrease the effect. To move to digital is certainly not just a technology discussion. There is a lot that need to be done there. We are very focused on the technology, but there is not enough focus on people and process.
Interview 120	Currently high in certain sectors with predominant technology focus.
Interview 121	Leaders should fully embrace and force the adoption of new innovative technologies that have been properly vetted and categorised as worthy of the pursuit. Blockchain as a distributed ledger of information can put some power back to the people with open access to digital currency. The permanent nature of digital information should be used to govern data for full accountability. Leaders have started and including people in the process shows great potential.
Interview 122	The automation of workflows by speeding up decision-making process by taking red tape out of the system. I think in this point in time it is probably mostly technology.

Table 4.16C Coded Segments of Digital Leadership Through Digital Innovation	
Interview 123	We are lacking in the leadership perspective. It's having leaders that understand what is happening around them and that are willing to lead the team behind them into that journey.
Interview 124	Organizations should implement to improve people, process and technology.
Interview 125	It is real and should be used but currently disjointed because not fully integrated.
Interview 126	We don't seem to have a co-ordinated effort. I think your innovation cycle must become a lot shorter than what it is today, you must enable your people through new processes and technology to innovate faster around their business processes and technologies than what they are doing today.
Interview 127	R&D and training should be used in a positive way to improve the quality of life of people, not only the processes and technology to become more productive and more effective.
Interview 128	There needs to be alignment between the technology, process and the people through a culture change. The holistic planning that involve people through culture is somehow lacking in certain organizations.
Interview 129	Digital innovation has an experimental approach that cannot necessarily be planned. Digital sometimes starts as an experiment and only sometimes becomes successful.
Interview 130	I think in SA is good, lots of telcos and banks to push to adopt technology.
Interview 131	I will start with the influence on people and need to be enforced and educated to maximize the positives from at school level and following into universities.
Interview 132	It is still new, and we are still stuck in our old ways. It is difficult to remove old ways. The cost of switching also plays a role.
Interview 133	Leaders would want to use the latest and greatest technology available to make an impact on their targeted audiences within a shorter timeframe, and to reach people in wider areas. Leaders need to get a better understanding of the impact of digital innovation in order to apply it in the most effective way possible. It could improve people's work environment by making their work easier and more efficient.
Interview 134	I believe people within my immediate context, still only focus on technology when you talk digital and there is no improvement in the sense of people and process
Interview 135	Through resistance to change and lack of understanding, coupled with a fear of the reaction of unions and labour movements, it is sub-optimal.
Interview 136	I think we are trying to, but we are not full throttle yet. We are still trying to catch up to fully implement with people and process.
Interview 137	In future the influence should be balanced across people, process and technology. Currently technology is implemented without full integrating with processes and people.
Interview 138	Important to integrate between people, process and technology. Leaders should communicate the digital message throughout the organization to drive the full impact of improvements.
Interview 139	The full ecosystem should be addressed as an integrated effort of people, process and technology. Digital champions should promote the full integration between people, process and technology. People and process need improvement to align with the introduction of new technologies.
Interview 140	Organizations that are still inefficient do not integrate people, process and technology.
Source: Francois Volschenk (2018)	

Appendix R2: Categorization of the Coded Segments

Figure 4.16D
Categorization of Coded Segments

Part E-1: Digital Leadership Influence

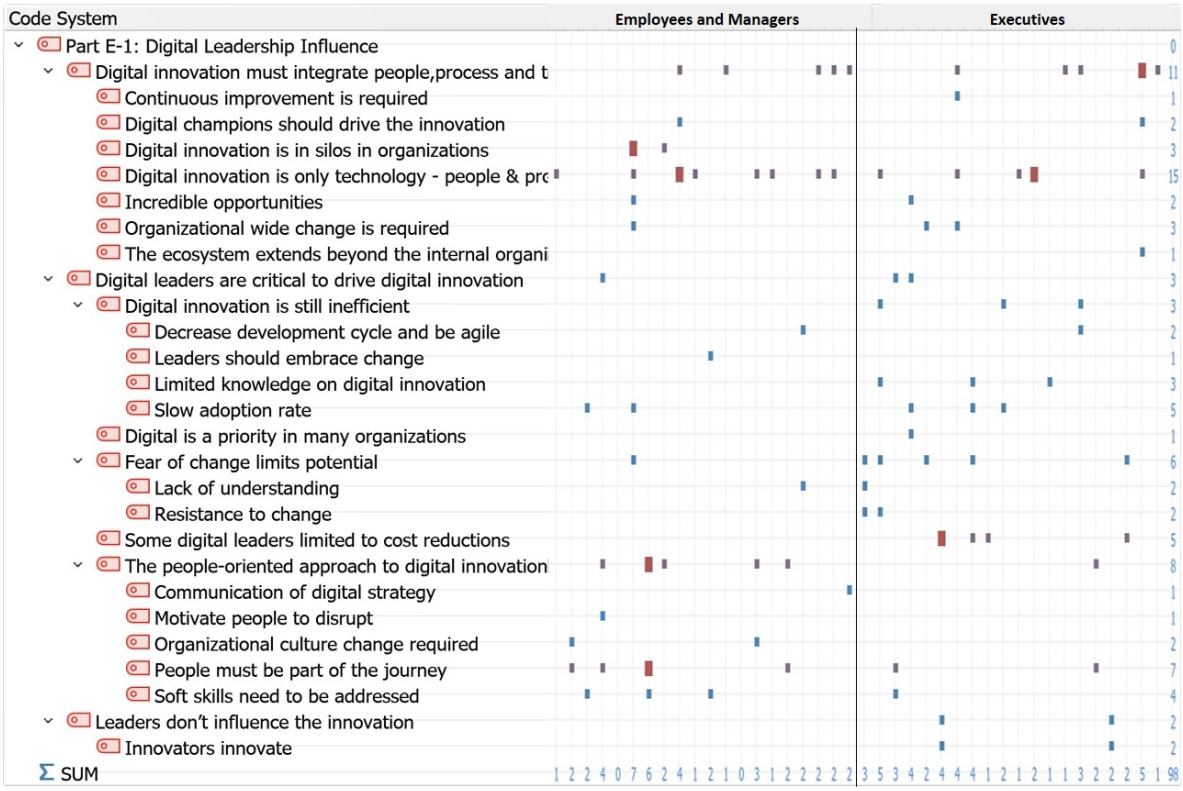
- Digital innovation must integrate people, process and technology
  - Continuous improvement is required
  - Digital champions should drive the innovation
  - Digital innovation is in silos in organizations
  - Digital innovation is only technology - people & process lack
  - Incredible opportunities
  - Organizational wide change is required
  - The ecosystem extends beyond the internal organization
- Digital leaders are critical to drive digital innovation
  - Digital innovation is still inefficient
    - Decrease development cycle and be agile
    - Leaders should embrace change
    - Limited knowledge on digital innovation
    - Slow adoption rate
  - Digital is a priority in many organizations
  - Fear of change limits potential
    - Lack of understanding
    - Resistance to change
  - Some digital leaders limited to cost reductions
  - The people-oriented approach to digital innovation is lacking
    - Communication of digital strategy
    - Motivate people to disrupt
    - Organizational culture change required
    - People must be part of the journey
    - Soft skills need to be addressed
- Leaders don't influence the innovation

Innovators innovate

Source: Francois Volschenk (2018)

Appendix R3: Code Matrix Browser

Figure 4.16E
Code Matrix Browser of Digital Leadership Through Digital Innovation



Source: Francois Volschenk (2018)

APPENDIX S: Social Leadership

Appendix S1: Coded Segments from the Interviews with Participants

Table 4.17C Coded Segments of Social Leadership	
Document Name	Coded segments from interviews (Part E-2)
Interview 101	Some leaders are trying but are limited to certain sectors. Future efforts should use digital to improve societal conditions permanently. Future efforts should use digital to improve societal conditions permanently.
Interview 102	Not in my experience. Any activity that is not related directly to the bottom line and the improvement of their own financial benefit is seen as a "grudge purchase". There are little pinpricks of light in the dark expanse, where little groups are coming together with actionable solutions in mind, but they are few and far apart. They are also stifled through a lack of funding and tied in knots through their own red tape.
Interview 103	Leaders are not solving societal issues. I have not really seen anything new. They try to make money in the same old ways.
Interview 104	Leaders should start within their own organizations. Innovate to make a change in people's lives.
Interview 105	I don't think so at the moment. I don't think a lot of the companies are doing that at the moment. They are just saying "this is what I want to do, and this is what you will do". I do not think they are taking the social leadership into play. Besides for the fact you have digital leadership, you need to take responsibility for what is happening socially as well or try to encourage social innovation as well.
Interview 106	Leaders are not acting to create networks of engagement. Some of them are starting to do that but it becomes an easy network to spread false news.
Interview 107	Currently where we stand now, we are fulfilling what the business wants. Or businesses want what they want, but not what society wants. Leaders are not acting in the best interest of society. I think they act more for themselves. I don't think the people are talking to each other, It's more for personal gain and for organizations in generating revenue.
Interview 108	I don't think as many people are adopting the impact they have on society or making a positive influence they could, and that might just be ignorance. Yes. You can reach out to so many more people. People are already adopting it. When you are looking at the communications that are happening, people are starting to understand what is happening out there. Yes. You can reach out to so many more people. People are already adopting it. When you are looking at the communications that are happening, people are starting to understand what is happening out there.
Interview 109	Yes, I think they are. The have adopted to it now, and now they are aggressively going for it. I think they have started and created networks with online availability worldwide.
Interview 110	Although there is a lot of socialization and talking of things but there isn't really a framework to help people understand and get to specific details to utilize the software or the technology as well as we could. I know of a few companies that create multiple groups to meet with people, not necessarily based on performance, but on enablement on education of the community around you. I know of a few companies that create multiple groups to meet with people, not necessarily based on performance, but on enablement on education of the community around you.

Table 4.17C Coded Segments of Social Leadership	
Interview 111	I think the current leaders are not up to date. We need a new movement to be able to create new types of leaders. We have got to be responsible people in the world. We need to have a society that is more in balance with another, not work against each other.
Interview 112	I don't believe they are. They don't understand it.
Interview 113	The South African government employ consultants to digitalize their power plants within South Africa.
Interview 114	Our leaders are not addressing issues as much as they should. Social innovation is used as a word only, but the full advantages of ownership is not with the community yet. The developing community should own the initial social development agenda - that is a matter that should develop.
Interview 115	We are seeing more effects of things like donate for a cause type of things using these public platforms and whatever the other platforms are essential to support a cause.
Interview 116	I think we are doing quite a lot in that area in terms of research, but in terms of practicing that, I don't necessarily see a lot of action happening and the leaders actively creating networks to discuss these things actively participating in end debates with their peers in the industry. The social leadership is currently theoretical only with a lot of interest now, but when it comes to practising and doing something around it, there is not a lot happening.
Interview 117	I think the impact could be huge.
Interview 118	Leaders are currently not doing enough. Various initiatives are starting but it is too slow at the moment.
Interview 119	There is a responsibility for social leaders to drive this adoption and to put the vehicles in place for society to properly pivot around the change, but I don't think that that is happening yet. I think social is a global problem that needs to be addressed in future.
Interview 120	The impact is high as society drives the required changes based on their personal requirements.
Interview 121	With a mindset of profit first and longevity second actionable societal issues resolution will lag for a long time to come. If we start adopting the innovation approach as a primary function, then we will be relevant for as long as we innovate.
Interview 122	I think with the adaption process within the enterprise environment we are much quicker than in the parastatal and government type environments where the biggest problem is.
Interview 123	There is currently no real evidence of discerning efforts of social leadership.
Interview 124	Leaders generally do not get involved with social initiatives -they emphasize on profit making only. Government should incentivise companies to get involved socially.
Interview 125	Innovation is market driven, everybody is out there making money. Resolving societal issues have been left behind.
Interview 126	You can see a couple of glimmers coming through in SA. There is a couple of areas where people are focused on that, but it is not the main understanding everywhere.
Interview 127	Social leadership should be forced on organizations. The transition should start as soon as possible.

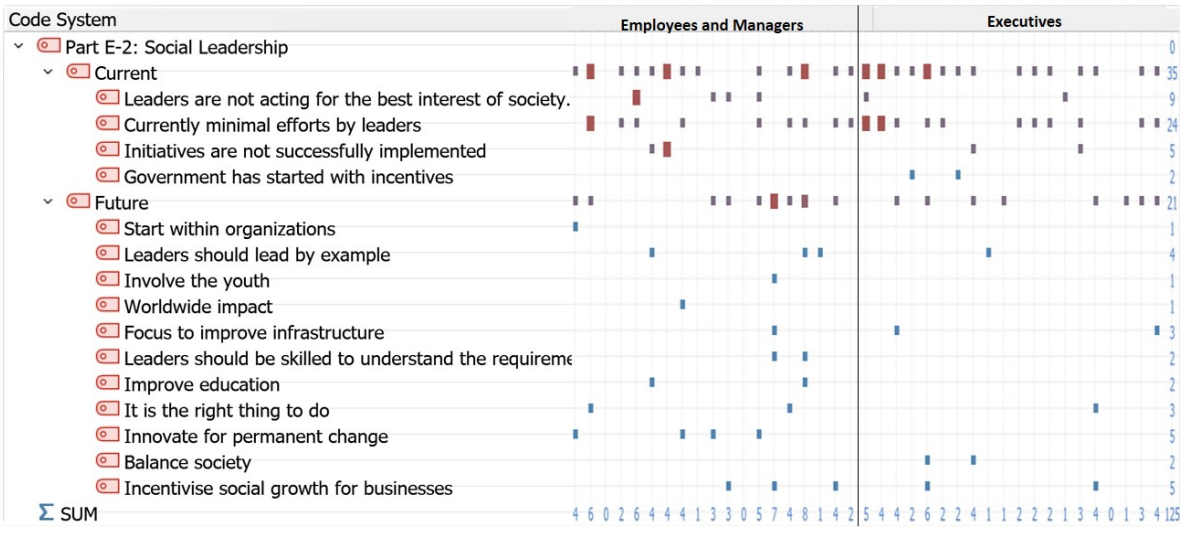
Table 4.17C Coded Segments of Social Leadership	
Interview 128	Leaders has not progressed to social leadership. Corporates are generally only concentrating on economic benefits. Applications can be created by digital innovators to alleviate socio-economic issues, even if it is just in providing funding for research.
Interview 129	Some leaders are trying but are limited to certain sectors. Future efforts should use digital to improve societal conditions permanently. Future efforts should use digital to improve societal conditions permanently.
Interview 130	Not in my experience. Any activity that is not related directly to the bottom line and the improvement of their own financial benefit is seen as a “grudge purchase”. There are little pinpricks of light in the dark expanse, where little groups are coming together with actionable solutions in mind, but they are few and far apart. They are also stifled through a lack of funding and tied in knots through their own red tape.
Interview 131	Not answered
Interview 132	Social leadership frameworks should be put in place to guide people in the right direction. I think in future there will be a crackdown on social leadership with mechanisms put in place to drive the positive change. In future, despite all the potential efforts, there will still not be a full focus towards social leadership. In future social leadership will hopeful enable kids and society to the entire range of available technology, applied as wide as possible. Social leadership frameworks should be put in place to guide people in the right direction.
Interview 133	There are organization that are actively trying to achieve this, but it is few and far between. People philosophically should do this not because they want to better their business, and just have an impact on additional revenue.
Interview 134	Society requires more social leaders to drive the future.
Interview 135	Real effort cannot be seen on a daily basis. If there is a network of engagement, it will possibly be for a short period of time and be treated as a “project” and not an ongoing effort. The performance of such networks can only be measured once the networks are defined and have been put in place. Leaders require more skills to make an actual difference to societal issues. Leaders can do more to address resolve societal issues. One of the biggest problems is the lack of educational opportunities and the quality thereof.
Interview 136	There are some leaders trying to make a difference that should act as an example to others as to what is possible.
Interview 137	Currently networks are not effectively created where it is very low currently. In future leaders should improve efforts in social leadership.
Interview 138	Leaders are currently not driving social leadership.
Interview 139	Leaders are not currently creating engagements to address societal issues. Future leaders need to become involved to address societal issues.
Interview 140	Currently the minimum is done to solve societal issues. Upliftment of people with infrastructure, access to technology and education to enable people to create new opportunities.
Source: Francois Volschenk (2018)	

Appendix S2: Categorization of the Coded Segments

Figure 4.17D Categorization of Coded Segments
Part E-2: Social Leadership ○ Current ◦ Leaders are not acting for the best interest of society. ◦ Currently minimal efforts by leaders ◦ Initiatives are not successfully implemented ◦ Government has started with incentives ○ Future ◦ Start within organizations ◦ Leaders should lead by example ◦ Involve the youth ◦ Worldwide impact ◦ Focus to improve infrastructure ◦ Leaders should be skilled to understand the requirements ◦ Improve education ◦ It is the right thing to do ◦ Innovate for permanent change ◦ Balance society ◦ Incentivise social growth for businesses
Source: Francois Volschenk (2018)

Appendix S3: Code Matrix Browser

Figure 4.17E
Code Matrix Browser of Social Leadership



Source: Francois Volschenk (2018)

APPENDIX T: Social Innovation

Appendix T1: Coded Segments from the Interviews with Participants

Table 4.18C Coded Segments of Social Innovation	
Document Name	Coded segments from interviews (Part E-3)
Interview 101	Social needs drive digital.
Interview 102	How can social innovation be capitalised on? By being in the communities, in the social sphere, talking to people, exchanging ideas and possibilities. Not by sitting in an ivory tower looking at the smog hanging over the buildings. Social innovation creates incredible opportunities. In social innovation lies the diamonds of opportunities and businesses that have the ability to see them, can capitalise on them.
Interview 103	It is almost the only way to continuously grow the market.
Interview 104	It is a 100% partnership between business and society. Being more open-minded, broad-minded. It will open new opportunities for organizations and could possibly make money out of it. It is a big thing. Listen more to what your team and the people around you are saying than just coming down with the old hammer, saying listen, this is the way of doing things, this is how you do it, and that is it.
Interview 105	Allow society members to share ideas and collaborate, creating a more open atmosphere from which everyone has more of a say in leading their companies to the next level. Societal coverage.
Interview 106	There is a huge amount of money in it. There are currently great examples of digital disruptors as the top companies in the world. That is most probably where a lot of opportunities are going to be.
Interview 107	Leaders should decide to go short or long, and if you go long you will work harder, but smart and get more money in future because you will make a real social impact.
Interview 108	Just embrace it. Understand and embrace it. Do not be afraid of it.
Interview 109	Well basically, when they start being disruptive in their digital side and marketing products and services, that will start influencing by growing and getting into more entrepreneurial services from their networks. So, what they are doing is they are spreading it across and enabling new parties to come to the party and help them and their businesses.
Interview 110	I think social innovation creates a lot of opportunities as long as you can understand what people are doing, saying and what they are feeling, there will be opportunities.
Interview 111	A culture that is beneficial to mankind, and everyone a benefit in the whole equation, everybody in society. I do not think the device in your hand normally changes everything that you do, so we need to create a culture that is more in line in what it is that we are trying to achieve.
Interview 112	I believe those who understand it, are using it effectively. Those who do not understand it, if they do get to use it, they are leveraging off the monetization of it.

Table 4.18C Coded Segments of Social Innovation	
Interview 113	A lot of companies do not realize their ideas can be realized into a digital innovation and it is important that we should form thought leadership type groups between the knowledge-based companies.
Interview 114	It has changed how we socially interact within society. Focus on solving societal problems and make sure they are using the right tools and right capabilities for the customers.
Interview 115	Innovation towards mobile money is definitely going to lead social innovation. E-Wallets in the African landscape are quite critical. Adoption and acceptance are quite quick, easy and efficient.
Interview 116	Organizations tend to want to develop a product and then they have a problem. Whereas, if you just observe society and the problems they already have, the way that they are trying to solve the problems for themselves, you can just identify things like that and latch onto that and assist them – that becomes a product. Social innovation where people are trying to solve something for themselves or interest using primitive means, all that you really must do is identify that and come with a more sophisticated and designed solution and that creates new business.
Interview 117	The social aspects of digital innovation are the most important ones to be resolved. Social benefits most.
Interview 118	The more people are using technology, the more it grows and the more opportunities it brings.
Interview 119	It speaks towards the ability of enabling entrepreneurs. We have an entrepreneurial society in this region, and I think social innovation in society can really help the entrepreneurs in the masses build and grow. And that is important for us in our economy. Social innovation is an enabler for potential future entrepreneurs.
Interview 120	Changes that make society more convenient has a worldwide influence and is therefore significant.
Interview 121	Automate the boring and mundane jobs then focus on the new and exciting opportunities. If we start adopting the innovation approach as a primary function, then we will be relevant for as long as we innovate. If you can offer a solution to a large problem, then considering how much to charge for it is a secondary thought.
Interview 122	I think there is great potential in that environment. Social innovation can really put you in the forefront but being once it being cleared between cutting edge and bleeding edge. Investment in social innovation generally has a long-term application.
Interview 123	The social community drives what digital should innovate. Use data insights to understand society better to enable more opportunities.
Interview 124	The opportunities are endless. It's a whole new world out there. There are endless opportunities for smart people. The ability to innovate, be successful, change the world, make money, improve society are as simple as finding an app that can work.
Interview 125	I looked at a case study where a motor manufacturer sourced an idea using social media technologies and it came with a product which the market was much happier with, with a reduced investment cycle.
Interview 126	Companies can especially on their R&D, utilise social innovation to reduce their cost and have a higher rate of success on their products and services.
Interview 127	Leaders can leverage from social innovation by marketing the positive experiences from their customers.

Table 4.18C Coded Segments of Social Innovation	
Interview 128	Businesses should identify the win-win situation to create opportunities with brand loyalty.
Interview 129	Social innovation can be improved to the highest level, and it actually should be as high as possible to permanently change society. In South Africa, the adoption of social innovation is currently slow. Certain initiatives were implemented but due to slow adoption the success is limited. A top-down approach only does not always work despite the good intentions. In my experience the use of digital technology for example, assisting the community in policing activities, is extremely efficient.
Interview 130	Social needs drive digital.
Interview 131	How can social innovation be capitalised on? By being in the communities, in the social sphere, talking to people, exchanging ideas and possibilities. Not by sitting in an ivory tower looking at the smog hanging over the buildings. Social innovation creates incredible opportunities. In social innovation lies the diamonds of opportunities and businesses that can see them, can capitalise on them.
Interview 132	It is almost the only way to continuously grow the market.
Interview 133	People should do this because they want to improve society as a whole. They could also see the benefits to the business and educate society about it.
Interview 134	Social innovation will bring down the costs of many social programmes, healthcare, education, all things needed in order to better the world.
Interview 135	People want better conditions to live in, easier lives to live, work should be made easier and innovations should be in place to do things faster. Tech leaders could solve more societal issues. Technology and digital innovation provide new opportunities for society. From job creation to improved mental wellbeing, problem solving, skills improvement, access to information and education to all ages. Some leaders in organizations listen to what society wants and what they need. Social needs create business opportunities. Some leaders in organizations listen to what society wants and what they need. These societal issues could be easily resolved with the utilization of technology.
Interview 136	Great opportunities on the welfare side e.g. government hospitals being able to improve the process, possibility of remote doctors or some ways of computers involved to analyse/x-rays/scans or things. Involve communities with education using technology to teach youngsters that technology can help all of mankind.
Interview 137	Thinking about the networks that can be created in poverty-stricken areas, most people have mobile phones or smart phones, whereby communication to health care providers can be created to improve efficiencies.
Interview 138	The participation and inclusion of society can be enabled through social innovation. Investing in programs to create businesses or entrepreneurs. Society can drive digital.
Interview 139	Certain generations could leverage more from the advantages of social innovation. Ironically, the older generations could get more gains from digital innovation through improved healthcare.
Interview 140	Education should start at the youngest possible age across genders to create interest in technology and innovation. Building people through access to technology will create future entrepreneurs.
Source: Francois Volschenk (2018)	

Appendix T2: Categorization of the Coded Segments

Figure 4.18D
Categorization of Coded Segments

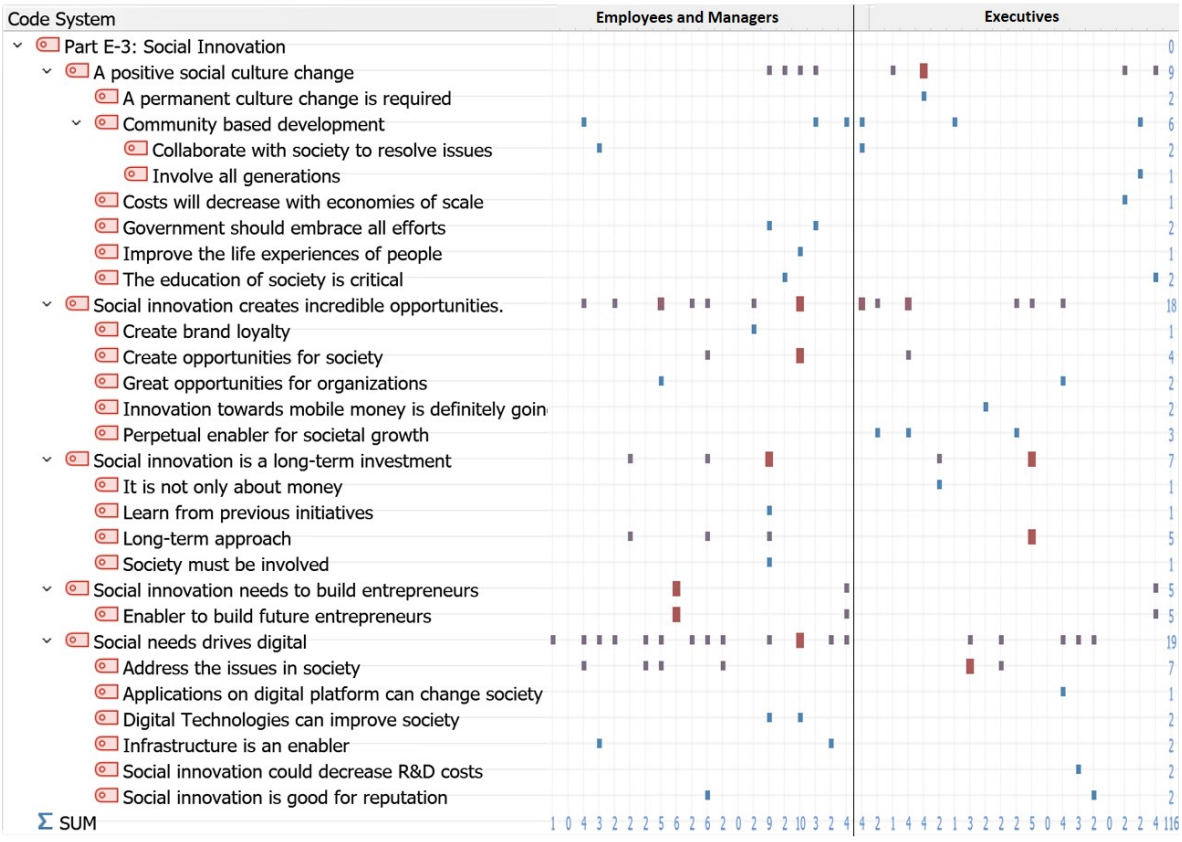
Part E-3: Social Innovation

- A positive social culture change
  - A permanent culture change is required
  - Community based development
    - Collaborate with society to resolve issues
    - Involve all generations
  - Cost will decrease with economies of scale
  - Government should embrace all efforts
  - Improve the life experiences of people
  - The education of society is critical
- Social innovation creates incredible opportunities.
  - Create brand loyalty
  - Create opportunities for society
  - Great opportunities for organizations
  - Innovation towards mobile money is going to lead soc
  - Perpetual enabler for societal growth
- Social innovation is a long-term investment
  - It is not only about money
  - Learn from previous initiatives
  - Long-term approach
  - Society must be involved
- Social innovation needs to build entrepreneurs
  - Enabler to build future entrepreneurs
- Social needs drive digital
  - Address the issues in society
  - Applications on digital platform can change society
  - Digital Technologies can improve society
  - Infrastructure is an enabler
  - Social innovation could decrease R&D costs
  - Social innovation is good for reputation

Source: Francois Volschenk (2018)

Appendix T3: Code Matrix Browser

Figure 4.18E
Code Matrix Browser of Social Innovation



Source: Francois Volschenk (2018)

APPENDIX U: Social Capital

Appendix U1: Coded Segments from the Interviews with Participants

Table 4.19C Coded Segments of Social Capital	
Document Name	Coded segments from interviews (Part E-4)
Interview 101	It is one voice. Social capital has muscle because they all stand together.
Interview 102	Social networks are where innovation starts and where consumers consume. By completing the circle, businesses can understand societal needs, respond to them through innovation and craft shared objectives.
Interview 103	Your average person usually wants to be associated with something. The higher intelligence you have, the less important it is. Society has got a large in the environment. Good example on Facebook, the share price – in one 90-minute interaction it dropped 24%.
Interview 104	It is believed that collectivism is one of the greatest contributors towards human evolution. The enablement of social capital allows for this at a global scale.
Interview 105	If you look at the traditional way of doing things, companies would say no, do not deal with this company, because they are competition, but from an engineering perspective, that guy that is sitting at that company has faced the same problem that I am sitting with at the moment. That is the whole idea behind the communities where all companies start these communities, saying, well we know you guys are competition for each other, but, from an engineering perspective you have sat with the same issue that guys have been sitting with and he has got a solution for it. If you are sharing it, everyone benefits out of it. The have the biggest influence of them all.
Interview 106	They really affect the environment. They have a voice. It is very important. The whole social digital innovation is going to impact the way that you live.
Interview 107	I do not think they are educated, because the message is not properly filtered down as to why we have this current Brexit environment or current fuel increases as an example.
Interview 108	All the people see is whatever is touching their pockets. And they scream at what is touching their pockets. I do not think they are educated, because the message is not properly filtered down as to why we have this current Brexit environment or current fuel increases as an example. That is huge. If you look even from a political stance point across the world where previously politician decisions were made in rooms etc., nowadays that capital voice can even influence politics.
Interview 109	They have more of an influence today than what they have had ever before. It is a voice that can be heard where ever they want it to be heard. I think it is extremely important.
Interview 110	I think we need we act together and grow together and make people successful. In order to do that we need to collaborate better, and I think that is what is happening on the societal side. We are starting to sort of leverage the whole society chain, instead of just me going to visit and targeting one market. Looking at leveraging the society as a whole and opting for crowd-sourcing that I can leverage new people in a certain region to look after my deliveries for instance. I think it is important because at the end of the day we must have customers.

Table 4.19C Coded Segments of Social Capital	
Interview 111	It is big, because you can create a movement, and with all the various social channels, as long as you have the social capital you can make things change very quickly or rapidly.
Interview 112	For me this is a new thing that we need to have in the world. Social capital can be wrong. They could say we are a group of people and we want to do something, but they could have a selfish thing in mind as well. This is what it is all about. I think we need to be socially responsible and to grow organizations that are socially responsible. True social capital should be governed as well in some way or another, but social capital per say, has a massive influence.
Interview 113	People fear using social platforms to share knowledge within a workplace because knowledge for them is power. If I share my knowledge, I lose my power, I lose my influence. I can use my normal social media platform to talk about my life, but not about my IP. You can influence peoples' thinking and behaviour through leveraging off social platforms. People are hesitant to adopt let's say closed social platforms as opposed to open social platforms.
Interview 114	I think each of these groups of people have different needs and a lot of them are common needs, and if digital innovation can address those needs it will be good.
Interview 115	This is like a conduit, a specific community that we are trying to "source" as customers.
Interview 116	The various platforms that digitally exist connects like-minded people together to resolves issues or collaborate for a common cause. People are trending towards common causes and looking digitally to join groups and support groups.
Interview 117	You can see the effects of that already how people just self-organize and the wisdom of the crowd. Social capital influence can backfire.
Interview 118	The best thing that we can do is just to keep the learning gaps open, share freely and collaborate. The biggest impact it will have is really on the social interactions in society in general.
Interview 119	For me it is more a reality than importance.
Interview 120	Most of the major digital technology providers have platforms that are always on, readily available. It is easy for people to create social capital and express their view to the masses. A lot of the major new thinking methods or thought leadership processes are born out of social collaboration. Any individual can create a forum or medium in their social space and in doing so impress their norms or ideas or idealisms, that is important. That is how we will grow as a society. The influence is big. Because of the always on, social capital is absolutely pivotal.
Interview 121	The concern is using social capital in a negative way. The influence has been proven to be extremely high.
Interview 122	It can obviously be detrimental. People are more informed, they are more up to date, the information sharing is faster and much wider and it captures a bigger audience.
Interview 123	I would like to think it doesn't it exist but if you just look at the last couple of situations somebody posts something, people don't like what they post, and they are like 2000 people rallying behind what somebody said or did. A network of people gets created a lot quicker than in the past. A lot of times it gets created, people start rallying behind one comment without context. I think people are starting to use it already, feeding it into the data they know from a business perspective using big data analytics and aggregating

Table 4.19C Coded Segments of Social Capital	
	that sort of information to make better decision on how they market and how they sell to people.
Interview 124	There is acceptance of social business with people interacting to conduct business. People want something that work and only worry about it if it doesn't work.
Interview 125	Social capital is a collaboration explosion. The ability to act as anybody, anywhere, anytime. More people are going to get connected.
Interview 126	I think it will make you an employer of choice in the new waves of employees coming through. I believe you can utilise your own staff as part of those structures to influence the market and to have the market information coming closer to you. It is good for your company and it will attract the right skills to your business if you are out there.
Interview 127	I believe it is important but can be dangerous. If it is done in a way that is good for society, it's obviously a massive opportunity.
Interview 128	Influential where social groups can even influence a government.
Interview 129	Collaboration enabled by a social network through available applications are very useful. The example of the Community Police Forum (CPF) has enabled this group of people to effectively communicate their requirements to expedite actions. Social networks are keeping the government in tact with their collective efforts. I believe digital innovation has enabled the positive actions, and it can only be improved in future.
Interview 130	The magnitude of the amount of information can sometimes be detrimental to the quality of social comments. The negative stuff spread fast and take up a lot of clutter in the cloud and everyone is given a platform, and there is a lot of nonsense that everyone can get out in the world as well.
Interview 131	Strong social capital requires strong individuals. If one person acts to conflict, others may join and start sharing their ideas concerning the topic. This could be harmful and create an even worse problem if it is based on incorrect or false information, knowingly or unknowingly. Society feels that they have a place where they can voice their opinion and share their ideas with others. They can find help more easily in various situations. Groups are able to convince or change more people's mindset than an individual would be able to.
Interview 132	It is one voice. Social capital has muscle because they all stand together.
Interview 133	Social networks are where innovation starts and where consumers consume. By completing the circle, businesses can understand societal needs, respond to them through innovation and craft shared objectives.
Interview 134	Your average person usually wants to be associated with something. The higher intelligence you have, the less important it is. Society has got a large in the environment. Good example on Facebook, the share price – in one 90-minute interaction it dropped 24%.
Interview 135	It is believed that collectivism is one of the greatest contributors towards human evolution. The enablement of social capital allows for this at a global scale.
Interview 136	If you look at the traditional way of doing things, companies would say no, do not deal with this company, because they are competition, but from an engineering perspective, that guy that is sitting at that company has faced the same problem that I am sitting with at the moment. That is the whole idea behind the communities where all companies start

Table 4.19C Coded Segments of Social Capital	
	these communities, saying, well we know you guys are competition for each other, but, from an engineering perspective you have sat with the same issue that guys have been sitting with and he has got a solution for it. If you are sharing it, everyone benefits out of it. The have the biggest influence of them all.
Interview 137	They really impact the environment. They have a voice. It is very important. The whole social digital innovation is going to impact the way that you live.
Interview 138	They are very important, the more you are able to collaborate or work with people from different geographical regions, ideas, societies and things, you could find that something that was really difficult for you to figure out or find a solution is a common occurrence on their side of where they are, so I think it is very important. From a business side, with the technology and ability now to be able to network with partners or suppliers it gives you the ability to work with partners and share ideas, processes, and you could maybe improve part of the business process or manufacturing process where both parties will then benefit because they collaborate into something that benefits both sides of the organizations, where before it wasn't that simple. You could pick up a phone and dial someone but is isn't the same as being able to network at that level and actually share ideas and improve things.
Interview 139	The fact that huge networks of people are created with digital, people can now interact with like-minded people to share ideas and thoughts instantaneously.
Interview 140	Social capital can improve the reputation of an organization through deliberate actions to increase the social capital associated with the organization.
Source: Francois Volschenk (2018)	

Appendix U2: Categorization of the Coded Segments

Figure 4.19D
Categorization of Coded Segments

Part E-4: Social Capital

- A reality more than a necessity
- Can utilize employees to improve organization
- Collaboration is the new norm
  - Focused approach to knowledge and co-operation
  - Geographical convenience
  - Applications as enabler
  - Incubator for innovative thinking
  - Social capital is a collaboration explosion
  - Potential to involve to whole of society
  - Coopetition can be a differentiator
- Collectivism contribute to human growth
  - Address common needs
  - The wisdom of the crowd
  - Social capital is an enabler
- Information on social platforms are trivial
  - The magnitude of information could reduce efficiency
  - Social interaction is generally non-work related
- The influence of social capital or social networks
  - Uncontrollable
  - Potentially dangerous or harmful
  - Fast distribution and impact
  - Generally, a selfish agenda
- The new voice of society
  - Collaboration with society
  - Common cause
  - Fulfil the human need for association
  - Influential
  - Large audience and fast distribution
  - Less influential for well-informed individuals
  - To limit negativity governance is required
- The start and end of consumer consumption
  - Availability of data analytics improve efficiency
  - Focused organizational reputational tool
  - Influential
  - Large spending capabilities
  - Power to the people
  - Understanding the customer

Source: Francois Volschenk (2018)

Appendix U3: Code Matrix Browser

Figure 4.19E
Code Matrix Browser Social Capital

Source: Francois Volschenk (2018)

APPENDIX V: Digital Social Dynamic Equilibrium (DSDE)

Appendix V1: Coded Segments from the Interviews with Participants

Table 4.20C Coded Segments of Digital Social Dynamic Equilibrium	
Document Name	Coded segments from interviews (Part E-5)
Interview 101	In the digital world, that doing what is right, is consistency of the organization. Leaders must be transparent. The people should trust the leader. Digital leaders should act in an ethical way.
Interview 102	More cost-effectively and value for money. By embracing social innovation and digital innovation at the same time and finding the equilibrium between the forces of society and business. Leaders can direct resources to new and exciting places where the value is created faster. Higher probability of success. Now that is a real increase in performance.
Interview 103	A leader's comments and his actions will influence that massively. So, if they perceive he did not act with integrity then it will swing dramatically. Create a new innovation that helps the society in what the requirements are, that is a key one. Make sure your voice that you have got in the environment is a positive integrity voice that speaks to the society. Do not only look at your customers, you need to look at the bigger social environment to have comments on it. So, to perceive negative that effect is a lot bigger especially if the requirements are less. So, if there is a monopoly at stake from a leadership side he will be more arrogant and be less punished in the short term and more in the long term. So, they will take something away from you. A leader is influential from a company perspective. You have an exponential amount of social comments or people that can influence it. The phone, any digital interaction that they have got in any way or form, so everybody is got a voice. (The combined society voice)
Interview 104	Create a need for most of the things we have, in the beginning there was never a need to begin with. They want trust. It must be ethical.
Interview 105	People/investors look at where people are in the magic quadrant, and if you are just dragging along and are just below the average, people are not going to invest in that, they are not going to try it. They need to stop thinking of the traditional way of doing things, they need to start thinking about how things are going to make my life easier. If I like it, will other people like it? This is from a leader's context. The whole idea behind is, you can either be a leader or you can be a follower, or you can be at the top of the game, or the bottom of the chart. They are going to try something from a social leader. They will try something that is innovative. Well from a social side of things they will raise their opinion and what they like and dislike, and leaders need to take into consideration what are the likes and dislikes of the people. And from society they will say be just to me, be fair to me, or I will not support you anymore.
Interview 106	I think it is how the social sees the technical and the growth. I still see that there is a lot of forces against the growth. You do not actually understand what you are getting yourself into, and because of that there is a fear of losing your job or progressing in the future of which you are unsure of. Everyone should work together to reach the same goals. Society has a negative influence on themselves, unbeknown to them because of the fear of uncertainty. Unwilling individuals need a growth plan in getting to a point where they realise that digital is not a threat but an extension of what is currently in the market, and a growth where they can get to.

Table 4.20C Coded Segments of Digital Social Dynamic Equilibrium	
Interview 107	It is to listen to them and to adapt. I think leaders need to fast track the way they do things, they need to develop some of the HR frameworks, they need to quickly move in. They should not go for a big bang approach. They should go quick in and take pockets of digital leaderships into their organizations. They will use the same social platforms to communicate back to these guys. Using it, not using it or responding on it.
Interview 108	Communication. Honesty. Even if it does all these things, one thing that he needs to put down is where will the benefit be for the society by doing something. You on one side have society still struggling with adoption of digital innovation, and on the other side, and on the other side you have digital innovation being introduced into society. A common ground needs to be found. Trust. How much money, or change in lifestyle, or something personal from societal perspective, that is crucial. From a social perspective I think it is dealing with the unknown, because you have people that has never had a revolution.
Interview 109	It goes back to the way people like to work, or the new ways of working in today's day in age. The whole digital drive and finding that balance it is to empower them, enable them to do that. Give people the opportunity to find their own balance. Empower people to allow them more freedom. If I want to go and watch my son play rugby this afternoon, I can work from anywhere, by the whole digital way of work, I can sit in my car and do it. Because, I feel, if you give a person the freedom 100%, and you acknowledge what they put out, by personal recognition, people are willing to go so much further. They want to be able to work throughout the night because they have done whatever they need to.
Interview 110	Start listening to society what the needs are. Start leveraging information from the current detrimental things in society to enable improvements. Show society how to better themselves. Build the trust. If they do not agree with them they can take a multiple of options, one option is to stop buying. Reach out to legislature.
Interview 111	If you have that resistance to change from a social perspective and a corporate perspective, it is setting the vision and creating it life-like. Everything could become quite ones and zeros orientated, very digitized, so It is understanding how you can work on removing that resistance to change by helping people understand it can help people. It has trust, being rest assured that things will be ok and better. The social acceptance force is resistance to change. It really depends on the grade of acceptance and if people would want to change or not. The picture would be this super digital advanced world and a very unsophisticated world and life that people used to live.
Interview 112	Depending on what everybody does, it changes the equilibrium. Leaders need to find out exactly what causes the equilibrium. We need to find out, do research, and see what changes that equilibrium. Ethics.
Interview 113	Honesty. I have got to prove to you as a leader that I am socially responsible, and you can trust me, because without that, you do not get the equilibrium.
Interview 114	I would say like what we have today where you have this tender process platform, maybe a similar platform where anyone can launch an idea and it gets consolidated and maybe aligned according to the specific innovation.
Interview 115	Understanding the requirements. Test ideas so you can propose as solution. Ensure there is an adoption of the solution. Digital knowledge. It is important to identify the problem that you are trying to solve. The more digitally savvy the community becomes, the more capable and louder the voice gets and the more powering the fuel.
Interview 116	Open, transparent, trustable platforms. Channels of communication and trust, security and safety are guaranteed – otherwise no one is going to talk to you. It is more how do we integrate digital into our daily manners in such a way that it would assist us in being better people.

Table 4.20C Coded Segments of Digital Social Dynamic Equilibrium	
Interview 117	From a business side the drive towards profitability is too strong. I am not entirely sure if it is a self-governing situation, will it naturally come to equilibrium if you just left it alone? There is a certain aspect that where it would natural forces will equalize each over time, but I think having knowledge of this and having the ability to see the signs I think it will be very important to understand how you influence the equilibrium and make it work for good. People will now start resisting it from the other sides saying that you know this is not something that we want to pay for as much as you want us to pay for. Start pushing towards using the information that they now have of our people, people are going to start pushing back, they know, this is not on, you did not buy my identity and my personal information by me accepting to use your app for example. Similar forces as in regular business, trust, integrity, mutual respect, respect of service, good service, from a consumer side be a good consumer.
Interview 118	Efficiency. Leaders should think about it that they can get a more efficient business landscape, while at the same time you have harmony in society. If you do not understand this, you are left with disastrous consequences. Harmony in society.
Interview 119	Digital Social Dynamic Equilibrium is the core and the key. Digital Social Dynamic Equilibrium is the nucleus of fully understanding digital innovation. It is an awareness from both digital and society sides in the short-term and long-term. From a society point of view, it is the caution, do I embrace it or not, where is this going to take me, what is this going to do to, or for us? It is collective realization that is lacking. People do not realize how strong this is. While some people label it as just technology, it is not, it is digitalization that is taking place. Digital transformation is any way you change the way the people behave with technology.
Interview 120	Saying that there should be an equilibrium imprinted or impressed upon a society from a leadership perspective is the wrong approach. The equilibrium is not a specific point, it is a constant change. It is an effort to reach an equilibrium which is a balance between the two forces of digital and social.
Interview 121	Competitiveness deliver value. Ease of usability. True leaders think beyond money to understand the context within society. Everything is about reaching a balance with an ever-changing and shifting equilibrium. Digital will blow-up and expand exponentially. The framework should not be a regulatory requirement. Consumer requirements. Consumers are always selfish wanting what they want, immediately. The full impact of digital is still mostly misunderstood.
Interview 122	Comply to governing body frameworks. Strongly incentivise adoption and further innovation. The mindset of capitalist-oriented organization will be better contextualized with DSDE. Responsible marketing. Choice of alternatives will force compliance by service providers. Security should not be compromised.
Interview 123	Positive publicity, recognition and getting the word out there. The spin offs will not necessarily only be monetary. It boils down to your basic economic factors in terms of supply and demand. In any capitalistic environment there needs to be a balance between the positive spin offs and the potential negatives. I don't think anyone really truly understands what digital transformation and digital disruption can mean, and obviously disruption can go a positive or negative way.
Interview 124	Be transparent. Address concerns. Transparency. Show genuine concern for people. I believe there should be equilibrium but also about creating your own barriers.
Interview 125	Improve the lives of customers. Take society to new heights. The importance is the balance where technology can take use, while still balancing the impact on society. It is important to recognize boundaries that should not be crossed. Adopt what they like and makes their lives better.

Table 4.20C Coded Segments of Digital Social Dynamic Equilibrium	
Interview 126	Currently there is probably no understanding of the equilibrium, or limited understanding.
Interview 127	What this does align is the ability to create a social gathering body using social media is a piece of cake, so you need strong individuals in the world that can rally the troops and tell the digital companies this is too much, and they will probably get that right. The issue is, how is society going to push back?
Interview 128	From leaders' perspective, your market research, education, involvement in industry trends, following the money, the R&D around the world from the big players is a big force on how you can influence. Leaders should have certain ethical conduct to make sure how you deal and how you bring this equilibrium into place to expect all those things. Leaders must understand that whatever they do will have an impact on society. Good leaders will listen to the voice of the customers. It also gives them a reason to exist. If you do not have that equilibrium you will struggle to exist. Don't look just into the technology in the short and long term. From the market perspective where people put their money is what influences things in the end.
Interview 129	You can almost kind of draw a parallel between the DSDE and politics, but with digital much faster reaction from social capital. The significance of it is extremely important.
Interview 130	Ethics and acceptable norms. Keep people in check and influence their conscience.
Interview 131	I am cynical about digital, due to the point when the machine can improve itself we could make humankind obsolete. The dilemma is that an equilibrium will not be able to be created. It is important to understand the impact of digital. Digital is unstoppable, and equilibrium cannot be forced. All humans could end on welfare as everything will be done for humans when machines take over. In future we could regret all the innovations that replace humans. People should have control of the machine, because when machines take control, an equilibrium will not be possible anymore. Regulation will not work to create an equilibrium.
Interview 132	Companies with devious agendas are exposed and pay the ultimate price. As an example, a security company offered their services free of charge to solve a crisis. The result was that their reputation has suddenly been improved with reluctant subscribers happily paying their subscription after getting to know about the company's actions. People with money dictates. People gravitate to fair, good service. Subscription-based services forced the new way of thinking, that the customer have a voice now whereby companies must ensure services do work and they are being held to account for their actions. Consumers can simply cancel subscriptions when they want.
Interview 133	Convenience. You will always have a cycle. You are never going to be in a space of equilibrium. High cost associated to it. If it does not address my requirement, or if the service is bad.
Interview 134	An understanding of Digital Social Dynamic Equilibrium within a defined framework will be useful to leaders to move beyond one dimensional thinking to incorporate the social forces. It is very important the help you achieve what you want, and it is a useful tool as well. I don't think people are thinking differently. They pursue different objectives and don't look at the whole in order to look at the equilibrium. Needs and expectations in technology.
Interview 135	Awareness (What does society want to achieve? Where can we help, what can we do?) Solutions. (Finding the best solutions). An enabler for technology and innovation. (Investors, providers). Reality. (What is possible and realistic) Implementation of-, and education around technology. (Implement the technology and educate how to use

Table 4.20C Coded Segments of Digital Social Dynamic Equilibrium	
	effectively to reach collective goals) Risk, security and control. (Protect society, inform society of risks and dangers) Humans are rarely satisfied – they want more and more and are willing to pay a price for comfort and time saving innovations. Awareness and willingness to understand (what is possible in digital technology to make my life easier, better and make things faster? Can and will it change my life for the better?) Users for products and services, providers for new innovative ideas. (New needs creates new ideas from user perspective – users ensure that you have a business) Survival. (Job creation, sustainable living – digital is required). What do I need, what would I like, what can I not live without, what needs to be improved? Education. (Better future. New opportunities for education that is accessible to all)
Interview 136	Accountable actions should protect society.
Interview 137	Feedback from leadership to users on the implementation of their digital strategy. Transparency - clearly define the fine print early in the engagement. Society should stand together on the digital platforms to guide ethical behaviour. Guidelines that digital platforms should comply to, can assist.
Interview 138	Convenience is critical. Trust.
Interview 139	Mentorship. Responsibility to foster a better understanding in society. A way to create a balance between digital innovation and the exposure of people to create a social balance. Coaching people to behave appropriately in the social space. Limit exposure to negative influence.
Interview 140	Absolutely important to create the understanding and awareness from both sides.
Source: Francois Volschenk (2018)	

Appendix V2: Categorization of the Coded Segments

Figure 4.20Di
Categorization of Coded Segments - Concepts

Part E-5: Digital Social Dynamic Equilibrium
- Dynamic process
  - Digital will expand exponentially in the foreseeable future
  - Continuously strive for equilibrium
  - Forced regulation will not assist in reaching equilibrium
  - DSDE possible subject to machine not controlling
- Leaders should embrace DSDE
  - Continuous awareness of society
  - Digital Social Dynamic Equilibrium is the key
  - Investigate the boundaries
  - Leadership tool for performance improvement
    - Improve probability of success
  - Reason to exist
  - Responsible digital capitalism
  - The influential leader
- Long term and short-term influences
  - Common goals
  - Incentivise adoption and future innovation
  - Protect humanity against digital dominance
  - Look beyond technology only
  - Continuous awareness creation

Source: Francois Volschenk (2018)

Appendix V3: Categorization of the Coded Segments

Figure 4.20Dii
Categorization of Coded Segments - Forces

Part E-5: Digital Social Dynamic Equilibrium
- Digital forces
  - Digital competency
    - Enabler for innovation
    - Governance assurance
    - Public image of the leader
    - Real solutions for requirements
    - Risk management
  - Open communication

- Realistic expectations
- Value proposition
  - Convenience
  - Solving societal issues
- Values and principles
  - Awareness
  - Empathy
  - Honesty
  - Integrity
  - Mentorship
  - Non-monetary commitments
  - The right thing to do
  - Transparency
  - Trust

- Societal forces
  - Choice of alternatives
  - Legislation
  - Limit negative influence
    - Ethical requirements
    - Perceived security
    - Responsible marketing
    - Trust
  - Loyalty
  - Resistance to change
  - Social capital
    - The realization of real influence is missing

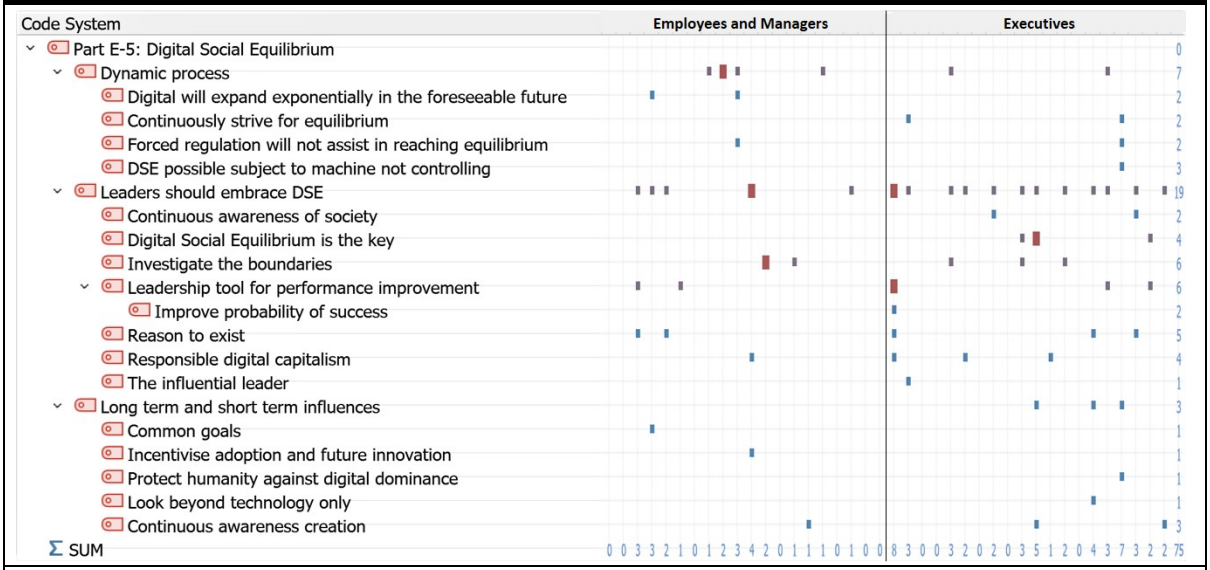
    Society understanding of digital is limited
    - Awareness of society about digital influence
    - Coaching within society of responsible behaviour
    - Each party will selfishly pursue own objectives
    - Education requirements
    - Empower people to allow them more freedom.
    - Lack of understanding
    - Society should use in their favour
    - Understanding of guidelines or frameworks

  - Survival instinct
  - Value perception
    - Consumption-based pricing
    - Money
    - Perception of convenience
    - Perception of savings
    - Termination of services

Source: Francois Volschenk (2018)

Appendix V4: Code Matrix Browser

Figure 4.20Ei
Code Matrix Browser of Digital Social Dynamic Equilibrium - Concepts



Source: Francois Volschenk (2018)

Appendix V5: Code Matrix Browser

Figure 4.20Eii
Code Matrix Browser of Digital Social Dynamic Equilibrium - Forces

Source: Francois Volschenk (2018)

APPENDIX W: The Socially Responsible Digital Leadership Framework (SRDL)

Appendix W1: Coded Segments from the Interviews with Participants

Table 4.21C Coded Segments of The Socially Responsible Digital Leadership Framework	
Document Name	Coded segments from interviews (Part E-6)
Interview 101	It guides leaders through complete transparency and makes them better leaders through applying honesty and integrity with who they engage with – it doesn't matter if it is within the organization or towards the outside because everything is transparent. It gives leaders direction if they apply their thinking towards their equilibrium it will give them their direction to guide them through the challenges of social and organizational change within the digital landscape.
Interview 102	By promoting the understanding that there is an equilibrium to be reached between societal and business drivers, an SRDL can be used to model the impact of strategies. If the strategy does not address the equilibrium, it is bound to fail. This creates the potential of predictive failure modelling.
Interview 103	If you don't understand both sides, it will be a short-lived model that you are putting into place or a short-lived innovation. The one thing is that the social side will always keep you in tact and in balance so that is the ideal part of it. It won't always happen, but it hopefully does. A leader needs to understand the forces at play, so whenever he creates something, whenever you do something, you need to make sure you act in the right way and understand the influence on society plus the digital innovation. To understand equilibrium is critical. Equilibrium itself, forces will play and act against each other to get to whatever – It's not equilibrium, it depends, because of the forces on both sides, that will move at any stage but to understand it is absolutely critical.
Interview 104	I think they should use it, if they know it exists. At the moment they have ignored it. There is no framework like that at the moment that can be measured upon.
Interview 105	Because it will incorporate the overall role between society and companies, how the one will help the other and vice versa.
Interview 106	It is to create some sort of singular way of working, singular way of understanding how the digital world should be tackled. To try and have a single standard of working, a single way of teaching. All of these are very important, because it is going to happen.
Interview 107	It is very important due to the fact that you have got the society part, business part, you have everything around this and you need to build something that will, instead of just doing something here, it could also upset someone there. I think leaders should use a framework to act responsibly.
Interview 108	It is critical for them to have their identified responsibilities. It gives them that working towards a common goal. You can set that common goal of you have a framework. So, I know you can't set a specific outcome, but you can work towards a common positive goal. If we can have a framework that can drive it, just think about the benefits it will have.
Interview 109	We need to get the digital leaders to embrace society better, and work together, not for the detriment of society. The framework allows them to act within those realms and to keep them in balance with it. We need to adopt that society and help it grow. Leaders need to make sure that they understand where society is going and facilitate that. Society want to adopt – they are looking after themselves individually.

Table 4.21C Coded Segments of The Socially Responsible Digital Leadership Framework	
Interview 110	Given that there is a framework, then I think in my experience, as long as the framework is guidance and is providing the same type of guidance and messaging to create that trust and invention for the people. If leaders don't follow a framework you will lose the social buy-in. If leaders don't follow a framework you will lose the social buy-in. It means a lot of research has gone into it, and the framework would indicate the various forces and how to deal with people, adopt to technology and how it can help them see the future. If leaders don't follow a framework you will lose the social buy-in.
Interview 111	I think leaders can enhance their own business by using this framework and make it better for the business and the people, or society themselves so that they can be a more responsible citizen in the world. A framework on how to act responsible and more of a compass where to go to would be beneficial. I think it will change a lot of things in business.
Interview 112	The mere presence of the framework makes it influential. For me, people, society are guided and influenced by frameworks. Whether they are frameworks at a societal level, whether they are frameworks at a business level, people adopt. We are informed by information that are readily available through Google and elsewhere, so if something is defined as the socially responsible framework, the existence of that framework will influence people to use it.
Interview 113	Structure is important, digital standards and guidelines that can be publicly available which innovation companies can follow, and maybe also some sort of platform, or anyone to actually to submit ideas that might changes their lives to have this platform available. The technology provider and digital leaders may think in a certain direction and believe that their direction is the best and is good, but in society it might not necessarily be the case, it could be detrimental.
Interview 114	Once you understand the power of what is possible, the power of what you can do and the power of how you can transform society, it is your responsibly to make sure you do it the right way and it is giving capability to do more by providing a responsible behaviour with the tools that you are putting out there.
Interview 115	There are certain principles and technology adoption modelling that essentially gives you some guidelines of the responsibility of all parties. It needs to be clear cut guideline or regulation that dictates the usage in which we engage with society. I think there are guidelines and responsibilities on either parties' side.
Interview 116	It's like anything in life, you can wing anything in life to a certain point but if you use a framework or some methodology behind what you are doing or knowledge of people that know what they are talking about, but if you do it in a structured way with a framework you will be more successful. I can almost use the analogy with getting access to the most advanced piece of weaponry that a leader can imagine. Imagine you give a leader this amazing piece of technology that there is just a potential to just win every war for him from that point on, if that leader or person does not have a framework to know how to apply that weapon, it is going to go bad. The framework should include guidelines, rules and knowledge.
Interview 117	A lot of leaders are going into this blind. Frameworks are quite useful to guide how you go about to do certain things. The whole idea of the framework is that you should understand the social impact and you should respect that otherwise you will not be successful going forward.
Interview 118	I think it is a critical guide for leaders. The framework should address the broader impact of influence because in recognising your social responsibility, that it's not all just about me and maximizing my own profit growth and forget the consequences if there are consequences. Selfless actions of leaders, where it is demonstrating by participation in the broader social context with a willingness to be responsible. The framework as such is

Table 4.21C Coded Segments of The Socially Responsible Digital Leadership Framework	
	showing you have appreciation for the broader spectrum. From a society point of view, it's the caution, do I embrace it or not, where is this going to take me, what is this going to do to, or for us.?
Interview 119	The framework will help us move towards the equilibrium as discussed earlier and to understand how business interacts with society. The framework could assist business leaders and guide them around new requirements for business to interact in a socially acceptable manner. Leaders should always aim to achieve it, or act in getting to the equilibrium. The challenge we have at the moment is that historically business has very archaic structures and very sort of waterfall-approach to everything. Where technology is going is, it's more a society-focused approached with multiple inputs. Some of these inputs of digital transformation should not only sit with the digital leaders. It should become a social discussion. I think the future of digital will be very dependent on society.
Interview 120	The framework is imperative to guide leaders without limiting innovation. With the change in technology, leaders need a guideline to define boundaries of engagement. Understanding that the impact is so wide that leaders must constantly understand how important it is to act within defined acceptable norms.
Interview 121	It is of utmost importance that innovation takes place within a framework. Equilibrium will probably only ever be reached if it is pushed from a social side. A one-directional framework will never work. True innovation is taking the same information given to all and finding alternate value propositions within. The framework ensures a level playing field as well as a field guide to the digital landscape.
Interview 122	I think that it is out there. The environment is there for the taking. Leaders should understand the social side otherwise it could go negative.
Interview 123	You must understand it to the nth degree. In this new world, the way that you must interact with people and the way that you respond is not like before. The positives of a framework, with potentially additional requirements, far outweigh the negatives.
Interview 124	The framework will be useful to guide leaders with issues of morality and the acceptable practice. Everybody describes digital disruption differently, but a framework can assist government to define guidelines with social mobilization for organizations. The framework should be descriptive but not forced as prescriptive. The framework should be descriptive but not forced as prescriptive. The voice of society should guide leaders with their decision making of future strategies.
Interview 125	Important for leaders to understand to guide them in future. Leaders should understand it first before trying to use it.
Interview 126	The framework defines that "it's the right thing to do".
Interview 127	The only way to prove it to them is by having some way of accreditation or a framework that you can show people what you are doing. Because ethics is a very difficult thing to measure it can influence leaders' thinking. I think the market will add value to something like that if you have it in place.
Interview 128	You don't want to re-invent the wheel the whole time. If someone has come up with a better practice way of doing these things, i.e. principles behind these things, everybody could apply it and benefit from it. Leaders would want to use a framework like this because a lot of the same learnings could be applied across the board. It will be useful, otherwise you will just have one direction of opinions of digital business all the time.
Interview 129	Guideline for leaders. Creating the concept of understanding for all the stakeholders to reach a balance. Define considerable accepted practices. Social forces: Keep business leaders in check.

Table 4.21C Coded Segments of The Socially Responsible Digital Leadership Framework	
Interview 130	Society will push back, but very different from the past with the new unleashing of the power of digital.
Interview 131	Large organizations will always push the boundaries of acceptance; therefore, this framework can guide leaders' attitude to explore within defined boundaries of acceptable behaviour. The framework is important to guide and protect society from potential predators.
Interview 132	Leaders should use the framework to ensure the highest level of success for the organization, individuals that are affected by innovation transformation, to make sure that society benefits from it. It is very important, you will then have a clear picture of what you are working towards and how you are going to get there, what you are going to address, need to consider and what the impacts are.
Interview 133	The framework and operating within the knowledge of a framework will enable leaders to be more effective in what they want to achieve.
Interview 134	A framework/model will provide solid and sustainable quality guidelines to follow. A framework/model should enable the Socially Responsible Leader to reach Digital Social Dynamic Equilibrium faster. By applying the framework, weak leadership will be minimized, and leaders would be placed in a better position to align strategies, manage processes, achieve goals faster and drive success on organizational/social level with the minimum negative impact on society and organizations. The framework would ensure that high level of standards is set and followed in a professional, ethical manner which would be expected from society and organizations.
Interview 135	It guides leaders through complete transparency and makes them better leaders through applying honesty and integrity with who they engage with – it doesn't matter if it is within the organization or towards the outside because everything is transparent. It gives leaders direction if they apply their thinking towards their equilibrium it will give them their direction to guide them through the challenges of social and organizational change within the digital landscape.
Interview 136	It's a way of keeping yourself in check with where you are heading, what you are doing and what you are trying to achieve. Appropriate laws and regulatory bodies by government should be part of the guidelines.
Interview 137	The fact that companies misused information for their own benefit can be detrimental. Leaders should be guided by ethics and moral sound principles. Non-compliance to guidelines can influence long-term sustainability of an organization. A framework similar to ISO certifications can be created for guidance.
Interview 138	The voice of society is important, and leaders should balance what they do according to the requirements of society.
Interview 139	The framework can guide and help leaders to balance the disruptors incorporating societal understanding. The framework is an extremely important toolset for leaders to create an understanding of the complexities of the interactions between digital innovation and the impact on humanity. The framework should be used by digital leaders, digital champions and digital mentors to elevate organizations to reach the Digital Social Dynamic Equilibrium faster.
Interview 140	People should be held accountable for their actions though prescription to adhere to the defined rules. The framework will be useful but there should be consequences for non-conformance. Leaders should use the framework to show commitment to society of their responsible behaviour.
Source: Francois Volschenk (2018)	

Appendix W2: Categorization of the Coded Segments

Figure 4.21D
Categorization of Coded Segments

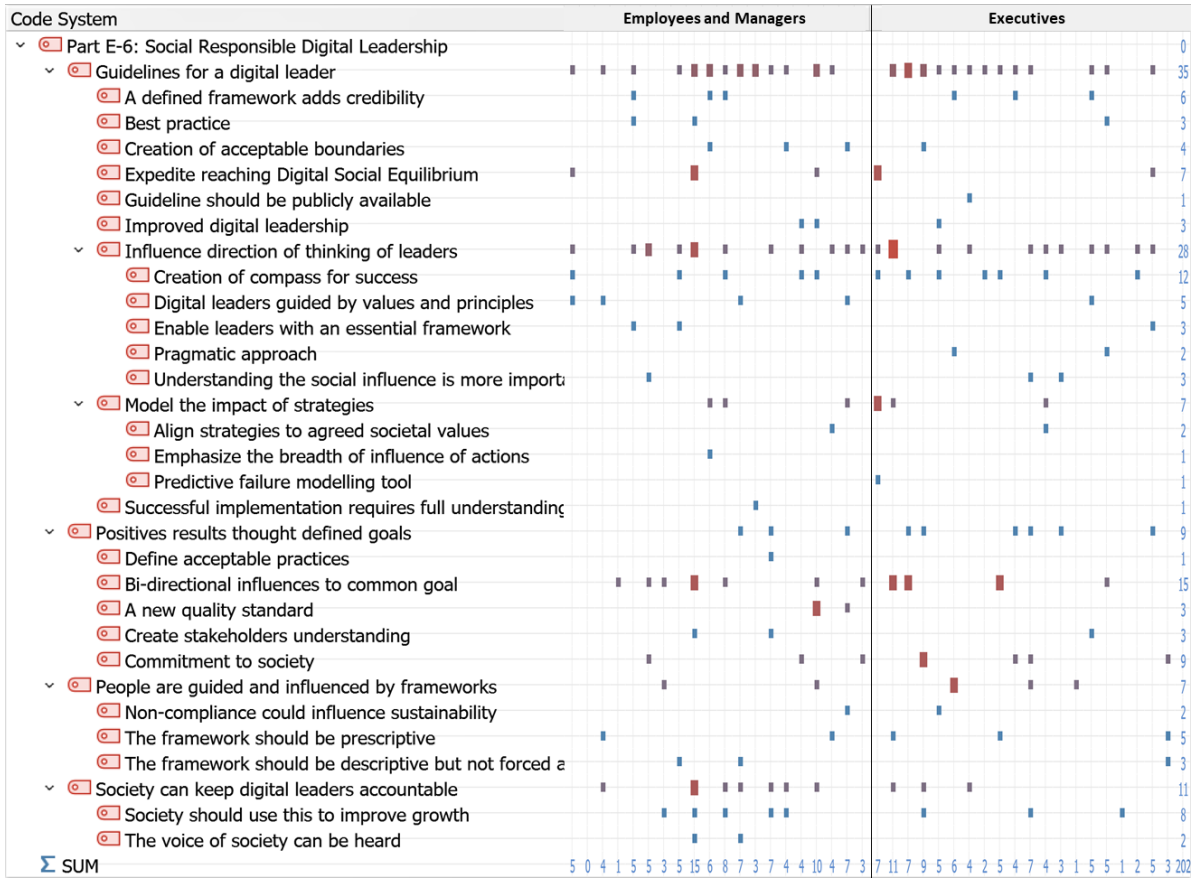
Part E-6: Socially Responsible Digital Leadership

- Guidelines for a digital leader
  - A defined framework adds credibility
  - Best practice
  - Creation of acceptable boundaries
  - Expedite reaching Digital Social Dynamic Equilibrium
  - Guideline should be publicly available
  - Improved digital leadership
  - Influence direction of thinking of leaders
    - Creation of compass for success
    - Digital leaders guided by values and principles
    - Enable leaders with an essential framework
    - Pragmatic approach
    - Understanding the social influence is more important than ever
  - Model the impact of strategies
    - Align strategies to agreed societal values
    - Emphasize the breadth of influence of actions
    - Predictive failure modelling tool
  - Successful implementation requires full understanding
- People are guided and influenced by frameworks
  - Non-compliance could influence sustainability
  - The framework should be prescriptive
  - The framework should be descriptive but not forced as prescript
- Positives results thought defined goals
  - Define acceptable practices
  - Bi-directional influences towards a common goal
  - A new quality standard
  - Create stakeholders understanding
  - Commitment to society
- Society can keep digital leaders accountable
  - Society should use this to improve growth
  - The voice of society can be heard

Source: Francois Volschenk (2018)

Appendix W3: Code Matrix Browser

Figure 4.21E
Code Matrix Browser of the Socially Responsible Digital Leadership Framework



Source: Francois Volschenk (2018)

APPENDIX X: The Perception Why Digital is Required in the World

Appendix X1: Coded Segments from the Interviews with Participants

Table 4.22C
Coded Segments of The Perception Why Digital is Required in The World

Document Name	Coded segments from interviews (Part F)
Interview 101	The effectiveness through adoption of the change. Knowledge availability. The application of the knowledge.
Interview 102	You need to compete effectively against somebody else. The reason why we need digital now, is because we are competing against somebody else who is digital. You have to be either the same or better than them to survive. My opinion is that you need digital to be better than your competitor to survive. Human beings like animals, have to be faster than the one at the back because otherwise you are going to get eaten, that's the way life works. The ultimate answer goes through to that you ultimately need to survive, but in overall perspective, so you need to make sure you are better than anybody else around you. If you ask an elderly person, they will answer no. If you ask a youngster, they will answer absolutely. We as humans always want to get things better. To be better than the others around them. As humans we want to be better than before, that is why it is just the human being that wants to be better every time. We probably do not need digital at all. It depends on where you are in your lifecycle. It's all relative around your lifecycle and what you are trying to do, and how you want to achieve it.
Interview 103	We cannot do it without digital for accuracy and speed. It enables me to spend more time with my family. Humans require digital to go faster and make life better. It makes life easier.
Interview 104	The way that everything is moving, it is the only way to go. It is about making life easier.
Interview 105	It is faster. Technology is growing. Whether you like it or now – so if you are going to stand back and wait, you are going to lose out on the growing innovations and technology phases. Not everybody will like the answer, I think it should make our lives easier. Everything is faster and easier.
Interview 106	We are connected by phones, networks and people are going to expect more, they are going to expect things faster. To enable humans. It gives everyone capability. It allows for an improved life experience. It makes information accessible. It makes my life easier, faster and less complicated.
Interview 107	To make the life of society much better.
Interview 108	We are transforming and changing faster than we ever have before, it is happening. It's happening, whether we like it or not. We don't have a choice. It makes our lives easier. It enables us to be more connected, it makes us feel like we are part of a small world where in fact, the world is large, but from a digital perspective, it is small. I reach out to someone, I talk to someone.
Interview 109	New people in another region to look after my manufacturing or other services. I think it is quite big because that is what you need. It makes our lives easier. It is a revolution. The world was stagnating, we had a number of different revolutions going on. Before, we were killing the world, because we were manufacturing, making and doing businesses across, and that enabled the rich to get richer and the poor to get poorer. What digital does is, because it has opened and the barriers to entry are now suddenly becoming less and less, the digital divide is breaking down your society barriers of entry. It doesn't

Table 4.22C Coded Segments of The Perception Why Digital is Required in The World	
	necessarily support the rich get richer and the poor get poorer, it opens those markets across the world which impacts on countries, on demographics, on everything. I think the digital world has been shrinking the boundaries of the world moving towards a one-world across the globe. Digital is enabling us to break boundaries and barriers across the world. It is expanding our market.
Interview 110	For the survival of mankind. If we don't have digital disruption and innovation, we will not have the opportunity for space exploration to create alternative living environments. The ultimate enhancement of life.
Interview 111	It makes life better and easier to do things.
Interview 112	It is not a case of is digital required for the world, it's there. It's the most effective way, in today's society of communicating and of being "seen" in the world. It makes it easier. What has digital done for the world? It's the communication. People have inherently understood the need for open platforms of communication. If they didn't, it would never have been adopted. It's the opening of boundaries and borders.
Interview 113	Without it, you will be left behind. Making life easier. "In order to adapt to the fast-paced life and changes we have, digital is the only way. Speed, flexibility, efficiency, data and information available when and as you want it"
Interview 114	It's giving us capabilities to do more. Digital enables entrepreneurs much better than before. It will enable us to do more with less.
Interview 115	Digital brings in a lot of efficiency. Increased convenience into our lives. It makes life better and easier.
Interview 116	It enables you as a human to do much more things. Digital gives you that extra human capability by augmenting human capability. It improves the quality of our lives. If applied correctly it takes away the mundane so that you can focus on the more interesting stuff. I wouldn't separate digital just from technology. The technology of the wheel was the digital of the age. Digital is a part of life and part of development. We develop through technology. Now this phase of our development, digital technology is the main tool that we must develop.
Interview 117	It goes back to efficiency and effectiveness. It starts off with you try to make everything better using technology. If you make things better and easier, generally you will be making more money.
Interview 118	It is going to happen whether you want it to or not. It's the way things have involved. It's not an experimental type of thing, it's an improvement road for society and for mankind. Humankind have always strived for better. The opportunity for growth is for those who realize it now, people who adopt it now, can see it smell it taste it. They are the ones that are going to be leaders.
Interview 119	Digital automates and improves efficiencies in the workplace, there are many applications where digital makes sense. I wouldn't say digital is required, it is inevitable. We can argue that digital improves our quality of life. Digital is a state of evolution.
Interview 120	Digital can make the world a better place. The entrepreneurs want to make money and digital provide opportunities. It is human nature to evolve and explore.
Interview 121	We must utilize technological advances to steer humanity towards an inclined progressive future, or else we too shall become extinct. It will allow us to move forward in the evolutionary grind to become better. Technology should be used to block out false information. Blockchain as a distributed ledger of information can put some power back to the people with open access to digital currency. The permanent nature of digital information should be used to govern data for full accountability. An audit trial can be built by blockchain to improve accountability and authenticity of any digital information.

Table 4.22C Coded Segments of The Perception Why Digital is Required in The World	
	Remove hunger and give the people something to do then you will see how fast we as humans can grow and evolve by embracing the aid that technology and AI offers.
Interview 122	It's how the environment, all sorts of resources, technology, people, process, information has evolved. It is not negotiable to go with that environment to move forward with the way that's coming. It makes our lives easier.
Interview 123	The effectiveness through adoption of the change. Knowledge availability. The application of the knowledge.
Interview 124	Your organization performs better. Society is better. It gives you a better quality of life. People will transform as it is human nature. You are more equipped with the right information. You can make smarter decisions.
Interview 125	You can improve customer service delivery. Serve internal organizations with improved productivity. Bring technology with improved infrastructure to impoverished communities. Drive economic growth for economic inclusion of more people. Improves people's lives for the better.
Interview 126	Times are changing, the world is evolving, the digital era is upon us. In order to keep up with the fast-paced changes, digital will need to be embraced. It makes life easier. Digital is required in order to keep up with competitive changes and in order to keep up with societal expectations.
Interview 127	I'm more effective. Digital is becoming the norm because it is making us more effective. I'm a better worker and can contribute more because of digital. It also allows me to choose some stuff that I'm interested in, in your own time and that's my form of relaxation.
Interview 128	I don't spend four hours sitting in a bank, I spend that four hours at home with my family.
Interview 129	It makes us more productive. For humans, to save time to do better things.
Interview 130	More time for things of leisure. Making life easier. Keep human being at the centre of everything to constantly improve society.
Interview 131	Digital is the game changer. Digital will start living by itself. Social enabler and equaliser.
Interview 132	Convenience from freeing myself from constraints like standing in queues. Spending more time with my family is my priority. Make my world easier. The potential for digital currency, digital voting and maybe even digital government.Net Neutrality of all individuals.
Interview 133	It makes your life more productive. The world is changing with all the technology, a lot of people are falling behind especially older people. It's affecting their productivity, their ability to still be productive economically, if this is used correctly then it enables them to be economically productive for longer. You will have more innovation that comes from society. For an individual it is convenience. If Digital Innovation is used correctly it can enable so many people that don't have access to higher learning as an example. That will drive the development of the whole society and entire world.
Interview 134	Basic services and development can have step change through digital disruption. Massive step change in alleviating a lot of wrongs in the world. For me personally, just comfort. In corporate and social environments, you can do good and well, things are easier to do than in the past. It's a massive equalization/enabler on various levels.
Interview 135	It ensures human and business survival. Through digital we have unlimited opportunities to be involved in matters which is of importance to us. It makes our lives as individuals easier.

Table 4.22C Coded Segments of The Perception Why Digital is Required in The World	
Interview 136	I can work from home at my convenience. It makes my life easier. Improved communications. Enabled social change through improved communication methods.
Interview 137	Created efficiencies. Makes everybody's life easier.
Interview 138	Decreasing the costs of products and services through efficiencies. Improve quality of life through the hierarchy of my needs. Convenience as consumer with availability of services. Makes my life easier.
Interview 139	Digitalization is a pre-requisite for organizations to remain relevant in future and to make businesses more effective within the new business ecosystem. The new way of doing business in future. Technology improves efficiencies. Digital innovation is here to stay and will continue to grow in future. The digital mindset has transformed the interaction with customers.
Interview 140	Opens a new way of living with new opportunities. Improved access to information. Makes my life easier. Create opportunities to communicate with other people.
Source: Francois Volschenk (2018)	

Appendix X2: Categorization of the Coded Segments

Figure 4.22i
Categorization of Coded Segments – Business Perspective

Part F: Why Digital?

- Businesses require digital to remain relevant
  - Improve effectiveness and efficiencies
  - Improve customer service delivery.
  - Defined the new way of doing business
- Digital is happening and is inevitable
  - Digital is here to stay
  - Digital is the new norm
  - To survive we need to embrace digital
- Improved communications
  - Personal communication channels improved
  - Customer communication improved
  - Could block false information
- It is a revolution
  - Improve governance of all information
    - Blockchain as permanent audit trail
  - Taking the world out of stagnation
  - Digital currency, government and voting possible
  - Digital could start living on its own
- We probably do not need digital at all.

Source: Francois Volschenk (2018)

Appendix X3: Categorization of the Coded Segments

Figure 4.22ii
Categorization of Coded Segments – Societal Perspective

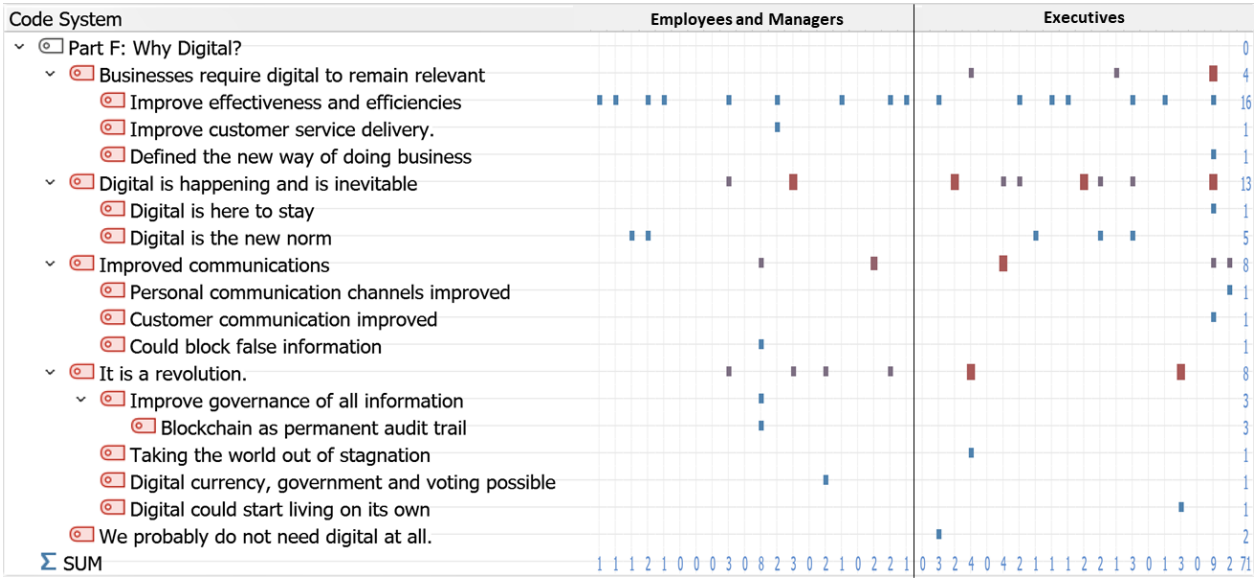
Part F: Why Digital?

- Digital to improve humanity
  - Survival
    - Enable exploration of alternative environments
    - Improve human to equip them for survival
  - Society is better
- Enable human capabilities and opportunities
  - Human improvement above others
  - Drive economic growth for economic inclusion of more people.
  - Enable impoverished society members
  - Older generations have much to gain from digital
- Improve quality of life
  - Improve knowledge through access to information
  - Makes life better
  - Makes life easier
  - Free up time for better things
    - Less wasting of time
    - Increase available time with family
    - Create leisure time
  - Wealth creation
  - Increase personal convenience
  - Personal comfort
  - Human nature to evolve
    - Technology and innovation are required for development
- Social equalizer or enabler
  - Breaks down boundaries
  - Social equalizer
  - Human centricity enabled
  - Enabler to achieve social expectations
  - Could create reason to belong for people
  - Opportunities for those who embrace it
  - Reduced barriers to entry in the market

Source: Francois Volschenk (2018)

Appendix X4: Code Matrix Browser

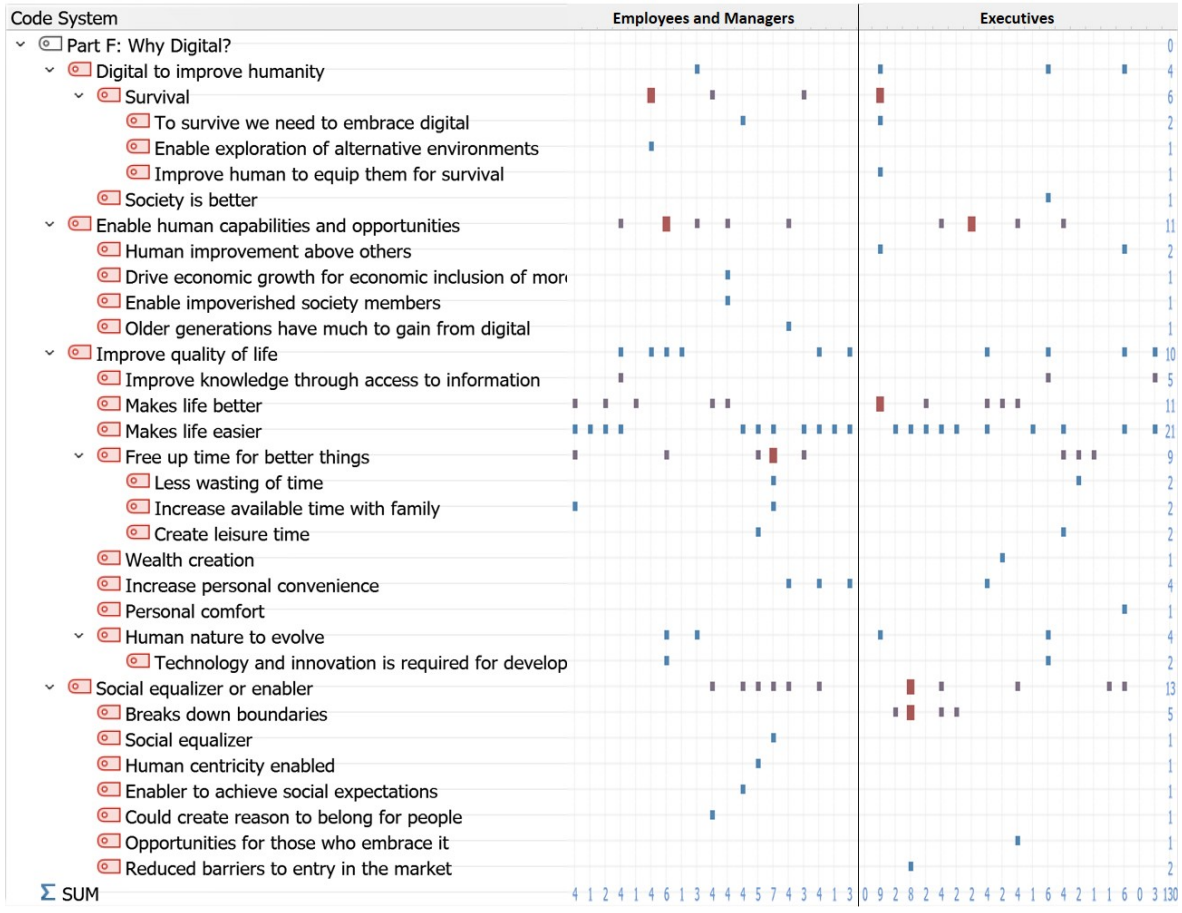
Figure 4.22Ei
Code Matrix Browser of the Perception Why Digital is Required in The World



Source: Francois Volschenk (2018)

Appendix X5: Code Matrix Browser

Figure 4.22Eii
Code Matrix Browser of The Perception Why Digital is Required in The World



Source: Francois Volschenk (2018)

APPENDIX Y: Quantitative Analysis

Appendix Y1. Descriptive Statistics of the Participants

Table Y1
Descriptive Statistics of Age Group, Leadership Experience and Digital Experience

Age

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Age	40	0	44,27	1,26	7,95	28,00	39,00	42,50	51,75	58,00

Age per group

Variable	Exec	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Age	0	20	0	40,10	1,41	6,32	28,00	36,50	39,00	44,50	54,00
	1	20	0	48,45	1,63	7,30	35,00	40,50	50,00	54,00	58,00

Leadership Experience

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Leadership Experience	40	0	12,20	1,27	8,05	0,00	5,25	10,00	15,75	30,00

Leadership Experience per group

Variable	Exec	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3
Leadership Experience	0	20	0	7,50	1,22	5,43	0,00	2,25	10,00	10,00
	1	20	0	16,90	1,69	7,55	5,00	10,75	15,00	23,75

Digital Experience

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Digital Experience	40	0	12,80	1,13	7,16	5,00	6,25	10,50	17,00	30,00

Digital Experience per group

Variable	Exec	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3
Digital Experience	0	20	0	10,65	1,30	5,83	5,00	5,25	10,00	12,75
	1	20	0	14,95	1,75	7,84	5,00	10,00	12,50	20,75

Source: Minitab 18 prepared by Francois Volschenk (2018)

Appendix Y2. T-test for Years of Digital Experience

Table Y2
Years of Digital Experience t-test

One-Sample T: Digital Experience

N	Mean	StDev	SE Mean	95% CI for μ
40	12,80	7,16	1,13	(10,51. 15,09)

μ: mean of Digital Experience

Test

Null hypothesis	H_0: μ = 10
Alternative hypothesis	H_1: μ ≠ 10

T-Value	P-Value
2,47	0,018

Source: Minitab 18 prepared by Francois Volschenk (2018)

Appendix Y3. T-tests for differences in the Influence Factors per Group

Table Y3
Tests for Differences in Groups with t-tests

Two-Sample T-Test and CI:

Group 0= Managers and Employees
Group 1= Executives

Digital Innovation - Future. Executives and 'Managers and Employees'
Descriptive Statistics: Digital Innovation - Future

Exec	N	Mean	StDev	SE Mean
0	18	6,083	0,943	0,22
1	16	5,44	1,58	0,39

T-Value	DF	P-Value
1,42	23	0,168

Social Leadership - Future. Executives and 'Managers and Employees'
Descriptive Statistics: Social Leadership - Future

Exec	N	Mean	StDev	SE Mean
0	18	5,83	1,10	0,26

1	11	5,455	0,688	0,21

T-Value	DF	P-Value
1,14	26	0,264

Social Innovation. Executives and 'Managers and Employees'
Descriptive Statistics: Social Innovation

Exec	N	Mean	StDev	SE Mean
0	20	5,70	1,42	0,32
1	20	5,775	0,952	0,21

T-Value	DF	P-Value
-0,20	33	0,846

Social Capital. Executives and 'Managers and Employees'
Descriptive Statistics: Social Capital

Exec	N	Mean	StDev	SE Mean
0	20	6,400	0,681	0,15
1	20	6,000	0,811	0,18

T-Value	DF	P-Value
1,69	36	0,100

Digital Social Dynamic Equilibrium. Executives and 'Managers and Employees'
Descriptive Statistics: Digital Social Dynamic Equilibrium

Exec	N	Mean	StDev	SE Mean
0	20	6,600	0,598	0,13
1	20	6,22	1,06	0,24

T-Value	DF	P-Value
1,38	30	0,178

SRDL framework. Executives and 'Managers and Employees'
Descriptive Statistics: SRDL framework

Exec	N	Mean	StDev	SE Mean
0	20	6,550	0,605	0,14
1	20	6,550	0,605	0,14

T-Value	DF	P-Value
0,00	38	1,000

Source: Minitab 18 prepared by Francois Volschenk (2018)

Appendix Y4. T-tests for Significance of the Influence Factors

Table Y4
The Influence Factors' t-tests

One-Sample T:
Digital Innovation - Future. Social Leadership, Social Innovation &Social Capital

Descriptive Statistics

Sample	N	Mean	StDev	SE Mean	95% CI for μ
Digital Innovation - Future	34	5,779	1,304	0,224	(5,324. 6,234)
Social Leadership - Future	29	5,690	0,967	0,180	(5,322. 6,058)
Social Innovation	40	5,737	1,193	0,189	(5,356. 6,119)
Social Capital	40	6,200	0,766	0,121	(5,955. 6,445)

μ: mean of Digital Innovation - Future. Social Leadership - Future. Social Innovation. Social Capital

Test

Null hypothesis	H_0: μ = 5
Alternative hypothesis	H_1: μ ≠ 5

Sample	T-Value	P-Value
Digital Innovation - Future	3,49	0,001
Social Leadership - Future	3,84	0,001
Social Innovation	3,91	0,0001
Social Capital	9,90	0,0001

One-Sample T:
Digital Social Dynamic Equilibrium & SRDL framework

Descriptive Statistics

Sample	N	Mean	StDev	SE Mean	95% CI for μ
Digital Social Dynamic Equilibrium	40	6,412	0,869	0,137	(6,135. 6,690)
SRDL framework	40	6,5500	0,5970	0,0944	(6,3591. 6,7409)

μ: mean of Digital Social Dynamic Equilibrium. SRDL framework

Test

Null hypothesis	H_0: μ = 6
Alternative hypothesis	H_1: μ ≠ 6

Sample	T-Value	P-Value
Digital Social Dynamic Equilibrium	3,00	0,005
SRDL framework	5,83	0,0001

Source: Minitab 18 prepared by Francois Volschenk (2018)

Appendix Y5. Descriptive Information of SRDL Framework per Group

Table Y5
Descriptive Statistics of the SRDL framework per group

Descriptive Statistics totals

Variable	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3
Digital Innovation - Future	34	6	5,779	0,224	1,304	2,000	5,000	6,000	7,000
Social Leadership - Future	29	11	5,690	0,180	0,967	4,000	5,000	6,000	6,500
Social Innovation	40	0	5,737	0,189	1,193	3,000	5,000	6,000	7,000
Social Capital	40	0	6,200	0,121	0,766	4,000	6,000	6,000	7,000
Digital Social Dynamic Equilibrium	40	0	6,412	0,137	0,869	4,000	6,000	7,000	7,000
SRDL framework	40	0	6,550	0,0944	0,5970	5,0000	6,0000	7,000	7,000

Digital Innovation - Future. Social ... framework

Variable	Exec	N	N*	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3
Digital Innovation - Future	0	18	2	6,083	0,222	0,943	4,000	6,000	6,000	7,000
	1	16	4	5,438	0,395	1,580	2,000	5,000	5,750	7,000
Social Leadership - Future	0	18	2	5,833	0,259	1,098	4,000	5,000	6,000	7,000
	1	11	9	5,455	0,207	0,688	5,000	5,000	5,000	6,000
Social Innovation	0	20	0	5,700	0,317	1,418	3,000	4,250	6,000	7,000
	1	20	0	5,775	0,213	0,952	4,000	5,000	6,000	6,750
Social Capital	0	20	0	6,400	0,152	0,681	5,000	6,000	6,500	7,000
	1	20	0	6,000	0,181	0,811	4,000	5,625	6,000	6,875
Digital Social Dynamic Equilibrium	0	20	0	6,600	0,134	0,598	5,000	6,000	7,000	7,000
	1	20	0	6,225	0,236	1,057	4,000	5,250	7,000	7,000
SRDL framework	0	20	0	6,550	0,135	0,605	5,000	6,000	7,000	7,000
	1	20	0	6,550	0,135	0,605	5,000	6,000	7,000	7,000

Source: Minitab 18 prepared by Francois Volschenk (2018)

Appendix Y6. Statistics for Digital Innovation and Digital Social Dynamic Equilibrium

Table Y6
Digital Leadership compared to Digital Social Dynamic Equilibrium

Two-Sample T-Test and CI:

Digital Innovation – Future & Digital Social Dynamic Equilibrium
Method

μ_1: mean of Digital Innovation - Future

μ_2: mean of Digital Social Dynamic Equilibrium

Difference: $\mu_1 - \mu_2$

Equal variances are not assumed for this analysis.

Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
Digital Innovation - Future	34	5,78	1,30	0,22
Digital Social Dynamic Equilibrium	40	6,412	0,869	0,14

Estimation for Difference

Difference	95% CI for Difference
-0,633	(-1,159. -0,107)

Test

Null hypothesis $H_0: \mu_1 - \mu_2 = 0$

Alternative hypothesis $H_1: \mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-2,41	55	0,019

Source: Minitab 18 prepared by Francois Volschenk (2018)

Appendix Y7. Statistics for Digital Innovation and the SRDL Framework

Table Y7
Digital leadership compared to the SRDL framework

Two-Sample T-Test and CI:

Digital Innovation – Future & SRDL framework

Method

μ_1: mean of Digital Innovation - Future

μ_2: mean of SRDL framework

Difference: $\mu_1 - \mu_2$

Equal variances are not assumed for this analysis.

Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
Digital Innovation - Future	34	5,78	1,30	0,22
SRDL framework	40	6,550	0,597	0,094

Estimation for Difference

Difference	95% CI for Difference
-0,771	(-1,260. -0,281)

Test

Null hypothesis H_0: $\mu_1 - \mu_2 = 0$

Alternative hypothesis H_1: $\mu_1 - \mu_2 \neq 0$

T-Value	DF	P-Value
-3,17	44	0,003

Source: Minitab 18 prepared by Francois Volschenk (2018)