

**UNIVERSITY OF KWAZULU-NATAL**

**THE FOURTH INDUSTRIAL REVOLUTION'S  
INFLUENCE ON MARKETING COMMUNICATIONS:  
PERSPECTIVES OF PRACTITIONERS IN GAUTENG,  
SOUTH AFRICA**

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MASTER OF COMMERCE**

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College of Law and Management Studies**

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## DECLARATION

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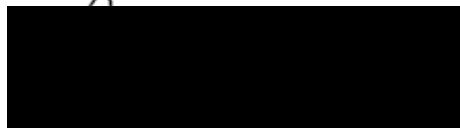
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## ABSTRACT

This research focuses on how prepared marketing communications practitioners are for the influence of the Fourth Industrial Revolution (4IR), with emphasis on the challenges they face and how they attempt to address them. Such issues have received scant attention in research thus far, particularly in South Africa. The study included 10 practitioners drawn from both advertising agencies and client companies, and attempted to answer the following questions: How prepared are practitioners in the marketing communications discipline for the influence of the 4IR? How does the 4IR influence their marketing communications? How have practitioners addressed challenges of the 4IR? It is postulated that in the context of the 4IR (Schwab 2017), marketing communications is impacted by the 4IR through theories of digital communication (Guizzo 2003), innovation diffusion (Daraza 2016) and polymedia (Madianou & Miller 2012).

The study adopted an exploratory qualitative approach and where semi-structured in-depth interviews were used to collect data. Data was analysed using thematic content analysis. Four themes were identified in the data, which are: general understanding of the 4IR; advantages of the 4IR; disadvantages of the 4IR; and strategies to address challenges of the 4IR.

Overall, findings show that the 4IR was seen as beneficial if it assists marketing communications practitioners to understand the consumer better and provide improved and quicker solutions. Although practitioners felt that jobs might not be severely affected by the 4IR and machines taking over (due to the importance of the human and creative elements in marketing communications), there was agreement that change is a constant, and that recent technologies require marketers to be a step ahead of the curve. The COVID-19 pandemic has thrown an additional challenge for marketers, demonstrating that the future is uncertain and that brands and agencies that have future-proofed themselves for success are likely to survive whatever changes are thrown at them. Some of the recommendations from the study include adapting to the changes, devising clear-cut strategies and maintaining an always-on attitude to cope with the 4IR. Recommendations for future research include understanding the perspectives of practitioners in other provinces.

**Key words:** Fourth Industrial Revolution, Gauteng, marketing communications, practitioners, social media

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## LIST OF ACRONYMS

4IR	-	Fourth Industrial Revolution
ADHD	-	Attention deficit hyperactivity disorder
AI	-	Artificial Intelligence
AIDA	-	Awareness, interest, desire and action
AR	-	Augmented Reality
ATL	-	Above the line
B2B	-	Business to Business
B2C	-	Business to Consumer
BTL	-	Below the line
BFAS	-	Bergen Facebook Addiction Scale
COVID-19	-	Coronavirus 2019
CPU	-	Central processing unit
CRM	-	Customer Relationship Management
DRIP	-	differentiate, remind, inform, and persuade
EU	-	European Union
FMCG	-	Fast-moving consumer goods
GDM	-	Global delivery management
GDPR	-	General Data Protection Regulation
ICT	-	Information and Communication Technology
IMC	-	Integrated marketing communications
IMH	-	Intelligent marketing hub
IDT	-	Innovation diffusion theory
IoT	-	Internet of Things
IoTCC	-	Internet of Total Corporate Communications
IT	-	Information Technology
K-wave	-	Kondratieff wave
LAWS	-	Lethal Autonomous Weapons System
MarTech	-	Marketing Technology
NPS	-	Net Promoter Scores
OECD	-	Organisation for Economic Co-operation and Development
PoPI Act	-	Protection of Personal Information
PLEs	-	Personal Learning Environments

ROI	-	Return on investment
SEO	-	Search engine optimisation
SME	-	Small & Medium Enterprise
TSR	-	Technological social responsibility
TTL	-	Through the line
USP	-	Unique selling point
VR	-	Virtual reality
WAMPA	-	Where Are My People At
WEF	-	World Economic Forum

# CHAPTER ONE: INTRODUCTION

## 1.1 Introduction

The global world is quickly embracing many elements of the Fourth Industrial Revolution (4IR), such as artificial intelligence, cryptocurrency, nanotechnology, robotics, the Internet of Things, 3D printing, cybersecurity and autonomous vehicles (Khumalo 2018). Schwab (2016, p. 31) defines this revolution as a series of “economic, social and cultural” upheavals that will unfold over the 21<sup>st</sup> century. The 4IR is a fusion of “new technologies that connect the physical, digital and biological worlds, impacting all disciplines, economies and industries” (Khumalo 2018, p. 4). Prisecaru (2016) notes that the 4IR now involves technology-created goods using three-dimensional (3D) printing, which can produce actual products by constructing sequential tiers of materials.

The 4IR has caught many industries unaware, with some better prepared than others for this change. Khumalo (2018) notes that many industries, especially in the developing world, will be playing catch-up for many years - and perhaps decades - to come.

Marketing communications, a discipline within several industries, is not immune to the influence of the 4IR (Shkurupskaya & Litovchenko 2016). This raises many questions, which include: How prepared are practitioners in the marketing communications field for the 4IR? What challenges does the 4IR pose for them and how do they deal with these challenges? Such questions have not received much attention in research, specifically in the context of South Africa. The aim of this study, therefore, is to address this gap by exploring Gauteng-based marketing communications practitioners’ perspectives on the influence of the 4IR on their work.

## 1.2 Background to the study

The 4IR follows the Third Industrial Revolution, the so-called ‘Third Wave’ (Toffler & Toffler 1996), which launched digital technology in the 1980s and is seen as a precursor to the 4IR. Rouse (2017, p. 1) defines the 4IR as “the current and developing environment in which disruptive technologies and trends such as the Internet of Things (IoT), robotics, virtual reality (VR) and artificial intelligence (AI) are changing the way we live and work”. According to Schwab (2017), the chairman of the World Economic Forum (WEF), the 4IR is revolutionising all aspects of life in work, in relationships, in markets and in all of humanity. He asserts that it is no longer about whether global industries will be disrupted, but when the

disruption will take place, what form it will take and how it will impact people and organisations (Schwab 2017). This contention indicates that South African industries are not immune to the influence of the 4IR. Adao, Vincent and Davies (2018) found that South African executives were less than ready to harness the full potential of the 4IR to benefit their clients when compared with their global counterparts. Some industries in South Africa are, however, making strides in embracing elements of the 4IR, such as the financial services and telecommunications sectors through mobile financial innovation and AI devices (Bernstein *et al.* 2017).

Organisations thrive when developing marketing communications solutions to attract consumers and customers (Mavratzas & Kalogiannidis 2020). The marketing communications of the fourth industrial age traverse both the real and virtual environments. For example, VR is said to change consumer behaviour in food choice and use, with a potential to assist in obesity reduction (Wang, Escobar, Da Mota, Velasco & Carlos 2021). Additionally, with COVID-19 lockdowns, there are opportunities for VR to assist consumers by providing a virtual shopping experience with smell and sensory feel whilst ordering their groceries online (Wang *et al.* 2021). Digital communication is delivered by the 4IR elements and moves from passive towards interactive communication where the consumer dictates the content and message (Shkurupskaya & Litovchenko 2016). This challenges the custodianship of the communication message, which is likely to vacillate between the brand and the user.

It is inferred that marketing communications practitioners, as knowledge workers, will be impacted by AI and machine learning (Daugherty & Wilson 2019). The IoT and AI, amongst others, will introduce marketing technology tools that could potentially change the structure of the marketing communications department and the type of skillset required to provide marketing communications solutions to their industries. Conick (2017) asserts that marketers should expect to retain skills that are more creative in ensuring that humans excel above machines.

### **1.3 Research problem**

The 4IR has ushered in digital disruption that is likely to impact every aspect of life (Schwab 2017), including marketing communications. Traditional marketing communication delivers brand messaging to customers and consumers in a one-way process. The 4IR, through digital communication, is changing this approach into a two-way process where users have the potential to influence the perception of the brand, especially in the social media space (Hird 2009). This power shift in brand custodianship raises questions

around marketing communications practitioners' openness to this change, as well as the strategies that they utilise to adapt to this change.

These issues have thus far not received much attention in research, especially in the context of South Africa. Although there is a growing body of research on the impact of the 4IR, such research has focused on aspects such as agriculture (Mtshali & Akinola, 2020), applied strategic marketing (Berndt et al. 2021), automation (Roberts, Gordon, Struwig, Bohler-Muller & Gastrow 2021), banking (Ajibade & Mutula 2020), challenges and opportunities (Beyode, Van der Poll & Ramphal 2019), COVID-19 impact (Telukdarie, Arnesh, Munsamy & Mohlala 2020), creative methodologies (Lekhanya 2015), destination marketing (Tseane-Gumbi & Ojakorotu 2021), education (Marwala 2021), emerging artists (Xaba, Fang & Mthembu 2021), emotional intelligence (van der Westhuizen 2021), employment (Naidoo 2020), English communication (Nel & Govender 2020), ethics and human rights (Mpofu & Nicolaides 2019), future of work (Mkansi & Landman 2021), gambling (Adams *et al.* 2020), housing and service delivery (Olojede, Agbola & Samuel 2019), industrial design (Adelabu & Campbell 2020), jobs (Fox & Signé 2021), leadership (Alade, Windapo & Wachira-Towey 2021), life insurance sector (Molloy & Ronnie 2020), logistics (Bag, Gupta & Luo 2020), loyalty intentions (Mgiba 2020), moral risk and government policy (Ostrowick 2021), policymakers (Markowitz 2019), Small & Medium Enterprise (SME) (Kademeteme & Twinomurinzi 2019), teaching and learning (Oke & Pereira Fernandes 2020), sustainable development goals (Hoosain *et al.* 2020), smart governance (Manda & Backhouse 2019), development (Sihlongonyane 2018), skills (Chaka 2020), sports sponsorship (Mackenzie 2020), unemployment (Matli & Ngoepe 2020), transformation (Mayer 2020), website security (Mofokeng 2019), women (Adams 2021) and youth (Tshabalala & Beharry-Ramraj, 2021). As can be seen from this list, the studies related to marketing have been in areas such as applied strategic marketing, destination marketing and sports sponsorship. To the best of the researcher's knowledge, however, there has not been any scholarly investigation into marketing communications practitioners' perceptions of and reactions to the influence of the 4IR on their work. (Studies that relate to the 4IR and marketing will be covered further in Section 2.2.10).

This study therefore aimed to address this gap by exploring Gauteng-based marketing communications practitioners' perspectives on the influence of the 4IR on the marketing communications of organisations within the business-to-business (B2B) and business-to-consumer (B2C) industries in South Africa.

#### **1.4 Research questions**

The questions that the study sought to answer were:

- What do marketing communications practitioners in Gauteng understand by the 4IR?
- How do marketing communications practitioners in Gauteng see the influence of the 4IR on the marketing communications practices of B2B and B2C organisations in South Africa?
- What challenges do these practitioners face in adapting their marketing communications practices in the context of the 4IR?
- How do they address these challenges?

## **1.5 Research objectives**

Aligned to the above questions, objectives of the study were:

- To gain insight into Gauteng-based marketing communications practitioners' understandings of the 4IR.
- To understand how marketing communications practitioners in Gauteng see the influence of the 4IR on the marketing communications practices of B2B and B2C organisations in South Africa.
- To explore challenges practitioners face in adapting their marketing communications practices in the context of the 4IR.
- To discover how marketing communications practitioners address these challenges.

## **1.6 Methodology**

The study adopted an exploratory qualitative approach. The research was conducted in Gauteng, South Africa. Ten marketing communications practitioners (five from advertising agencies and five from client companies) were selected using a judgemental approach (a form of non-probability sampling).

In-depth semi-structured interviews were used to collect data. Due to the COVID-19 pandemic, interviews were conducted telephonically. Data quality was addressed using Guba's constructs for trustworthiness (Lemon & Hayes, 2020). The data was analysed using thematic content analysis with the aid of a software programme, NVivo.

The methodology is explained and justified in depth in Chapter 3. Ethical considerations pertinent to the study are also addressed in that chapter.



## **1.7 Delimitations**

This was an exploratory, qualitative study designed to gain a deep understanding of an area that has not been previously explored. The study was based on a sample of 10 marketing communications practitioners (from both advertising agencies and client companies), drawn from the business sector (B2B and B2C), and not from other sectors such as non-profits and charities. The study was also limited to the Gauteng area of South Africa.

## **1.8 Significance of the study**

There is a paucity of literature on the influence of the 4IR on marketing communication, particularly in South Africa. The study aimed to begin to address this gap in the literature by exploring Gauteng-based marketing communications practitioners' perspectives on the influence of the 4IR on the marketing communications of organisations within the B2B and B2C industries in South Africa.

## **1.9 Structure of the dissertation**

The dissertation is divided into five chapters. The first chapter provides a background and overview of the study. The next chapter comprises the literature review that examines the Fourth Industrial Revolution and marketing communications concepts. This chapter also presents the conceptual framework that was constructed for the study. Chapter Three reviews the research methodology, with a focus on the approach taken to collect and analyse the data. Chapter Four presents and discusses the findings by identifying themes and subthemes in the data. Conclusions, recommendations and limitations are discussed in the final chapter.

## **1.10 Conclusion**

This chapter provided an overview of the dissertation, the background to the topic, the articulation of the research problem, the objectives of the research and the approach to the research. The following chapter addresses the literature that assists in developing a conceptual framework of this topic. It comprises an overview of the influence of the 4IR in general and in marketing communications specifically.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter comprises a review of the literature related to the impact of the 4IR on marketing communications. The chapter begins by delving into the concept of the 4IR by addressing the elements of this revolution. It then focuses on the impact of the 4IR, which takes into consideration the impact of the 4IR on developing countries, in Africa, and finally South Africa since the study is set in a developing economy. The chapter then addresses the impact of the 4IR on business and on the future of work since marketing communications practitioners operate in a specific discipline in industries. Some aspects of society are addressed specifically, which the researcher deemed significant to give attention to, such as the impact on age groups such as the Millennials and Generation Z, who demand instantaneous response from brands in the 4IR era. The impact of the 4IR also requires mention of government's role as a catalyst of change in all aspects of society.

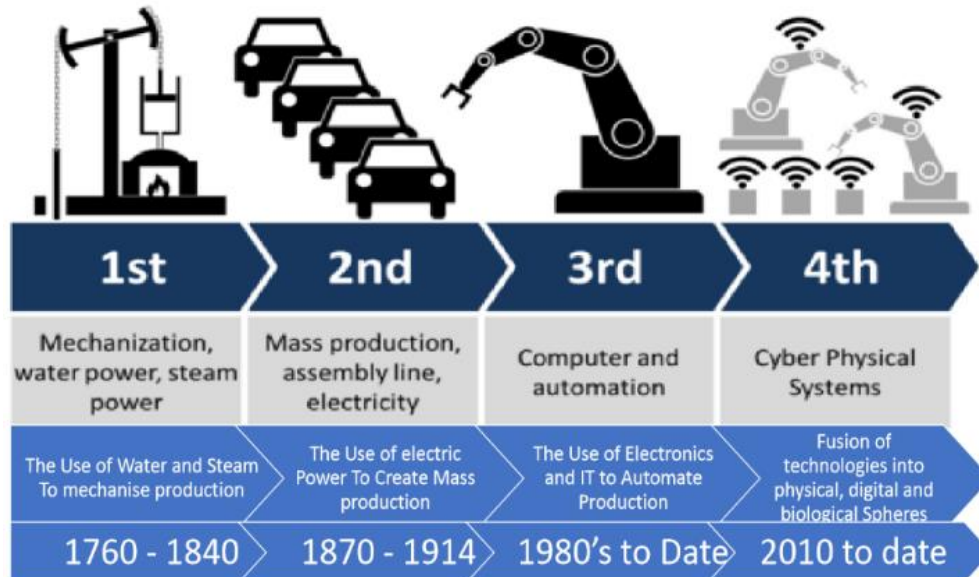
The second part of the chapter focuses on marketing and marketing communications. Under marketing, the chapter addresses traditional marketing and digital marketing in the digital era as an introduction to the 4IR in this discipline. Thereafter the chapter focuses on marketing communications, commencing with the influence of the internet and data on marketing communications. The elements of the 4IR are addressed as they impact on marketing communications. There is also a focus on the influence of the 4IR on the marketing function as a profession and on digital communication in South Africa specifically. Further discussion addresses the impact of the 4IR on customer privacy and social media as these platforms have opened up communication between brands and companies. Since the study was conducted during the COVID-19 pandemic, mention of the pandemic's impact is also made. A synthesis of the challenges and opportunities of the 4IR on marketing communications is provided. Lastly, the theories that are relevant to these issues are investigated and the conceptual framework that demonstrates the elements of the study is presented. These issues were intensively explored because there is a gap in the literature, particularly in South Africa, when it comes to the influence of the 4IR on marketing communications.

### **2.2 The Fourth Industrial Revolution (4IR)**

As previously stated, Schwab (2016, p. 31) defines the 4IR as a series of “social, political, cultural and economic” upheavals that will unfold over the 21<sup>st</sup> century. This section covers the concept of the 4IR, elements of the 4IR and the impact of the 4IR on industries and other aspects of life.

### 2.2.1 The concepts of the 4IR

Globally, the discussion on the 4IR has been led by among others, the WEF, a body that is “dedicated to advancing the human race across various spheres of society with other leaders improving the state of the world by engaging business, political, academic, and other principals that are shaping organisational, local and international programmes” (World Economic Forum 2017, p. 2). Every aspect of life is postulated to be impacted by the 4IR (Schwab 2016). Drivers of the 4IR are mainly “high-speed mobile internet, big data analytics, cloud technology, blockchain technology, biotechnology, internet of things and artificial intelligence” (Schwab 2017, p.19).



**Figure 2.1: The First to Fourth Industrial Revolutions (Source: Khumalo 2018, p. 5)**

Scholars assert that the 4IR follows on from previous industrial revolutions (as indicated in Figure 2.1) (Schwab 2016; Khumalo 2018). It should be stated, however, that opinions differ regarding the timeframes of these phases, as is evident in the following discussion. The first industrial revolution covered the years from 1760 to approximately 1840 and was centred on steam engine technology, which brought on mechanical production. Horse and carriage jobs were automated by the construction of rail transportation (Schwab 2016). This was the first mechanisation of jobs and possibly the first experience of wide-scale job displacement. The second industrial revolution began around 1870 and endured until the 1940s (Schwab

2017). Essentially, the advent of electricity ushered in mass production. Automation replaced jobs that were until then done by hand-held tools, when the conveyor belt mechanism delivered mass market goods. The third industrial revolution came in from around the 1960s to 2010 (Schwab 2017). This revolution was called the computer revolution, driven by semi-conductors, mainframe computing, personal computing and the internet (Beno 2019). Thus, the third industrial revolution brought robotics into factories, which displaced manual jobs further.

Nevertheless, the 4IR takes digitisation a step further by fusing “new technologies that are connecting the physical, digital, and biological worlds, and impacting all disciplines, economies, and industries” (Khumalo 2018, p. 4). According to Schwab (2017), the 4IR is transforming all aspects of life as we know it; it is no longer about whether global industries will be disrupted, but rather when the disruption will take place, what form it will take, and how it will impact people and organisations.

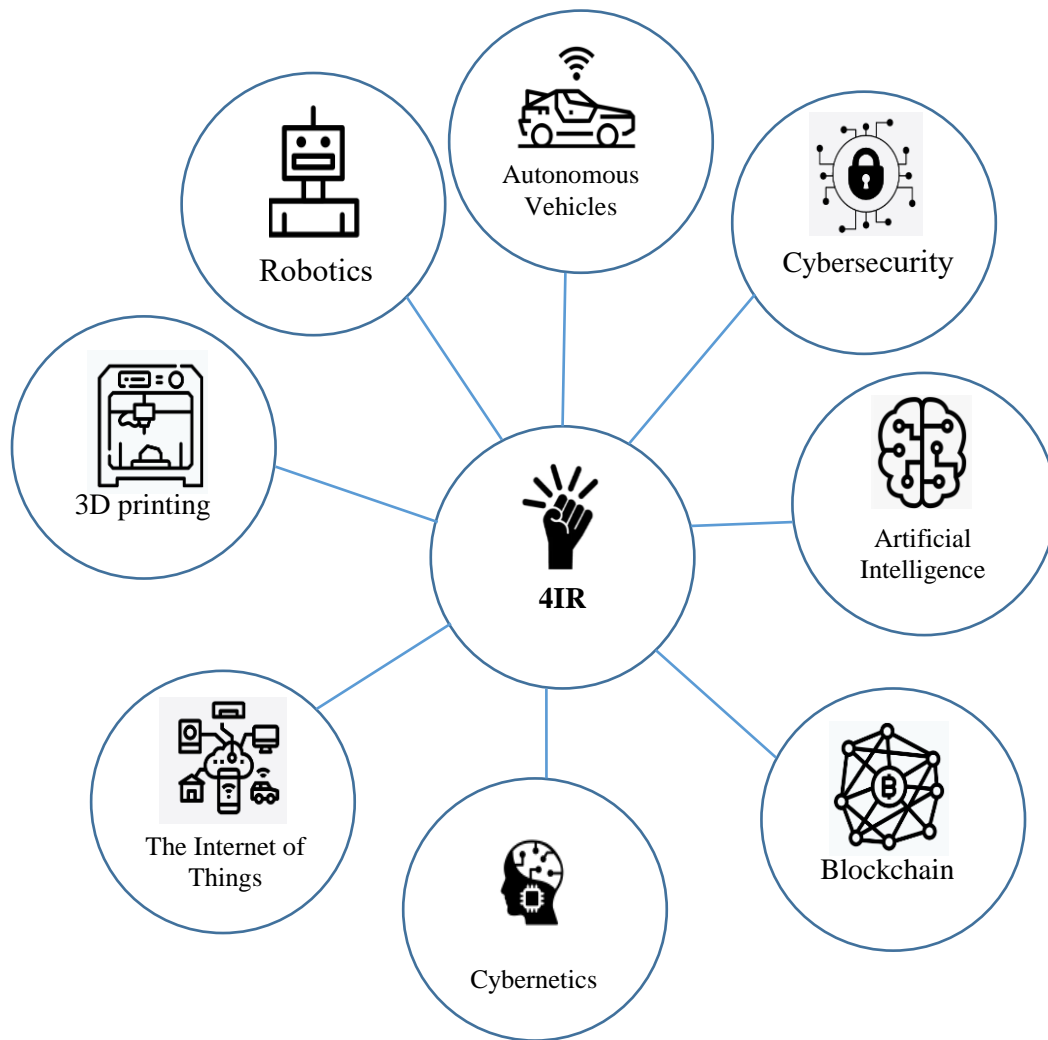
Physical manifestations of the 4IR such as “autonomous vehicles, 3D printing, advanced robotics, and new materials” are megatrends that are hypothesised to change the world; all countries therefore need to be geared up for it (Schwab 2017, p. 20). Gearing up for the change means facing the reality of jobs that are being replaced with every industrial revolution; nonetheless, automation in this revolution is said to be exponential. Fundamentally, the big question is whether previous industrial revolutions created more jobs than they displaced.

Moore’s Law states that the pace of change will be exponential (Baldwin 2019). This pace relates to the velocity of data, where data is processed at an apt and extraordinary pace (Gentsch 2019). Thus, the high velocity of this change is a concern for marketers - and indeed for every discipline - because of the capacity of industries and discipline to cope with the change.

### **2.2.2 Elements of the 4IR**

Unpacking the elements of the 4IR will help to explain this concept in depth. These elements are artificial intelligence, cryptocurrency (blockchain), robotics, Internet of Things, cybernetics, 3D printing, cybersecurity and autonomous vehicles (Khumalo 2018). The following sub-sections provide an overview of these 4IR elements.

The major elements of the 4IR are graphically represented in Figure 2.2. An overview of each element is provided thereafter.



**Figure 2.2: Elements of the 4IR (Source: Adapted from Jones 2019)**

**(a) The Internet of Things (IoT)**

The basic component of the IoT is the wireless sensor networks such as “tags, sensors, actuators, mobile phones” and so on, which allow objects to communicate with other devices through the cloud and other systems (Okano 2017, p. 76). The ability of these cyber-physical systems to interconnect is driven by physical, digital and biological drivers (Gouping, Yun & Aizhi 2017). Principally, the impact is the digitisation of the manufacturing process and customisation of products. This fosters the integration of production lines and requires business mode adjustment to respond to customer expectations.

Scholars note that there are various technological drivers of this revolution that cannot be ignored (Schwab 2016; Gouping et al. 2017). The internet of and for things is epitomised by the phenomenon of a portable central processing unit (CPU) (Schwab 2016). This CPU is so small that it is delivered in a mobile phone. This allows for mobile technology to provide an opportunity for all to access 4IR technology, but it also poses challenges of inequality where the haves possess access to the best technologies compared to the have-nots. The increase in access to technology is, however, gaining momentum. Given the above, the tipping point is regarded as when 90% of the global population possesses smart phones, which is anticipated to be by 2025 (Schwab 2017). Another estimation states that by 2025 “three quarters of the world will be able surf the web using their smartphone” (Handley 2019, p. 1). This relates to Metcalf’s Law of network connections, where the incremental growth exponentially balloons almost uncontrollably (Baldwin 2019). The world of interconnectivity is therefore going to be pervasive; marketers must take advantage of this connection.

IoT also assists entrepreneurs when they can identify market intentions that develop “core IoT”, “adjacent IoT”, and “transformational IoT” (Hudson 2017, p. 8). Core IoT grows the core business; adjacent IoT is about venturing into new offerings using existing data and transformational IoT looks at untapped opportunities (Hudson 2017). Thus, marketers need to track the innovation trends that either developed at core level, adjacent to existing data and moreover those that are transformational.

Opportunities are seen regarding economic development and restructuring, which could increase production efficiencies. From a marketing perspective, the benefit of the customer IoT is the extension of products that can carry additional data on user experiences. The data that is derived from customer IoT, such as the refrigerator, might be more powerful than a company Customer Relationship Management (CRM) programme (Chavez, O’Hara & Vaidya 2019). Pentland (2013) defines this scenario as that of a data-driven society where almost every action is regulated by data. Equally marketing is not an exception to this phenomenon.

## **(b) Autonomous vehicles**

Transportation solutions brought on by the 4IR are driverless cars or autonomous vehicles, which are vehicles with built-in technology that can sense their environment, navigate and move with little or no human intervention (Schwab 2017). This technology is not only in cars, but also in “trucks, drones, aircrafts and boats” (Schwab 2017, p. 20). Thus, the benefits are the reduction of traffic accidents that could be a result of human error and a decrease of traffic congestion. Scholars have deliberated on legal challenges of

autonomous vehicles in the event of accidents (Schwab 2017, Tegmark 2017). Additionally, insurance companies are debating the culpability in the event of accidents involving autonomous vehicles (Ryan 2020). In addition, ride-hailing services such as Uber and other new transportation solutions such as flying cars are assumed to change the way people and goods move since the creation of the first automobile (Terry *et al.* 2019). This technology, which assumes the ‘pay as you go’ concept could assist marketing practitioners in meeting mobility needs of an increasingly demanding customer.

Human error is the arbiter that could make transportation jobs (such as truck drivers, taxi drivers, ride-hailing drivers and delivery vehicles drivers) extinct due to computerisation, autonomous vehicles and self-driving technology (Nikitas, Vitel & Cotet 2021). These technologies are designed to be safer than human error, and machines can drive continuously without fatigue. Additionally, financial benefits are enormous. For instance, seven trillion dollars are projected to be generated by the mobility market by 2030 (Terry *et al.* 2019). In addition, there are opportunities for technology transfer in developing countries in the transportation industry through ensuring efficient technological systems (Adeniran 2016). Transportation and autonomous vehicle technology have an impact on marketing communications. For example, Hawthorne-Castro (2018) stated that autonomous vehicles will become a mobile entertainment theatre with movies and advertising streaming, whilst the passenger is being transported to their destination.

### **(c) 3D printing**

3D printing or additive manufacturing refers to the production of materials that are customised, ranging from electrical components to human cells and organs (Munaz *et al.* 2016). Consequently, marketers can deliver personalised product solutions using 3D printing and robotics. For example, Coca-Cola (2013) created a ‘mini-me’ printed version of their consumers when they launched the mini Coca-Cola bottle in Israel. This technology therefore answers to the needs of the new consumers, the Millennials and Generation Z, who demand instant and personalised solutions from brands (Tim 2019).

### **(d) Blockchain**

Blockchain is a database that is shared across a network of computers that trade on cryptocurrency, a financial trading system (Efanov & Roschin 2018). Once a record has been made to the chain it is very difficult to change (Efanov & Roschin 2018). It is a basis of the cryptocurrency trading system that is outside the formal financial services system (Khumalo 2018; Schwab 2016). Customers can trade using the financial system, thus bypassing traditional banking structures. Consequently, the technology can allow

marketers to avoid intermediaries by interacting directly with customers as well as triggering click fraud when using authenticated user profiles (Rejeb, Keogh & Treiblmaier 2020).

### **(e) Robotics**

Robotics and robots have leapfrogged this revolution, bringing science fiction movies to life. Robots are rated by the level of acquisition of human skills. With communication skills, robots acquire what the McKinsey report terms “natural language understanding”, which is the ability to comprehend language and nuanced human interaction (Baldwin 2019, p. 154). Whilst AI is lauded as remarkably close to human intelligence, robots still lack the creative ability for diverse and novel ideas and understanding context as opposed to content (Durrant 2018).

Additionally, human beings are said to be social animals with the ability to be empathetic and demonstrate emotional intelligence. Robots by contrast are essentially “socially tone-deaf” without the ability to understand the context of a situation (Baldwin 2019, p. 158). However, jobs and occupations (such as marketing communications) that require human interaction, stakeholder engagement and event management rely on reading social cues and context to engage the audience, and to endear customers to the brand (Kotler, Kartajaya & Setiawan 2017). The suggestion is that some functions within marketing communications could be safe from the risk posed by robotics.

Communication is improved when robots are enabled by sensors to comprehend, react to their environment and participate in a range of functions, becoming more human-like (Salas-Pilco 2020). In warfare, drones with lethal autonomous weapons systems (LAWs) could use AI to replace soldiers and pilots; and assist in decision-making (Gyngell & Koorey 2021). These so-called ‘killer robots’ can be astute and sensible, resulting in the reduction of human error and collateral damage (Tegmark 2017). Reducing hazardous work is the positive benefit in automating risky jobs such as in the military, oil and gas exploration (Tegmark 2017). As a result, the innovative factors of the weapons systems can be transferred to civilian products which marketers can launch in their industries.

### **(f) Artificial Intelligence (AI)**

Artificial intelligence (AI) is defined as the expertise of machines that exhibit acumen in reasoning and behaviour mimicking and outshining humanity (Massaron 2019). This relates to the machine’s ability to perceive, learn, interact and make decisions. Machine learning relates to a set of algorithms where



computers intuitively decipher obstacles on their own (Massaron 2019). Correspondingly, deep learning relates to “a set of complex neural networks that can detect, transform, process, translate and interact in an intelligible and reasonable way” (Massaron 2019, p. 9). Due to deep learning, computers can distinguish images, managing audio, translating languages and handling human exchanges (Massaron 2019). Consequently, this technology could assist in the A/B testing of adverts, delivering results quicker than humans.

Related to AI, augmented reality (AR) is “an integration of the real world and the virtual world, with the aim of providing additional information about something in the real world with information displayed in the virtual world” (Nayyar, Mahapatra, Le & Suseendran 2018, p. 156). VR refers to “an entirely virtual world with virtual objects in it” (Nayyar *et al.* 2018, p. 157). Both AR and VR have a potential of bringing gamification into the brands assisting in capturing the youth and increasing engagement (Loureiro, Bilro & Angelino 2020).

### **(g) Cybersecurity**

Cybersecurity is a major challenge in a connected world where privacy can be compromised by accessing personal data in a cloud (Hur, Kim, Kim & Eom 2017). Schwab (2017, p. 91) notes that “the internet can be an unprecedented tool of liberation and democratisation, and at the same time an enabler of indiscriminate, far-reaching and almost unfathomable mass surveillance.” The legal system has not kept pace with the challenges posed by digital technologies (Tegmark 2017). Subsequently, these challenges expose connected individuals to rogue elements, and for marketers who are eager to exploit the vulnerability of customers for quick revenues.

### **(h) Cybernetics**

The 4IR is a term that is also related to the cybernetic revolution as well as the Kondratieff waves, the so-called K-waves (Penprase 2018). Particularly, the cybernetic revolution denotes the emergence of information technologies that have an ability to self-regulate (Bryant 2021). Given the above, the fifth K-wave, akin to the 4IR tracks the long waves of economic growth and declines based on technological innovation cycles (Maharajh 2018). Whilst the 4IR is more than just a wave, understanding these waves could assist marketers in plotting the next big innovation, strategically delivering competitive advantage for their industries.

With an understanding of the constituent elements of the 4IR in place, it is now appropriate to turn attention to the impact of the 4IR.

### **2.2.3 The impact of the 4IR**

Studies undertaken on the 4IR look at various influences that this revolution will have, such as on skills, jobs and employment (Johnson 2018). The influence on jobs is assumed to be the biggest challenge and opportunity for many industries. Khumalo (2020, p. 8) asserts that “traditional business models and organisations will seek to hire employees with the highest levels of skills”. Reports on the impact of automation indicate that repetitive jobs will be replaced by machines (BusinessTech 2019). Additionally, the world of manufacturing points to a move towards greater customisation and fast production cycles due to the 4IR (Gouping *et al.* 2017; Carvalho, Chaim, Cazarini & Gerolamo 2018).

Whilst production can be accelerated, sustainability issues are also raised with every industrialisation. Akileswaran and Hutchinson (2019) note the economic, environmental and social factors that are impacted by the 4IR. These factors form the basis of a framework for sustainable solutions in the 4IR (Morrar, Arman & Mousa 2017). As such, the opportunity for integration, decentralisation, interoperability and adaptability to the environmental effects holds a promise that this revolution might lessen the impact on the environment (Carvalho *et al.* 2018). Besides, it is also hoped that Millennials as a target group are showing signs of concern about the environmental effects of mass production and could turn the tide on the impact of this revolution (World Economic Forum 2017). AI is also incorporated into environmentally conscious products to increase consumer buying desire (Frank 2020).

AI can potentially become an extension of the mind and its use is being investigated for trauma victims, possibly allowing them to text what they are thinking (Metz 2019). This is not far removed from making some customers feel that AI is reading their mind and pre-empting their thoughts. Agrawal, Gans and Goldfarb (2018) note that AI could help retailers to anticipate customer needs by shipping products based on AI recommendations, with the option of free returns should customers decide not to keep the goods. In this way, AI can be said to think for the customer; however, the potential for misuse of this capability is a concern. It follows that the customer might be affronted if they have changed their behaviour, but AI continues to recommend their previous purchase choices (Davenport, Guha, Grewal & Bressgott 2019). Hence, concern for dignity and independence of mind for the customer is significant where an individual is treated as an object rather than a subject (Mitrou 2018). The next section looks into the impact of the 4IR on developing economies.

#### **2.2.4 The impact of the 4IR on developing economies**

Developing economies are likely to benefit from the digital infrastructure of the 4IR which relies less on physical infrastructure and more on satellite and cyber-physical systems (Ayentimi & Burgess 2018). Agricultural-based economies, such as those in developing countries, are also adopting mobile technologies at a fast pace (Lele 2017). For instance, application systems have been developed that provide climatic data to farmers, guiding them on which crops to plant to improve the soil condition (Melia 2019). These applications are also connecting remote farmers with real-time information to the supply chain which improves connectivity and productivity of the land (Melia 2019). Marketers working in developing economies need to support technologies that improve the quality of their customers' production processes.

In developing economies, the concern around increasing inequality, the so-called 'digital divide', has the potential for "re-shoring of global manufacturing to advanced economies" (Schwab 2017, p. 45). Essentially, the shifting of global value chains from developing countries back to developed countries can further exacerbate economic inequality and structural unemployment where small fresh spots of upheavals are created (Gouping *et al.* 2017). Increasingly, jobs that are being displaced are white collar jobs where jobs are not physically re-shored, in a phenomenon known as telemigration (Baldwin 2019). Resultingly, marketing as a white-collar function could be at risk of telemigration where the marketing technologies are employed at the expense of market contextual understanding. With the developing economic challenges covered, attention now turns to the impact of the 4IR in Africa.

#### **2.2.5 The impact of the 4IR in Africa**

Questions have been asked about whether the 4IR is relevant for Sub-Saharan Africa (Ayentimi & Burgess 2018). Given the above, the 4IR will likely hegemonise the current world system as the majority of those without access to electricity are in Sub-Saharan countries (Maharajh 2018). "South Africa has about 28 industrial robots for each 10 000 employees" compared to, for example, "635 per 10 000 employees for South Korea"; yet South Africa has not invested in social robots that could promote social distancing during the COVID-19 pandemic (Keet 2020, p. 2). It can be concluded that the risk for developing economies, particularly those in the African continent, is that digital innovation will be so advanced that opportunities to bridge the gap will be lost forever.

African economies need to improve the attractiveness of Information and Communication Technology (ICT) if they are going to compete on a global scale (SAIIA, 2020). The continent is said to be more connected than ever before due to the internet; but focus is still needed by these economies in supporting the ICT sector.

Indeed, regional trade and integration among African economies is necessary to stimulate advancement, employment and trade of these economies (Gammadigbe 2021). For instance, improving the cost of access to mobile, e-commerce solutions, workforce reskilling and the creation of ICT parks are necessary to support innovation and new business models in this sector. Ultimately, for these economies to thrive, it is important to take advantage of the 4IR to deliver creative solutions to their problems.

Public sector delivery and infrastructure challenges are immense in African economies; however, there is potential for solar power to take advantage of the abundant solar energy (Nalubega & Uwizeymana 2019). Examples of using solar energy throughout the continent to power e-solutions based on mobile connectivity are starting to show the continent's ability to utilise its own resources for innovative solutions (Maharajh 2018; Chiweshe 2019). Typically, renewable energy provides an opportunity to retrain workers who lose jobs through automation and could create entrepreneurial opportunities in Africa (Chiweshe 2019). Given the above, this has the potential for African countries to implement sustainable solutions to a technological problem. Subsequently, marketing communications practitioners can utilise this sustainable energy source as an opportunity to demonstrate the futuristic vision of their industries.

Moreover, the 4IR is also challenged by the diverse languages in the continent when creating algorithms using local languages. Agglutinating languages such as those in Sub-Saharan Africa create a challenge for human-robot interaction in terms of the robot's ability to read these nuances (Keet 2020). The next section looks at the impact of the 4IR on business.

### **2.2.6 The impact of the 4IR on business**

Opportunities for technology advancement relate commonly to an exponential increase in productivity (Xu, David & Kim 2018). Kasza (2019) alludes to opportunities of the 4IR being similar to characteristics of the four stages of civilisation (primordial, agricultural, industrial and intellectual), where technology advances at an exponential pace. Additionally, nanotechnology, multi-tier edge computing and the infosphere are delivered by the 4IR, putting the knowledge worker at the forefront of the revolution (Dao *et al.* 2017). Moreover, the knowledge worker needs to be empowered with these technologies, otherwise they remain

buzzwords. In the same way, these tools need to be embedded into daily operations for the knowledge worker to deliver the 4IR benefits in their industries (Daugherty & Wilson 2019). Chavez *et al.* (2019) note that the B2C marketing engine works like a brain called the intelligent marketing hub (IMH), where the hub creates the interaction with a customer. Given the above, it behaves like the integrated marketing communications (IMC) system in that all touchpoints are coordinated. Thus, all content that can potentially be sent to the customer is tagged and then the right content is delivered to the customer.

The tagging of the data is made possible by computer scientists. For instance, computer scientists and engineers develop hardware and smart systems such as cyber-physical systems and human cyber-physical systems. Essentially, these systems are viewed as a backbone of the 4IR (Lukac 2015; Romero Díaz *et al.* 2016). Thus, computer science drives digital technologies to such an extent that coding is recognised as a language that is taught in schools. Computer science is also driven by coding and programming of big data. Ultimately, marketers work with computer scientists to create a better customer user experience (American Marketing Association 2020).

Computers working together store large amounts of data such as customer information, business processes and systems in the cloud (Tegmark 2017). This data is called big data. Big data is a phenomenon that is pervasive to most industries (Han, Kim, Lee & Kim 2017). Furthermore, big data “enables better and faster decision-making... and provide(s) real time services and support for everything from customer interactions to automated... payments” (Schwab 2017, p. 130). According to Gilder’s Law, the transmission rates of data are expected to expand at an exponential pace quicker than the central processing power of a computer (Baldwin 2019). Data is ineffective unless it is utilised to develop and grow the business (Malapane 2019; Gentsch 2019). Marketing and other knowledge functions are inundated with massive amounts of data resulting in overloaded communication messages to customers (Hair, Harrison & Risher 2018). It is significant that data that is collected is utilised to nurture the brands and deliver profit margins.

Most marketers are only scratching the surface with the current use of data (Copulsky, Richardson & Simone 2017). Chavez *et al.* (2019, p.136) note that there are five elements that are necessary to build and transform a company into a data-driven organisation - “goals, people, process, data and tools”. As a result, business goals must be openly articulated to be measured with data, together with the right skills to deliver the strategy with the data which is aligned to business goals (Chavez *et al.* 2019).

Marketing communications practitioners are data-driven and require quick responses to deal with customers who are always-on in the social media space (Marsland 2019; Pertierra 2016). The eternal connectedness

using digital signatures link “people data”, that “permeates virtually every nook and cranny”, allowing both positive and negative consequences from this data (Chavez *et al.* 2019, p. 2). Data allows for one-to-one tailored content to the customer, thereby reducing wastage (Celikovskiy & Foltin 2017). Finally, the benefit of AI is when data is integrated across all touchpoints to facilitate a consumer user journey across all areas (Verma, Sharma, Deb & Maitra 2020).

Okano (2017, p. 75) notes that the three elements of the 4IR are the “smart product”, the “smart machine” and the “augmented operator”. The smart product is an active part that “receive(s) a memory on which operational data... (is) stored directly”, and the smart machine becomes a Cyber-Physical Production System (CPPS) (Okano 2017, p. 75). The third dimension is the augmented worker who provides technical backing to make the environment function (Okano 2017). The result is the interoperability of systems, which is at the core of how these elements can connect (Liao *et al.* 2017).

Exponential technology advances of the 4IR have many advantages for industries. The first is that AI has improved the security industry through allowing remote monitoring of homes and industries. Although enterprise-wide controls are required where individuals, society and organisations could be negatively impacted by the intrusion of AI (Cheatham, Javanmardian & Samandari 2019).

The second technology advance is evident in the medical industry. Healthcare jobs are likely to be positively enhanced using AI in diagnosis, remote diagnosis and test reporting (Thrall *et al.* 2018). Medical diagnosis has enabled remote rural consultations that link laboratories to rapidly provide results for patients (Ganapathy *et al.* 2019). Marketers working in the healthcare sector could utilise these advances to promote the first-mover advantage of their products and services.

Similarly, drones are increasingly being used to deliver medicines, such as yellow fever vaccines in Ghana and blood samples in South Africa (Chiweshe 2019; MyBroadband 2019). Improvements in radiology reports and interpreting radiographs using AI could possibly assist medical practitioners with immediate diagnosis (Jha 2016). Correspondingly, exercise rehabilitation for injuries using bionics and robotics could potentially assist in the therapy of patients with neuromuscular and cerebral dysfunction (Jee 2017). AI has assisted in imaging analyses to detect COVID-19 variants and mutations in real time (Greig 2021). As a result, consumers demand prompt solutions to their problems, with these advances marketers can promote this instantaneous response advantage.

Further, predictive manufacturing changes the mode to customised products, with customers dictating the production process (Duffy, Bruce, Moroko & Groeger 2020). For instance, flexible, cooperative, collaborative management allows for industries to cope with intelligent technologies (Gouping *et al.* 2017). Additionally, entrepreneurs and established businesses are creating collaborative innovations to respond to the “now world” experience demanded by Millennials and Generation Z (Tim 2019, p. 7). By way of illustration, the fintech sector has seen traditional banks and fintech start-ups delivering mobile financial solutions that respond to these instantaneous market demands (Cortina & Schmukler 2018). Further, competitors and co-creators are viewed as one in this revolution. Therefore, it is “no longer a zero-sum game” (Kotler *et al.* 2017, p. 20). Evidence thus illustrates that the ‘winner takes all’ attitude of the past three revolutions has seen some Fortune 500 companies disappear (Mpofu & Nicolaidis 2019).

This collaboration thus involves competitors and even external parties such as customers (Kotler *et al.* 2017). Consequently, this collaboration is likely to challenge the strategic trajectory of some marketing and business plans. There is also a notion of the 4IR’s capability to bring about social good (Ortega, Otero, Steinberg & Andres 2019). Hence, collaboration on all aspects of the 4IR is the hallmark for success during this disruption (Celikovsky & Foltin 2017; Bailey 2018). Further Bughin, and Hazan (2019) recommend that businesses embrace technological social responsibility (TSR) which aligns business goals with social needs. Given the above, businesses need to partner with academia and government in shaping the skills of the ‘new collar’ workers necessitated by the 4IR. However, businesses are starting to ponder whether leaders can embrace TSR as a new standard measure in addition to business performance (Bughin & Hazan 2019, p. 2). Overall, it is recognised that a business needs to be adaptable to succeed. These changes cannot be avoided; society needs to find solutions to adapt to the 4IR (Yoon 2017; Schwab 2017). With these business needs, digital innovations are grounded in digital platforms which are the structural units that interact with each other, are flexible and robust whilst delivering an important part of the high-tech structure (Sassanelli, Terzi, Panetto & Doumeingts 2021).

Service industries and the management of work are other areas where the opportunities of the 4IR are also identified (Temelkova 2017). During the 4IR, a business views technology as its core rather than as playing a supporting or collaborative role (Mandapaty & McClure 2016). The world operates in a data economy, which bodes well for businesses driven by the management of people and information (Woo 2017). Businesses are committing to AI due to the fear of missing out, argues The Economist Intelligence Unit (2016, cited in Baldwin 2019). There is a fear of competitors getting an advantage and new entrants taking the market share of existing businesses. Without a clear digital strategy that is integrated with the

organisational strategic objectives, however, this attempt might not be as successful in leapfrogging the business into the 4IR (Kotler *et al.* 2017).

Other aspects that will be disrupted by the 4IR include entrepreneurship (Morrar *et al.* 2017; Hudson 2017). Entrepreneurship is seen as most responsive to epochal changes as it can pre-empt and quickly adjust to revolutionary changes (Caruso 2018). In addition, it has the potential to create careers that are not yet developed by big industry and academia. The adoption rate of the 4IR technology by small entrepreneurs is, however, hampered by the additional and high costs of digitisation (Bughin *et al.* 2017).

It is because the smaller the SME, the higher the chances their progress will be compromised by this revolution (Sommer 2015). SMEs can be disruptive through collaborative innovation with established business, which can reduce the cost of new technologies (Tim 2019). The following section reviews literature on the impact of the 4IR on the future of work.

### **2.2.7 The impact of the 4IR on the future of work**

Whilst this latest industrial revolution has positives, there are concerns about technological unemployment, where automation will reduce repetitive jobs (Peters 2017). It is estimated that through AI, automation and robotics, “30% of repetitive jobs” could be taken over by robots, which amounts to a total of “800 million jobs by 2030” (Manyika *et al.* 2017, p. 7). For example, automated warehouse bots sort and pack orders, which enables fast delivery to customers. Therefore, likely job losses are in the assembly-line manufacturing, retail and customer interaction fields (Mhlanga & Moloji 2020).

It is also claimed that half of South African companies are intending to substitute monotonous jobs with automation (Peters 2017). Of these “35 percent of all jobs in South Africa, almost 5.7 million jobs are vulnerable to mechanisation” (Phillips, Seedat & van der Westhuizen 2018). However, whilst existing repetitive jobs will be reduced or made obsolete, there are also new jobs that will be created by the 4IR. These so-called “smart jobs” will require a change in the approach to education, from mass education for mass production to targeted future-focused, solution-oriented education (Butler-Adam 2018; Naude 2017; Bazic 2017).

Whilst job losses will be pervasive across most industries, the 4IR allows for careers and higher education to be redefined to meet the new needs of industry and society (Hirschi 2018; Gleason 2018; Selamat 2017; Bandura & Grainger 2019). New jobs and new careers mean that traditional teaching methods and



approaches will no longer suffice. Elbeck (2018) asserts that cognitive computing and advanced robotics will assist marketing education in replacing some repetitive tasks of educators.

By contrast, the 4IR will create smart jobs that require specific skills. The top 10 skills that are required are those that machines are unable to replicate (Gray 2016). These skills are “complex problem solving, critical thinking, creativity, people management, coordinating with others, emotional intelligence, judgement and decision-making, service orientation, negotiation and cognitive flexibility” (Gray 2016, p. 2). In the same vein, a McKinsey study notes the additional required skills such as “unpredictable physical activities, interfacing with stakeholders, applying expertise, and managing and developing people” (Baldwin 2019, p. 246).

Scholars are not only noting additional skills required but also remarking on technology that facilitates inclusion (Conick 2017; Johnson 2018). Recent studies on neuroscience argue that the 4IR is pushing technology companies into recognising the potential of neurodiverse people and their potential to advance learning in the 4IR. This recognition is putting people with autism, attention deficit hyperactivity disorder (ADHD), and dyslexia at the forefront of novel ways of tutoring, termed the “silent 4IR talent” (Seydel 2020, p. 1). Thus, learning environments embracing ‘Personal Learning Environments (PLEs)’ during COVID-19 are making it possible for customised tuition to be delivered to devices for students with a wide variety of needs (Whalley, France, Park, Mauchline & Welsh 2021). These PLEs are bridging the gap between traditional tuition and digitisation, introducing students with neurodiverse needs to technology. As a result, diversity is bringing in people with different cognitive abilities into workspaces, whose exclusion has been aggravated by the COVID-19 plague (Seydel 2020, Whalley *et al.* 2021). Marketers that take advantage of this diversity can enjoy first-mover advantage in the education sector and be seen to be inclusive.

Some studies are specific to the disruptive elements of the 4IR, such as smart work which largely relates to tertiary jobs that require creativity and programming skills that cannot be done by machines (Eberhard *et al.* 2017; Albrieu & Rapetti 2019). Marketing practitioners are knowledge workers whose jobs require creativity and are therefore assumed to a certain extent to be impacted positively by the 4IR (Levy 2005). Those practitioners who were doing repetitive jobs such as newspaper clippings will be displaced. It is not only knowledge workers who will be impacted but knowledge-based economies are expected to undergo a ‘triple helix evolutionary transition’ as a combination of factors are impacting the 4IR such as the economy, academia and the government spheres (Yoda & Kuwashima 2019).

Moreover, technology poses challenges related to the ubiquity of connectivity, which is the always-on, 24/7 phenomenon (Marsland 2019). Galanxhi and Nah (2021) assert that the always-on approach has redefined the nature of work, where flexible work patterns are abundant. The Baby Boomer generation believed in permanent employment or at least successive full-time employment until retirement. This new workforce by contrast has a range of tasks or contracts rather than single employment (Neufeind, O'Reilly & Florian 2018). This phenomenon redefines the employment contract where jobs are increasingly fragmented and work from home (or anywhere) creates a connected, yet isolated workforce. In the information technology space, employment of the workforce is being reviewed, businesses are disrupted, and labour laws are being redefined (Neufeind *et al.* 2018). The COVID-19 lockdown has enforced work from home arrangements which has hastened and intensified these changes (McKinsey 2021c).

Likewise, 'crowdforce' is a term that refers to a new type of workforce that is working remotely to deliver digital solutions to businesses (Neufeind *et al.* 2018, p. 10). Baldwin (2019, p. 2) states that the 'telemigrants' are taking white collar jobs instead of in-shoring the jobs from emerging countries back to the West. The workforce could also compete with a "white collar robot" such as Amelia, a robot worker with "cloned human intelligence" (Baldwin 2019, p. 4). Baldwin (2019) calls this phenomenon 'globotics', with robotics moving beyond manufacturing automation to the service economy. Whilst crowdworkers at home are facing labour law risks such as "not being covered by social and employment protection", their jobs also face cheaper telemigrant competition (Neufeind *et al.* 2018, p. 14). This phenomenon is called "social dumping" where labour laws such as those in the West are destabilised because of the relaxed, perhaps poor working conditions from emerging countries (Baldwin 2019, p. 227).

Consequently, Schwab (2017) notes that this workforce that is cloud-based can trigger a phenomenon called the precariat, who are workers moving from task to task with no labour rights, and therefore at risk of a new kind of exploitation. He further notes that it is important that this digital revolution allows for the achievement of the purpose of work rather than a reversal of the gains of labour rights (Schwab 2017). Goldman (2021) argues that technology has become an enabler of worker control in this industrial revolution compared to the previous revolutions, because it erodes work-life balance where overworked employees are imprisoned by their technology gadgets. As a result, marketers are likely to be inured with technology demands, making them feel captive.

On the other hand, Millennials are noted for not wanting their jobs to constrain them from achieving self-fulfilment (Schwab 2016). The COVID-19 pandemic has made Millennials question their sense of purpose in employment (McKinsey 2021a). Millennials and young people growing up with technology are said to

be eschewing interpersonal contact for online contact (Schwab 2016). Carr (2010, cited in Schwab 2017, p. 90) laments the fact that technology renders humans weaker cognitively as it is “dividing (our) attention... mak(ing) us tense and anxious”. The job of marketers is to make brands emotionally connect with Millennials in a meaningful way.

The 4IR has produced companies that did not exist before. Companies such as Facebook, Uber and Airbnb have changed the business paradigm in their sectors and have created competition that has previously not been considered (Schwab 2017). Additionally, SMEs can be disruptive and, through collaborative innovation with established businesses, can reduce the costs of new technologies (Tim 2019). The smaller the SME, the higher the chances their progress will be compromised by this revolution (Sommer 2015).

Further, other jobs such as data entry clerks, chefs, financial analysts, musicians, and artists who create stock materials might also be impacted (Manyika *et al.* 2017). Creative jobs could be safe from automation; however creative writers, journalists and lawyers could have AI delivering stories and articles quicker than humans can (Sahota 2019; Daugherty & Wilson 2019; MediaUpdate 2018a). Robo-judges are also assumed to eliminate biases by being resourceful and non-discriminatory (Baldwin 2019). Whilst it can be comforting to marketers to know that creative jobs can be safe from automation, the 4IR demonstrates that its impact is pervasive. The impact of the 4IR on various age groups is considered in the next section.

### **2.2.8 The impact of the 4IR on various age groups**

People across the world engage with the 4IR differently. For instance, countries that are youth-dominated will be impacted by the 4IR differently, compared to those that have an older or a more balanced spread of age groups in the population (Abdullah, Abdullah & Salleh 2017). Increasingly, young people globally and in Africa embrace mobile technology and digital communication more than older people (Melia 2019). According to the World Economic Forum (2017), young people are positive about technologies such as AI, biotechnology and robotics. They are optimistic about technology’s impact on education, healthcare and manufacturing; although they do not trust robots taking over their actions and decisions (World Economic Forum 2017). Young men are more trusting of robots than young women, while young people from high income economies are more trusting of technology than those from poor countries, particularly in Africa (World Economic Forum 2017).

Older citizens tend to be later adopters of digital technology. The youth, by contrast, are “early adopter(s)” of technologies (Kotler *et al.* 2017, p. 22). Millennials account for almost 50% of the world population

(World Economic Forum 2017, p. 1). Youthquake 4.0 is a term associated with the overall influence that young people have on society (Scopelliti 2018). This group is metropolitan, progressive and well-networked (Law 2021).

They are, however, less reliant on traditional media for their media consumption (Makananise & Madima 2021). Millennials' obsession with digital technology has resulted in a "me" culture phenomenon, where young people are hyper-connected but lonely (Schwab 2017, p. 60; Pertierra 2016). Simon (1971, cited in Schwab 2017, p. 90) notes that digital connectivity has created shallow relationships and elements of nonchalance particularly among this group.

Similarly, the youth in the developing economies are also embracing digital technology. The youth are termed "digital natives" as they were born into the digital revolution (Kotler *et al.* 2017, p. 22). Further, emerging markets are manifested in the concentration of the youth populace in the cities (Kotler *et al.* 2017). The youth in emerging markets have high aspirational goals, and connectivity presents opportunities for marketers to target them (World Economic Forum 2017). Therefore, developing a youth strategy is necessary for brands to target this group; however, it needs to fit in with the overall marketing strategy (Kotler *et al.* 2017).

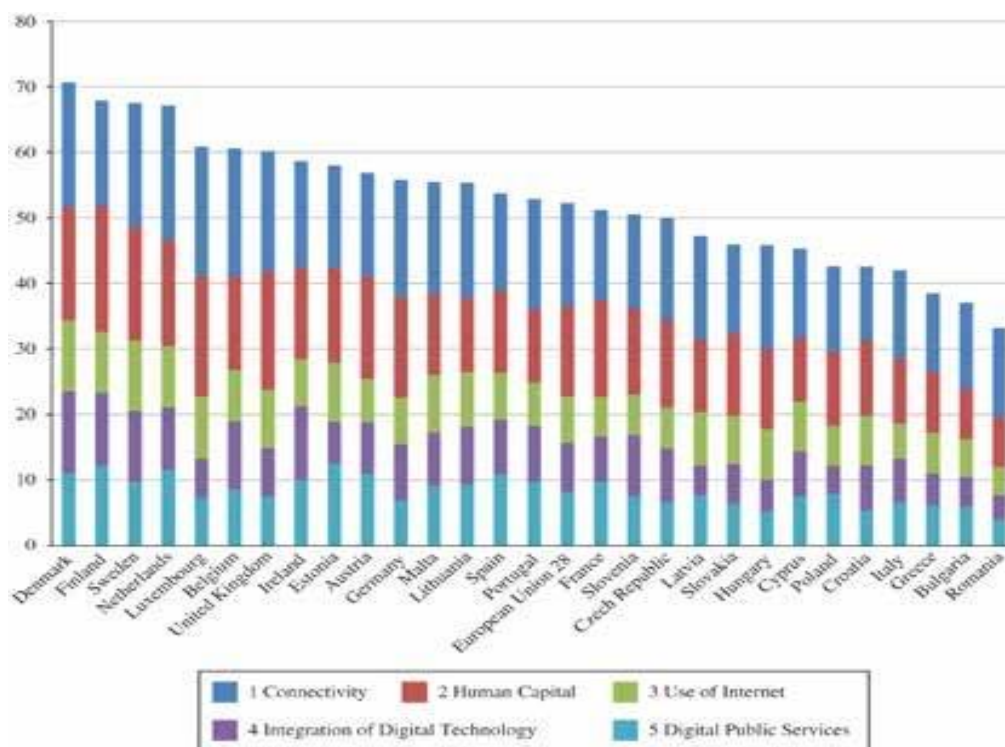
## **2.2.9 The impact of the 4IR on governments**

Overall, the strategic direction of the 4IR needs to be driven by policy changes at government and inter-government level as far as legislation and opening market opportunities is concerned (Jules 2017). The readiness of regional and national governments to respond to the 4IR has been observed across the globe and the European Union (EU) in particular (Speringer & Schelzer 2019; Kuruczleki, Pelle, Lazci & Fekete 2016). It is the case that the EU started observing the shift to the knowledge economy from 2000 and their preparedness for this phenomenon is apparent (Kuruczleki *et al.* 2016). China, India and Singapore have developed cooperation policy directions related to the 4IR (Choongjae & Youngchul 2018).

Firstly, Germany coined the concept 'Industry 4.0' in Hanover in 2011 as a competitive advantage for their industries (Morrar *et al.* 2017). Secondly, Poland's concept of Economy 4.0 focused on the policy for accountable progress, the impact of rapid high-tech changes fused with transformations in societal contracts, conventions and so on (Biaton & Werner 2018). Thirdly, Japan's two-fold revolution strategy focused on exploiting the country's strengths and supplementing its weaknesses (Kim 2018). Finally, China's Strategy 2025 (Cheng, Liu, Qiang & Liu 2016; Balogh 2017), Thailand's 4.0 Government Policy

(Jones & Pimdee 2018) and South Africa’s launch of the 4IR Presidential Commission (Campbell 2019; Mzekandaba 2019; Diko 2019) are also noted for responding to the impact of the 4IR in those countries.

It is well established that the global world is divided into developing and developed countries (WorldBank, 2012). The 4IR is said to extend the digital divide between developing and developed countries further. A McKinsey report stated that by 2030, machine learning will have automated 60% of the activities of occupations throughout the world (West 2018). Moreover, the WEF predicts job losses of 7.1 million; however, jobs will also be created that currently do not exist (West 2018). Soete (2018, p. 24) calls this occurrence the “destructive creation” of jobs due to increased productivity.



**Figure 2.3: Digital ranking of EU countries in the digital economy and society (Source: European Commission 2017, cited in Neufeind *et al.* 2018, p. 40)**

Accordingly, countries are also ranked by the evolution of digitisation (see Figure 2.3). For example, Organisation for Economic Co-operation and Development (OECD) countries use ranking on factors such as the level of connectivity, the capability of human capital concerning digital skills, internet penetration and its usage, “the integration of digital technology” with operations and the digitisation of “public services” (Neufeind *et al.* 2018, p. 40). These countries are ranked high on the elements of digitisation as

developing countries whereas South Africa, like other developing countries, lags behind. Denmark, for example is ranked higher because of a combination of all the five factors digitisation which are “connectivity, human capital, use of internet, integration of digital technology and digital public services” (Neufeind *et al.* 2018, p. 18). South Africa has to invest in all five factors to improve its global ranking. The level of digitisation in a developing country such as South Africa is discussed in the next section.

### **2.2.10 The South African scenario**

According to the Internet World Stats, internet penetration in Africa is at 43% versus the world average of 65% in 2021 (Stats 2021). By contrast, South Africa is close to the world average at 57%, with Eritrea having the lowest internet penetration on the continent at 6.9% (Stats 2020). Internet usage frequency is recorded at 65% for everyday access in 2021 in South Africa, with most of this access (75% of internet traffic) through mobile (Statista 2021, p. 1). Evidence illustrates that in 2021, there is a 41.9% penetration of social media usage (Kemp 2021).

Conversely, e-commerce penetration in South Africa is at 31% whereas countries like the USA, UK and China recorded penetration of 93%, 97% and 98% respectively (Statista 2019). Whilst mobile use is high in South Africa, more e-commerce purchase occurs on desktop computers (21%) compared to mobile devices (15%) (QwertyDigital 2017). The relevance of internet connection and e-commerce penetration relate respectively to their impact on how users engage with brands (message engagement) and online purchase satisfaction especially in the light of the delayed introduction of the 5G spectrum in South Africa.

Accordingly, South Africa does not rate high on its “readiness for the economic and social changes” brought about by the 4IR (Musgrave 2018, p. 1). For instance, the WEF looks at the structure of production and drivers of production as key matrices for the country’s readiness for these changes. Out of 100 global economies, South Africa is ranked at “45<sup>th</sup> on its structure, and 49<sup>th</sup> on its drivers of production” (Musgrave 2018, p. 2). With developed countries mostly in the top quartile of the ranking, this revolution is likely to polarise the world further, entrenching the inequalities that are currently experienced.

Sadly, South Africa will be one of the countries that will be further disadvantaged by the low level of readiness for this change. As a result, business and labour have begun clashing on the displacement of jobs due to the digital revolution; for example, in retrenchments in the banking sector (CarteBlanche 2019). This conflict is likely to continue to other sectors since it exhibits the absence of collaboration from these interested parties on the 4IR changes (CarteBlanche 2019). Nevertheless, government and industries are

only starting to articulate plans to take advantage of this revolution, whereas other economies are already implementing the changes (Musgrave 2018). Moreover, the South African government has yet to install 5G technology that will make interconnectivity fast while other countries are already planning for 6G (Fourie 2021).

Governments around the world are transitioning to e-government development solutions to assist in managing the data overload of their cities (Chung 2017). South Africa's launch of e-government at the Centre for Public Service Innovation is one such example (Roberge 2018). Whether these campaigns deliver concrete results remains to be seen. Balkaran (2018) reports that the South African government is adopting a patriotic stance, yet it is looking to take advantage of this phenomenon. Putzier (2017) analyses the readiness for the 4IR of both public and private sectors. Like all developing countries in Africa, there is a concern in South Africa about increasing inequality brought on by these fast-paced technologies (Naude 2017). The South African government has appointed a Fourth Industrial Presidential Commission, bringing together academics and practitioners in this field (Diko 2019; Mzekandaba 2019; Campbell 2019; Dell 2018). The COVID-19 pandemic has exposed governments in developing countries who have missed an opportunity to develop specialised digital systems to track vaccines and vaccinated individuals (WorldBank 2021).

Nevertheless, governments in developing countries can assist their industries to leapfrog development and technology, to set themselves apart from competing nations (Gouping *et al.* 2017). For example, governments can support their economies through infrastructure support and intellectual property protection to become efficient; however, the effects of these epochal changes mean that countries need to plan for the displacement of workers and re-skilling, to enable them to adapt to the new technologies (Gouping *et al.* 2017). In addition, governments need to scale up the use of AI to identify poverty-stricken areas to provide amelioration programmes for those communities (Mhlanga 2020).

Whilst scaling up for AI, governments need to put together policies to assist citizens to adapt to the changes whilst providing civil aid for the 4IR (Baldwin 2019). For instance, the Danish government's trio of rules is an excellent example of a country that is responsive to the digital disruption; the first policy permits industries to dismiss and recruit without repercussions, the second provides liberal benefits for employees whose jobs have been displaced, and the third provides a programme for displaced workers through "job-search assistance... counselling... retraining and wage subsidies" (Baldwin 2019, p. 271).

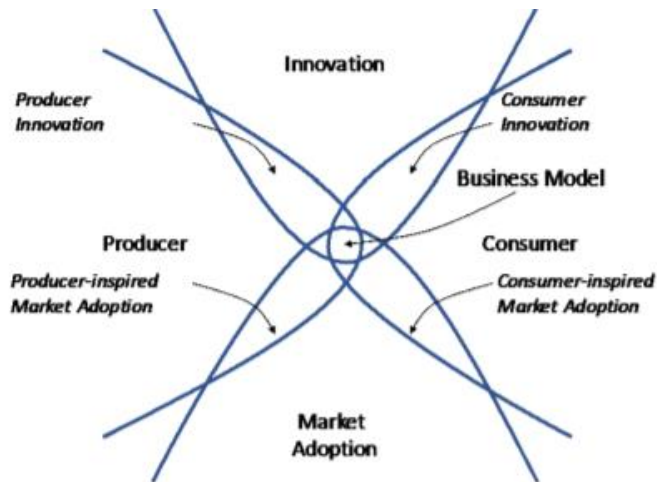
As noted previously, questions have been asked about whether the 4IR is a significant factor in Sub-Saharan Africa (Ayentimi & Burgess 2018). The authors list limitations of emerging economies, such as the less organised sector with limited technological competences (Ayentimi & Burgess 2018). Whilst the continent still grapples with this question, the world is becoming smaller as technologies converge and exponential innovations advance. Perhaps some lessons can be drawn from other emerging countries such as in the Latin Americas on how they are tackling these challenges (Albrieu & Rapetti 2019). Cilliers (2018) focuses on the risk of job losses in manufacturing in South Africa, whereas Oosthuizen (2016) argues optimistically for Schwab's four types of intelligence (contextual, emotional, inspired and physical) bringing opportunities for smart jobs.

Kotler *et al.* (2017) applaud the digital revolution for bringing innovation where Western influence is declining, allowing emerging markets, primarily from Asia to flourish. In addition, digital technology introduced mechanisation and diminutive products, which has reduced the costs of goods and opened trade for companies from emerging markets (Kotler *et al.* 2017). Some of these industries are fake copies, resulting in the disruption of the global expansion of the original companies (Kotler *et al.* 2017).

It is said that South African executives are less than ready to harness the full potential of the 4IR to benefit their clients when compared with their global counterparts (Adao, Vincent & Davies 2018). Some industries in South Africa are, however, making strides, such as the financial services and telecommunications sectors with mobile financial innovation and AI devices. Increasingly, banks in South Africa are partnering with fintech start-ups (Timm 2019). For example, the financial services sector is targeting the 11% of South Africa's unbanked through cardless services such as M-Pesa (Bernstein *et al.* 2017). This technology was successfully launched in 2007 in Kenya and Tanzania and has since expanded globally (Bailey 2018). As a result, mobile technology tools like this allow for marketing communications to be more inclusive and to be brought closer to the targeted audience (Sawadogo 2014).

The 4IR in marketing communications in South Africa explores the changing roles of the discipline in South Africa with more customers connected with brands and engaging with these on social media (Berndt *et al.*, 2021). In addition, the competitive landscape has been expanded in the online environment with local organisations now competing with global suppliers (Botha 2019). Additionally, Botha (2019) notes that the 4IR consumer is looking for customised products in a virtual marketplace. The business model below depicts the consumer as integral to the 4IR. The increasing demand for innovation has resulted in the consumer creating a market pull for products and services (Botha 2019). Further, with the personalisation of goods, disruption results in the consumer being a co-producer in this business model.





**Figure 2.4: 4IR innovation adoption and producer-consumer relationships disrupt the business model for the producer (Botha 2019, p. 195)**

Having reviewed the literature on the 4IR (focusing on its concepts, elements and impacts), and having considered the SA scenario in relation to the 4IR, attention now turns to the second major strand of the chapter - marketing and, specifically, marketing communications.

## 2.3 Marketing

Kotler (2002, p. 4) defines marketing as “a process which is used to regulate which products or services may be of interest to customers”. On the other hand, marketing communications is “the means by which firms attempt to inform, persuade and remind their customers - directly and indirectly - of products” (Kotler, Kelller, Brady, Goodman & Hansen 2009). For the purpose of this study, it is important to set the scene for the strategy journey of marketing to demonstrate the evolution of the influence of the 4IR on marketing and marketing communications.

Marketing evolved from the traditional marketing mix of the 4 Ps (product, price, promotion – also known as marketing communication - and place) to accommodate marketing in service industries (Panchal 2015). Accordingly, the 4 Ps were later expanded to 7 Ps, with the addition of positioning, packaging and people (McCarthy 1960, cited in Hanlon 2019). McCarthy (1960, cited in Hanlon 2019) also gives the additional Ps as people, process and physical evidence. In the digital space, it has been recommended that the 4 Ps be restated as the 4 Cs, i.e. “co-creation, currency, communal activation and conversation” (Kotler *et al.* 2017, p. 50). Due to co-creation, customers are involved in new product development, customising product

features and assisting in building innovative plans (Kotler *et al.* 2017, p. 50). In addition, 3D printing and additive manufacturing further provide customers with customised products, thereby satisfying the need for personalisation. Of relevance to this study, the focus will be on setting the scene for marketing communications evolution as it grew from marketing.

Increasingly, marketing continued to gain prominence; marketing-driven organisations, as opposed to production-oriented industries, were relied upon to be drivers of profitable growth and shareholder value (Da Gama 2017). On the one hand, small and local industries were initially focused on price- and cost-cutting in the 1980s, while multinationals with big budgets were delivering mass marketing communications, especially in the fast-moving consumer goods (FMCG) industries. Thus, the focus evolved from sales (selling the product the plant produced), to the concept of creating value for customers (Da Gama 2017). This was the era of Marketing 2.0, where the customer was viewed as an extension of product orientation, and the first purchase of a product was perceived to be the beginning of a relationship that is maintained through customer loyalty (Biaton & Werner 2018). Initially, traditional communication began with the potential customer exposed to an advertisement on television, print or radio (Batra & Keller 2016). Thereafter, the customer visited the physical store to make a purchase decision. Thus, traditional media followed the customer journey and ensured that prime time viewing was filled with targeted advertising and brands clamoured for the ad space. This era was termed ‘customer-centric marketing’ by Kotler *et al.* (2017).

### **2.3.1 Traditional marketing and digital marketing in the digital era**

It is argued that traditional and digital marketing “co-exist with interchanging roles across the customer path”, as reflected in Figure 2.5 (Kotler *et al.* 2017, p. 52). The figure also highlights the elements of traditional and digital marketing. Traditional marketing can deliver levels one and two, which are enjoyment and experience respectively. However, digital marketing can deliver level three (engagement). This involves a connected approach, instead of a conventional approach which is the ambit of traditional marketing. Consumers are looking to co-create and engage in conversation with the brand rather than being presented with one-way offerings. The consumer gets closer to the brand since the products and services are personalised and the consumer feels connected. The tools and technologies of the 4IR facilitate this sort of engagement through platforms such as social media. Social media marketing utilises tools such as social listening to understand consumer and tailor messaging to the targeted audience (MediaUpdate 2018c). Exploring the implications of this shift for marketing communications practitioners (brand custodians) is a key focus of this study.



**Figure 2.5: The interchanging roles of traditional and digital marketing (Source: Kotler *et al.* 2017, p. 52)**

What differentiates traditional marketing and digital marketing is the potential instant ability of digital marketing to deliver results and activism. Additionally, traditional marketing is focused on the enjoyment and experience of the product or service, whereas digital marketing is focused on customer engagement (Kotler *et al.* 2017).

The impact of the 4IR on traditional marketing versus digital marketing has been charted by various scholars (Kotler *et al.* 2017). Purists maintain that the 4 Ps remain applicable despite brands being in the digital space (Jackson & Ahuja 2015). However, there are modernists who believe in the inclusion of IMC as part of the marketing mix. Expansionists believe in the marketing mix beyond the 7 Ps, especially as the proponents of cause-related marketing gained momentum (Jackson & Ahuja 2015). Expanding from the traditional 4 Ps of marketing is an attempt to address the evolving process to address the connected customer marketing approach. Hayden's (2007, cited in Jackson & Ahuja 2015, p. 172) focus on personal selling included "personal credibility, push and pull and persistence". With the proliferation of the Ps came an evolution towards the Cs with scholars focusing on the customer rather than the specific elements of marketing (Jackson & Ahuja 2015). The contention is that the customer is the focal point in the 4IR rather than marketing as a discipline.

Additionally, marketing in the digital era advances to Marketing 4.0, which combines the traditional and digital, “blends style with substance... complements machine-to-machine connectivity with human-to-human touch to strengthen customer engagement” (Kotler *et al.* 2017, p. 53). For instance, both traditional and digital marketing are supposed to coexist in delivering endorsement from customers (Kotler *et al.* 2017). The challenge, however, is for brands to traverse this transition into digital whilst ensuring that they remain true to their brand identity. Thus, this era is embracing ‘human-centric marketing’ more than before (Kotler *et al.* 2017).

The impact of human-centric marketing is evident in the evolution of marketers. Marketers who are brand custodians are seeing their roles redefined (Araujo, Copulsky, Hayes, Kim & Srivastava 2020). This evolution was based on the shift in power from marketing practitioners to the media and encouraging customer dominance (Duffy *et al.* 2020).

Increasingly, the future is moving towards interactivity as more customers can influence the brand image, and ultimately the equity of the brand (Madianou & Miller 2012). For example, advertising and client companies are seeing a shift to an increasing influence of digital communication regarding the share of voice, budget spend and returns on investment (Shkurupskaya & Litovchenko 2016).

Further, the concept of the brand and brand positioning is changing with the digital revolution as customers have online access to evaluate and examine what the brand guarantees (Cui, Wang & Namih 2019). It is important that the brand stays true to its identity, yet remains adaptable to changing conditions. Additionally, brands promote themselves to customers through advertising and other means to induce customers to purchase products (Kotler *et al.* 2017). Sales promotions tend to be short-term delivering in-year revenues and attracting customers who switch because of price, which rarely increases the brand value.

Duffy *et al.* (2020) also remarked on the technological influence on marketing communications due to the challenges of multinationals and the epoch of changes in manufacturing and industries in general. Increasingly, aspects of this communication are influenced differently by technology and digital communication. Industries emphasise certain aspects of marketing communications more than others; for example, direct marketing instead of mass communication. This is driven by the strategic objectives of each business. Therefore, it is important that marketing communication is aligned to the delivery of the strategic aims of the business.

Human-centric marketing embraces six attributes that are significant for brands to succeed in the digital age (Kotler *et al.* 2017): ‘physicality’ - attraction of the brands to customers; ‘intellectuality’ - innovative brands that are at the forefront of technology that provide solutions to customers; ‘sociability’ - brands with an open demeanour, able to engage honestly with customers; ‘emotionality’ - brands that motivate, inspire and engage their users; ‘personability’ - brands that are conscious of their strengths and weaknesses; and finally, ‘morality’ - brands that have values that are congruent with those of their customers.

Moreover, online customers who are used to instant gratification are expecting a wow-effect from brands. For instance, the process of delivering a wow effect is for the brand to “enjoy, experience (and) engage” with the customer (Kotler *et al.* 2017, p. 168). Therefore, this involves creating unforgettable engagement experiences that endear the brand to customers. There is no limit to what the brand can conjure up to provide customer engagement and differentiate itself from competitors.

Further, in the digital space, the 4 Ps have been redefined as follows: products are created using algorithms; price is dynamic, altered by algorithms depending on factors such as “demand, availability and prices competitors have”; promotion uses the recommender system to on-sell and cross-sell to customers; place relates to e-commerce transactions performed by bots (Gentsch 2019, p. 62).

By the same token, traditional marketing processes such as segmentation are also being redefined (Kotler *et al.* 2017). For instance, the paradigm of segmentation and customer targeting works on a “vertical relationship between a brand and its customers, analogous to hunter and prey” (Kotler *et al.* 2017, p. 47). Previously, the unilateral brand decision involved brand choices that were made largely by marketers. This unilateral decision is also being reviewed as concepts such as influencer marketing and the recommender system are embraced (Kotane, Znotina, & Hu 2019). Therefore, the new paradigm in a digital revolution involves marketers recognising customers as communities rather than segments. Social online communities are formed by customers; brands need permission to be invited to form relationships with customers inside these communities (Kotler *et al.* 2017). Further, Godin (2008, cited in Kotler *et al.* 2017) devised the concept of permission marketing, where the brand requests consent to be invited into the circles or communities of customers. Brands that need to form relationships with the customers should offer solutions rather than an outright sell to them (Kotler *et al.* 2017). Therefore, all these changes point to the marketing function being inextricably impacted by the 4IR. As companies began to be customer-centric, scholars focused on the promotional element of marketing (Belch & Belch 2003). This will be addressed in the next section.

## 2.4 Marketing communications

Marketing communications (that is, promotion) narrates the deliberate, often cogent communication whereby communicators and stakeholders are dynamic in crafting, changing and re-building meanings (van Ruler 2018). Syuhada, Samad and Muthalib (2020) suggest that the aims of marketing communication are demonstrated in the “differentiate, remind, inform and persuade (DRIP)” model. Marketing communications encompass the promotional mix, which comprises of “advertising, direct marketing, interactive/internet marketing (also known as digital communication), sales promotion, publicity/ public relations (PR) and personal selling” (Belch & Belch 2003 p. 24). Deepak and Jevakumar (2019) note that marketing communications also covers branding and event sponsorship. Kotler and Armstrong (2012, p. 408) concur with other scholars by defining “a company's total marketing communication mix (also called promotion mix)” as consisting of “specific blends of advertising, personal selling, sales promotion, public relations and direct marketing tools that the company use to pursue its advertising and marketing objectives.”

Figure 2.6 shows the marketing mix in relation to the promotional mix.



**Figure 2.6 Promotional Mix (Source: Belyh 2020, p. 1)**

Each of the promotional mix elements is now discussed.

### **2.4.1 Advertising**

Kotler (1984, p. 58) defines advertising as “any paid form of non-personal presentation and promotion of ideas, goods and services through mass media such as newspapers, magazines, television or radio by an identified sponsor.”

Advertising dominated the marketing communications space as multinationals embraced mass marketing (Biaton & Werner 2018). Advertising can transform itself from television, radio, print and billboards into the digital space through elements such as tailormade advertising sent via mobile phone using social media and websites (Sawadogo 2014). AI in advertising takes the consumer journey through need recognition using rich consumer profiles; consideration through AI enabled ad targeting all through to the intelligent purchase decision (Kietzmann, Paschen & Treen 2018).

### **2.4.2 Public relations/ Publicity**

PR, on the other hand, puts the voice of marketing to the customer and develops relationships between brands and customers (Demetrio 2017). Corporate communications involve elements of both marketing and PR; the former being for the reputation of the brand, and the latter being for the reputation of the company amongst stakeholders (Demetrio 2017). PR encompasses communicating about the brand/organisation to “publics” or stakeholders and is concerned with the protection and management of the brand and company reputation (Copley 2004). Therefore, it is a long-term brand-building process delivering positive content to targeted environments. Additionally, marketing PR or brand PR is concerned with using media platforms to portray the brand in a positive light through sponsorship, government or interest groups lobbying, social investment and so on (Gendron 2017).

Belch and Belch (2003, p. 30) defines publicity as “nonpersonal communication regarding an organisation, product, service, or idea not directly paid or run under identified sponsorship”. Publicity has exploded in an area of stakeholder management and corporate affairs dealing with lobbying groups such as media, government, industry councils and non-profit organisations (Anholt 2016). These interest groups have a bearing on the reputation and image of the brand and company in the eyes of its customers (Gendron 2017). Of relevance to this study is the impact of the reputation on publicity and corporate communications in a digital space to publics such as customers and other stakeholders.

Corporate communications have seen an increase, especially in B2B industries, because of direct marketing, stakeholder engagement and customer relationship management (Demetrio 2017). For this reason, this is moving mass communication, which is fast and low-cost, to integrated communication which improves the effectiveness of campaigns, whilst reducing cost per media type (Shkurupskaya & Litovchenko 2016).

Technology advancement is exemplified by the corporate internet marketing revolution which delivers the IoT into corporate communications not only in industry but also in academia. Corporate communications focus on internal marketing communications and bringing digital communication into stakeholder relationships (Balmer & Yen 2016). For instance, relevant concepts are Internet of Total Corporate Communications (IoTCC) and quaternary corporate communications, which integrate the communication elements into one (Balmer & Yen 2016).

### **2.4.3 Direct marketing**

Another promotional mix element is direct marketing, which “involves a variety of activities, including database management, direct selling, telemarketing, and direct response ads through direct mail, the internet, and various broadcast and print media” (Belch & Belch 2003, p. 20). E-commerce technology using the 4IR can potentially transform the direct marketing field through ensuring that trade can happen online, even during periods such as the pandemic lockdown (Shahjee 2016).

### **2.4.4 Sales promotion**

Sales promotion refers to “marketing activities that provide extra value or incentives to the sales force, the distributors, or the ultimate consumer and can stimulate immediate sales” (Belch & Belch 2003, p. 21). Sales promotion is divided into consumer-oriented and trade-oriented initiatives to deliver short-term purchase results (Belch & Belch 2003). Scholars note the shift from advertising to tools such as sales promotion to deliver results at a reduced cost (Belch & Belch 2003). Sales promotion can evolve in the digital space using digital incentives that are redeemed online without having to cut coupons (Wichitchayanon 2016).



### **2.4.5 Personal selling**

Personal selling involves “direct contact between buyer and seller, either face-to-face or through some form of telecommunications such as telephone sales” (Belch & Belch 2003, p. 23). Even personal selling is transforming using AI and moving into social media platforms (Moncrief 2017). Since personal selling is face-to-face, the challenge of AI is the emotional nuances that sales representatives use to influence the purchase and close the deal (Purdy, Zealley & Maseli 2019). Further, it is said that half of purchase decisions are based on feelings (Daye 2016).

Marketing communications is seen as a precursor of IMC (Belch & Belch 2003, p. 17). Scholars noted that IMC started in the 1990s (Shkurupskaya & Litovchenko 2016). IMC is defined as “a process that involves various forms of communications that variously persuade, inform, remind and entertain customers and prospects, affecting and influencing behaviour of target audiences” (Copley 2004, p. 12). For example, communications can be above the line (ATL) such as television, radio, outdoor and print, below the line (BTL) such as in-store, sponsorship and direct marketing, or through the line (TTL) which comprises all forms including digital marketing. Therefore, IMC focuses on consistent messaging, ATL, BTL, TTL and throughout various customer touchpoints, in some circles referred to as Gestalt, clarity and/or synergy (Shkurupskaya & Litovchenko 2016; Copley 2004). IMC is successful if both advertising and client companies embrace this clarity for the benefit of the customer (Copley 2004; Percy 2008).

### **2.4.6 Digital communication**

Digital communication or interactive media permits the “back and forth flow of information whereby users can participate in and modify the form and content of the information they receive in real time” (Belch & Belch, p. 28). Digital communication changed the flow of communication between customers and brands from traditional which is one-way to digital which is two-way. It is founded in digital communication theory which will be explained in Section 2.7.1.

## **2.5 The 4IR and marketing communications**

This section unpacks the influence of the 4IR on marketing communications, commencing with internet and data, and thereafter the digital communication element of marketing communications. The social media impact is then addressed, followed by the customer privacy. The impact on the marketing function

discipline as a whole is also discussed. The section ends with a synthesis of the positive and negative influences of the 4IR on marketing communications.

### **2.5.1 The influence of the internet and data on marketing communications**

The influence of the 4IR on marketing exploded with the advent of the internet. This influence is inextricably linked to both marketing and marketing communications. Internet advertising started in the 1990s when website banners were developed targeting the user with online messages (Cui *et al.* 2019). Internet advertising, together with internet marketing and mobile marketing, are the key elements of digital marketing (Miklosik, Kuchta, Evans & Zak 2019). Accordingly, successful data-driven marketing works on the five principles that generate the highest returns on investment, which are reaching the right person through segmentation, the right place through activation, the right message through targeted communication, the right time through optimised frequency of messages, and the right idea through delivering the content that customers want (Chavez *et al.* 2019). Data without integration is likely to be futile, unless marketers filter the data using analytics to deliver actionable and profit-driven initiatives (Chavez *et al.* 2019). Thus, marketing analytics is said to be the cornerstone of preparing and implementing a digital marketing strategy (Miklosik *et al.* 2019).

Increasingly, mobile technology has been hailed as a phenomenal tool whereby marketers can track the user's location and direct the user to their brands, giving them incentives every time they engage with the brand (Kotler *et al.* 2017). As a result, digital mobile technology permits the user to review products without going to stores' physical premises (Kotler *et al.* 2017). In addition, it allows the user to search customer reviews of the brand and decide on the rating of the product (Kotler *et al.* 2017). The practice of searching for reviews in-store before purchase is called "show-rooming" (Chavez *et al.* 2019, p. 66). This has shifted the "moment of truth" from the aisle to a variety of factors such as "brand awareness... high availability in-store and online... near perfect pricing", as well as overall availability of content (Chavez *et al.* 2019, p. 66).

Similarly, omni-channel marketing is the result of the integration of traditional and digital channels that combines all aspects of the customer (Kotler *et al.* 2017). Therefore, brands require a synergy between the traditional and digital communication of the brand where the brand is talking to different audiences utilising these channels.

IMC also relies on the efficient use of data to deliver this synergy. However, third-party data is a controversial subject among marketers. For example, data is bought to augment user profiles of current and potential customers (Chavez *et al.* 2019). It is not enough to know the demographics and psychographics of customers. In this case, the potent data uses data signatures to include finite details on the user (Chavez *et al.* 2019). Then, social data (or social media data) tracks user signatures on sites like Facebook, where the location check-in and bio information are potentially shared with advertisers (Chavez *et al.* 2019). This occurs because the social media space is integrated and connected to search engines such as Google. The browser history is tracked on the sites, which allows marketers to use that information to influence the brand purchase decision (Chavez *et al.* 2019). Consequently, so-called “walled gardens” have now been created to prevent the transfer of information from one platform to another, thus protecting personal information (Chavez *et al.* 2019).

Correspondingly, direct marketing is a highly targeted marketing tool that utilises customer data on the CRM database, whether company-owned or bought from third parties, to “effect a response” such as a purchase (Copley 2004, p. 155). For example, direct marketing involves personal selling, mail, emails, telemarketing and print magazine voucher inserts, among others. Direct marketing is undergoing a metamorphosis with the advent of the 4IR, where tools such as recommender systems and online vouchers are used alongside mailed coupons. The recommender system is called ‘digital nudging’, made popular by Thaler and Sunstein from 2008 (Jesse & Jannach 2021). Finally, Foy (2017) notes that ‘choice architecture’, which is the situation in which users are nudged to make decisions based on recommended options, is increasing the digitisation of the CRM programme.

Using a recommender system, cookies started tracking which websites and ads users clicked on (Sakamoto & Matsunaga 2019). For instance, cookies are understood to be leaving digital breadcrumbs across various sites and pages, indicating what the user likes. In addition, browser history keeps the cookie information, tracks and follows users throughout their online activity. Then, external sources can buy cookie information of targeted users to push advertising of their brands. This advertising is sent in real time. Customers come online looking for a user experience yet, through data leakage, they are bombarded with advertising. As a result, policies and governance on data privacy were reviewed, following the backlash from users because of this barrage. Trust in companies that exploited this data and privacy was thus compromised (Cui *et al.* 2019). Trust can be broken when marketers put profit before integrity, and therefore needs to be guarded by brand custodians.

Chavez *et al.* (2019, p. 31) further states that “marketers who prioritise trust and transparency with their handling of precious people data, reap meaningful rewards in positive perceptions and brand equity over the long-term”. The conclusion is that for brands to build equity with their customers, the relationships that they form online need to be treated with trust and transparency, like any relationship. Trust and customer privacy will be explored in depth in Section 2.5.4.

Additionally, opting into cookie tracking is viewed as a powerful indicator of the customer’s advertising interest after the awareness stage (Hardcastle 2019). It provides marketers with an opportunity to engage and form a relationship with a customer. Similarly, CRM is the oldest tool for building customer profiles on a database. Indeed, managing an AI-enabled CRM programme advances the process from simply recording relationships to a recommender system of similar products or services, personalised to the demands of the customer using omni-channel marketing (Chavez *et al.* 2019). Through AI, marketers are enabled with insights about customer needs, likes, and dislikes, as well as potential purchase decisions. Moreover, Chavez *et al.* (2019) note that marketers are using data to reduce churn, retain loyal customers and deliver customer experiences that meet business objectives.

Social CRM redefines traditional CRM from being one-way to customers, to interactive where customers engage with brands on social media through conversations with communities (Kotler *et al.* 2017). Additionally, social CRM focuses on resolving customer issues rather than just social listening. Moreover, social CRM and social media marketing “coexist” and can be “integrated or segregated”, depending on the objectives of the brand and the activation campaign (Kotler *et al.* 2017, p. 91). Thirdly, gamification involves using “game principles in a non-game context” (Kotler *et al.* 2017, p. 94). For instance, reward and recognition elements, such as incentives, miles and tokens are accumulated by customers to keep them engaged. Thus, the marketer collects data on customer behaviour, ranking them according to brand use and affinity (Kotler *et al.* 2017).

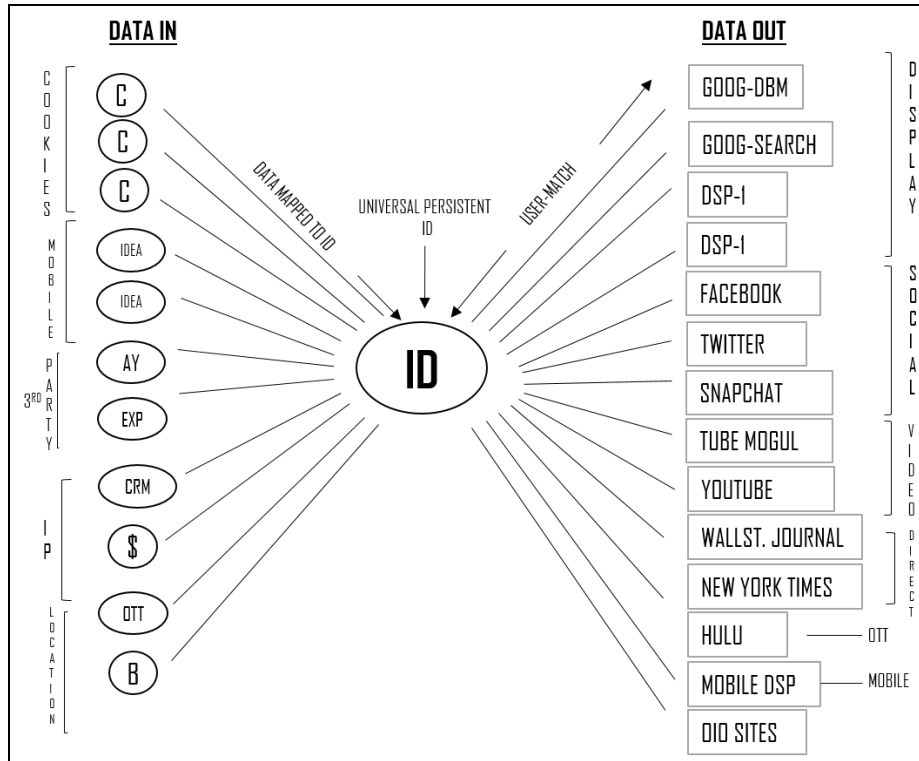
Further, “experiential connectivity” enables brands to deliver “superior customer experience in touchpoints between customers and brands”, leading to “social connectivity, which is about the strength of connection in communities of customers” (Kotler *et al.* 2017, p. 22). AI can be used to analyse user behaviour online. For example, online users provide two types of signals, that is “deterministic” and “probabilistic” (Chavez *et al.* 2019, p. 70). A deterministic signal refers to a user who has identified themselves when they log in online using a username and password, for example. A probabilistic signal refers to developing an algorithm that will through deduction give an indication that this is the same user accessing the site from different devices or platforms. Therefore, it is powerful information that marketers can glean from these signals to

respond accordingly. Consequently, marketers can be successful in their campaigns when they are able to deliver powerful and relevant messages to a user using both deterministic and probabilistic signals (Chavez *et al.* 2019).

In addition, help is at hand using data mapping through a process of ‘onboarding’ where ‘deterministic signal data’ such as an email address is diced and matched to a cookie and relevant messages are delivered to the user (Chavez *et al.* 2019). This results in ‘performance data’ which is analysed to make content recommendations to improve sales (Machanik 2020). Though location data is powerful, perhaps it is the most invasive of user data in the digital space. For instance, Global Positioning Systems (GPS) communicate with satellites to locate the user’s smartphone within a few metres.

Similarly, beacons are used to locate mobile devices and offer customers specials while they are in store or to entice them to come into the store (Chavez *et al.* 2019). Therefore, consumer benefits can be established from participating in cellular phone applications (Sobolewski 2021).

Marketers are challenged with data overload and ‘data out’ which is the content that needs to be delivered to the user (Chavez *et al.* 2019). For instance, outbound identity mapping allows for the correct message delivery, sequencing it based on the stage of the customer journey, solving any attribution problems and ensuring that the user is engaged at the right touchpoints (Chavez *et al.* 2019). Moreover, Chavez *et al.* (2019, p. 80) argue that “data out is all about the ability to intelligently provision data about the people to the systems and the surfaces that they visit” (see Figure 2.7). This raises the question of whether this process can be conducted by a machine instead of data scientists embedded within the marketing department.



**Figure 2.7: An illustration of the data in, data out process (Source: Chavez *et al.* 2019, p. 63)**

Chavez *et al.* (2019, p. 63) note, as illustrated in Figure 2.7, that mobile, 3<sup>rd</sup> party data that brands sign up to, IP (internet protocol) through CRM purchase, and segmentation and location is mapped into a ‘unique ID’ that when matched delivers “focused messaging into display advertising on Google”. This data management platform stretches the demands of marketers beyond traditional marketing (Chavez *et al.* 2019). Evidence illustrates that data content is becoming a holy grail for marketers. It has the potential to create ‘ad fatigue’ or annoyance for the user when they are bombarded with too much content (Chavez *et al.* 2019). In this case, Chavez *et al.* (2019) recommend a global delivery management (GDM) which controls the frequency of messages across various channels of engagement using a bookkeeping system that tracks the quantity and frequency of messages directed to the user. Another powerful process is the ‘data late exports’, when data is mapped back to the internal customer records or database, thereby providing insights that are powerful for the brand (Chavez *et al.* 2019).

Whilst AI can efficiently process data and content, marketers’ creativity thrives on understanding the context of the problem; therefore, broader problem-solving is required where connecting the dots, thus taking a strategic view is critical in delivering business results (Durrant 2018). On the other hand, AI allows for personalisation of content to the user, plotting the user journey, segmentation and enriching data in real

time, thereby freeing marketers to concentrate on synthesising business goals and planning marketing campaigns that deliver results (Durrant 2018).

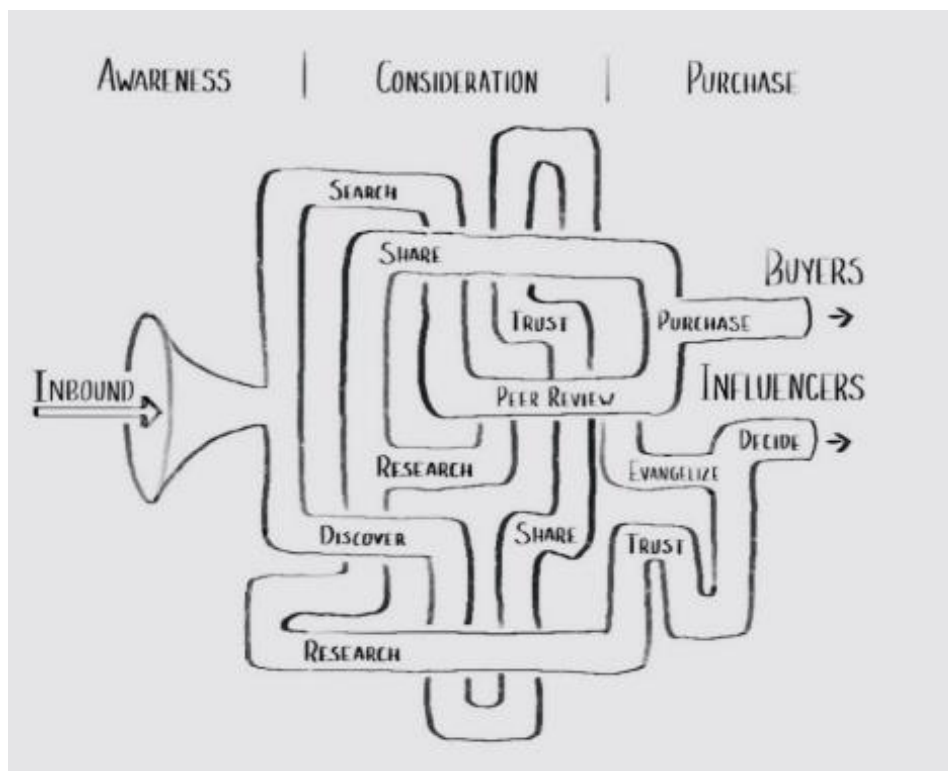
Further, AI “could be tasked with producing content marketing pieces” that are auto generated, based on the algorithm that has already been developed (MediaUpdate 2019b, p. 1). AI can also assist in predicting “a customer’s future behaviour by analysing their past behaviour patterns”, thereby mapping the customer journey with the brand (MediaUpdate 2019b, p. 1). Thus, the customer’s clicks online can be analysed and content can be customised to induce sales online (Machanik 2020).

Once data is collected, monitoring and tracking the effectiveness of marketing campaigns is possible through attribution with AI to ensure focused reach of the message. Similarly, attrition modelling using AI pinpoints the risks of loyal customer loss (Cui *et al.* 2019). This modelling, when there are multiple touch points, also allows marketers to measure the “incremental impact of marketing” efforts (Cui *et al.* 2019, p. 6). In addition, AI has been instrumental in estimating the lifetime value (LTV) of conversion, from the time the user clicks on the ad to the point of purchase (Cui *et al.* 2019). As a result, it has also assisted in checking when the user gets attracted to the content, assists in positioning the advert earlier for better sales conversion (Machanik 2020).

Additionally, AI can assist in driving efficiencies for B2B marketers through the saving of resources (Allouche 2019). Similarly, these efficiencies are also observed in B2C contexts since AI deals with data and content overload, freeing marketers for creative and strategic input. For instance, customer segmentation is one aspect that ensures delivery of “the right message, to the right person, at the right time” (MediaUpdate 2019b, p. 1). Likewise, creating personas around AI-generated segments brings in the creativity from the marketer, thereby complimenting the technology.

In addition, AI allows marketers to really understand customer needs through the ability to process data quickly and efficiently, assisting marketers to pre-empt and personalise customer service needs using tools such as recommenders (MediaUpdate 2018a; MediaUpdate 2018b). For example, AI could also assist to comprehend “online customer engagement behaviours”, “in real time to the appropriate department” (Perez-Vega *et al.* 2020, p. 908). It further illustrates that brands that tell “an authentic story across multiple channels, connecting people in real time” have better success using technology in marketing (Ting, Fam, Chan & Cheah 2019, p. iii).

Evidence shows that the 4IR's influence on marketing communications is the shift of the power from vertical to horizontal (Kotler *et al.* 2017). This means that the power is now, to a certain extent, with individuals/ consumers rather than corporations. Social media companies such as Facebook and YouTube recognise these social forces and are empowering the individual, embracing more inclusive instead of the traditional, vertical and exclusive forces (Kotler *et al.* 2017). Thus, competitive forces are changing as inclusivity opens opportunities for new entrants. For example, Uber and Airbnb are competitive entrants that the taxi and hospitality industry did not anticipate in their environmental scans (Kotler *et al.* 2017). These technology shifts challenge marketers as brand custodians to be welcoming of these changes.



**Figure 2.8: Multiple channels of the modern marketing funnel (Source: Chavez *et al.* 2019, p. 35)**

Further, Chavez *et al.* (2019) argue that during the current datafied environment, the customer journey is not s-shaped but a complete zig-zag with factors such as search, social media interaction, product comparison and e-commerce experiences (see Figure 2.8). Therefore, the process of reaching customers has become complicated, with online marketing touchpoints (from social media, websites, video, augmented reality, games, and apps) becoming disjointed. All these tools are there to entice the customer. It illustrates that once the customer has made a purchase decision, CRM and other tools using the online space are used “to engage him or her in a cross-sell or upsell” (Chavez *et al.* 2019, p. 36). Similarly, this



process fits the typical Millennial customer who is constantly on the move, dynamic, navigating various communication channels and vacillating between different stages of the stimulus-response model (Chavez *et al.* 2019). Such customers are becoming difficult to put into a box through segmentation since they demonstrate many facets of their lives (Chavez *et al.* 2019).

In addition, Kotler *et al.* (2017) note that the old customer journey characterised by AIDA (awareness, interest, desire and action) is being redefined in this digital era to the 4 As (aware, attitude, act and act again). Developed by Derek Rucker, this path recognises the decision journey that is influenced by connectivity (Kotler *et al.* 2017). Therefore, this journey changes the thought process of the customer, who is influenced by the social resolutions in their community. Likewise, this influence is gathered from reviews that they obtain from search and the so-called “f-factors (friends, families, Facebook friends, Twitter followers)” (Kotler *et al.* 2017, p. 12).

Further, Chavez *et al.* (2019, p. 156) revise AIDA in the digital space to a three-layer model of “know, personalise and engage”, where “know” refers to who the customer is, “personalise” refers to what message is to be delivered to customers and “engage” denotes decisions such as when the ad impression should be delivered and where the customers network digitally.

Remarkably, a data tool called ‘Where (Are) My People At (WAMPA)’ locates the number of users online, the amount of time spent on the company site and what pages they are accessing on the site (Chavez *et al.* 2019). Moreover, this tool assists marketers in media planning since it can plot the type of customer and strategies to engage with the customer can be further developed. In addition, segmentation in a data-driven world is about redefining the customer and understanding their different “day-to-day... personas” (Chavez *et al.* 2019, p. 201). Therefore, from WAMPA, it is important to know where the customer is going, so that deliberate activation campaigns can be delivered. Thus, with customisation, the marketer can develop richer insights and a better understanding of the customer (Chavez *et al.* 2019).

AIDA and WAMPA are tools that can be utilised as a set of data armoury to engage and get closer to customers. These tools are facilitated by the technologies brought about by the 4IR. The next section focuses on the element of marketing communications which is digital communication.

## 2.5.2 Digital communication in South Africa

Online marketing accounted for up to 51% of US adspend in 2018 (Cui *et al.* 2019). In South Africa, by contrast, online marketing contributed only 19% of adspend in 2020 (Guttmann 2021). Furthermore, CRM has gone online using key performance dashboards for each customer. Given the above, ICT and marketers work closely in delivering online marketing solutions. It is for this reason that data scientists are sometimes embedded in the marketing department or outsourced to agencies. This is because their function enables the processing of big data. Besides, these digital skills are potent in a digitally focused marketing organisation. The collaboration across functions has the potential to deliver successful digital solutions for the brand that can drive incremental value. However, online marketing faces the challenge of ROI. It is not enough to measure clicks and views of advertising; conversion is the most significant metric as this can result in a purchase decision (Chavez *et al.* 2019). Thus, AI can now aid with the effectiveness analysis of an advert, frame by frame, to improve online response (Machanik 2020).

Indeed, brands have further developed technologies to keep customers engaged. For example, mobile applications, social CRM and gamification are digital tools used to create brand kinship (Kotler *et al.* 2017). However, mobile applications need smartphone capability, which is low in Sub-Saharan Africa. Evidence illustrates that smartphone penetration was recorded at 50% in 2020 and is projected to be 65% by 2025 in Sub-Saharan Africa (Gilbert 2020). Similarly, South Africa has over 80% smartphone penetration, with smartphones mostly utilised for social media apps (Gilbert 2019).

Digital communication delivers two-way communication between brands and consumers. Moreover, interactivity driven by conversations with chatbots and voice assistants makes the brand human-like and connects the brand to the customer (Kotane *et al.* 2019; Ting *et al.* 2019). This demonstrates that chatbots are allowing the use of the ubiquitous smartphones to provide tailor-made customer solutions in South Africa (O'Connor 2019). For instance, AI deep learning allows for communication of content via voice, customising content and personalisation of marketing messages (Massaron 2019). Nevertheless, chat forums run by AI still have a long way to go to be truly responsive; however, they allow the brand to be personal and can increase brand loyalty (Manyika, *et al.* 2017). For the brand to be personal it must be close to its customers. For example, influencer marketing allows for advocacy from a person whom users admire and/or aspire to emulate, to endorse the product or service (Kotane *et al.* 2019).

The next section takes the discussion of the element of digital communication further and focuses on social media as a communication platform.

### 2.5.3 The impact of social media

Social media is a significant tool that allows humans as social beings to connect. It creates an inclusive world as digital communication is borderless. However, this over-connectedness and overload of data and content has the potential to breed users devoid of depth of attention and empathy (Schwab 2017). Schwab (2017, p. 84) notes that digital media creates empowered and disempowered citizens; they are “empowered by changes in technology... at the same time... feel increasingly excluded from meaningful participation in traditional decision-making.” Accordingly, these are issues marketers need to address in developing marketing campaigns for digitally connected audiences.

Mobile technology solutions are seen as a platform to reach the young population of South Africa as well as those in Africa (Ndung’u & Signé 2020). As the messaging moves from text to voice using AI and AR, these features will be dominant in social media platforms, allowing brands to get closer to users (O'Connor 2019).

Through social media, brands can embark on a process of social listening to understand what online users say about the brand and gain insights into positive or negative sentiments on the brand. This is similar to media clippings, where the process can be automated (Kotler *et al.* 2017). Given the above, this process can assist in market information to understand the real-life context where users interact with the brand (Kotler *et al.* 2017). Additionally, online tribes are another powerful tool for the brand to engage in communities (Kotler *et al.* 2017). Developed by Robert Kozinets, “netnography... is a method... to understand human behaviours in e-tribes or online communities” (Kotler *et al.* 2017, p. 111). Observers become part of the online community and gain insights into the natural conversations where users are engaging with the brand (Kotler *et al.* 2017).

Further, digital addiction is likely to create backlash as children are getting hooked earlier (Baldwin 2019). This is because social media companies and marketers are reaping millions by marketing apps and games to children (Baldwin 2019). Palihapitiya, a former Facebook executive, lamented in 2017 that this addiction is destroying the moral fibre of society (Baldwin 2019).

Social media companies like Facebook are criticised for being “digital monsters that (are) destroying our democracies, and our societies”, according to the former prime minister of Belgium, Guy Verhofstadt (Baldwin 2019, p. 215). Resultingly, an addictive scale called the Bergen Facebook Addiction Scale (BFAS) tests an individual’s mental health and addiction level, and how these are impacted by spending

extended periods of time on social networking sites like Facebook (da Veiga *et al.* 2019). Could Facebook and other addictive applications create a technologically drug-induced generation that is unable to operate effectively in society?

The next section takes the social media discussion into one of its effects, which is on customer privacy.

#### **2.5.4 The impact of the 4IR on customer privacy**

AI, and its influence on data within the marketing field, touches on the issue of customer privacy. Increasingly, marketers have access to information on customer backgrounds, financial status, aspirations and influences, which can be exploited for the benefit of brands, and perhaps to the detriment of customers. This issue has resulted in the introduction of laws such as the General Data Protection Regulation (GDPR) in the European Union (EU) countries (du Chenne 2018; O'Connor 2019). In South Africa, personal information is protected by the Protection of Personal Information (PoPI) Act No. 4 of 2013 (MediaUpdate 2019c). The question of fundamental rights, freedoms of individuals and infringements in the use of private data has legal, ethical and social implications (Mitrou 2018).

Privacy issues aside, AI can assist social media campaigns by delivering innovation fast and obtaining insights through processes such as text analysis and sentiment analysis of social media data (MediaUpdate 2019b). Perhaps new campaigns as well as new product and service launches can be brought into the market fast through AI-assisted processes (MediaUpdate 2019b). In addition, machine learning can compute the most difficult mathematical-statistical calculations quickly, delivering faster decision-making for marketers (Miklosik *et al.* 2019). For example, A/B testing of advertising is made easier with AI tools that calculate the advert that achieves the specific metric loaded onto the algorithm, and then prioritise the best version to flight to future customers (MediaUpdate 2019b). However, the creativity and emotional connection might be lost with algorithms determining communication messaging. This is where human-centric marketing might be significant in marketing communications (Kotler *et al.* 2017).

Protection of personal information is one thing, but Kotler *et al.* (2017) further argue that faith in brands has declined; instead of customers being swayed by promotions, they now base their trust on those closest to them. Those closest to them are classified as the “f-factors” and are trusted more than marketing communications (Kotler *et al.* 2017, p. 12). Notably, websites for ratings and reviews, such as TripAdvisor and Yelp are testament to customers trusting strangers’ opinions over marketing companies (Kotler *et al.* 2017). Nonetheless, the brand can retain trust if it is seen as transparent and has integrity (Cui *et al.* 2019).

Regarding wearable devices, whether they are perceived as companions and/or monitors by the user, they are gaining momentum in the marketing of a healthy lifestyle. Taken a step further, these devices might be used to create conformists in society, where individual choice is removed, and there is an engrossment of government, insurance and employer companies (Schwab 2017). Therefore, the risk is that individuals might feel that their privacy is being infringed. Scholars raise this issue of trust with privacy of customer information (Berndt, *et al.*, 2021). Protection of personal information is necessary in the management of data and safeguarding people's privacy (Chavez *et al.* 2019).

The next section will now deliberate on the 4IR's influence on the marketing function as a discipline.

### **2.5.5 The 4IR's influence on the marketing function**

The marketing department has become scientific in its approach to big data. For instance, data analysts and data scientists perform “proprietary analyses, and build in-house machine learning models for attribution, measurement and propensity” (Chavez *et al.* 2019, p. 82). Then machine learning provides information for the marketing decision-making process, with the advantage of “optimal performance... faster decision-making... automisation of predictable activities... reducing error rates... computing the most difficult mathematical-statistical operations” (Miklosik *et al.* 2019, p. 85715-6).

Additionally, there is a field called Marketing Technology (or MarTech) which uses software to execute marketing functions (Sashikala 2021). This is where marketing departments are focused on employing marketing technology solutions to engage and build loyalty with their customers. However, Forsstrom (2017, p. 1) holds the pessimistic view that the marketing profession is “building machines that will take over your job functions” and mortgaging “short-term success for long-term unemployment.” Thus, data and content overload can result in a marketing function that is likely to self-destruct, unless the profession adapts to the changes through creativity and innovation. Consequently, it is recognised that all marketing jobs will not only be creative, but they will be digital rather than having digital specialists working alongside traditional media specialists (Forsstrom 2017).

Further, Martech embraces elements of technology in communications. In the technology space, AI assists in delivering intelligent and specific content that drive engagement (Manovic 2001). VR and AR are tools utilised by marketers to keep users entertained, provide a wow effect and bring the brand to life through gamification (Loureiro *et al.* 2020).

Content marketing is, thus, one element that is exploding in the digital space (Sashikala 2021). Content marketing has become a new field that connects brands with customers in the social media space. It involves “creating, curating, distributing and amplifying content that is interesting, relevant and useful” to users (Kotler *et al.* 2017, p. 121). The brand can deliver content in various ways – through storytelling, thought leadership articles and so on. Thus, content marketing is viewed as the new advertisement that surreptitiously inserts the brand into the conversation with customers, provides solutions, direction and influences customer purchase decisions. In addition, brands compete with user-generated content in the social media space. This has given birth to influencer marketing, where online influencers are contracted to promote brands in their social circles. Content marketing needs to be focused on the online medium, rather than be rehashed from traditional advertising (Ansari 2020). As a result, this field has created dedicated content marketing jobs, particularly in the B2B sector.

Whilst content creation is the new field in marketing communications, repetitive skills can be disrupted. Skills disruption means that employees need to maintain momentum through continuous training of hard and soft skills to survive the impact of the 4IR (Johnson 2018). Forsstrom (2017, p. 2) notes that marketing skills in product development that have “real depth, and a human touch” are what customers are looking for. As a result, creativity, together with imagination that utilises emotional intelligence will set marketing practitioners apart from machines. Thus, Forsstrom (2017, p. 2) laments the evolution of the marketing profession from being a “creative industry, but is now largely a data discipline.”

Besides the new fields, marketing requires a hybrid of skills such as business knowledge, technology understanding and soft skills such as communication, critical thinking and an innovative mindset (Oke & Pereira Fernandes 2020, p. 2). Lurie (2019, cited in MediaUpdate 2019a) concurs with the assertion that marketers need skills in creative strategic thinking and complex problem solving, which are among the top 10 skills required to thrive in the 4IR.

For instance, skills in digital data management are sometimes lacking within marketing departments as the curriculum in digital marketing strategy is latent, and few institutions offer this new discipline (Fierro, Arbelaez & Gavilanez 2017). Additional skills such as data analytics and search engine optimisation (SEO) are now a requirement for digital brand management (Bala & Verma 2018). This illustrates that these skills can be learned on the job through short courses, experience or trial and error by many marketers (Johnson 2018). For example, short courses in digital innovation, AI and robotics are now offered by local and global universities to bridge the gap between the traditional degree curriculum and the needs of the workplace

(Mhlanga & Moloi 2020). Increasingly, these skills have the potential to deliver marketing practitioners who are agile innovators and can deliver unique and suitable offerings to the customer, and profitability to the business (Moi & Cabiddu 2021). Khumalo (2020) notes that the success of digital literacy relies on tuition commencing at first-year degree level.

Digitisation of the marketing function needs to improve the occupation and not just digitise per se. For instance, Chavez *et al.* (2019, p, 130) note that a centre of excellence is created that endeavours to deliver “better audience discovery, more precise segmentation...the ability to get fast insights to support optimisation opportunities, and the capacity to integrate with the tools currently in use.” Resultingly, the outputs include marketing return on investment (ROI), key performance indicators (KPIs), media effectiveness and customer profiles. Thus, stakeholders that form the centre of excellence are data analysts, ICT specialists, technology vendors, media players, advertising agencies and marketers (Chavez *et al.* 2019).

Hattar (2018) advises that to transform the marketing function, it is important to invest in new marketing tools that will endear the brand to customers and deliver effective return on investment. Likewise, Durrant (2018) asserts that AI technologies and marketers should be complementary, rather than adversaries. For instance, AI empowers knowledge workers by supplementing their competences (Davenport *et al.* 2019) and frees marketers for “doing, thinking, solving, closing, supporting, and negotiating” (Chavez *et al.* 2019, p. 171).

From a B2B perspective, virtual sales training using AI and predicting customer behaviour using machine learning, are examples of the 4IR making the sales and marketing professions efficient (O'Connor 2019). For instance, “augmented creativity” is when human creativity meets technology, “using AI and data to augment – not replace – the capabilities of the creative team” (Machanik 2020, p.1). Increasingly, virtual influencers are used as an extension of the brand to influence customer perceptions; however, these need to acquire human-like appearance and conduct life-like activities to be trusted (Molin 2019). Subsequently sales bots can assist salespeople to improve the sales process (Davenport *et al.* 2019). Overall, AI can assist in the development of the marketing strategy through forecasting new products and advertising expenditure (adspend) (Davenport *et al.* 2019).

The 4IR is redefining the marketing function and ushering in new business models. This illustrates that new business models have evolved through internet or online marketing. These are delivered by marketing data scientists who combine “technological, marketing, analytical and strategical” positions to develop

“technological solutions for marketing purposes” (Sashikala 2021, p. 1). For instance, online marketing technologies such as “email marketing, search engine marketing, social media marketing and display advertising” are utilised in this new era (Cui *et al.* 2019, p. 1).

Having discussed the various influences of the 4IR on marketing communications, the next section provides a synthesis of the challenges and positive impacts on the 4IR on marketing and marketing communications in a table format.

### 2.5.6 The challenges and opportunities/positive impacts of the 4IR on marketing and marketing communications– a synthesis

The challenges and opportunities/positive impacts of the 4IR on marketing and marketing communications mentioned in the preceding sections are summarised in the table below:

**Table 2.1 Challenges and opportunities/positive impacts of the 4IR on marketing and marketing communications**

Opportunities/ positive impacts of the 4IR	Challenges of the 4IR
The potential instant ability of digital marketing to deliver results and activism (Kotler, 2017)	Social data (or social media data) tracks user signatures on sites like Facebook, where the location check-in and bio information are potentially shared with advertisers (Chavez <i>et al.</i> 2019)
Marketers who are brand custodians are seeing their roles redefined (Araujo <i>et al.</i> 2020)	Skills disruption means that employees need to maintain momentum through continuous training of hard and soft skills to survive the impact of the 4IR (Johnson 2018)
Interactivity as more customers can influence the brand image, and ultimately the equity of the brand (Madianou & Miller 2012)	There is a shift in power from marketing practitioners ... encouraging customer dominance (Duffy <i>et al.</i> 2020)
Online customers expect a wow for the brand to “enjoy, experience (and) engage” with the customer (Kotler <i>et al.</i> 2017, p. 168)	Trust in companies that exploit data and privacy to their benefit is compromised (Cui <i>et al.</i> 2019)
The 4 Ps have been redefined ... relates to e-commerce transactions performed by bots (Gentsch 2019, p. 62)	Marketers are challenged with data overload and ‘data out’, which is the content that needs to be delivered to the user (Chavez <i>et al.</i> 2019)
Digital mobile technology permits the user to review products without going to stores’ physical premises (Kotler <i>et al.</i> 2017)	Data content has the potential to create ‘ad fatigue’ or annoyance for the user when they are bombarded with too much content (Chavez <i>et al.</i> 2019)
Chavez <i>et al.</i> (2019, p. 31) state that “marketers who prioritise trust and transparency with their handling of precious people data, reap meaningful	Browser history is tracked on sites, which allows marketers to use that information to influence the brand purchase decision (Chavez <i>et al.</i> 2019)



rewards in positive perceptions and brand equity over the long-term”	
Through AI, marketers are enabled with insights about customer needs, likes, and dislikes, as well as potential purchase decisions (Chavez <i>et al.</i> 2019)	Content marketing needs to be focused on the online medium, rather than be rehashed from traditional advertising (Ansari 2020)
“Experiential connectivity” enables brands to deliver “superior customer experience in touchpoints between customers and brands”, leading to “social connectivity, which is about the strength of connection in communities of customers” (Kotler <i>et al.</i> 2017, p. 22)	Forsstrom (2017, p. 2) laments the evolution of the marketing profession from being a “creative industry, but is now largely a data discipline”
Beacons are used to locate mobile devices and offer customers specials while they are in store or to entice them to come into the store (Chavez <i>et al.</i> 2019)	Lurie (2019, cited in MediaUpdate 2019a) notes that marketers need skills in creative strategic thinking and complex problem solving, which are among the top 10 skills required to thrive in the 4IR
Data analysts and data scientists perform “proprietary analyses, and build in-house machine learning models for attribution, measurement and propensity” (Chavez <i>et al.</i> 2019, p. 82)	Protection of personal information is necessary in the management of data and safeguarding people’s privacy (Chavez <i>et al.</i> 2019)
AI can now aid with the effectiveness analysis of an advert, frame by frame, to improve online response (Machanik 2020)	
Social CRM redefines traditional CRM from being one-way to customers, to interactive where customers engage with brands on social media through conversations with communities (Kotler <i>et al.</i> 2017)	
Attrition modelling using AI pinpoints the risks of loyal customer loss (Cui <i>et al.</i> 2019)	
AI assisted in checking when the user gets attracted to the content, assists in positioning the advert earlier for better sales conversion (Machanik 2020)	
Augmented reality apps have the potential to drive changes in brand attitude, since they provide inspirational messaging to the user (Rauschnabel <i>et al.</i> 2018)	
The brand appears as a friend on a personal smartphone, not too removed from the user’s everyday experience (Sawadogo 2014)	
Brands that recognise that the power has shifted to users are turning to social influencers through the recommender system and influencer campaigns (Molin 2019)	
AI and deep learning technologies are further utilised in hyper-targeted advertising, pricing optimisation, lead scoring, natural language processing and real time forecasting (Massaron 2019; MediaUpdate 2018a)	

This study was conducted during the COVID-19 pandemic. The following section therefore focuses on aspects of the pandemic in relation to the 4IR's influence on marketing communications.

## **2.6 The impact of the COVID-19 pandemic**

The COVID-19 pandemic has had a tremendous impact on societies and on marketing communications. Consumers, worried about their health and financial situations, are demanding that brands and companies devise innovative ways to assist them to navigate the new normal (Accenture 2020).

The battle for the home (with many consumers now working, learning and living at home) is contested by brands and companies (Accenture 2020). Consumers are connecting to virtual communities that link them without risking their lives, and are demanding brands and companies to support these behaviours. Fear was identified as a driving factor in changing purchase behaviour during the pandemic, with various consumer groups reacting differently (Eger, Komarkov, Egerova & Micik 2021). For instance, the older generation, the Baby Boomers, significantly cut down buying in bricks and mortar stores except for essential products and services (Eger *et al.* 2021).

Indeed, consumers' fears are significant insights for brands and companies to use to redefine the shopping experience, whether in-store or online. Whilst customers went online during the pandemic, there is a need for a mix of online and traditional interface to deliver complete customer engagement. The physical stores are seen as a closet for displays; however, excess space needs to be revitalised by retail landlords (Nanda, Xu & Zhang 2021). Companies need to rethink company culture as it is impacted by the hybrid working model (McKinsey 2021a). For example, the hybrid working model is said to result in fatigue as workers do more work when remote working (McKinsey 2021c). Notably, this is technological exploitation, which sees workers hailed as superheroes during the pandemic whilst eschewing work-life balance (Goldman 2021).

In view of this, as health workers are burdened by caring for COVID-19 patients and women are leaving the workforce to care for the vulnerable, businesses need to rethink the work environment. Accordingly, this requires a new set of skills such as “social and emotional, advanced cognitive and digital capabilities” (McKinsey 2021b). Incidentally, these are the same set of skills required to cope with the 4IR.

Business resilience and coping with the new normal was communicated largely on social media during the pandemic (Iglesias-Sanchez, Jambrino-Maldo, de las Heras-Pedrosa & Fernandez-Díaz 2021). Therefore,

social distancing can be observed using machines rather than humans in public areas (Sobrosa Neto *et al.* 2020). The next section addresses theories that are pertinent to the 4IR's influence on marketing communications.

## **2.7 Theories pertinent to the 4IR's influence on marketing communications**

The theories outlined below are relevant to the study because they articulate the process of communicating messages to users as well as the innovation process that is central to the adoption of the 4IR. First, digital communication theory is briefly outlined because marketing communication practitioners have had to grapple with digital communication as it shifts the messaging flow from one-way to two-way communication. Thereafter, polymedia theory is discussed because it introduces the convergence between messaging and automation which facilitates the two-way interaction that is currently experienced. It is the basis of the technology influence in marketing in areas such as MarTech. Finally, innovation diffusion theory is covered because the exponential pace of innovation points to the core of the technological changes due to the 4IR. The understanding of this innovation diffusion theory is likely to be the bedrock of new product development project processes in marketing.

### **2.7.1 Digital communication theory**

The 4IR focuses on the concept of digital communication, in relation to marketing communications. Developed in 1948 by Claude Shannon, the concept of digital communication deals with the relationship between theory, problem sets and engineering design (Guizzo 2003). It illustrates that digital communication looks at communication as a process of devices communicating information digitally (Erlangga *et al.* 2020). Madhow (2008) remarks on the technical and mathematical aspects of digital communication as it relates to modulation and channel coding, leading to wireless communication. Erlangga *et al.* (2020) address the communication process in the digital age such as cognitive and behavioural perspectives. This is further delineated into the four functions of communication in the organisation, i.e. informative, regulative, persuasive and integrative (Erlangga *et al.* 2020). Whilst Shannon is regarded as the father of information theory, Turing is regarded as the father of computer science; the combination of information and computers are noted as the emergence of digital communication (Giannini & Bowen 2017). The concept, as defined by Shannon and Weaver, can be viewed as the seed that germinated polymedia theory (Tyma, Hermann & Herbig 2015, p. 2).

## 2.7.2 Polymedia theory

Polymedia theory was introduced by Daniel Miller and Mirca Madianou and uses the digital communication technologies to demonstrate how people today use various modern communication and media tools (Madianou & Miller 2012). Unlike traditional communication, polymedia integrates the media, the brand and users who are interactively engaging with the brand (Madianou & Miller 2012). Moreover, polymedia postulates that “communication occurs when a variety of media technologies can be exploited by the user” (Madianou & Miller 2012, p. 7). Notably, polymedia is a process and product that is “a discursive structure (that is) beyond media convergence” and allows users to be producers, audiences and critics of content or discourse (Tyma *et al.* 2015, p. xx). Therefore, it is both a “socio-material condition, and an epistemological approach to media practices” (Jansson 2015, p. 36).

Smartphones are regarded as media tools used for communication in a polymediated environment (Madianou 2014). The device provides unconstrained access, in an integrated structure, that cuts across the globe. As an example, polymedia is seen as a multi-platform media ecology and goes beyond just the environment as it integrates the user, message, environment and the process of interaction (Madianou 2014). As a theory, it fits the multi-platform or media multiplexity of the 4IR, because the messaging and interactivity is navigated at various stages of the digital communication (Madianou & Miller 2012). For instance, this digital communication includes text, audio and images such as emojis on various platforms integrated into a polymediated environment (Madianou & Miller 2012). Likewise, emojis are proving to be a powerful communication tool for the youth.

It follows that a polymediated environment exists in a small network where there are many forms of communication, and these interactions converge using a single platform such as a mobile smartphone (Madianou 2020). Given the above, new media involves a variety of principles such as numerical presentation, modular structure, automation, variability and transcoding. Firstly, numerical representation indicates “a grid of pixels used to represent a digital image” (Manovic 2001, p. 49). Secondly, “modular or fractal” characterises structures which are assembled in a message and are connected yet can exist independently of each other; for example, an image, text and audio-visual all existing in one message (Manovic 2001, p. 49). The other principles (“automation, variability and transcoding”) are “dependent on the principles (of) numerical representation and modularity” (Manovic 2001, p. 56). Thirdly, automation is where, through AI as well as a human-machine interface using machine learning, the communication interaction is delivered intelligently to the user. Fourthly, variability means “not fixed once and for all but can exist in different, potentially infinite, versions” (Manovic 2001, p. 56). Manovic (2001) likens

polymedia to hypermedia, but it is the interactivity element that is common and the digital space in which they both exist. Hypermedia is defined as “an augmentation of hypertext and multimedia’ which includes “both multiple representations of information as well as a nonlinear design” (Moos & Marroquin 2010, p. 266). Polymedia is therefore more complex than hypermedia. Finally, transcoding relates to converting computer language into cultural language in the form of image, text and so on and thereafter new media transcribes the computer’s cosmogony into human culture (Manovic 2001).

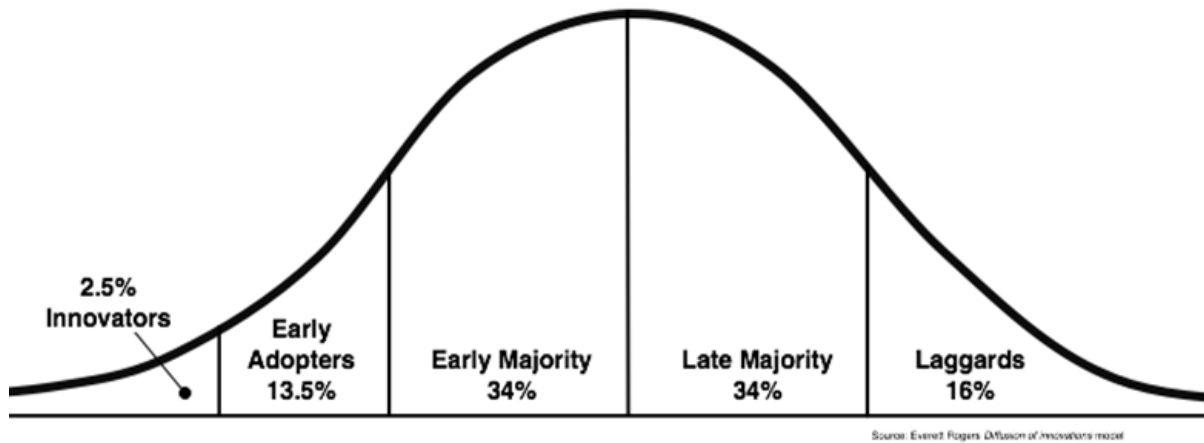
### **2.7.3 Innovation diffusion theory**

Innovation diffusion theory (IDT) was introduced in 1962 by Rogers and focuses on the adoption of technologies and innovations in industry. Primarily, innovation theory takes into consideration the technologies as enablers of change rather than individuals being coaxed to change. The innovation therefore diffuses into the behaviour or aspects of the life of individuals or society by making their lives and functions better (Wani & Wajid Ali 2015).

Notably, the innovation diffusion theory is split into four elements, “innovations, communication systems, time and social system” (Wani & Wajid Ali 2015, p. 104). Firstly, given the above, innovations are technology ideas that are viewed by the users as innovative. Secondly, the communication system is the channel or medium in which this idea is relayed to users. Thirdly, time refers to the pace of the innovation from the time it was introduced until it stops being considered as new by the users. Fourthly, the social system is the category of adopters of the new technology from early users to when “half of the targeted population” would have embraced the technology (Wani & Wajid Ali 2015). Additionally, the categories are “early adopters, early majority, late majority and laggards”, as depicted in Figure 2.9 (Rogers 2003, cited in Wani & Wajid Ali 2015, p. 105).

Subsequently, consumers using digital communication are spread across these adoption categories, with the youth being viewed as early adopters of technologies, particularly social media platforms in engaging with brands (Kotler *et al.* 2017). As time progresses, the early majority requires support in taking on the new technologies as they are less likely to take risks. Thus, the older generation relies on the support to take up the 4IR technologies (Kotler *et al.* 2017). This suggests that the risk is calculated by the level of uncertainty that is reduced when the user is presented with the technology. The older generation group is potentially classified as the laggards as they adopt the technologies last. Their willingness to adopt innovations demonstrates their fear of taking risks until the technology is ubiquitous and they have no choice but to adopt the technology. Principally with social media, new platforms are adopted by the youth and as soon

as the older generation embrace the social media platform, such as Facebook, the youth leave the platform to engage on new platforms such as TikTok (Shen 2022).

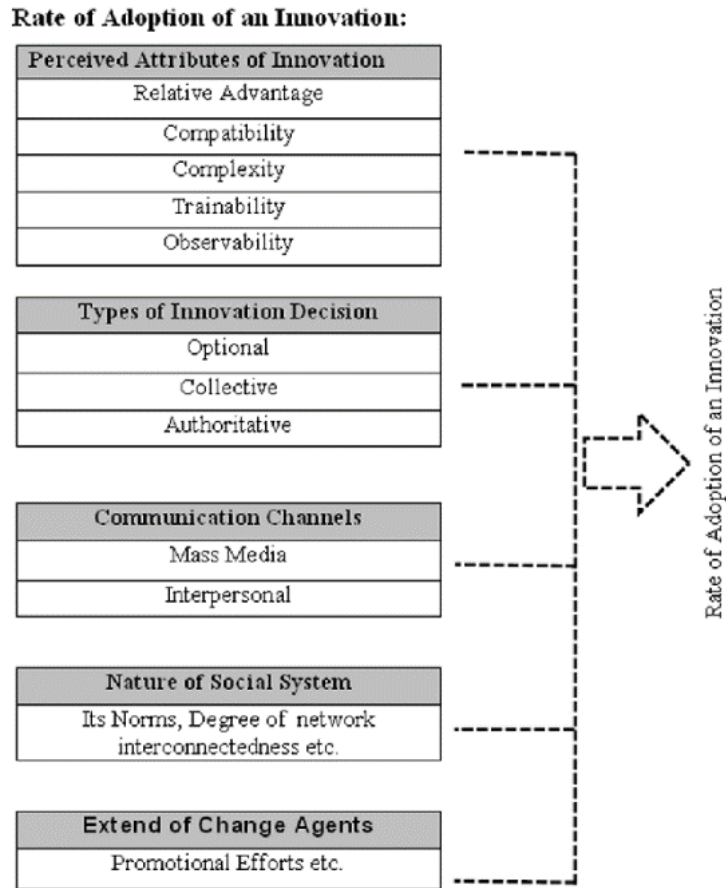


**Figure 2.9: Adopter Categorisation (Source: Rogers (2003) cited in Wani & Wajid Ali 2015, p. 105)**

The consumer faced with this risk is likely to employ the five attributes of innovation (Wani & Wajid Ali 2015, p. 105). These are “relative advantage, compatibility, complexity, observability and trialability” (Wani & Wajid Ali 2015 p. 109). Firstly, relative advantage is when consumers integrate technology with ease. Secondly, compatibility is when it meets their needs. Thirdly, complexity refers to the adoption of the innovative relative to the degree of its intricacy. Observability touches on the communication elements of the innovation as perceived by adopters through advocacy gained from the advertisements of the technology. Lastly, trialability is when the technology is less complicated and consumers are more likely to adopt the new technology (Wani & Wajid Ali 2015). Similarly, early adopters assist other early majority or even laggards to adopt the technology by advocating the innovation. 4IR interactive platforms such as social media allow for this. The use of influencer marketing is one such example where the observability is demonstrated (Kotane *et al.* 2019).

The rate of adoption is influenced by a variety of factors, which are set out in Figure 2.10 (Wani & Wajid Ali 2015 p. 114). Further, it is the pace at which innovation is separate to the diffusion process; the former being on an individual level and the latter being on a societal level. Wani and Wajid Ali (2015) remarked that smartphone innovation was an example of exponential innovation whose rate of adoption was both innovative and diffusive. Diffusion theory looks at five stages of the innovation adoption process which are “awareness, interest, evaluation, trial and adoption” (Daraza 2016, p. 24). Whilst most generations may be aware of the technology, marketers hone in on certain groups such as the youth who are early adopters to

influence the adoption of the 4IR technologies. Consequently, mass media and interpersonal communication are tools that marketers use to influence the rate of adoption of these technologies. Of relevance to this study is that the rate of adoption of new digital platforms has been increasing at an exponential rate with users adopting these technologies, yet marketers are battling to keep up (de Reuver, Sørensen & Basole 2018). In the 4IR phenomenon, mass media has become more prolific and interpersonal with the advent of social media. Additionally, co-creation from customers influence the decision of innovation to be more towards a collective decision than an authoritative one (Kotler *et al.* 2017).



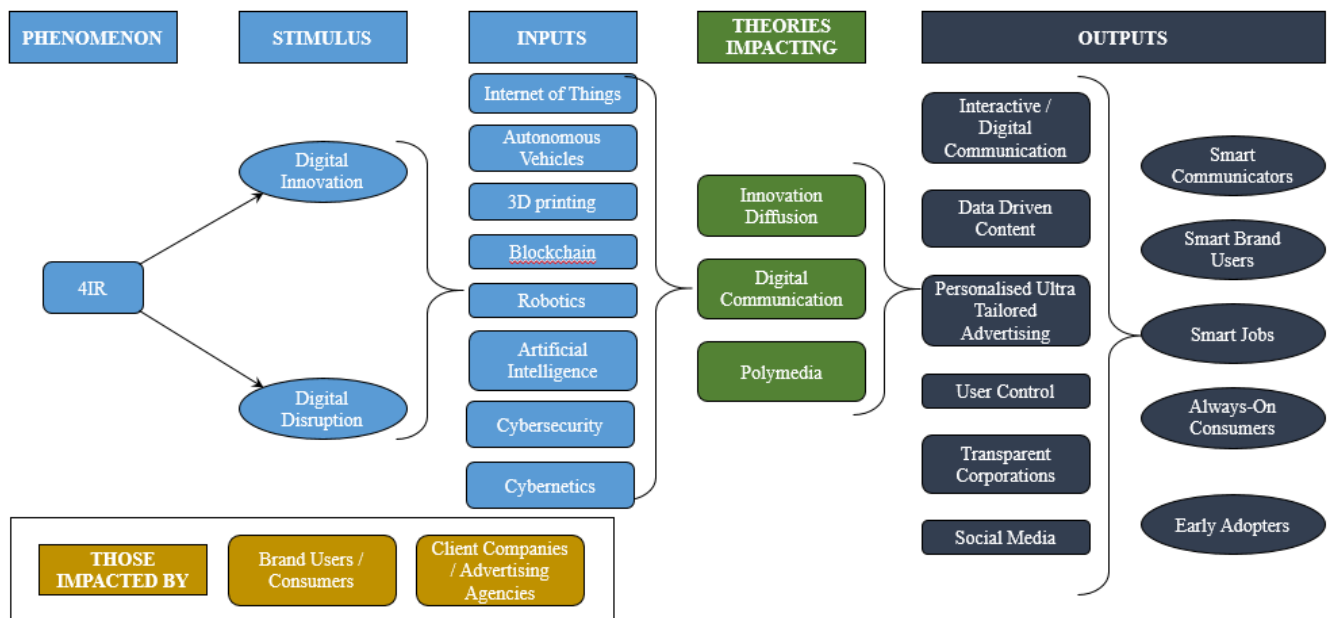
**Figure 2.10 Variables Determining the Rate of Adoption of Innovations**  
 (Source: Rogers 1983, cited in Wani & Wajid Ali 2015, p. 113)

The innovation theory of marketing communications also focuses on a linear model, moving from “knowledge, persuasion, decision, implementation and confirmation” (Copley 2004, p. 40). In addition, models of communication involve the 7 Cs which assist in overcoming barriers of delivering the message. These are “clarity, credibility, content, context, continuity, capability and channels” (Daraza 2016, p. 8). Diffusion also suggests a linear process, yet the process of digital disruption in the 4IR is not linear (Daraza

2016). Polymedia looks at the process that is not linear. While the process of awareness, anticipation and adoption of innovation occurs at various levels, the time factor is also drastically reduced (Madianou 2020). Innovation diffusion theory depicts a bell curve concerning innovation adoption, whereas digital communication of the 4IR displays an s-curve as the process goes through several exponential iterations.

## 2.8 Conceptual framework

Figure 2.11 is a representation of the conceptual framework envisaged for the study.



**Figure 2.11: Conceptual framework**

The conceptual framework depicts the 4IR phenomenon and the elements that are influencing this revolution. The conceptual framework looks at the influence of the 4IR as a phenomenon, with digital innovation and disruption as stimuli for change (see Figure 2.11). Initially, the inputs are the IoT, autonomous vehicles, 3D printing, blockchain, robotics, AI, cybersecurity and cybernetics. Thereafter, the theories that are impacting on marketing communications are innovation diffusion, digital communication and polymedia. These theories help to explain the outputs that result from the inputs previously stated. With these theories, the outputs are many, such as data-driven content, user control, and transparent corporations resulting in smart communicators, smart jobs, smart brand users and always-on consumers. The 4IR, whilst it is posing many challenges to marketing practitioners and others in industry, as with other revolutions also offers positives in terms of improvement in society. In this case the 4IR begets smart users both from the



practitioners' side and from the side of the consumer. This framework can be said to represent the environment within which marketing communications practitioners operate, in the perspective of the 4IR. Finally, the main focus of this study as demonstrated in this framework is on the challenges posed by this environment and ways in which practitioners deal with such challenges. The conceptual framework is therefore significant in that it depicts the variables and relationships addressed in the study.

## **2.9 Conclusion**

Many of South Africa's challenges relate to the paradox of developing and developed economies in one country. It has been illustrated that digital solutions are starting to permeate and reach the levels of some Western countries. Technology infrastructure such as 5G, creates a delay in leapfrogging this economy to the 4IR. South Africa will remain challenged in bridging the gap of meeting the demands of the 4IR.

The literature review indicates that the 4IR could potentially displace jobs as did previous revolutions. It is also likely to create new jobs. Further, this digital revolution is altering all aspects of life from relationships to industry, to markets and all of humankind (Schwab 2017). Given the above, marketing communications practitioners are only starting to grapple with the challenges of the 4IR and its influence on the structure of marketing departments, customers and the business as a whole. Consequently, this influence is likely to redefine the relationship between the customer and the brand. In particular, polymedia theory was explored, which looks at a new way of communicating that is centred on interactivity between the customer and the brand. In addition, innovation diffusion theory, which explores the innovation and diffusion aspects of the 4IR technologies was also covered.

Notwithstanding, there is a paucity of literature on the 4IR's influence on marketing communications in South Africa. It is postulated that marketing practitioners in this country have not grappled with concepts such as the Internet of Total Corporate Communications (IoTCC) and quaternary corporate communications (Balmer & Yen 2016). Thus, this study aims to begin to address this gap by exploring Gauteng-based marketing communications practitioners' perspectives on the influence of the 4IR on the marketing communications of both B2B and B2C industries in South Africa.

The following chapter addresses the research methodology used to address this gap in literature. The chapter argues for the chosen methodology and also considers the limitations of this approach.

## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

Nayak and Singh (2015, p. 1) define methodology as “a research strategy that translates ontological and epistemological principles into guidelines that show how research is to be conducted and principles, procedures, and practices that govern research”.

The intention of this chapter is to present the methodology underpinning the research as well as to explore and substantiate the approach and design principles applied to achieve the research objectives. As a reminder, the objectives of this study were:

- to gain insight into Gauteng-based marketing communications practitioners’ understandings of the 4IR
- to understand how they see the influence of the 4IR on the marketing communications practices of B2B and B2C organisations in South Africa
- to explore the challenges they face in adapting their marketing communications practices in the context of the 4IR
- to discover how they address these challenges.

The chapter also discusses ethical considerations related to the research.

### 3.2 Research philosophy

The research philosophy applicable to qualitative research is interpretivism which holds that reality and comprehension are personal, rooted in ethnicity and tradition (Ryan 2018). This approach has its roots in the “philosophical position of idealism” (Dudovskiy 2019, p. 1). In particular, it is also about an appreciation of the different views of people and the concession that there are different interpretations to a phenomenon. Reality is said to be socially constructed, with many versions, based on people’s experiences (Holden & Lynch 2004).

Evidence suggests that the origins of interpretivism philosophy come from early to mid-21<sup>st</sup> century Europe (Ryan 2018). It was influenced by a combination of hermeneutics, phenomenology and symbolic interactionism (Ryan 2018). Ryan (2018) states that it was the German convention of hermeneutics and the *Verstehen* (understanding) practice in sociology, as well as the phenomenology of Alfred Schutz, that were

the foundations of interpretivism. Firstly, hermeneutics refers to the way to make sense of textual data which may be unclear one way or another (Willis 1995). Secondly, phenomenology is said to be a philosophy that pursues the candid observation of the world's wonders (Dudovskiy 2019). Thirdly, symbolic interactionism refers to reality that is created through cultural symbols (Dudovskiy 2019). Other postulations point to positivism originating from the Plato and Aristotle era of the Greek philosophies, and the sophists who were classified as anti-positivists epitomised by Kant, Hegel, Marx, Freud, etc. (Ryan 2018). However, interpretivism is different to positivism in that positivism is about observable reality, whereas interpretivism acknowledges that there are numerous truths because of people's different experiences (Ryan 2018).

Fundamentally, the aim of this research was to grow the knowledge of the 4IR phenomenon. First and foremost, attention was focused on looking for meaning of the phenomenon, relative to the context in which it occurs. Secondly, the relationship between the researcher and the participants was "interactive and participative" (Dudovskiy 2019, p. 2). Finally, the desired information that was required for the research was to understand, "what people think and do, what kind of problems they are confronted with and how they deal with them" (Dudovskiy 2019, p. 2).

The topic of the study fits with interpretivist philosophy as it involves recognition that there are various perspectives about phenomena. As stated previously, Schwab (2017) asserts that the 4IR is transforming all aspects of life from relationships, industries, markets and all of humanity. This illustrates that the 4IR is an emotive and rational topic which gives rise to various perspectives, some of which are positive towards the technological influence on marketing communications and others that are sceptical of this influence.

Further, the study was inductive, meaning that it is inferred from the observations. In view of this, prior knowledge of the marketing practitioners and their interpretation of the perspectives of the influence of the 4IR differed markedly. Notably, there was perhaps no single truth to this topic. Consequently, the practitioners from advertising agencies and those from client companies provided different perspectives on the 4IR's influence. Thus, their perspectives were subjective and opinions were constructed socially or individually (Ryan 2018).

It should be noted that the researcher was an active participant bringing in their notions of the subject matter (Ryan 2018). The researcher is a practitioner in the marketing communications field with many years of experience across various industries. Whilst the influence of the practitioners was significant for this study, it was important that biases of the researcher did not impact on the research. The researcher encouraged the

opinions and perspectives of the participants, whether complex or contradictory. The assumption was that the B2B and B2C industries could elicit different responses on the 4IR. Therefore, the gap in the literature allowed for this study to be explorative and pointed to a need for further studies to delve deeply into differences between these industry types.

Additionally, this research allowed for intense exploration of the topic and permitted “richness, vividness, and accuracy in describing complex situations or cultures” (Rubin & Rubin 2012, p. 16). It therefore aligned with the interpretive constructionism paradigm. Thus, the findings of interpretive constructionist research are likely to be organic, allowing for “unexpected and surprising occurrences” (Rubin & Rubin 2012, p. 16).

### **3.3 Research design**

The study adopted an exploratory design to gain a deep appreciation of the participants’ views. Whilst elements of the topic have been explored globally, it has not been explored in South Africa. It is for this reason that this design was chosen, to address the gap in the literature on this phenomenon in this context. Findings from the research are deemed to be new and tangible in that they reflect direct perspectives of the phenomenon (Rubin & Rubin 2012). Similarly, there was a balance of participants from various areas of marketing communications (that is advertising agencies and client companies), allowing for a detailed investigation of the topic (Rubin & Rubin 2012).

The conceptual framework provides an overview of the 4IR phenomenon, which has not been investigated in South Africa in relation to marketing communications specifically. Therefore, the exploratory research design, which allows for this phenomenon to be interrogated deeply, is justified in this study.

Research questions were open-ended so that in-depth qualitative information could be collected. In addition, responsive interviewing allowed for this study to explore new areas, address the gap in literature which a structured interview would not have allowed (Basias & Pollalis 2018). A semi-structured format was used to understand who, what, where and when the phenomenon took place (Basias & Pollalis 2018). Therefore, the research design selected allowed for intense and comprehensive information to uncover layers of information such that a whole perspective is built (Basias & Pollalis 2018).

### **3.4 Research approach/paradigm**

The paucity of literature on this topic meant that an in-depth approach was required to explore the various elements of the influence of the 4IR on marketing communications. Hence, the study delved deeply into the participants' understanding of digital disruption associated with the 4IR, and how this impacted their profession. Similarly, the subject matter was complex and dynamic with various opinions from participants whose perspectives differ from industry to industry. A qualitative approach allowed for diverse and divergent views to be heard (Ryan 2018).

The qualitative approach was in the form of interviews with marketing communications practitioners from both advertising agencies and client companies. Including practitioners from both contexts offered the potential to elicit varying views of the phenomenon, since they sit on opposite ends of marketing communications. This will be demonstrated in the discussion of the findings in Chapter 4. In addition, the research philosophy allowed for various participants' perspectives to be considered. Likewise, the exploratory nature of this study fitted with Gummesson's assertion that, "excessive use of quantitative methods" precludes the "openness, tolerance and critique which enable unconventional, creative thinking" (Daymon & Holloway 2011, p. 5). Further, the research adopted a qualitative approach to enable participants to tell a story of their experience in their own words (Ochberg 1996). This helped to explain, understand and explore participants' opinions, behaviours and experiences of the 4IR influence on marketing practitioners.

Additionally, this approach utilised in-depth interviews that were semi-structured, allowing participants to share their experiences on the phenomenon. Research questions were a guide to ascertain that the topic was covered fully with all participants. Since the field of the 4IR is immense and the influence of the marketing communications has not been fully explored in South Africa; this necessitated a qualitative approach using in-depth interviews. Thus, the qualitative approach involves the belief that the researcher can never be separate from their own values and belief (Ryan 2018).

The research approach adopted was inductive rather than deductive. Dudovskiy (2019) notes that whilst an inductive approach allows for in-depth exploration, consistency and representativeness of information is compromised to a certain degree. The intention of this exploratory study was to gain initial, in-depth insight into an under-researched phenomenon in the South African context, rather than to generalise the findings.

### **3.5 Study site and target population**

The research was conducted in Gauteng, South Africa. The target population was marketing communications practitioners from both advertising agencies and client companies in the Gauteng area. Such practitioners were identified from a published list of marketing communications practitioners in the Gauteng area that handle B2B and B2C industries. There were 687 marketing communication practitioners in Gauteng that were listed on the bizcommunity database (the specific list used is discussed in the next section). The target population also included referrals from such marketing practitioners. Gauteng was selected because it was assumed to have the largest concentration of marketing communications practitioners in South Africa, by virtue of being the economic powerhouse of the country (StatsSA 2019). The site also offered convenience for the Gauteng-based researcher. (Initially, the researcher planned to do in-person/face-to-face interviews with each participant; however, due to subsequent COVID-19-related restrictions on contact-based research, the interviews took place via telephone instead).

### **3.6 Sampling strategy**

This exploratory study involved interviews with a sample of 10 marketing communications practitioners based in Gauteng, South Africa. It is recommended that between 4 and 40 participants are adequate for research that requires “deep and rich data” (Daymon & Holloway 2011, p. 217). Additionally, the sample size of 10 was guided by the concept of ‘information power’ (Malterud, Siersma & Guassora 2015). Malterud, Siersma and Guassora (2015, p. 1) note that “information power indicates that the more information the sample holds, relevant for the actual study, the lower amount of participants is needed”. The sample in this study, by virtue of their seniority and experience in the marketing communication field, held much relevant information to deliver deep perspectives on the study’s research questions. Accordingly, a larger sample size was not considered necessary. This was borne out during the data collection phase. During the interviews, the participants contributed rich information pertaining to the questions, as will be seen in the findings. However, as the interviews progressed, the more the participants were asked the same broad questions, the more similar the responses were; therefore, there was little to be gained by interviewing more participants as the researcher felt that data saturation had been reached (Saunders *et al.* 2018).

The sample was selected using a judgmental approach (a form of non-probability sampling) since the population was selective rather than random (Manna & Mete 2021). The sample was further divided into five advertising agency participants and five client company participants (in other words, five of the

marketing communication practitioners who participate in the study worked at agencies, while the other five worked at client companies). This was done to enable the researcher to explore whether perspectives on the research questions varied across these contexts. As the findings will attest, there is a difference in the influence of the 4IR and the relationship between agencies and client companies impacts this influence.

Given the above, the researcher's knowledge, based on her experience and seniority in the marketing communications field, was critical in the selection of the sample. Thus, judgement as non-probability technique was applied. Further, participants were drawn from organisations listed on the online directory of marketing and media companies in South Africa, which appears on the bizcommunity website (<https://www.bizcommunity.com/>). The website contains an A-Z list of marketing and media companies from across the country, categorised by region, business type, function and so on. Companies that participated were selected from the list of marketing and advertising companies on the directory.

The selection of the companies was based on the research objectives (for example, only companies based in Gauteng were included). Of the 687 listed companies in Gauteng, five (four ad agencies and one client company, the latter contributing two participants) responded. Additionally, the sample included four referrals from other participants since participants in the field knew of other practitioners with experience and expertise. Principally, the research objectives required marketing practitioners who had the experience and expertise to answer questions on the influence of the 4IR on their agencies or client companies.

Gatekeeper permissions were obtained from each of the target companies to interview an employee. Thereafter, the selection of the specific employee (participant) from each company was centred on their ability and willingness to answer research questions. In terms of their ability to answer the research questions, the sampling approach ensured that participants selected were experts in their field through seniority, experience and expertise. For this reason, the criteria were that they must have been involved in decision-making, such that they have experienced traditional and digital communications challenges and issues, within their companies or their client companies. This was to ensure that participants selected would be able to provide comprehensive feedback on the topic.

### **3.7 Data collection methods**

Data was gathered using an in-depth, semi-structured interview method. Interviews were conducted telephonically in November 2020, since face-to-face interviews were not possible due to restrictions on contact-based research because of COVID-19. This method of gathering data (interviews) was appropriate

because it allowed for intense exploration of the topic. Additionally, a semi-structured interview schedule ensured that all participants were asked the same core questions, while also allowing for flexibility regarding probing and follow-up questions on relevant aspects. Hence, the researcher was primarily interested in capturing the views and perspectives of participants in their words.

A consideration was that the interview should provide participants time and space for privacy and without interruption. Firstly, the researcher introduced herself and clarified the purpose of the research. Institutional consent was obtained in advance with the gatekeeper permission letters received from their companies and agencies. Secondly, the consent form and information sheet were discussed with the individual participant prior to the start of the interview to ensure that they understood the expectations of the research, and that the option was available to discontinue the interview at any point in the process. Thirdly, participants were then asked for consent to commence with the study. Fourthly, permission was also sought to record the audio of the interview. Fifthly, the information sheet was read out to the participants with contact details of the researcher, the supervisor and ethics board contact person available for the participant to communicate with, if necessary. The interviews were conducted in English and took on average one hour. Finally, interviews were audio taped on a recording instrument and then transcribed verbatim.

Nevertheless, there were limitations to doing interviews by telephone versus face-to-face. Face-to-face interviews could have provided visual cues that would have assisted the researcher in probing the topic further. Another potential concern related to the lack of visual contact during telephone interviews is the possibility that participants may 'Google' for answers. However, the researcher considers it unlikely that this was the case as she did not pick up any discernible delays in responses (either during the live interviews or when listening to the audio recordings), which might have suggested that this was happening. Furthermore, the participants were senior, experienced practitioners who would be likely to have first-hand knowledge of the issues discussed, and who were in fact able to provide concrete examples from their field to help illustrate and support their responses. Finally, the interview method in general (whether telephonic or face-to-face) is considered subjective because there is no one truth in this research (Ryan 2018). It gives a conglomeration of participant's perspectives.

### **3.8 Research instrument**

The research instrument was designed to explore the understanding of the 4IR by marketing communications practitioners. The first section of the interview was an introduction and explored the background of the participants. The second section related to the research objectives. The third section of



the interview focused on the concluding questions of the interview. It is noted that the research instrument was influenced by the gap in the literature in South Africa. Evidence suggests that this topic has not been explored in South Africa and the focus was on marketing communications practitioners in the Gauteng province.

Semi-structured questions granted for all participants to be questioned the same broad issues without missing any element of the research topic. At the same time, these questions were stimuli for investigating the topic and for the researcher to further ask any probing, or follow-up questions, based on responses to the research questions above. A copy of the interview schedule is attached as Appendix C.

### **3.9 Data quality control**

Regarding data quality, Guba recommends that qualitative research fulfil four requirements of credibility, transferability, dependability and confirmability (Guba 1985, cited in Lemon & Hayes 2020, p. 605).

#### **3.9.1 Credibility**

Credibility is fulfilled by ensuring that the study measures what it intends to measure through iterative questioning (Shenton 2004). Principally, the study delved deeply into the influence of the 4IR on marketing communications practitioners and their work. Evidence shows that it is important that experiences of participants are recorded based on their situations (Ryan 2018). Accordingly, interviews were audio recorded and transcribed verbatim and feedback was subsequently obtained from participants to ensure that findings conformed to their experiences and did not reflect researcher bias. In other words, member checks were done to ensure that the phenomenon as captured by the researcher was indeed reflective of the participants' perspectives. Thus, credibility meant that the readers of the research needed to find the study making sense of their environments (Stahl & King 2020).

#### **3.9.2 Transferability**

Guba's construct of transferability is fulfilled through detailing the context and the full research methodology for the study (Lemon & Hayes, 2020). In terms of context, the study focused on Gauteng-based practitioners who were experts in the marketing communications field with experience to comment on the topic. The transferability of this study related to the rich account of their understanding which can be related to other studies' deep interpretation of their context (Stahl & King 2020). Further, Lemon and

Hayes (2020, p. 605) note that transferability replaces “external validity” where the story related to the readers’ experiences can be transferred to similar studies that are exploratory.

### **3.9.3 Dependability**

The dependability construct requires that what was planned and executed is reflected in the research design (Lemon and Hayes 2020). For instance, the research needs to be conducted in a consistent and accurate manner through detailing the context in which the research was conducted (Daymon & Holloway 2011). In view of that, the study was planned and executed consistently with prior ethical approval of the sample, the research instrument and data collection method in line with the study’s aims and objectives.

“Reflexive auditing” of the researcher was done as the elements of the research were explored, for example the delineation of the 4IR influence vis a vis the COVID-19 pandemic influence on marketing communications (Stahl & King 2020, p. 27).

### **3.9.4 Confirmability**

Lastly, the requirement of confirmability is fulfilled through ensuring that the findings are based on the subjective perceptions of the participants and not reflective of the researcher’s bias (Lemon and Hayes 2020). Interviews were audio recorded and transcribed verbatim to make certain that the participants’ views were correctly and comprehensively encapsulated.

Member checks were done to ensure that the phenomenon, as captured by the researcher, was indeed reflective of participants’ perspectives. For instance, member checks were utilised to establish the precept of trustworthiness. Participants were sent an overview of the research findings to establish whether the phenomenon as explored by them was covered adequately. Member checks are regarded as part of Lincoln and Guba’s construct of trustworthiness in qualitative research (StatisticsSolutions 2019). Consequently, feedback obtained from the participants after the interviews, confirming the draft themes and findings, helped to establish the integrity of the research by confirming that what was recorded reflects participants’ opinions (StatisticsSolutions 2019).

### **3.10 Data analysis**

Data analysis took the form of listing patterns of experiences from direct conversations and paraphrasing of ideas (Lester, Cho & Lochmiller 2020). Thus, thematic content analysis was the selected method of data analysis. This involved the grouping of patterns into themes to understand the phenomenon. The steps involved were the following (Lester *et al.* 2020).

#### **3.10.1 Familiarisation**

This process involved listening to the audio recordings and transcribing the interview data. Further, this is an iterative process of analysis, re-reading the data for the researcher to engage herself with the data. Therefore, having audio recordings of the interviews facilitated this process of familiarisation as it was possible to listen to them repeatedly.

#### **3.10.2 Indexing**

Thematic content analysis was applied to discover shared patterns across the data set and to pursue themes which indicated broader patterns that fit the data (Lester *et al.* 2020). For example, an open coding method was used to name, classify, and group the phenomenon, as described by Strauss and Corbin (1998, cited in Blair 2015). Hence, this technique permitted the researcher to dissect the information (Lester *et al.* 2020).

Further, the interviews were transcribed and the data was clustered into patterns using the software programme NVivo, a qualitative data analysis tool. On this note, the process was a combination of manual coding and using the software to ensure that the quality of the thematic framework is reinforced. Thereafter, the data set was catalogued into themes and sub-themes. This formed a picture of participants' experiences.

Axial coding, which is another form of coding data was used to further cluster the data from common categories into themes (Theron 2015). Once the themes developed, the researcher started having a sense of what the data meant. During the data analysis process, the interviewer requested feedback from the participants to confirm or disclaim the themes and pattern of experiences. This was a process of clustering the data and putting it into themes using thematic analysis (Lester *et al.* 2020).

### **3.10.3 Charting**

The themes were then categorised into the different and related themes (Lester *et al.* 2020). Thus, summaries from each interview on the themes and overall summary of all interviews' perspectives on the themes were charted.

### **3.10.4 Mapping and interpretation**

Themes were reviewed and summarised or divided as the interpretation developed further. The phenomenon charted in the previous step was clarified to enable the comprehension of the topic (Lester *et al.* 2020). The data started to have meaning and this assisted in the discovery of the study's intent.

### **3.11 Ethical considerations**

Ethical approval was obtained from the university and gatekeeper permission was attained from participating agencies and client companies. Approval bound the researcher to endeavour to act honestly and in a trustworthy manner. Xu *et al.* (2020) note that ethical values of the researcher are paramount despite the ethical approval from the ethics committee.

Consideration was given to participating organisations and individuals, and the confidentiality of their information. Interviews can be intrusive, and it was important for this researcher to consider the welfare of participants, particularly as data shared by the practitioners might have alluded to competitor intelligence information of their industries and their clients.

Informed consent was granted by individual participants prior to commencing with the research. Hence participants' right to confidentiality, right to anonymity and the respect for dignity and decision-making of the participants was a primary consideration by the researcher. For example, the brands and companies that the participants worked for were not identified in the research to preserve anonymity. In addition, anonymity was achieved using pseudonyms when referring to or quoting participants.

### **3.12 Conclusion**

The research methodology selected for this study was appropriate for the subject as it required an in-depth investigation of the influence of the 4IR on marketing communications to highlight perspectives of

practitioners in the Gauteng area. Similarly, semi-structured interviews as a method of data collection allowed all participants to be asked the same broad core questions, while allowing flexibility in terms of probing and follow-up questions, enabling in-depth information to be uncovered.

Further, a sample of 10 marketing communications practitioners was used who were from both advertising agencies and client companies. Due to the COVID-19 pandemic, telephonic interviews were conducted. The data analysis followed a thematic analysis approach with an open-coding and axial coding methods using the NVivo software tool to develop themes that enhanced the understanding of the phenomenon. Data quality control was in the form of audio recordings, verbatim transcripts and member checks. Ethical considerations were considered to protect the participants' confidentiality, anonymity and respect for dignity.

Having set out the methodology that was adopted to address the research questions, the next chapter moves on to presenting and discussing the findings.

## CHAPTER FOUR: PRESENTATION AND DISCUSSION OF FINDINGS

### 4.1 Introduction

This chapter presents and discusses the findings related to research questions that steered the study. Research questions focused on practitioners' understanding of the influence of the 4IR on marketing communications. Further, the study concentrated on challenges that practitioners face in the context of the 4IR, and how they adapt their marketing communications to address these challenges. Before proceeding to the study's findings, however, a description of participants is provided.

### 4.2 Overview of the sample

A total of 10 Gauteng-based marketing communications practitioners participated in the study. (It should be noted that one participant subsequently relocated to KwaZulu-Natal due to the COVID-19 pandemic). A description of each of the 10 individual participants is presented in Table 4.1.

**Table 4.1 Description of individual participants**

Participant #	Race	Gender	Sector	Current role/designation	Marketing communications experience (years)
1	Coloured	Male	Client - B2B	Senior Manager: Marketing	15
2	White	Female	Agency – Brand Design	Owner/Managing Director	35
3	Indian	Male	Agency - Media	Owner/Managing Director	23
4	White	Male	Client – B2C	Commercial Manager	14
5	White	Male	Client – B2C	Co-Owner/Sales & Marketing Director	20
6	Indian	Female	Client – B2C	Product Manager	3
7	Black	Female	Client – B2B	Communications Coordinator	15
8	Black	Male	Agency – Digital Advertising	Founder & CEO	24
9	White	Female	Agency – Advertising	Marketing & Sales Account Executive	22
10	Black	Male	Agency – Digital Advertising	Relationship Manager	6

Table 4.2 below provides a breakdown/summary of the group of participants as a whole.

**Table 4.2: Breakdown of the research participants**

<b>Race</b>	White	Black	Coloured	Indian
	4	3	1	2
<b>Gender</b>	Male	Female		
	6	4		
<b>Sector</b>	Agency	Client		
	5	5		
	<i>Agency type</i> Media: 1 Brand design: 1 Advertising: 1 Digital: 2	<i>Client type</i> B2B: 2 B2C: 3		
<b>Role/ designation</b>	Owner/Founder	Manager/ Supervisor	Operative	
	4	5	1	
<b>Experience</b>	Up to 10 years	11-20 years	21-30 years	Over 30 years
	2	4	3	1

As depicted in the table above, participants from client companies were from both the B2B and B2C sectors. Participants from agencies represented two digital advertising agencies, an advertising agency, a brand design agency and a media agency. There was representation of all races (four White participants, three Black participants, one Coloured participant and two Indian participants). Six of the participants were male and four were female. Participants' experience in the marketing communications field ranged from three years to 35 years. All participants were managers in their functions, except for one participant who was in an operative role. They ranged from owners or co-owners of agencies and in client companies to managers or operators. Thus, the combination of senior roles and length of experience of most of the participants points to their suitability for providing input and insight that would help to address research questions and objectives.

### 4.3 Research Findings

Research findings are presented in terms of the themes that were uncovered during the thematic analysis. Direct quotes from participants are included to support and illustrate identified themes. For easy identification, participant quotes are presented in italics. In addition, participant context (client or agency) is provided in brackets.

An overview of the themes and sub-themes is presented in Table 4.3.

**Table 4.3: Themes and sub-themes**

<b>Theme 1:</b> General understanding of the 4IR
<b>Theme 2:</b> Advantages of the 4IR
Sub-theme: General advantages of the 4IR
Sub-theme: Advantages of the 4IR for marketing communications
<b>Theme 3:</b> Disadvantages of the 4IR
Sub-theme: General disadvantages of the 4IR
Sub-theme: Disadvantages of the 4IR for marketing communications
<b>Theme 4:</b> Strategies to address challenges of the 4IR

#### 4.3.1 Theme 1: General understanding of the 4IR

The first research question was concerned with finding out how marketing communications practitioners understood the 4IR in general. Principally, there was a general understanding of the 4IR and its elements by all participants.

Participants viewed the 4IR as an evolutionary development. (Agency) Participant 3 noted that “*what we call the 4IR is more of an evolution*” in the sense that it has been evolving from the previous industrial revolution. For instance, the third industrial revolution related to the computer age while the 4IR relates to the merger of technologies, which is made possible by computer technologies. Further, (agency) Participant 3 also emphasised that the 4IR follows other revolutions, as described by Khumalo (2018). In addition, (client) Participant 4 indicated that some green shoots of the current revolution were first identified some 20 years ago and have been slowly implemented in phases as technology has advanced. (Client) Participant 4 also referred to the 4IR as a disruptive technology in the sense that it changes the way people have been



doing things before. Referring to his industry, he remarked: “*All of that, using digital apps to do these things, so that’s huge and that’s going to for sure disrupt everything to do with payment.*” From the marketing technology point of view, Ustinova, Karpova and Trubanov (2019) note that its evolution has been on a gradual scale as the 4IR changes influenced this field. For example, they charted the five major advertising evolutionary stages from traditional television advertising, online advertising, search engine advertising, social media advertising and machine learning (Ustinova, Karpova & Trubanov 2019).

Similarly, the participants’ understanding of the 4IR ranged from a limited understanding of the elements of the 4IR, to a more detailed understanding of the elements such as robotics, AI, the Internet of Things, cryptocurrency, 5G technology and so on. Participants also displayed varying degrees of understanding of robotics and its influence on the 4IR. The hologram was interpreted by (agency) Participant 3 as an element of the 4IR. (Client) Participant 4 defined the 4IR as the merging of “*technology and humanity in terms of speed and responsiveness*”. Similar to scholars (Schwab 2016; Khumalo 2018), the 4IR was described by participants as a new way of life. Some participants referred to it as the “*new normal*”, which is a buzz phrase now associated with the COVID-19 pandemic.

According to (client) Participant 7’s understanding, the 4IR means that companies and businesses as well as the world in general, can be more efficient and more advanced through technology. (Agency) Participant 8 referred to the 4IR as the age of the internet, which is the Third Industrial Revolution. He noted: “*It is couched in the information age. It is couched in the age of the internet.*” The definition that closely fits the 4IR was mentioned by (agency) Participant 8 when he remarked that it is “*the age of digital technology*”. This shows that there is some confusion between the Third Industrial Age and the 4IR because elements of computer technology (from the Third Industrial Revolution) are the foundations of the 4IR. The 4IR would not have managed to usher in the cyber-physical systems without the internet and computer technology.

(Agency) Participant 2 indicated that they do not need to understand the granular detail of the 4IR elements if they can deliver what is required for the business. This could be an indication of the enormity of the 4IR and its impact that may be difficult to fathom.

All participants noted the importance of the 4IR in every aspect of human life, reinforcing Schwab’s (2017) attestation that this revolution changes everything. Some of the examples they mentioned are:

*The introduction of robotics in the manufacturing, much more use of robotics, improving your production line.* (Client Participant 1)

*We can't stop it. It's going to happen. As humanity, we are going to adapt to the new way of life.*  
(Agency Participant 3)

*...companies and businesses, the world in general can be more efficient and more advanced through technology, specifically the growth in Artificial Intelligence, machine learning...* (Client Participant 6)

*Industry 4.0 is the emergence of high-powered tech, tools that integrate Artificial Intelligence and we know that today it is most talked about transformative technology and one that is going (to) certainly lead the way; the AI which includes tools such as cloud computing, robotics, self-driven vehicles and so many other things.* (Client Participant 7)

*It is informed by the Internet of Things. It is informed by the fact that digital technology is going to be playing a very big role.* (Agency Participant 8)

Further, the experience of AI was identified by (client) Participant 7 as the driving force in enabling the 4IR to be experienced by people. In addition, (client) Participant 7 postulated that more big changes are going to be revealed in 2026 when many of these technologies will be realised globally, reinforcing Caruso's (2018) assertion of epochal social changes brought on by the 4IR. Moreover, robotics is constantly mentioned as game-changing technology in the 4IR, both in the positive and negative sense. Consequently, (agency) Participant 3 went as far as saying that the 4IR will influence the environment and how we manage our resources on this planet.

An understanding of the importance of the 4IR technologies on marketing was raised by participants who mentioned AI, the Internet of Things and robotics as impacting companies, agencies, consumers and brands. This was intensified by the importance of mobile technology, which confirmed Schwab's reference to it as the "super-computer in your pocket" (2016, p.120). (Agency) Participant 8 noted that "*people are talking supercomputers, the type of computers that are going to be out-talking, out-thinking and out-reasoning humans.*" This also confirms the polymedia theory of these interactions converging on a single platform such as a mobile phone (Madianou 2020).

It should be borne in mind that the study was run during the COVID-19 pandemic. There appeared to be an overlap between the 4IR changes and transformations brought by the COVID-19 pandemic.

This was however not clearly articulated by some participants in terms of differentiating between 4IR changes and those factors attributable to the effect of the COVID-19 pandemic. This necessitated requesting clarification from participants to articulate the digitisation due to the COVID-19 lockdown rules and the general digitisation due to the 4IR changes.

### **4.3.2 Theme 2: Advantages of the 4IR**

Theme 2 highlights the advantages of the 4IR as seen from the participants' perspectives. General advantages as well as advantages related specifically to marketing communications were identified. Each of these two foci is addressed in a separate sub-theme below.

#### **(a) Sub-theme: General advantages of the 4IR**

It has been noted by participants that the most significant advantage of the 4IR has been the democratisation of access to technology by almost all income levels across the globe. As an example, (client) Participant 4 even referred to feature phones as having advanced to a level where they have better smartphone functionality than before. This allows those living in rural areas to have access to technology, to monitor their livestock and manage crop rotation, thereby capacitating rural communities. This assertion supports Melia (2019) who referred to application systems that are connecting remote farmers with real-time information to the supply chain, thereby improving connectivity and productivity of the land. It is this interaction between the technology and user that is driving polymedia theory which also allows variability in application (Madianou 2020).

It can be noted that virtual communication such as virtual events was viewed as an opportunity brought in by the 4IR. Additionally, some participants remarked that VR headsets and augmented reality technologies were opportunities to redefine activities such as events for consumers. This supports Yang, Carlson and Chen's (2020) assertion that these tools enrich consumer experiences and draw them to that specific brand.

According to (agency) Participant 3, the 4IR is permitting new energy in the market, creating new ways of marketing using AI and utilising indigenous knowledge to farm certain products. Further, this participant saw the 4IR as creating an advantage in terms of a fusion of old knowledge systems with new technologies. This reinforces Penprase's (2018) assertion that this democratisation leads to the erosion of control structures across some industries. Similarly, the democratisation is made possible by the power of mobile

technology which has brought the so-called “super-computer in your pocket” to anyone with access to a smartphone (Schwab 2016, p.120).

(Agency) Participant 10 referred to the democratisation of education and access to online training tools through programmes such as the free and certified Google Skills Academy training. This democratisation indicates that the digital space is forever changing and sites like Google can eclipse the formal tuition system, in that courses are upgraded as soon as new technology is launched, which keeps them up to date. Scholars like Khumalo (2020) remarked that digital education needs to be integrated within the university syllabus from the first year. This supports the attestation from Bazic (2017) that trends in society and education influence the 4IR. Further, Butler-Adam (2018) referred to the 4IR as the blurring of the humanities and sciences in education and insisted on the end of the separation of the social and scientific pedagogy. Thus, the early adopters who are embracing online training are demonstrating the theory of innovation diffusion in practice, with Google presenting new courses ahead of the university curriculum.

Some participants noted that remote access, remote learning and blended learning became tools that people used to cope with the lockdown. This corroborates Gleason’s (2018) assertion that higher education is being redefined to meet the needs of society due to the changes in the 4IR. Digital literacy was still pitting the “digital elites” against the “digital immigrants” according to Khumalo (2020, p. 2).

According to (agency) Participant 8, the progress made during COVID-19 brought in years of digital advancements in a space of a few months, forcing people to reckon with the technology when there were few options available to them. Further, Mhlanga and Moloi (2020) note that the COVID-19 pandemic unleashed a need for remote learning in South Africa, demonstrating capabilities for increased access to education.

(Client) Participant 7 raised the issue of “*selectivism*” that prevails when other people do not have access to technology. Her assertions were, “*we really need to ensure... to make sure that people are embracing what 4IR is bringing instead of being on the selectivism side.*” This illustrates that the democratisation of information advances active corporate citizenship. According to (client) Participant 7, this democratisation has borne hashtag campaigns such as the #MeToo movement that raised the issue of gender-based violence to the fore throughout the world. Similarly, Raman, Avery, Brett and Hewitt (2020) state that these hashtags, particularly on Twitter are unique and user-defined concepts. Whilst these social media campaigns can provide “a simpler way to participate in activist causes” there is a danger of “slacktivism” where very little is done to bring about lasting changes (Thomson 2018, p. 2).

## **(b) Sub-theme: Advantages of the 4IR for marketing communications**

Within the marketing communications space, access to technology has allowed consumers to connect using different media platforms. (Agency) Participant 10 noted that marketers need to adopt an “*omni-channel*” approach to engage with consumers wherever these consumers are. Correspondingly, Kotler *et al.* (2017) noted that this omni-channel approach creates seamless assimilation between the traditional and digital channels of communication. According to (agency) Participant 9, there is an individual access system where freelancers can purchase engineering software applications to develop and edit advertising material, thereby bypassing formal advertising structures and delivering solutions to clients quicker than before. (While this is of advantage to freelancers and their clients, for agencies this may conversely pose a threat in terms of greater competition from freelancers as noted under Theme 3). With advertising going personal there are opportunities for increased communication to consumers using various channels that are tailormade to the consumer. Using AI, the right message at the right time has a greater probability of delivering sales than mass advertising (Miklosik *et al.* 2019).

By far the most noteworthy advantage of the 4IR on marketing, as noted by the participants has been the choice that consumers now have. Some of the advantages mentioned were the power of the consumer to have a voice, the choice of information accessed, the choice of media channels available and the choice of engagement. Some of the responses were:

*One important thing to note is that consumers are very smart; consumers are very informed as opposed to back then when information was not as widely accessible.* (Agency Participant 10)

*The consumer definitely now holds what they want to do. They also hold the power in what they had, and what they want based on the response that they have towards the product; the money they spend towards the product.* (Agency Participant 9)

This ubiquity of choice is likely to continue and at best, marketers need to learn to adapt to this change and take advantage of opportunities these changes bring to their brands. (Agency) Participant 10 cautioned that what worked in the previous year might not work this year, alluding to the need to constantly evolve marketing communications.

Participants noted that administrative and repetitive work was being taken over by 4IR technologies, freeing marketers to concentrate on higher-order skills, resulting in the efficient use of time. Additionally, some participants noted that opportunities availed for marketers included the ability to commercialise their businesses and to seek opportunities to gain experience, especially during the COVID-19 pandemic which brought the need for digital technology to the fore. Further, (client) Participant 7 mentioned that an AI tool such as Apple's Siri reduces workload by enabling a voice search. Evidence suggests that this would not have been possible without AI. Even though it is not deep learning as Massaron (2019) asserted, the communication of content via voice is an example of the efficiency brought in by the 4IR.

Some participants noted that the importance of personalisation is central to digital communication. In this case, (agency) Participant 10 noted: *"The consumer is somebody that wants personalised content."* It was noted that Apple's application software, Siri, was capable of making personalised recommendations to online users, thereby freeing marketers to concentrate on tasks requiring higher order skills. Moreover, one participant noted that consumers are now smart and are demanding personalised content in a timely manner, compared to when they were accessing traditional communication. This personalisation can extend to targeted incentives when it comes to direct marketing and customised online sales that are instantly redeemable on social media platforms.

Digital communication has been escalated by the COVID-19 pandemic, bringing those who were reluctant to embrace technology into the fold, and allowing the young and old equal access to information. For instance, (client) Participant 6 remarked: *"Maybe prior to COVID, I would have said that older people don't embrace technology as quickly. I think COVID might have changed that. It could be an equal mix of customers."* It follows that some technologies were seen as age levellers by some participants.

Predominantly, digital marketing agencies have found a place in the media space during COVID-19, as the lockdown precluded many other marketing initiatives from taking place. According to (agency) Participant 8, the pandemic garnered respect for digital agencies and channels, which was non-existent before COVID-19.

Nevertheless, brands and marketers were also forced to think creatively during this time by attempting to get closer to consumers. Given the above, (client) Participant 5 remarked that their luxury brand could not afford to be ostentatious during this trying time; instead, they started to share recipes with consumers and ran cooking masterclasses using their products. In addition, (client) Participant 4 noted that their event company moved into virtual streaming of their events, getting even overseas consumers to participate.

Additionally, some participants remarked that VR headsets and augmented reality technologies were opportunities to redefine activities such as events for consumers. This supports Yang, Carlson and Chen's (2020) assertion that these tools enrich consumer experiences and draw them to that specific brand. For example, VR and AR are useful tools in sales promotion as new products can be demonstrated without the need for attending physical in-store campaigns.

According to (agency) Participant 9, the network of channels that the brand can utilise can be quite consuming. As an example, she stated: "*Over the years, we have gone from 8-9 radio stations to more than 300 radio stations alone just in SA (South Africa).*" It further illustrates that consumers now have more choice as brands use digital technology to fast-track the innovations that are launched. However, marketers must cleverly utilise their budgets to reach consumers where they are. As an example, (agency) Participant 2 noted: "*When you don't have budgets you are also not going to take risks, you're not going to try something new.*"

Some participants remarked that a positive aspect of the 4IR is the immediacy of marketing communications to reach consumers more easily and more quickly than before. As an example, (client) Participant 5 stated that, with insourced graphic designers and web developers, client companies have been able to respond quickly to consumers by creating content in-house and uploading it within an hour of an event taking place. This allows the brand to be seen as responsive and in touch with consumers. When the COVID-19 pandemic hit, participants noted that some brands were unable to respond, especially during lockdown when consumers could mostly interact with brands digitally. However, participants claimed that the brands and companies that had invested in digital solutions benefitted from the lockdown, as they could continue to trade and engage with consumers. According to (client) Participant 5, new product launches are quick and can be communicated online early. Further, (client) Participant 4 (who is in the events industry) remarked that events could be streamed live online, reaching consumers beyond the physical borders of the country.

Young people, particularly Generation Z, are positive about the 4IR because they were born into digital technology (agency) Participant 10). His remarks were: "*Gen Z are very unique in that they are very opinionated. They want what they want.*" Scholars such as Kotler *et al.* (2017) call them digital natives. They are said to be more familiar and more courageous in embracing new technology. This affirms Schwab's (2016) remarks that Millennials and young people growing up with technology prefer online contact. However, some participants noted the advent of TikTok, and remarked that marketers have little understanding of this platform but that their brands could benefit from reaching young people in this space.

With other social media platforms, some participants noted that the market demands an understanding of all platforms to be able to decide where to feature the brands' communication effectively.

Whilst jobs can be challenged by the advent of the 4IR, some participants remarked that better skills are now being utilised. According to some participants, more tasks are being done as 4IR technology has freed up time for personnel to do other complex tasks. This corroborates Gray's (2016) assertion that complex problem solving is one of the 10 skills that machines are unable to replicate.

Whilst robotics and AI challenge human intelligence, some participants remarked that human skills are still critical in marketing communications. (Client) Participant 1 noted: *"You're taking a lot of administrative sifting process and you're taking it and giving it to the robot to do. But you still need the human in the loop."* These skills mentioned by participants include soft skills such as customer relations, the emotional touch that brands convey to consumers and the ability for critical thinking that cannot be replaced by machines. (Agency) Participant 8's remarks about adaptation were:

*You know humans have been around for the last 6 million years and we have seen different eras as we have gone; starting right from the era of hunter-gatherers, coming all this way; the industrial era really is now going to be replaced by 4IR.*

Predominantly, robots lack emotions and, for marketing communications, the creative elements of communication lie in the emotional character intrinsic of the brand that partly influences liking and ultimately the purchase of a product or a service. It is said that, on average, "50% of our purchase decisions are based on emotions" (Daye 2016, p. 1). Hence, robots are seen as appendages to the marketing communications function. (Client) Participant 1 noted, *"If you can get a robot, to get an automated system to deal with enquiries, able to channel it to the right areas; ...you can basically sift out the real requirement."* Conversely, Ivanov and Webster (2017) challenge marketers to think of robots as consumers that in the future will need to be marketed to as they advance into the stage of general human intelligence.

Overall, some participants remarked that marketing communications practitioners must learn to adapt or die if they are going to cope with the 4IR. Further, the human brain can continuously learn organically, yet the robot needs constant updating. According to (agency) Participant 10, if marketers embark on continuous learning their ability to cope with the 4IR will be sufficient.



Predominantly, (client) Participant 5 asked for marketers to be brave in their approach to marketing since the future is constantly changing and less clear. Their marketing plans can therefore never be 100% certain, requiring them to trust their guts in making decisions on their brands. Notably, his assertions were: *“Be braver; don’t... if it’s 80% correct it’s probably going to be good. The last 20% of the project takes all the time, but you’ll make some mistakes which we do.”*

Data that is utilised to make a difference has been noted as positive for digital communications. For example, (client) Participant 7 mentioned that hashtags are used in campaigns like #MeToo to raise awareness about gender issues, enabling social movements to spread throughout the globe.

Digitisation has the potential of bridging the gap between rural and urban societies, the developed and developing worlds. By contrast, those who were raised with access to digital technology are called digital natives or “digital elites”; however, those who had no access to technology are called “digital immigrants” (Khumalo 2020, p. 2). For instance, (agency) Participant 10 noted that, *“with more proliferation of access to technology, particularly with those people in those regions – we can have them contributing to society in a meaningful way.”* (Agency) Participant 10 also stated that the Google Skills Academy allowed for those living away from cities with access to data to acquire certified training, thereby democratising education.

(Agency) Participant 8 (who runs a digital advertising agency) noted that before COVID-19, a residual budget would be allocated to digital; however, during the COVID-19 lockdown, clients were forced to use this channel more. Consequently, this has allowed digital marketing to be taken more seriously as client companies relied on this channel to meet their objectives during this lockdown period (agency Participant 8).

Based on participants’ viewpoints, general advantages of the 4IR can be summarised as the democratisation of technology and the opening of access to information. Within marketing communications specifically, this has been evidenced by the choices that consumers now have and the challenge that these choices pose for marketers. Whilst AI reduces the workload for marketers by eliminating repetitive work, marketers utilise this time to do additional complex tasks. Humans have always adapted throughout the previous revolutions; therefore, the 4IR is viewed as another era where humans will learn to adapt to the changes.

### **4.3.3 Theme 3: Disadvantages of the 4IR**

This theme covers two aspects, each of which is covered in a separate sub-theme below, that is, the general disadvantages of the 4IR and the disadvantages that the 4IR poses for marketing communications in particular.

#### **(a) Sub-theme: General disadvantages of the 4IR**

The major disadvantage that was pointed out by most participants is that the 4IR is taking over jobs across the board, not only in marketing communications. For instance, technologies such as robotics are noted as one of the reasons for the loss of jobs, varying from soldiers being freed from attack using drones to machines replacing workers on the production floor. Ali (2021) further substantiates this point by noting that AI could replace not only soldiers but pilots, and even assist in decision-making.

Some participants, however, viewed this as an advantage rather than a disadvantage and mentioned how the human factor is vulnerable to stressors and errors, whereas robots that are programmed can operate for extended periods without fatigue. Scholars such as Frey and Osborne (2013) noted that using robots could eliminate human error in transportation systems and this could also be possible for other industries. Further, (client) Participant 1 noted: “...*whereas if you use IT systems and use robotics and those types of elements you actually enhance your operational performance.*”

#### **(b) Sub-theme: Disadvantages of the 4IR for marketing communications**

According to (client) Participant 6, robotics in marketing communications means the removal of a friendly face during an event. Increasingly, robots are said to be advancing to the level that they take on human characteristics. However, Baldwin (2019, p.236) claims that robots will have achieved human capability once they have achieved what psychologists call “social cognition”, which is the ability to communicate, read the context and express feelings. For instance, AI is said to be available 24/7 and could render a service, thereby reducing the number of marketers staffing call centres. This further substantiates the assertion made by Manyika *et al.* (2017) that some jobs could be replaced by the 4IR.

Within marketing communications, some participants noted that specific tasks can be and are now being replaced by machines, which has resulted in the reduction of jobs. For example, where repetitive tasks such

as media clippings were done by humans, this is now automated, freeing marketers to concentrate on other tasks. (Agency) Participant 8 noted:

*What they found is jobs that are repetitive, jobs that don't have a lot of mental heavy lifting and jobs that incorporate lots and lots of generation of data. Such jobs are going to be swallowed by AI across the board.*

The notion that workload might be reduced by the introduction of machines in marketing communications was refuted by some participants. According to (client) Participant 1, instead of working smarter, due to the use of AI and machines in marketing communications, marketers end up taking in more work due to the freed-up time. COVID-19 has also pushed more people to work remotely and embrace digital technology. (Agency) Participant 8 remarked that people are working 27% more than before, even with the saving of time from commuting. From the work point of view, some participants noted that employees feel forced to be always-on and engaging with customers and employers.

Similarly, Baldwin (2019) remarked that the future of work required agile workers to cope with the 4IR changes. Goldman (2021) cautions against employees becoming prisoners of their mobile gadgets. Marketing communications practitioners operating in the digital space are compelled to engage with customers 24/7, as consumers are interacting with the brand outside of normal working hours. (Agency) Participant 8 remarked that with Twitter, for example, users are engaging actively with brands after working hours and demand that brands respond to them immediately. The brand reputation might be at stake if the company waits for office hours to respond to users online. This emphasises Marsland's (2019) assertion that as marketing becomes data-driven, AI delivers quick response times to consumers who are always-on in the social media space.

Some participants remarked that marketing departments must manage the ever-changing social media space of marketing communications with the many channels that are now available for them to engage with their consumers. This could result in consumers that are less engaged with the brand as consumers suffer from ad fatigue (Chavez *et al.* 2019). Additionally, the BFAS indicates that the extended exposure to social networking sites such as Facebook has a potential impact on mental health and addiction (da Veiga *et al.* 2019).

As indicated previously, research participants were divided into agency and client participants. There was mention by some participants of client and agency conflicts in the handling of the 4IR, and particularly as

it relates to data. According to (agency) Participant 2, marketing communications practitioners have only scratched the surface when it comes to data. This data is accessible through digitisation and information received from various sources such as point of sale and through AI. The influx of data was noted as overwhelming for clients who do not have the resources to analyse this data (McCarthy 2021). For example, (agency) Participant 2 also stated that the agency is expected to utilise the data to inform insights, but this data is kept by the client, and only shared when the client sees fit. Therefore, client and agency conflicts arise when the agency is expected to deliver innovative solutions, yet the agency is unable to access and analyse the data to its fullest potential. Finally, (agency) Participant 2 lamented: “*Because if the client doesn’t give you that information and you just kind of have to work it as much as possible there’s not much you can do about it.*”

Additionally, (agency) Participant 2 indicated that this lack of data results in the “*spray and pray*” phenomenon when it comes to utilising data to inform marketing decisions. As an example, when the consumer makes a purchase decision, the client does not know which of the digital connections influenced that purchase. Further, AI has the potential of replacing some of the marketing functions by increasing advertising effectiveness with precision which can influence purchase decision-making (Machanik 2020).

Accordingly, the understanding of data analytics undermines the decisions made regarding the digitisation of marketing communications. This refers to the client’s lack of understanding of how clicks on the website translate to sales. Chavez *et al.* (2019) note that conversion is the most significant measure of purchase, rather than clicks and views. Consequently, this deficiency, noted (agency) Participant 2, creates a gap in strategically charting the future on product decisions that need to be made by the client. According to (agency) Participant 8, clients tend to abdicate their responsibilities to digital communications agencies because of their (clients’) digital illiteracy. (Agency) Participant 2 remarked: “*Clients probably need to upskill their staff or have maybe staff who have a capability in that.*” For this reason, this understanding needs to start at the CEO level, remarked (agency) Participant 8.

Due to this deficiency, some participants noted that some clients embarked on insourcing data analysts and web developers who have full access to the data to deliver solutions to consumers. Conversely, this insourcing of agency capabilities is seen as the death for agencies, lamented (agency) Participant 9. The challenge, noted by this agency participant, is that an insourced graphic designer is not guided by visionary strategists who are involved with the brand daily; furthermore, the design team does not have a futurist look that agencies bring to the brand. According to (client) Participant 6, this gap could be addressed by engaging

machine learning or AI experts who could assist in extracting value from the data. (Client) Participant 6 also noted:

*So, we could use things like machine learning to understand what type of people spend on what type of product, and then in the future if you roll up this data and understand, to maybe offer customers bundled purchases.*

As more consumers are going online, the requirements to make data work effectively is adding more pressure to the client and agency relationship.

Increasingly, social media platforms are constantly changing as consumers move to new applications. Likewise, (agency) Participant 8 remarked that some clients prefer familiar platforms that they already engage in, rather than new or unfamiliar platforms their consumers are migrating to. As an example, clients prefer LinkedIn to TikTok because they do not understand this new platform (agency Participant 8). The danger is that clients could miss the opportunity to socially listen to their consumers. Kotler *et al.* (2017) stress that social listening on social media gives a glimpse into the real-life context of consumers. (Client) Participant 7 remarked: *“in a way it actually challenges brands to start looking at how they are rendering their services and how they are marketing their products and really listening to what the consumers are all about.”*

According to (agency) Participant 8, digital communication does not have agreed measurement standards, unlike traditional channels. Without industry standards, (agency) Participant 8 stated, clients find it difficult to take this channel seriously. Resultingly, the clicks and views become just numbers and the work is not comparable, making it challenging to identify performance indicators.

Other elements of marketing communications that can be disadvantaged by the 4IR are direct marketing, personal selling and in-store sales promotion, especially during COVID-19 lockdowns. Unless these promotional mix elements are transforming into the digital space, there is a risk of them being made redundant or replaced by machines.

Participants mentioned several fears about the impact of the 4IR on marketing communications. These fears were more prevalent among the older generation, whereas the younger generation was prepared to embrace technology more. For instance, (agency) Participant 2 noted that as practitioners, they have no choice but to be brave in tackling the impact of the 4IR on marketing communications. (Client) Participant 5 concurred

that the rate of change is so fast that bravery is required to make quick decisions without comprehensive information on product launches.

Increasingly, the democratisation of the digital space has opened opportunities for start-ups and freelancers to challenge established agencies in delivering digital solutions as quickly as they can download an appropriate application software (agency Participant 9).

Notably, the consumer landscape has changed drastically over the years. Some participants mentioned that consumers are smart and well-informed because they have information at their fingertips. Further, marketing changes the way products are being consumed and how services are being accessed by consumers. This has propelled marketers to adapt their approach for the sustainability of their brands, noted some participants. (Agency) Participant 10 remarked:

*Consumer behaviour is changing, so from a product perspective, from a service perspective, things will change for the future and once that comes to be, then we will also realise that marketing and communications will have to change.*

Due to the 4IR, consumers can build and destroy the brand in one text on social media platforms, said (agency) Participant 10. In addition, they want instant responses to the content they place on social media. According to (agency) Participant 8, brands that are on platforms like Twitter need to be available to consumers after hours as consumers are active on such platforms at that time. The example quoted by one of the participants indicated that quick action during that time is critical in addressing the concerns of consumers. For example, (agency) Participant 10 referred to an incident involving Momentum's refusal to pay out a life insurance claim to a widow. He remarked:

*It was trending on Twitter. People were basically saying they will be pulling out their policies from Momentum. What actually happened was that the company ended up paying more than what they were supposed to be compensated.*

This corroborates Marsland's (2019) assertion of the ubiquity of connectivity or the always-on phenomenon. Further, Baldwin (2019, p. 270) refers to "the agile-team approach" whereby teams "manage themselves and are fully accountable for what they do" and that means being always available to consumers.

According to (agency) Participant 10, younger Generation Z consumers are more challenging for brands since they are more informed about what they want. It was also remarked that they want to make sure that brand messages are aligned. Therefore, many challenges brought by the 4IR compel marketers to adapt to new platforms because Generation Z consumers change social media platforms frequently.

Agency participants saw themselves as being of service to the client companies since they (agencies) are trend forecasters. For example, (agency) Participant 2 noted that agencies can chart the impact of new technologies on the client's brands and assist marketers in navigating this revolution. Nevertheless, participants were of the view that the power has shifted to consumers and that brands are likely to be at the mercy of consumers. (Agency) Participant 10 remarked: *"These are people that are able to see through your brand. If your brand is found wanting, they will tarnish you; they will talk about you on Black Twitter."* Black Twitter is defined as a digital black community that connects on the online platform (Wheeler 2019). Moreover, consumers can endorse and vouch for your brand online more than they can on traditional advertising (MediaUpdate 2020). Consequently, consumers' power and confidence in the brands is commensurate with the trust and protection of their privacy online (PwC 2019).

Accordingly, (agency) Participant 8 cautioned marketers to be open to media channels that consumers engage in and not to be dogmatic to their preferred channels. Further, brands should invest in influencers who are relevant to young people (agency Participant 10). Kotane *et al.* (2019) confirmed that advocacy in the form of influencer marketing ensures the endorsement of the product or service.

Increasingly, consumers are over-burdened with too much choice, stated most participants. For example, the television landscape has increased exponentially in terms of the number of channels available, remarked (agency) Participant 9. Further, the 4IR has given rise to online platforms that allow consumers to have access to information about companies and brands, and to challenge brands (agency Participant 10). (Agency) Participant 10 also noted that the consumer has fleeting moments of engaging with the brand online. In addition, the brand is not able to tell a story in 280 text characters or 15 seconds of video content. As a result, this is a challenge of instant communication that the brand finds itself in. Thus, the brand messaging must be concise and focus on the call to action. Further, (client) Participant 5 noted that this implies *"talking to the right people, in the right moment and not a week after it's happened"*.

Participants noted that the ubiquity of data influences marketing communications by creating more challenges for marketers. Owing to this, marketers are unsure which data is useful and which is not (agency Participant 2).

There were different views on the changes in the number of jobs in marketing communications due to the influence of the 4IR. Though the demands of marketing communications continue to increase, the principles of marketing have not changed in the digital medium, stated some participants. The type of jobs that are now required have, however, changed. Hence, it was noted that the same marketer is now required to acquire more skills related to digital communication. Technology has transformed the marketing communications function; however, participants remarked that jobs that require creativity skills and empathy will be spared. Gray (2016) mentioned that these skills are some of the top 10 skills that machines are unable to replicate.

However, (agency) Participant 3 envisaged a situation where television news could be presented by an AI robot. This confirms the assertion that creative jobs could be safe from automation; however, creative writers, journalists and lawyers could have AI delivering stories and articles quicker than humans can (Sahota 2019). New online platforms that consumers engage in create a challenge for marketers because there is not enough understanding of how to leverage them effectively, remarked (agency) Participant 8. According to (agency) Participant 2, creating content for consumers is one thing; how to translate the content into brand affinity and ultimately sales, are challenges for marketers. She also noted that there is no effective measurement of the ROI on most of these platforms, resulting in wastage for companies, which has the potential for straining the relationship between agencies and client companies. In addition, agency participants remarked that agencies are tasked to create value using data and digitisation technology. Agencies are also looked upon to provide the measurement of social media marketing activities. Resultingly, marketing functions are challenged to demonstrate value from the adspend on these platforms, remarked some of the participants.

(Agency) Participant 8 noted that adspend on digital communication has been steadily increasing with a resultant decrease in traditional advertising. Additionally, agency participants that use digital communications as their main offering said that they have reaped the benefits of these changes, yet traditional advertising agency participants lamented the reduction of adspend. (Agency) Participant 3 (who is in a media agency) remarked that they have had to offer more than media solutions to their clients. Further, (agency) Participant 9 (from a traditional advertising agency) was pessimistic about adspend being squeezed by the digital agencies, as well as by smaller and individual freelancers who can respond to market demands quickly. By contrast, participants from digital agencies displayed optimism about being able to exploit opportunities beyond the confines of this country. Additionally, participants from client companies



that are embracing technology also saw opportunities presenting themselves beyond the country's borders through being able to expand to other markets.

Earlier companies that developed an e-commerce store alongside a brick-and-mortar store futureproofed their business as COVID-19 lockdown happened, remarked some participants. Besides responding to the pandemic, several participants saw these businesses as progressive. According to (client) Participant 5, his company was running masterclasses for their consumers during the lockdown. As another example, (agency) Participant 3 was offering concierge services to his clients. Other participants were running virtual events that were streaming throughout the world. Consequently, client companies who were slow in the adoption of these technologies saw themselves missing out on opportunities during the lockdown.

According to (agency) Participant 10, technology allows the man on the street to be connected to the world. Overall, mobile technology provides an opportunity for all to access the 4IR technology, but it also poses challenges of inequality, where the haves possess access to the best technologies compared to the have-nots. Like all developing countries in Africa, there is a concern in South Africa about increasing inequality brought on by these fast-paced technologies (Naude 2017). Moreover, (agency) Participant 3 noted that marketers need to connect with consumers through mobile telephony to tell a story of their brands. Evidence demonstrates that mobile technology tools allow for marketing communications to be brought closer to the targeted audience (Kotler *et al.* 2017).

Wearable technology is seen as a possibility by (client) Participant 6, where customers can be scanned on their foreheads and do not have to carry any cards to enter, purchase and enjoy the event. There is, however, a risk that customers with such technology might have their privacy infringed. (Client) Participant 4 remarked on this issue of privacy, *“Like every site now has cookies because POPI and GDPR point out that you have to make people aware that you're tracking them, but all the sites have to have the same message.”*

(Agency) Participant 8 mentioned that digital communication such as social media has always been viewed as cheaper than television advertising. This participant also noted that this is a fallacy because the number of social media channels, and constant changes to the content, increases the cost.

Marketers are said to balance the creative and analytical. Participants noted that AI can assist in the data analysis but that the extraction of the creative idea from the data relies on the strategic understanding of consumer insights. Whereas data analytics is seen as the game-changer for marketing communications, AI and machine learning are used to understand the consumer better and to forecast what products to launch

in the future. Consequently, this has borne a field called data sciences, where marketers connect the dots in data for deeper insights, according to (client) Participant 6. Conversely, analysis paralysis is a danger that (agency) Participant 2 observed, as agencies struggle to choose between the creative and the analytical. Some of the agency participants' comments were:

*I think that if you're talking about things like Artificial Intelligence and the Internet of Things, I think ultimately it should be all about understanding the customer better.* (Agency Participant 2)

*...our company has a lot of data, so we could use things like machine learning and AI to understand our data, to understand our customers better in order to provide better product solutions to our customers.* (Client Participant 6)

*So, it is also understanding that data at times works, as you know data is cold, so you need to really follow the numbers and understand what it means for you.* (Agency Participant 10)

Some participants mentioned the issue of data privacy as a concern as data is amassed by companies on consumer behaviour. According to (client) Participant 4, the POPI Act requires that users online be made aware that their information is being collected. Nonetheless, data monopoly is seen as the evil of online platforms. Given the above, (client) Participant 5 mentioned that the big social media giants have earned bad reputations for their unbridled use of personal data. Some of the issues raised by participants are:

*We use social media to be a lot more careful and thoughtful about those around us.* (Client Participant 5)

*Data is more expensive than oil. It's the modern currency and I think that it's going to need some governance.* (Client Participant 4)

(Agency) Participant 10 also noted that agencies are learning as new platforms are launched. The biggest challenge is to measure the ROI of these platforms and how much value they are creating for brands, remarked (agency) Participant 2. Although (agency) Participant 3 argued "*You know... what is the return on investment? But that is not the investment... it is a spend. That's what you look at advertising.*" According to (agency) Participant 8, the lack of industry standards in digital marketing results in a lack of reliability in the calculation of social media campaigns.

The disadvantages of the 4IR, as identified by the participants can be summarised as the loss of jobs as the 4IR takes over jobs across the board, not only in marketing communications. It was also noted that human skills are lost when robots take over functions. Challenges can be summarised as relating to the fast-paced change in technology and in the consumer landscape where consumers are faced with too much choice. Thus, the need for immediacy of marketing communications is putting incremental demands on marketing communications practitioners. Further, access to and utilisation of data are challenges that pit clients against agencies, resulting in marketing communications solutions that are not ideal.

#### **4.3.4 Theme 4: Strategies to address the challenges of the 4IR**

South Africa is noted as a country that is always catching up to trends from the developed world, said (client) Participant 4. According to (agency) Participant 8, the great divide between those with and without access to digital technology is creating a digital literacy gap that will be difficult to bridge, as the 4IR technologies are increasing at an exponential pace. Similarly, Maharajh (2018) remarked that the 4IR will likely hegemonise the current world system as those in Sub-Saharan countries are still battling with the basics of access to electricity. Thus, marketers in this region need to be cognisant of this contrast when developing and implementing strategies in their industries.

According to (agency) Participant 2, there is a need to recognise excellence in digital innovation and it was also noted that there were no marketing technology awards in South Africa. Therefore, players in the industry are not motivated to excel and better themselves like their Asian or Western counterparts, noted (agency) Participant 10. It illustrates that celebrating excellence sharpens the minds of marketers to push themselves further (agency Participant 2).

It was stated by some participants that some brands have no clear-cut strategies of why their brands are in the digital space except for the fear of missing out. For companies to take digital marketing seriously, (agency) Participant 8 remarked that there must be buy-in at the CEO level. Otherwise, digital marketing risks becoming a poor cousin of traditional marketing. For instance, (agency) Participant 8 also lamented about a client that bought users to make their Twitter account look good for executives. As a result, this approach was seen by (agency) Participant 8 as demonstrating a lack of both a social media strategy and understanding of the objectives of utilising this platform.

Some participants noted that the older generation displayed a fear of technology. This confirmed Melia's (2019) remarks that young people globally and in Africa embrace mobile technology and digital

communication more than older people. It was stated that marketers – whether older or younger – must embrace this technology. However, coping with the 4IR is seen by some participants as an adapt or die approach. Moreover, agency participants remarked that they are at the forefront of technology trends and can assist client companies to prepare their brands for the impending technologies and futureproof their brands for success.

The younger consumer is ready to embrace technological changes, remarked some participants. Brands need to be open to saying less and listening more, noted (client) Participant 7. This attests to Kotler's (2017) emphasis on social listening on social media giving a glimpse into the real-life context of consumers. In view of this, marketers need to adopt a strategy of immersing themselves in the world in which their consumers live. Additionally, (client) Participant 7 lauded social media platforms as these were providing an opportunity for companies to listen to what consumers are all about. According to (agency) Participant 10, influencer marketing can enable the brand voice to reach young people. Thus, it has the potential of being successful if it meets brand objectives.

Further, Chavez *et al.* (2019) argued that the consumer journey in a digital space is a complete zig-zag and not s-shaped as in traditional communication. Although the consumer journey might be translated differently in a digital space, some participants noted that the journey is essentially the same and therefore it is important for the digital marketer to stick to the basics. Primarily, (agency) Participant 2 reckoned that it all starts with consumer insights, whether the consumer is on social media or in-store. However, the marketing truths are exponentially exposed when marketing communications are online and immediate. According to (agency) Participant 10, when a Twitter storm brewed for one of the brands, the message inconsistency was exposed on a bigger scale and the issue was exacerbated by this harsh social media platform.

Consumer insights still rely on understanding consumer behaviour. Fundamentally, (agency) Participant 9 remarked that one of the ways to be on top of the game was to do consumer surveys, which enable marketers to better understand the media consumption patterns of their consumers and to devise promotional campaigns that meet their needs.

Marketers are demanded to go beyond the mandates of their function as the result of consumer and technological changes, said (agency) Participant 3. Nevertheless, (agency) Participant 9 remarked that agency functions are also blurred as insourced graphic designers, data analysts and web developers are delivering fast solutions for client companies. Thus, agencies are now bringing new and more complicated

technologies to insource such as gaming technology, virtual and augmented reality technologies for their clients, noted some participants.

Technology poses challenges of the ubiquity of connectivity, which is the always-on, 24/7 phenomenon (Marsland 2019). For example, (agency) Participant 8 mentioned that brands need to be accessible to consumers by giving powers to marketers to make instant decisions after hours when a crisis arises. In addition, they need to practice social listening which then allows the marketer to be proactive and own the content narrative, concluded (agency) Participant 8. Similarly, AI can assist social media through an interactive platform called social listening, which allows for tailor-made messaging (MediaUpdate 2018a).

Conversely, marketers might not be able to understand all the factors of the product launch, remarked (client) Participant 5. There is a recognition that they will need to make decisions with incomplete information due to the ubiquity of data that puts demands for agile action from marketers (client Participant 5).

Importantly, agency and client relationships are central to the success of marketing, said (agency) Participant 2. Accordingly, conflict can be healthy if it is nurtured sufficiently to deliver successful marketing solutions for the customer. Consequently, agency and client company relationships need to be re-appraised and viewed as a partnership rather than an us versus them situation (agency Participant 10). In addition, the COVID-19 pandemic has shown that brands that have utilised this relationship have been successful in growing connections with consumers, concluded (agency) Participant 10. Copley (2004) notes that through IMC, advertising and client companies can embrace this clarity for the benefit of the consumer.

Participants applied different strategies to personally cope with the 4IR changes, ranging from digital detox, to being brave, and using technology applications to manage their time online. Ironically, (client) Participant 4 noted that they turn to technology (such as an application like Slack) to force them to switch off from being online.

Some participants remarked that COVID-19 and remote working have blurred the lines between work and home, resulting in employees working more as they drive less. Further, the digitisation of knowledge was mentioned by (agency) Participant 10 as a benefit for those who are unable to afford formal education. This democratisation was perceived as creating a challenge for established agencies whose work is being taken over by freelancers who can provide fast digital solutions. Therefore, the strategy for agencies affected is to pre-empt the future by bringing in new technologies faster than competition, concluded (agency)

Participant 2. According to (agency) Participant 10, client companies are more likely to view agencies as a support system if they play open cards and forecast trends that can future proof their brands and their companies' survival.

(Client) Participant 7 indicated that the strategies for coping with the influence of the 4IR involve embracing the positives, such as improved decision-making for better outcomes for the company. The positives come in the form of applications of inventions that are even outside of the marketing space, concluded some participants. Thus, the marketing function becomes marketing plus, as there is the blurring of technology solutions that go beyond marketing communications (agency Participant 3). (Agency) Participant 10 called it MarTech – marketing technology where marketing goes beyond just marketing but fully embraces technology, further confirming this new field of marketing.

Data overload will continue to be a problem for marketers, as the amount of data cannot be analysed sufficiently, declared some participants. Conversely, the conundrum faced by marketing communications practitioners is deciding what data is analysed and what data is not, stated (agency) Participant 2. Notwithstanding, Forsstrom (2017, p. 2) laments the evolution of the marketing profession from being a “creative industry, but is now largely a data discipline.” AI tools can assist; however, they need to be guided by specific algorithms that require a human interface or decision. That is the marketing skill that cannot be replaced by machines, concluded (client) Participant 1.

Fundamentally, there was a sense that marketers are being forced to change and adapt strategies because of the 4IR. For example, participants reported that there were very few training courses that they attended that prepared them for the 4IR changes. Instead, participants used change management skills that they learned in coping with other changes to deal with the 4IR. Notably, agency participants, as trend forecasters, were perceived to be in a better place to pre-empt the changes linked to the 4IR. Further, they were able to bring innovative technology and looked to client companies who were brave to be early adopters of those technologies, remarked (agency) Participant 2. Other client companies were noted to be followers in adopting these technologies once they had seen them work effectively for the early adopters. This confirmed the innovation diffusion curve, where companies as well as individuals go through the various stages of innovation adoption (Wani & Wajid Ali 2015).

Some participants felt that the 4IR changes, together with the COVID-19 pandemic, were a double blow to the marketing communications field and the world. Sadly, the haemorrhaging of jobs due to the pandemic

put the creative industry on the back foot as they saw marketing budgets being reallocated to operational demands, noted some participants.

Overall, participants remarked that they needed to implement an adapt or die strategy, as what worked for them in the past was not going to work for them in the present or the future. Therefore, there was a need to “*unlearn*” old ways and learn new ways, said (agency) Participant 10. (Agency) Participant 8 had confidence in the ability of the human species to adapt throughout the centuries and reckoned that the 4IR is another opportunity for the modern man to adapt to the changes.

Some participants remarked that the 4IR presents positive opportunities in terms of expanding globally and reaching audiences and customers that could not be reached before. (Agency) Participant 10 noted an opportunity to utilise resources globally; for example, through digital communication, copywriters and editors could be reached across the globe and work could be done across different time zones, thereby delivering marketing campaigns quickly.

According to (client) Participant 1, AI allows for marketers to be freed from repetitive tasks and marketers could be upskilled to focus on prospecting for new clients. Expanding globally allowed some agencies and client companies to procure work outside of South Africa, said some participants. Therefore, agencies and client companies that invested in digital communication intensified their expansion to other markets.

An omni-channel strategy is one of the recommended strategies participants utilise to cope with the 4IR. This strategy is suggested since it ensures that the same brand message is communicated across channels, thereby ensuring consistency of the brand message. Additionally, it is in line with the IMC strategy. According to (agency) Participant 10, the best strategy is that of understanding who the customer is, how they want their content to be served and the frequency of that communication. This supports Kumar, Ramachandran and Kumar’s (2020) argument that new-age technologies assist companies to provide content to the consumer at the appropriate time.

A culture of learning was also recommended by participants as a strategy to ensure that brands keep evolving in reaction to the encounters proffered by the 4IR. (Client) Participant 7 remarked that marketers need to keep learning, whilst ensuring that communication to all stakeholders is conducted properly. Primarily, all marketers are required to learn a new skill to cope with the demands of the 4IR, said some of the participants. Participants commented that the world of marketing communications has changed, where marketers realise that the new consumers are engaging on many platforms. Eventually, it was mentioned

that this omnipresence puts pressure on marketers to understand consumers better and formulate marketing plans to meet their needs where the consumers are.

Some participants mentioned that brands need to diversify their communication channels to futureproof themselves. As an example, COVID-19 exposed some brands to the challenges of opting for traditional marketing channels to the exclusion of digital channels, remarked some participants. Further, innovations in digital communications purged the big media and advertising agencies that were not sufficiently diversified to cope with the 4IR, noted some participants. For instance, print, particularly magazines and newspapers, folded during the hard lockdown, demonstrating the importance of diversification and of forecasting changes (Agency Participant 3).

Another strategy for coping with the 4IR, for both agencies and client companies has been to be generalists rather than specialists in marketing communications (agency Participant 8). In addition, this participant also noted that specialist skills are easier to teach a robot than generalist skills. This is in line with Moravec's description of general intelligence which is the ability to reach human intelligence and beyond (Moravec 1998, cited in Tegmark 2017, p. 75).

(Agency) Participant 8 also remarked that, in the past, marketers used to wear one or two hats when approaching a consumer challenge; now, due to the changes they are faced with, they must wear four to six hats at a time. According to (agency) Participant 9, they are required to have a technical understanding of digital communication yet at the same time have a strategic view of the brands.

Significantly, marketers who are multi-skilled are better able to cope with the 4IR changes, said (agency) Participant 8. However, client companies are insourcing skills that used to be done by agencies, so that they can respond quickly to consumer needs (Agency Participant 9). Thus, agencies are venturing into new technologies that are in the gaming space, such as augmented and VR, thereby pushing the envelope further, remarked (agency) Participant 2.

Additionally, marketers are required to be multi-skilled; as a result, there are few digital marketing specialists. Increasingly, all marketers are required to possess some digital marketing skills to cope with the 4IR demands, said some participants. (Client) Participant 6 noted that they are equipping themselves with coding skills to immerse in the computer science field. Evidence confirms Johnson's (2018) assertion that skills disruption means that employees need to maintain the momentum of continuous training of hard and soft skills to survive the impact of the 4IR. Khumalo (2020, p. 9) further argued that "the most important



skill for entrepreneurs or young innovators should be to learn how to code”. According to (agency) Participant 2, whilst they are not skilled at computer coding and the new gaming solutions, they have sufficient know-how of the end-result of the application that they require.

Another strategy recommended by (client) Participant 5 is to be brave and comfortable working with uncertain or incomplete information to decide on product launches. Similarly, this situation has enabled some brands to launch new products more often than they used to in the past. It was noted that this strategy assisted in coping with the demands of the new consumer, who requires more choices and new products more often. Moreover, (client) Participant 7 remarked that the changes brought by the 4IR allowed her industry to be more efficient and to eliminate deficient areas whilst fine-tuning communication to stakeholders.

Some participants noted that the environmental mindset, where there is a demand for artisanal and more natural products, has opened opportunities for brands to respond with new products and be seen to be doing something positive for the environment. Accordingly, Millennials as a target group were also demonstrating great concern for the environmental impact of this revolution (World Economic Forum 2017). This environmental mindset creates an opportunity to combine indigenous knowledge systems with new technologies to provide better solutions (agency Participant 3).

In summary, the participants’ strategies to cope with the challenges of the 4IR have a common factor which is an adapt or die approach. In addition, marketers are asked not to fear new changes but be brave and embrace them. Further, marketers must be multi-skilled and continuously learn to cope with new consumers who are always engaging in new platforms. Fundamentally, agency and client companies must work together for the benefit of the consumer.

#### **4.4 Conclusion**

Based on the findings presented in this chapter, essentially the 4IR was seen by participants as beneficial if it assists marketing communications practitioners to understand the consumer better and to provide improved and quicker solutions. Whilst jobs might not be hugely affected by the 4IR due to machines taking over (given the importance of the creative element and the human touch in marketing communications), some participants felt that there are now more demands made on them and they must upskill themselves continuously. There is a challenge of the ubiquity of data and the inability to decide which data is useful to assist in decision-making. Marketers must cope with incomplete information but are required to be brave

to make brand decisions. Primarily, there is an agreement among participants that change is a constant for marketers and new technologies would require them to be a step ahead of the curve. The COVID-19 pandemic has thrown an additional challenge for marketers, demonstrating that the future is uncertain; however, brands and agencies that have futureproofed themselves for success are likely to survive whatever changes that are thrown at them.

The following chapter addresses the conclusions, limitations and recommendations for further research.

# **CHAPTER FIVE: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS**

## **5.1 Introduction**

This chapter presents a summary of the findings in relation to the research objectives to help consider whether the research objectives have been achieved or not. In addition, it makes recommendations for marketing practitioners and researchers based on the study's findings. Finally, it sets out the limitations and overall conclusions of the study.

## **5.2 Summary of the findings in relation to the research objectives**

In the previous chapter, research findings were presented in terms of the themes that were uncovered during the thematic analysis. Direct quotes from participants were included to support and illustrate the identified themes. Four themes and four sub-themes were uncovered (for a reminder of these, refer to Table 4.3). In this section, the findings are now considered in terms of each of the four research objectives.

### **5.2.1 Research Objective 1: To gain insight into Gauteng-based marketing communications practitioners' understandings of the 4IR**

A general understanding of the 4IR and its elements was evident amongst all participants. This ranged from a limited understanding of the elements of the 4IR to a more detailed understanding of the elements such as robotics, AI, the Internet of Things, cryptocurrency, 5G technology and so on. Whilst some participants indicated that they did not understand granular details of some of the 4IR elements, they did not feel that this was necessary if technology applications can deliver what is required for the business. It is also demonstrated that some participants equipped themselves with skills such as coding in addition to the top 10 skills that machines are unable to replicate (Gray 2016). Some participants also asserted to the need for continuous learning, affirming Johnson's (2018) assertion that both soft and hard skills are required to cope with the challenge of the 4IR.

The study was conducted during the COVID-19 plague. Further, the lockdown initially prevented traditional brick and mortar businesses from trading with customers and propelled them to engage in digital marketing. The greater adoption of digital technology during the COVID-19 lockdown was sometimes

coalesced with the broad effect of the 4IR; however, this was not clearly articulated by some participants when differentiating between the 4IR changes and those factors attributable to the influence of the COVID-19 pandemic.

It can be concluded that Research Objective One was met as the findings provide insight into participants' understanding of the 4IR and some of its elements.

### **5.2.2 Research Objective 2: To understand how marketing communications practitioners in Gauteng see the influence of the 4IR on the marketing communications practices of B2B and B2C organisations in South Africa**

Marketing communications practitioners noted the influence of the 4IR in general and on marketing communications specifically. In addition, they remarked that the digital world was getting smaller and closer, opening the globe to markets, products and services. This was due to the democratisation of technology and the opening of access to information. Essentially, they felt that digitisation has the potential of bridging the gap between rural and urban societies, the developed and the developing worlds.

It was mentioned that a disadvantage of the 4IR has been the loss of jobs across the board, not only in marketing communications. It was also noted that it is not just jobs, but also human skills that are lost when robots take over functions. Although some participants felt that human skills are still required in marketing communications, the process of marketing and communications relies on an emotional connection with brands. Further, this emotional connection is said to be what separates humans from robots. Soft skills, such as emotional intelligence are important in marketing communications. As such, job losses due to the 4IR might not be as huge in marketing communications compared to some other areas.

Moreover, 4IR technologies (specifically AI) have made life easier for marketing communications practitioners by eliminating repetitive work. Marketers are said to be experiencing freed-up time due to the 4IR; however, the nature of work in the 4IR has meant that marketers now utilise that time to do surplus complex tasks. Additionally, the COVID-19 lockdown might have contributed to the redefinition of work, as marketers saw themselves utilising what would have been commute time to do more work than before. Increasingly, most marketing jobs are said to be including digital communication.

Consequently, the 4IR and the COVID-19 pandemic are likely to continue to influence the nature of work and employment in the future. It was also noted by participants that the fast-paced change in technology

due to the 4IR has likely borne a new kind of consumer, a consumer with too much choice and one who is more demanding. For instance, consumers are interacting with brands 24/7 and are now putting incremental demands on marketing practitioners. By contrast, in the past, consumers had access to few traditional channels and opportunities to engage with brands; now, such channels have exponentially expanded. Additionally, the consumer is now engaging in new digital communication channels, especially social media, where new platforms are launched frequently. Therefore, brand budgets and marketing resources are stretched as companies battle to cope with multiple channels when engaging with the new consumers.

Some technologies are seen as age levellers by some participants. It follows that older generations, because of the COVID-19 pandemic lockdown, were now embracing technologies as much as the younger generation, noted some participants. However, Millennials and Generation Z as a subset of the younger generation are influencing brands to redefine the marketing communications flow from one-way to interactive. Interactive communication gives the power and control of the brand's narrative to consumers, thereby shifting the power pendulum towards consumers and away from brand custodians that is marketers. Consequently, marketers have found themselves pandering to this power shift by allowing consumers to influence their brand's communication.

Through influencer marketing, brands are utilising the voice of the consumer to gain loyalty and advocacy. There is also caution on the reputational risk of using influencers for brands. Although it is possible to avoid this risk by using virtual influencers as an extension of the brand to influence customer perceptions, these need to acquire human-like appearance and conduct life-like activities to be trusted (Molin 2019).

Participants from B2B organisations saw the influence of the 4IR as opening markets around the world to their products and services. This is due to the borderless internet world where marketing communications can be delivered across countries. The competition is therefore wider, but at the same time opportunities are increased. Thus, those organisations that invested in digital communication prior to the COVID-19 pandemic were seen to be in a better space to take advantage of the 4IR and its borderless opportunities.

Participants from B2C organisations saw the influence of the 4IR in disruptive technologies, which forced them, for example, to be brave in their product launches or to go online in virtual streaming of their events. In addition, B2C organisations noted that they want to engage with consumers where the consumers are. Participants from advertising agencies saw the influence of the 4IR in understanding consumers better. For instance, agency participants saw themselves to be of service to client companies since they are trend

forecasters. They can chart the impact of new technologies on the clients' brands and assist marketers in navigating this revolution.

Further, the influence of the 4IR can also be seen in the digitisation of the marketing communications function. Thus, digital communication is seen as a one-on-one marketing but in a mass marketing environment. The influence of data and digitisation can be summarised as the ubiquity of data. This ubiquity brought in the importance of digital communication to marketing communications.

It can be surmised that Research Objective Two was met as the findings indicate that the marketing communications practitioners view the influence of the 4IR in the digitisation of the marketing function. This influence is seen in the ubiquity of data bringing the importance of digital communication to marketing communications. B2B and B2C organisations view the influence of the 4IR differently; however, the common denominator is that these organisations must change to cope with the disruptive technologies.

### **5.2.3 Research Objective 3: To explore challenges practitioners face in adapting their marketing communications practices in the context of the 4IR**

A common thread in the challenges that marketers face is the loss of jobs as the 4IR takes over jobs across the board, not only in marketing communications. Robots are however unable to mimic human behaviour, and this shortcoming points to the need for humans to continue to be part of the equation. Of relevance to marketing communications, is that robots, by contrast to humans, are essentially “socially tone-deaf” without the ability to understand the context of a situation, which necessitates the need for humans in understanding consumer behaviour (Baldwin 2019, p. 158).

As AI increases its applications in various functions, robots are seen as appendages to the marketing communications function. Conversely, robotic thinking is said to be domain-based on the algorithm developed, yet general intelligence is multi-skilled. In conclusion, it is remarked that humans' ability to multi-skill and not only specialise is likely to extend the need for human skills in marketing communications. This supports Kloefkorn's (2018) contention that a hybrid of skills such as business knowledge, technology understanding and soft skills such as communication, critical thinking and an innovative mindset are required to cope with the 4IR.

Within marketing communications, some participants noted that specific tasks can be and are now being replaced by machines, which has resulted in the reduction of jobs. Instead of working smarter due to the

impact of AI and machines in marketing communications, however, marketers end up taking in more work in the freed-up time.

Another challenge that marketers face in the 4IR era is keeping up with new social platforms that their customers engage in. Consumers are constantly changing to new platforms, yet marketers are comfortable with social media platforms with which they are familiar. The success factor for marketers faced with this challenge is acceptance of the unfamiliar.

Marketers are also challenged by the always-on nature of social media platforms. Likewise, the always-on tendency requires that marketing communications practitioners operating in the digital space be available to engage with customers 24/7, as consumers are interacting with the brand outside of normal working hours. Whilst chat bots can assist with websites and other applications, marketers need to be empowered to respond to users online after office hours.

The ubiquity of data creates additional challenges for marketers. As such, access to and utilisation of data were identified by the participants as challenges that pitted clients against agencies, resulting in less-than-ideal marketing communications solutions. This conflict is likely to create a challenge when client companies and agencies must deal with demanding consumers. Nevertheless, new consumers are also engaging in new platforms which practitioners battle to understand. Client companies must therefore rely more on agencies as brand design visionaries to guide companies on how to leverage these new platforms effectively.

Digital communication focuses on creating content for consumers, but it is noted that the 4IR must deliver sales. In addition, the ubiquity of data and the challenge it poses is just one obstacle that marketers must traverse by client companies and agencies working together. It can be surmised that client and agency relationships can only succeed if they are focused on the ultimate objective of increasing sales for the business.

The issue of data privacy is a further challenge and concern as data on consumer behaviour is amassed by companies. Additionally, data monopoly is seen as the evil of online platforms. Similarly, marketers need to obtain consent from consumers and users online on the use of their information. The implementation of the POPI Act requires that users online be made aware that their information is being collected. Companies may risk alienation as customers put their trust in those closest to them, rather than in brands (Kotler *et al.* (2017).

Perhaps the biggest challenge is to measure the ROI of these social media platforms (Terpening & Li 2017). Essentially, the lack of industry standards in digital communication results in a lack of consistency in the evaluation of social media campaigns. Further, Terpening and Li (2017, p. 6) report on measuring the “social business ROI” such as Net Promoter Scores (NPS) with few financial metrics relating to e-commerce.

Marketing communications practitioners faced professional and personal challenges in adapting their practices in the context of this revolution. Conversely, the COVID-19 lockdown enabled marketers to work more as the daily commute to work was reduced, however, they were unable to switch off as the professional demands of being always-on was exacerbated.

Research Objective Three aimed to explore challenges that marketing communications practitioners face in adapting their practices in the face of the 4IR. It can be concluded that Research Objective Three was met because findings provide insight into challenges that practitioners experience; these ranged from replacement of some marketing functions by robots, the emergence of the new consumer, to the ubiquity of data.

#### **5.2.4 Research Objective 4: To discover how marketing communications practitioners address these challenges**

The final research objective focused on discovering how marketing communications practitioners addressed challenges posed by the 4IR. Coping with the 4IR was seen by some participants as an adapt or die approach. Further, it was noted that humans have always adapted throughout the previous revolutions; therefore, the 4IR was viewed as another era where humans will learn to adapt to the changes.

It was further stressed that the human brain can learn organically, yet the robot needs constant updating. The 4IR allowed marketers to be freed from repetitive and administrative tasks to concentrate on higher-order skills resulting in the efficient use of time. It was also remarked that as long as marketers embark on continuous learning, their ability to cope with the 4IR will be sufficient.

Participants felt that marketers needed to be multi-skilled to adapt their marketing communications to consumers because specialist skills are easier to teach a robot than generalist skills. Thus, marketing requires a hybrid of skills such as business knowledge, technology understanding and soft skills such as



communication, critical thinking and an innovative mindset (Kloefkorn 2018). However, the enormity of the 4IR led some participants to adopt coping mechanisms. For instance, these included selecting what is necessary to understand and implement with regards to the 4IR (pointing to the enormity of this phenomenon for marketers) and adapting to the 4IR as it impacted on them (for example, by being brave with new product launches).

Besides, marketers were now required to possess some digital marketing skills to cope with the 4IR demands. Moreover, marketing departments have in-sourced skills such as graphic design, SEO and other creative skills that used to be conducted by agencies. Some participants capacitated themselves further such as learning coding to immerse themselves in the computer science field. Even if marketers were not skilled at computer coding and the new gaming solutions, they needed to have sufficient knowledge of the end result of the applications that they required.

Essentially, companies need to have clear-cut strategies of why their brands are in a digital space. Therefore, it was remarked that marketers can be successful in their function if there is buy-in for digital communication at the CEO level. It is for this reason that a social media strategy must be crafted with the understanding of the objectives that are aligned to the business strategy. Additionally, it was noted that the upskilling of digital skills must start at the CEO level. Thus, the lockdown during the COVID-19 pandemic demonstrated the need for digital skills to be adopted at all levels.

In addition, participants remarked that the older generation displayed a fear of technology. Fundamentally, the COVID-19 pandemic demonstrated the need to embrace the technology. It thus became a leveller between the older and younger generations, requiring that all embrace the technology due to the lockdown.

Agency participants noted that they are at the forefront of technology trends and can assist client companies to prepare their brands for the impending technologies and futureproof their brands for success. Therefore, it is this innovative stance that is likely to repair the relationship between client companies and agencies.

Young people globally and in Africa embrace mobile technology and digital communication more than older people. It was noted that marketers, whether older or younger, must embrace this technology. Particularly, young people can be torch bearers in assisting brands and marketers to embrace the new technologies.

Further, marketers need to adopt a strategy of immersing themselves in the world in which their consumers live. Through social listening on social media, marketers can get a glimpse into the real-life context of consumers. It was noted that brands invest in influencers who are relevant to young people to get their brands to connect and get closer to consumers. For instance, brands that are on the digital space need brand messaging that is concise and focused on the call to action. Some participants noted that brand messaging needs to be consistent across all channels. Hence, an omni-channel strategy is recommended to ensure the consistency of messaging across all channels.

Likewise, marketers addressed personal challenges of coping with the 4IR through digital detox, ironically turning to technology (for example, using an application such as Slack) to help them switch off from technology. Thus, coping with the 4IR is about both personal survival for the marketers and ensuring the business survival for the brands.

As the findings illustrate a variety of ways in which the participants address challenges brought on by the 4IR for marketing communications practitioners, it can be said that Research Objective Four was met.

### **5.3 Recommendations for marketing communications practitioners**

Considering the findings of this study, a few recommendations are offered to help marketing communications practitioners cope with challenges of the 4IR.

#### **5.3.1 Recommendation 1: Devise clear-cut strategies on digital marketing**

It was noted by participants that at times there were no clear-cut strategies of why companies entered the digital space except for the fear of missing out. Additionally, marketers preferred familiar social media platforms that they already engage in, rather than new or unfamiliar platforms that their consumers were migrating to. It is recommended that digital marketing strategies are developed based on consumer insights, and understanding business objectives of the brand, before engaging in digital platforms.

It was also remarked that a client company purchased users on a social media platform indicating a lack of strategy and a lack of defined objectives of the digital communication. Further, Bughin and van Zeebroeck (2017) asserted that the digital strategy needs to be incorporated into the corporate strategy. Therefore, the recommendation is for agencies to assist client companies to prepare their brands for impending technologies and futureproof their brands for success. When client companies and agencies can collaborate

to develop digital strategies that are aligned to the corporate strategy, there is a potential for success for companies and the client-agency relationship.

### **5.3.2 Recommendation 2: Adopt a business survival approach**

Coping with the 4IR was seen by some participants as an adapt or die approach. It was noted that humans have always adapted throughout previous revolutions; therefore, the 4IR was viewed as another era where humans will learn to adapt to the changes.

Further, companies that develop business strategies to cope with these changes are likely to survive and not suffer “economic disappearance” (Bayraktar & Atac 2018, p. 347). It is therefore recommended that marketing practitioners acquire skills to adapt the marketing function to futureproof their businesses.

The findings revealed that client companies were insourcing skills that used to be done by agencies (such as graphic design, SEO and web development), to respond quickly to consumer needs. It is noted that all marketers need to possess some digital marketing skills to cope with the 4IR demands. It follows that new marketing positions that are being advertised now require creative skills such as graphic design and software programming tools, in addition to traditional marketing skills. It is recommended that the marketing function will be able to respond quickly if they have coding skills to operate the backend of their websites, as well as applications without having to wait for an agency to make the required changes. Evidence shows that this move will transform the marketing communications function by including design and technology skills, thereby enabling marketers to be agile in their response to consumers.

Similarly, marketers utilising higher-order and soft skills were better able to cope with the 4IR. For instance, one of the skills is emotional intelligence which cannot be replaced by robots. Emotional intelligence emitted an understanding that consumers are engaging online to connect with the brand partly because they are lonesome. Further, Schwab (2016) noted that their obsession with digital technology is such that a me culture phenomenon has ensued, where people are hyper-connected but lonely. In conclusion, brands that recognise this need can craft content that addresses this loneliness and bring their brands closer to these consumers.

Regarding direct marketing and personal selling, it is recommended that marketers use tools such as recommender systems and online vouchers, thereby replacing traditional tools such as printed vouchers. Additionally, it is suggested that the CRM programme also be digitised (so called ‘e-CRM’) and made

personal using digital nudging in which users are nudged to make decisions based on recommended options (Jesse & Jannach 2021). It is also recommended that brands' targeted display ads utilise cookies in advertising for personalised content based on the digital breadcrumbs that users leave online (Chavez *et al.* 2019). However, brands have to be cautious in how they use cookies given concerns around customer privacy.

Agency participants noted that they were at the forefront of technology trends and could assist client companies to prepare their brands for the impending technologies and futureproof their brands for success. Therefore, the relationship between the agency and the client could be strengthened through pre-empting changes that are going to impact brands by understanding these challenges.

### **5.3.3 Recommendation 3: A particular understanding of the younger consumer**

Young people globally and in Africa embraced mobile technology and digital communication more than older people (Melia 2019). It was noted that marketers, whether older or younger had to embrace new technologies. It was also remarked that the younger consumer was ready to embrace technological changes. Further, it is recommended that brands need to be open to saying less and listening more.

Conversely, brands in the social media space cannot engage in one-way traditional communication, instead they had to be open to a two-way communication between consumers and the brands. Thus, a recommendation is for marketers to adopt a strategy of immersing themselves in the world in which their consumers live.

It was crucial for marketers to comprehend the social media platforms that these young consumers engaged in. Generation Z, in particular, were positive about the 4IR because they were born into digital technology. Conversely, they are regarded as “digital elites/natives” and yet the older generation are termed “digital immigrants” (Khumalo 2020, p. 2). Resultingly, the many changes brought by the 4IR compelled marketers to adapt to new platforms because Generation Z changes social media platforms frequently.

Marketers must be multi-skilled and continuously learn to cope with new consumers who are always engaging in new platforms. The same connected consumer is said to be “always connected but alone” (Pertierra 2016, p. 5). Hence, brands that seek to develop affinity more than just selling products and services, are likely to resonate with the consumer that is online looking for an emotional connection.

Marketers could learn from the younger generation, the Generation Z consumers on how to approach challenges of the 4IR. It is recommended that brands further causes that are important to the younger generation such as the sustainability of the environment, gender issues and mental health (Schwab 2017). Supporting these and other movements can be accomplished only if brands remain authentic and consistent to their unique selling point (USP).

#### **5.3.4 Recommendation 4: Keep an always-on mentality**

Participants noted that technology posed challenges of the ubiquity of connectivity, which is the always-on phenomenon. In addition, marketers needed to practice social listening using social media platforms, which allow marketers to be proactive and own the content narrative. Further, AI could assist marketers through an interactive platform called social listening, which allows for tailor-made messaging (MediaUpdate 2018a). For example, through social listening, time and effort can be reduced in sales promotion by utilising personalised digital incentives that are redeemed online without having to cut out coupons (Wichitchayanon 2016).

The ubiquity of choice that consumers enjoy is likely to continue, and at best marketers need to learn to adapt to this change. Essentially, the ubiquity of data brought in the importance of digital communication to marketing communications. The ubiquity of data influenced marketing communications by creating more challenges for marketers. For instance, the data overload increased the workload of marketers as they try to understand the new channels and platforms where consumers were spending time.

Therefore, marketers needed to adopt change management strategies to cope with the 4IR. Client companies needed to employ online chats to keep consumers continuously engaged on their websites. As a result, participants noted that the COVID-19 pandemic exacerbated their workload, as marketers increased their productivity when working remotely.

Social media platforms such as Twitter, for example, created an expectation of an immediate response from client companies. As such, their users were engaging actively with brands after working hours and demanded that brands respond to them immediately. Consequently, a recommendation is for executives to permit marketers to be accessible to consumers by empowering marketers to make instant online decisions after hours. It is also suggested that marketers use social media platforms for PR through targeted communication to stakeholders that will be personal and distributed more often, thereby allaying any uncertainties and mitigating against public outcry facing brands and companies.

Finally, marketers were likely to be burnt out if they always engaged with consumers. The coping strategy that some adopted personally was digital detox, ironically using an application (such as Slack) to force them to switch off from being online. Thus, it is recommended that marketers must seek to maintain a work-life balance.

### **5.3.5 Recommendation 5: Retain the brand truths**

According to participants, marketing truths were exponentially exposed when marketing communications moved online. For instance, social media platforms such as Twitter exposed brands that were not true to themselves and inconsistent brand messages were exposed on a bigger scale on social media platforms. As such, digital platforms required succinct communication of the brand message due to the limited space, limited time and text characters allowed. It is recommended that brands remain true to their brand essence. Therefore, brands that tell “an authentic story across multiple channels, connecting people in real time” have better success using technology in marketing (Ting *et al.* 2019, p. iii).

Basically, consumer insights were still necessary to understand consumer behaviour. Whilst Chavez *et al.* (2019) argued that the consumer journey in a digital space is a complete zig-zag and not s-shaped as in traditional communication, marketers remarked that the same consumer journey applied online and off-line. Essentially, consumer surveys needed to be conducted, which enabled marketers to better understand the media consumption patterns of their consumers and to devise promotional campaigns that meet their needs. Further, working closely with agency companies who were trend forecasters, marketers could assist in navigating this revolution. It shows that this allowed marketers to have a technical understanding of digital communications as well as craft a vision for the brands. Therefore, the recommendation is for marketers to keep to the basics of consumer insights that are derived from consumer surveys whilst working closely with agency companies.

As consumers connect with the brands using different media platforms, omnipresence puts pressure on marketers to understand consumers better and to formulate marketing plans to meet their needs where the consumers are. Thus, the omni-channel strategy allowed for the understanding of who the customer is, how they want their content to be served and the frequency of that communication to be maintained. Additionally, the omni-channel strategy and/or at the very least the IMC is recommended since it ensures that the same brand message is communicated across channels, thereby ensuring the consistency of the brand message.

### **5.3.6 Recommendation 6: Agency and client relationship understanding**

Agency and client relationships are central to the success of marketing. Agency and client relationship conflict could be healthy if it is nurtured sufficiently to deliver successful marketing solutions for the customer. Evidence demonstrates that the relationship could be strengthened through pre-empting the changes that could impact the brands by understanding these fluctuations. It was thus recommended that the relationship needed to be re-appraised and viewed as a partnership rather than an us versus them situation.

It was noted that agencies can mount potentially more effective promotional campaigns if client companies provide full access to consumer data. With the use of augmented creativity, agencies could customise adverts to deliver online sales performance (Machanik 2020).

Client companies were more likely to view agencies as a support system if they played open cards and forecasted trends that could future-proof their brands for the companies' survival. It was noted that the COVID-19 pandemic demonstrated that brands that had utilised this relationship effectively were successful in growing connections with consumers. Whilst client-agency conflict was healthy, the 4IR demonstrated that it is significant that when channelled properly, it is likely to deliver profitable returns for both agency and client companies.

### **5.3.7 Recommendation 7: Embracing the positives**

The 4IR brings widespread changes and marketers needed to embrace the positives such as improved decision-making for better outcomes for the company. Where jobs were challenged by the 4IR changes, better skills could be utilised. Essentially, marketers were required to acquire skills related to digital communication. In addition, client companies were in-sourcing digital and creative agency skills to respond rapidly to consumers.

New technologies in the form of applications or inventions that were outside of the marketing space were enabling the marketing function to fully embrace the 4IR. As a result, the marketing function became marketing plus, as there was the blurring of technology solutions that went beyond marketing communications. This was described as MarTech – marketing technology - where marketing went beyond just marketing, but fully embraced technology. For example, marketing technology as a field, combines IT

and marketing creativity to deliver solutions that engage and build brand loyalty with customers (Sashikala 2021). Consequently, a recommendation is for marketing departments to embrace technologies in their function, to reduce workload and utilise higher order skills to deliver incremental revenues for their industries.

An “agile-team approach” was recommended, meaning marketers are always contactable by consumers. Further, the agile approach meant that marketers must make decisions with incomplete information and trust their instincts due to the ubiquity of data that puts demands on marketers. It confirms Baldwin’s (2019) remark that the future of work required agile workers to cope with the 4IR changes.

Similarly, marketers who embraced the positives pursued opportunities beyond South Africa, and reached audiences and customers that could not be engaged before. For instance, the agile approach saw marketers utilising the 4IR to search for scarce resources overseas. Likewise, agencies and client companies that were already in the digital space before the COVID-19 pandemic, were positive in embracing the 4IR changes and the pandemic lockdown. Therefore, a recommendation is for marketers to explore opportunities beyond their current customers’ base, sector or region using the 4IR technologies.

## **5.4 Limitations**

This study focused on perspectives of marketing communication practitioners from the province of Gauteng only, and the researcher does not claim that these findings can be applied to other areas. Essentially, the objective of this exploratory qualitative study was to gain initial insight into an under-researched phenomenon, rather than to generalise findings. However, research done on this topic in other areas of South Africa and/or adopting a different methodology might elicit different findings.

Another limitation is that the study focused only on marketing communications practitioners’ perspectives of the 4IR. As such, the consumer voice is another important perspective that merits future research attention, since the 4IR has demonstrated that the consumer now has more power and influence on brands using the digital social media platforms available.



## **5.5 Recommendations for further research**

It is recommended that further research is conducted to understand this topic in more depth. This study focused on perspectives of practitioners in the Gauteng province of South Africa. Further research to understand the influence of the 4IR amongst marketing communications practitioners in the rest of the country is required, as well as its influence on non-business sectors such as non-profit organisations and charities.

Another potential avenue for future research is to explore how consumers view the influence of the 4IR on marketing communications. For instance, consumers are engaging with the brand message in a two-way communication. Increasingly, there is a shifting of the power of control of the message from marketing communications practitioners to consumers and customers (Hird 2009). It is therefore important to understand consumers' perspectives of the influence of the 4IR on marketing communications. Consequently, research into the consumer perspective will allow for the end-user view of the influence of this phenomenon. Especially, the younger generation, particularly Generation Z, can provide a distinctive perspective of the influence of marketing communications on the 4IR.

## **5.6 Research Contribution**

This study contributes to the body of literature in South Africa that addresses the influence of the 4IR in various disciplines. Specifically, it addresses a gap in the literature on the 4IR's influence on marketing communications. The findings provide insight into the positive and negative influences of the 4IR on marketing communications, and begin to unpack the challenges faced by practitioners in the marketing communications field due to the 4IR. The study also provides an understanding of some of the strategies that marketing communication practitioners utilise to cope with the 4IR, whether in advertising agencies or in client companies. The 4IR continues to have an influence on this discipline and it is hoped that this is the beginning for other scholars to continue to address the paucity of literature on this topic.

## **5.7 Summary and conclusion of this chapter**

The study attempted to explore the influence of the 4IR on marketing communications practitioners. Based on the findings of this study, marketing communications practitioners in Gauteng do understand the 4IR phenomenon. Further, practitioners noted the influence of the 4IR, both positive and negative, in general and in the marketing communications sphere. The study also addressed the challenges practitioners faced

and how they attempted to address these challenges. Additionally, strategies to cope with the 4IR included developing clear-cut strategies; business survival; a particular understanding of the young consumer; an always-on attitude; brand truths; agency and client relationship understanding and embracing the positives. It can thus be concluded that the research objectives have been achieved.

The study focused on marketing communications practitioners in Gauteng. This points to a need for further research into understanding this phenomenon with practitioners in other areas of South Africa. Further, consumers and the consumer landscape impacted by the 4IR forced marketers to adopt an 'adapt or die' approach to cope with the challenges brought on by the 4IR. As a result, the marketers are tasked to respond to the instant ability of online marketing to deliver results and activism (Kotler, 2017). The field of the consumer influence on marketing and the marketing function points to a need for further research in this topic.

Within the boundaries of its stated limitations, the study has attempted to address an identified gap in the literature on the 4IR in South Africa. The findings and recommendations point to the need for further research on this topic.

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## Appendix A: Ethical Clearance Certificate



08 September 2020

Miss Nomonde Patience Sussmann (892134949)  
School Of Man Info Tech & Gov  
Westville Campus

Dear Miss Sussmann,

Protocol reference number: HSSREC/00001730/2020

Project title: The Fourth Industrial Revolution's influence on marketing communications: Perspectives of practitioners in Gauteng, South Africa

Degree: Masters

### Approval Notification – Expedited Application

This letter serves to notify you that your application received on 13 July 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

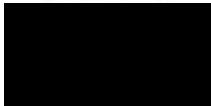
This approval is valid until 08 September 2021.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities & Social Sciences Research Ethics Committee  
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building  
Postal Address: Private Bag X54001, Durban 4000  
Tel: +27 31 260 8359 / 4557 / 3557  
Website: <http://research.ukzn.ac.za/Research-Ethical/>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

INSPIRING GREATNESS

## **Appendix B: Information Sheet and Consent Form**

### Information Sheet and Consent to Participate in Research

Date:

Greetings,

My name is Nomonde Süßmann, a Masters student from the University of KwaZulu-Natal (UKZN) at the College of Management Studies. My email details are: 892134949@stu.ukzn.ac.za. I can also be contacted on 082-927-9106. My supervisor (Dr Aradhna Arbee) can be contacted on [arbee@ukzn.ac.za](mailto:arbee@ukzn.ac.za) or 083 654 1574.

You are being invited to consider participating in a study that involves research on the topic of the Fourth Industrial Revolution's (4IR's) Influence on Marketing Communications: Perspectives of practitioners in Gauteng, South Africa. The aim and purpose of this research is to understand the influence of the 4IR on marketing communications, from the perspectives of marketing communications practitioners. The study is expected to include 10 participants in total, half from advertising agencies and half from client companies, in the Gauteng province. Participation will involve an interview, to be conducted telephonically or via an electronic platform (such as Skype or Zoom), on a date and time convenient for you. The duration of your participation, if you choose to participate and remain in the study, is expected to be approximately an hour.

Although there will be no direct benefit to participants, it is hoped that the study will create an understanding of the challenges marketing practitioners face due to the influence of the 4IR on marketing communications. The study hopes to contribute to the limited knowledge base on this topic.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number HSSREC/00001730/2020).

In the event of any problems or concerns/questions you may contact the researcher at: 892134949@stu.ukzn.ac.za or on 082-927-9106, or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

#### **HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban 4000 KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will

be maintained by the researcher and the School of Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor at the numbers listed above.

Sincerely

Nomonde Süßmann

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**CONSENT TO PARTICIPATE**

I, \_\_\_\_\_ (Name), have been informed about the study entitled *The Fourth Industrial Revolution's Influence on Marketing Communications: Perspectives of practitioners in Gauteng* by Nomonde Süßmann.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at 892134949@stu.ukzn.ac.za or on 082-927-9106.

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION**

Research Office, Westville Campus  
Govan Mbeki Building  
Private Bag X 54001  
Durban  
4000  
KwaZulu-Natal, SOUTH AFRICA  
Tel: 27 31 2604557 - Fax: 27 31 2604609  
Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Additional consent, where applicable

I hereby provide consent to:

Audio-record my interview YES / NO

\_\_\_\_\_  
**Signature of Participant**

\_\_\_\_\_  
**Date**

## Appendix C: Interview Schedule

### INTERVIEW SCHEDULE

#### OPENING

My name is Nomonde Süßmann and I am a Masters student at the University of KwaZulu-Natal. I am undertaking research for my dissertation and I would like approximately an hour of your time to interview you. Your organisation has granted permission for you to be involved in this study.

The research that I am conducting is about the Fourth Industrial Revolution's influence on marketing communications. I am gathering perspectives from marketing communications practitioners in Gauteng, South Africa. I would like to learn about your understanding and experiences of the influence of the Fourth Industrial Revolution on marketing communications.

I have sent you the consent form and the information sheet beforehand that has my contact details, the contact details of my supervisor and the ethics board contacts that are available to you at any point during and after this interview. I confirm that I have received the signed consent form from you and this grants me permission to commence with the interview. The information sheet as indicated grants you permission to end the interview at any point.

As indicated in the consent form, I also request permission to record the interview. This will allow me not to miss anything during the analysis. I would like to confirm with you whether you are comfortable for us to conduct this interview in English. As indicated, the interview will take approximately an hour.

#### BODY

Please respond as fully as possible to the questions that I am about to ask you. There are no 'right' or 'wrong' answers. Try to give concrete examples to illustrate your responses, wherever possible.

#### **Introductory/background questions**

Can you tell me a bit about yourself and your work?

*Probing/follow-up questions (if not covered in the response to the above question)*

How long have you worked as a marketing communications practitioner?

In this time, what sorts of industries have you worked in?

What sorts of roles and activities have you undertaken?

Have you always worked in South Africa, or have you also worked abroad?

What sort of education and training have you had related to your work as a marketing communications practitioner?

#### **Questions addressing the research objectives**

***RO<sub>1</sub>: To gain insight into Gauteng-based marketing communication practitioners' understandings of the 4IR.***

What do you understand by the ‘Fourth Industrial Revolution’, in general?

Thinking now about your field (*insert field/ industry*) specifically, what do you understand about the 4IR in that context?

***RO<sub>2</sub>: To understand how marketing communications practitioners in Gauteng see the influence of the 4IR on the marketing communication practices of B2B and B2C organisations in South Africa.***

What do you see as the influence of the 4IR, in general?

How do you see the influence of the 4IR on marketing communications practices in South Africa?

How do you see the influence of the 4IR on advertising agencies in general? (*Skip if not applicable*)

How do you see the influence of the 4IR on companies in general? (*Skip if not applicable*)

How do you see the influence of the 4IR on your field (*insert field/industry*)?

How do you see the influence of the 4IR on your organisation (*insert company/ agency name*) specifically?

***RO<sub>3</sub>: To explore what challenges they face in adapting their marketing communication practices in the context of the 4IR.***

What challenges does the marketing communications industry as a whole face in adapting its marketing communications practices in the context of the 4IR?

What challenges do you personally face in adapting your marketing communications practices in the context of the 4IR?

*If not already covered in the responses to the above questions, probe about the following sorts of challenges:*

- Training
- Mentorship
- Workload
- Personnel (numbers, types)
- Technology

***RO<sub>4</sub>: To discover how they address these challenges.***

How does the marketing communications industry as a whole address the general challenges that you identified earlier?

How do you personally address these challenges that you identified earlier?

*Probing/follow-up questions (if not covered in the response to the above question)*

Have you gone on any training to help you adapt to the challenges posed by the 4IR? If yes, what sorts of training? How useful did you find it?

Have you been guided by a mentor? If yes, what did this involve? How useful did you find it?

You have previously mentioned the challenges of (workload/personnel/ technology) to be influenced by the 4IR. How are you addressing the challenges of (workload/ personnel/ technology)?

*Would you say that COVID-19 has created/intensified any challenges, or presented any opportunities in relation to the 4IR in the marketing communications practice?*

### **Concluding questions**

We are reaching the end of the interview. Is there anything that I have missed that you feel is important to share on this topic?

## **CLOSING**

I appreciate your time that you have taken for this interview. I have learned a lot about your industry, your experiences and your challenges.

May I contact you again should I need to clarify/ confirm any of your responses?

Thanks again for your time. This marks the end of this interview.