Leadership in Digitalisation

Employees’ Perception of Effective Leadership in Digitalisation

MASTER OF SCIENCE THESIS WITHIN: Business Administration
PROGRAMME OF STUDY: Managing in a Global Context
NUMBER OF CREDITS: 30
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JÖNKÖPING: May 2018
Abstract
It is widely recognised that digitalisation has a significant impact on the organisational environment, triggering challenges on all levels of organisations irrespective of the industry. Despite the fact that digitalisation also brings forth opportunities, ultimately, companies are required to transform their businesses to stay competitive. Although leadership plays a crucial role in this digital transformation process, there is only little research on the link between leadership theory and digitalisation as well as a lack of understanding of what effective leaders in the digital age should encompass. Hence, the purpose of this paper is to add to the discussion of effective leadership in the digital age by investigating employees’ perception of leadership. Therefore, we conduct a qualitative study with twelve semi-structured interviews. Following an abductive research approach, we interpret the empirical findings with the prior established theoretical framework and further literature to fulfil the purpose of research. The study reveals that effective leadership in digitalisation as perceived by employees consists of an interplay between seven leadership skills and respective leadership behaviours that are also partly reflected in specific leadership styles.
Acknowledgement

Having dedicated endless hours of reading and writing, experienced moments of joy and frustration, sweat and tears as well as fruitful and misleading discussions, we are now proud to present our Master Thesis as the last milestone of two exciting years at JIBS. We would like to take this opportunity to thank everyone, who supported us throughout the process of writing this thesis.

We would like to express our gratitude to our supervisor Daniel Pittino for his support, both morally and as an expert in the field of leadership. We always appreciated his open ear for our concerns and endeavours to guide us in the right direction. We would also like to thank for the additional support from several teachers at JIBS. For us, also the discussions and feedback in our seminar groups and from our fellow students contributed significantly to the quality of our thesis. Thus, a special thank you also goes to our friends and family, who supported us with critical feedback and encouraging words. Moreover, we would like to thank our respondents, who participated in our interviews. By sharing their insights and experiences us, we could increase the value of our thesis tremendously. Without them, our thesis would not have been possible. We are lucky that with their help, our paper can now serve as an impetus for both theory and practitioners alike.

I, Marion Lange, would like to express my warmest thanks to my thesis partner Valerie for her unique working attitude, dedication and emotional support. I feel that we have completed each other very well and I am happy having spent so much time together, our close friendship only became stronger. Also I, Valerie Böck, would like to express gratitude to my thesis partner Marion as without her, writing this thesis would indeed not have been possible. We completed and supported each other in any way possible. Regarding the fact that we could spend another half a year together, I would even consider writing another master thesis.

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Jönköping International Business School
May 2018
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Abbreviations

ICT ..........................Information and Communications Technology
IT ..................................Information Technology
SME .............................Small and Medium Enterprise
1 Introduction

The first chapter of this paper introduces the topic of the research by providing background information. Thereby, the relevance of our study is highlighted, which hence, reasons the topic being discussed. The chapter concludes with defining the purpose of our research and the formulation of the research questions.

1.1 Background

The era of Information and Communications Technology (ICT) started off with the emergence of the first personal computers in the 1970s, followed by e-mail and the internet in the late 1980s and early 1990s (Berman & Marshal, 2014; Palfrey & Gasser, 2008). Ever since, ICT has developed and matured in a way that in today’s digital age, technological change emerges more profound and at a much faster pace than anything before (Berman & Marshal, 2014; Fitzgerald, Kruschwitz, Bonnet, & Welch, 2013; Kohnke, 2017). Thereby, the most common new technologies are cloud computing, big data and analytics, and intelligent autonomous systems through machine learning, which are influencing businesses of almost all industries at all levels (Carcary, Doherty, & Conway, 2016; Fichman, Dos Santos, & Zheng, 2014; Fitzgerald et al., 2013; Wade & Marchand, 2014).

Businesses operating today are facing complex changes that are ongoing, disruptive, emergent, and cannot be foreseen (Alavi & Gill, 2017). Digitalisation can be regarded as an example for such changes that are affecting whole organisations (Boggis, Dannenhauer, & Trafford, 2017; Bolden & O’Regan, 2016; Bonnet & Nandan, 2011; Oakland & Tanner, 2007). Digital transformation can be defined as the actual change process resulting from digitalisation achieving significant business improvements through the application of new digital technologies (Fitzgerald et al., 2013; Wade & Marchand, 2014; Westerman, Bonnet, & McAfee, 2014). Parviainen, Tihinen, Kääriäinen, and Teppola (2017) argue that adopting “digital technologies in an organisation or in the operation environment of the organisation” (p. 63) leads to changes on the process, organisation, business domain, and society level. New technologies enable
companies to cut costs and get more connected and productive than ever before. Some benefits of digitalisation include precise forecasts and real-time reports that allow quick decision making, enhancing customer offerings and experiences as well as creating new organisational structures and business models (Fitzgerald et al., 2013; Parviainen et al., 2017; Stolterman & Fors, 2004; Westerman et al., 2014).

However, digitalisation and the use of digital technologies also have disruptive effects on both organisations as well as society (Bolden & O'Regan, 2016; Carcary et al., 2016; Wade & Marchand, 2014). Fitzgerald et al. (2013) underline that even companies which in the past could leverage technology in effective way, are nowadays challenged by new technologies, as they demand a different set of skills and mindset than previous transformative technologies. Several authors (Kohnke, 2017; McAfee & Welch, 2013; Westerman et al., 2014) have thereby emphasised the crucial role of leadership as it sets the baseline for any business to successfully operate in a digitalised environment, for instance by recognising the opportunities of digitalisation, motivating people as well as setting and communicating strategic visions. In this regard, there is a universal consensus in the literature that specific leadership capabilities are gaining importance (Bennis, 2013; Kohnke, 2017; Wang, 2017; Westerman et al., 2014). Moreover, rapid technological change requires leadership to be more flexible and adaptable, which has led to an increased interest in adaptive leadership being discussed in leadership theory (Northouse, 2016; Yukl & Mahsud, 2010). Adaptive leaders are characterised by supporting others to change, and quick adaption to the changing environment organisations are operating in (Heifetz, Grashow, & Linsky, 2009; Northouse, 2016). Also, Alavi and Gill (2017) have recently discussed authentic leadership as adequate for leading complex organisational change due to the leader’s ability to engage followers as change agents in the process and positively influencing their commitment and readiness to change. In general, the critical role of leadership in the context of change has been underlined by dominant scholars such as Kotter (1996) and Oakland and Tanner (2007) by arguing that leaders are responsible for creating a sense of urgency, creating a vision, and communicating change.
1.2 Problem Discussion

Technological change has long been seen as a trigger for organisational change according to scholars (Kotter, 1996; Oakland & Tanner, 2007) and nowadays, organisations of all industries are affected by the developments of new technologies (Bonnet & Nandan, 2011). Scholars agree that digitalisation brings forth complex changes on all levels of the organisation (Bennis, 2013; Bonnet & Nandan, 2011; Fitzgerald et al., 2013; Kohnke, 2017). Therefore, effective leadership takes on a crucial role in coping with this complexity and leading the enterprise through the transformative effects of digitalisation (Bonnet & Nandan, 2011; Fitzgerald et al., 2013; McAfee & Welch, 2013). Leadership in organisational change has put forth specific leadership styles to cope with the challenges arising in today’s business environment (Alavi & Gill, 2017; Avolio & Gardner, 2005; Copeland, 2014). The concepts of both authentic and adaptive leadership have been discussed as emerging leadership approaches in the 21st century and adequate leadership styles for leading in today’s business world that is affected by complex changes (Alavi & Gill, 2017, Bolden & O’Regan, 2016; Boggis et al., 2017; Fitzgerald et al., 2013; Northhouse, 2016; Wade & Marchand, 2014).

However, a clear link between leadership theory and digitalisation regarding effective leadership for facing complex challenges has barely been established (Bennis, 2013; Wang, 2017). Moreover, with regards to digitalisation and its disruptive character on businesses and society, empirical research has primarily been conducted from the leaders’ perspective but has so far not considered the perception of employees. However, scholars argue that followers’ perceptions can also be an important indicator of leadership effectiveness (Van Quaquebeke, Van Knippenberg, & Brodbeck, 2011; Wiley, 2010; Yukl, 2010). This implies that the topic of leading in the digital age has not yet been examined from a holistic view (Bennis, 2013; Bolden & O’Regan, 2016; Bonnet & Nandan, 2011; Bughin, Holley, & Mellbye, 2015; Fitzgerald et al., 2013; Kohnke, 2017).
1.3 Purpose of the Research

Hence, the purpose of our thesis is to investigate how leadership in digitalisation is perceived by employees as being effective.

The following research questions were formulated to give evidence related to the purpose of our research.

Q1: How does digitalisation affect the organisational environment from employees' perspectives?
Q2: How is the general concept of leadership affected by digitalisation from employees' perspectives?
Q3: Which leadership skills are perceived as necessary by employees in times of digitalisation?

To explicitly investigate leadership effectiveness in times of digitalisation from employees' perspectives is highly interesting, as prior conducted studies have already attempted to assess leadership effectiveness (further discussed in Chapter 2.2.2). Consequently, this thesis provides a relevant contribution to existing research in this field. Moreover, our thesis aims to supply practical advice for companies on how leadership is perceived as being effective in today’s digitalised business environment.
2 Frame of Reference

The purpose of the following chapter is to outline the theoretical background of digitalisation and leadership. Thereby, existing theories and relevant literature are discussed to build the basis for our empirical research.

2.1 Digitalisation

2.1.1 Definition

In literature, the terms ‘digitisation’, ‘digitalisation’ and ‘digital transformation’ are frequently used interchangeably. Brennen and Kreiss (2014) indicate that ‘digitisation’ can be referred to as “the specific process of converting analogue data streams into digital bits” (Digitalisation section, paragraph 1) and define ‘digitalisation’ as “the way, in which many domains of social life are restructured around digital communication and media infrastructures” (paragraph 4). Henriette, Feki, & Boughzala (2015) use the terms ‘digitalisation’ and ‘digital transformation’ simultaneously, referring to a business model that is driven by “changes that the digital technology causes or influences in all aspects of human life” (Stolterman & Fors, 2004, p. 689) being “implemented through digitisation” (Henriette et al., 2015, p. 432). Bounfour (2016) proposes that ‘digital transformation’ has no clear definition as of yet and focuses on the transformational nature and impact of digital technology in companies. Wade and Marchand (2014) refer to ‘digital transformation’ as a form of organisational change, whereby digital technologies are used to improve performance.

Other scholars associate the term ‘digital transformation’ with the actual change process resulting from digitalisation in order to achieve significant business improvements through applying new digital technologies, such as analytics, big data or Internet of Things (Carcary et al., 2016; Fitzgerald et al., 2013; Wade & Marchand, 2014; Westerman et al., 2014). This is in line with the theory of organisational change (Kotter, 1996; Oakland & Tanner, 2007) wherein technology is seen as a trigger for organisational change. It is agreed upon in literature that by using digital technologies, digital transformation carries the significant characteristic of being disruptive in its effects (Bolden & O'Regan,
2016; Carcary et al., 2016; Wade & Marchand, 2014). Thus, the digital age poses a major challenge for enterprises in managing the changes coming alongside digitalisation (Bonnet & Nandan, 2011).

For the clarity of this thesis, we will use ‘digitalisation’ as an umbrella term for businesses applying new technologies to improve business performance and ‘digital transformation’ when referring to the actual change process. We understand digital technologies as a combination of connectivity, computing, information, and communication technologies (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). The subsequent chapter will outline the transformative effects of digitalisation and its impacts on businesses.

2.1.2 Organisational Implications of Digitalisation

When scanning through literature it becomes apparent that researchers set different foci and analyse digitalisation from different perspectives (Henriette et al., 2015), for instance by focusing on the technological innovations itself (Dremel, Herterich, Wulf, Waizmann, & Brenner, 2017; Loebbecke & Picot, 2017) or specific industries or sectors (Choi & Burnes, 2017; Ghemawat, 2017). Nevertheless, there seems to be consensus in academic literature within the field of business and management about the fact that digitalisation nowadays impacts the internal business environment in a disruptive manner (Bennis, 2017; Boggis et al., 2017; Bolden & O’Regan, 2016; Bounfour, 2016; Fitzgerald et al., 2013; Gimpel & Röglinger, 2015; Kohnke, 2017; Lohrmann, 2017; Wade & Marchand, 2014) and that ultimately, change is at the core of digitalisation (Henriette et al., 2015; Kohnke, 2017; Parviainen et al., 2017; Wade & Marchand, 2014).

In order to emphasise the importance of this phenomenon, the disruptive character of digitalisation and its impacts for the organisations are described in the following. Due to the wide scope and pervasive challenges of digitalisation for businesses (Matt, Hess, & Benlian, 2015), we set the focus on recurring themes and topics in literature.
(1) Several scholars (Bonnet & Nandan, 2011; Bounfour, 2016; Fitzgerald et al., 2013; Wade & Marchand, 2014) claim that digitalisation has a ubiquitous presence in today’s business environment as all industries and sectors will ultimately be affected by digitalisation. Some might be more disrupted than others as this also depends on products, markets, and operations (Bonnet & Nandan, 2011). However, through the transformation of businesses, “digital will just become the ‘new normal’” (Wade & Marchand, 2014, paragraph 14) and this “digital reality” will ultimately touch all industry segments (Bonnet & Nandan, 2011).

(2) Digitalisation enables businesses to create new value in various areas. In a simplified way, the benefits of digitalisation can be classified into enhanced customer experience, operational improvements, and new business models (Bonnet & Nandan, 2011; Fitzgerald et al., 2013). Communication with customers is transforming into new forms of interaction and information exchange (Bharadwaj et al., 2013; Fitzgerald et al., 2013). Also, consumer insights can be gained through tracking or other analytical tools, which can improve customer experience (Bonnet & Nandan, 2011). Berman and Marshall (2014) characterise this transformative effect of new digital technologies as a paradigm shift from customer-centricity to an everyone-to-everyone economy, where consumers and companies communicate and collaborate alongside the whole value chain through hyper-connectedness. Furthermore, digitalisation allows for operational improvements such as cost and time reductions or improved working conditions within the organisation. For instance, new digital channels or digital tools can foster collaboration among employees or leverage productivity (Bonnet & Nandan, 2011; McAfee & Welch, 2013). Moreover, Fichman et al. (2014) define the innovations in digital business models “as a significantly new way of creating and capturing business value that is embodied in or enabled by IT” (p. 335). Physical products can be transformed into or brought together by digital products and features, or services are extended onto new digital platforms, which then allow new business value to be created (Bonnet & Nandan, 2011; Fitzgerald et al., 2013; Matt et al., 2015).
(3) With emerging digital technologies, the speed of change is accelerating at a faster pace, affecting companies in the way they do business as well as regarding the adoption of digital technologies by various stakeholders (Bharadwaj et al., 2013; Bonnet & Nandan, 2011; Kohnke, 2017). Digital innovations are evolving at “a breath-taking speed” (Bolden & O'Regan, 2016, p. 439), which increases the complexity of digitalisation. Especially for traditional companies, digitalisation is associated with a process that is continuously evolving and needs continual adjustment (Carcary et al., 2016). Traditional companies need to be more open to risks and follow the speed of new competitors, for example when entering the digital space of product launches (Bharadwaj et al., 2013; Kane, Palmer, Nguyen Phillips, Kiron, & Buckley, 2015).

(4) Several authors (Bharadwaj et al., 2013; Carcary et al., 2016; El Sawy, Kræmmergaard, Amsinck, & Vinther, 2016; Fitzgerald et al., 2013; Kane et al., 2015; Matt et al., 2015) highlight the importance of including digitalisation in the business strategy. Usually, the business strategy directs the IT (Information Technology) strategy; however, scholars suggest incorporating a digital business strategy, which then resembles “a fusion between IT strategy and business strategy” (Bharadwaj et al., 2013, p. 471). According to Kane et al. (2015), companies with a “clear and coherent digital strategy” (section 1, paragraph 3) are called digitally mature companies. Matt et al. (2015) define the aim of a digital transformation strategy as coordinating and prioritising the far-reaching challenges coming along with digitalisation. Thus, a digital strategy helps companies to transform when integrating digital technologies and on how to operate afterwards. Even though research has already been conducted in this area, specific guidelines are still missing on how firms should formulate and implement as well as evaluate a digital transformation strategy (Matt et al., 2015).

(5) The transformative effects of digitalisation on both companies and people are often emphasised (Bonnet & Nandan, 2011; Gimpel & Röglinger, 2015; Kohnke, 2017). Besides changing organisational operations, digitalisation brings fundamental changes for employees alike (Bonnet & Nandan, 2011). Authors like Gimpel and Röglinger (2015) highlight that through the increased penetration of
digitalisation, the connection to and behaviour of individuals are changing. Kohnke (2017) further claims that the focus of transforming businesses lies more on technologies themselves and companies tend to underestimate the influence digitalisation has on the people dimension. This results in the need to align people with organisational structures, processes, and cultures (Bonnet & Nandan, 2011). The disruptive character of digitalisation shows that although benefits for businesses are manifold, so are the challenges arising with it (Bolden & O'Regan, 2016; Bonnet & Nandan, 2011; Fitzgerald et al., 2013; Matt et al., 2015; Wade & Marchand, 2014). The complexity that comes with digitalisation can pose difficulties for organisations to successfully operate in the digital age. Lack of urgency for digital transformation as well as insufficient internal leadership for digital projects are the most common obstacles according to several studies (Bughin et al., 2015; Fitzgerald et al., 2013).

Many authors highlight the importance of organisational capabilities, adjustment skills, competencies, and especially the role of leadership when aiming to be successful in the digital age (Bennis, 2013; Bolden & O'Regan, 2016; Bughin et al., 2015; Carcary et al., 2016; Fitzgerald et al., 2013; Kohnke, 2017; Lohrmann, 2017; Wade & Marchand, 2014; Westerman et al., 2014). We will therefore, further discuss the importance of leadership in the digital age in the following chapters.

2.2 Leadership

2.2.1 Overview of Leadership Theory

With its long history, leadership theory has evolved over decades by aiming to find new definitions, concepts, and theories about what leadership is (Grint, 2010; Kotter, 1996; Northouse, 2016). Although leadership has been viewed and conceptualised from various perspectives and viewpoints such as from a skill, position or personality perspective, or as being a process, an act or a behaviour (DeRue, 2011; Grint, 2010; Northouse, 2016), Northouse (2016) has presented four components essential to the concept of leadership. These components are the following (p. 6): (1) Leadership is a process, (2) leadership involves influence, (3) leadership occurs in groups, and (4) leadership involves common goals. Thus,
leadership has been identified as “a process, whereby an individual influences a group of individuals to achieve a common goal” (p. 6). Similarly, leadership has been conceptualised by other academic scholars of leadership theory (Bass & Bass, 2009; House, Javidan, Hanges, & Dorfman, 2002; Yukl, 2010), proposing it as a socially influenced process that supports a group of people wanting to reach a common goal or purpose. However, leadership still lacks a standard definition and poses a complex, yet an incomplete concept that is influenced by various factors such as global influences or different generational perceptions (DeRue, 2011; Northouse, 2016). Recently, the dimensions of ethics and morality have been proposed to be considered of exemplary leaders (Copeland, 2014). Leadership styles such as servant, complex, contextual or shared leadership, as well as authentic, spiritual and adaptive leadership behaviour have been recognised by emerging leadership theory in the 21st century (Marion & Uhl-Bien, 2001; Northouse, 2016; Osborn, Hunt, & Jauch, 2002; Parolini, Patterson, & Winston, 2009; Pearce & Conger, 2003).

For the aim of our research, we adopt the definition of leadership established by Bass and Bass (2009), House et al. (2002) and Yukl (2010), viewing leadership as a socially influenced process, whereby a group of people is supported to achieve a group’s shared goal.

2.2.2 Leading in the Context of Change

2.2.2.1 Theoretical Perspectives

The complexity and challenges of organisational change, as well as the roles of involved employees, have recently been re-emphasised by scholars (Alavi & Gill, 2017). It is widely agreed upon that the success of change is significantly affected by the leader, whose responsibility it is to provide direction, foster change throughout the company and to ensure that change is performed ultimately (Beer & Nohria, 2000; Higgs, 2003; Higgs & Rowland, 2001; Kotter, 1996). Nevertheless, not only the leader’s role is essential, but also the roles of everyone involved in the organisational change process, as the act of performing actual change is carried out from below (Beer & Nohria, 2000; Oakland & Tanner, 2007). The applicability of certain leadership behaviours in different change contexts has
thus been researched (Higgs & Rowland, 2005). Thereby, it was concluded that while a leader-centric behaviour does not support success, a more facilitating and enabling behaviour displayed by leaders is more likely to support the success of the change process (Higgs, 2003; Higgs & Rowland, 2001). Two emerging forms of leadership behaviours which have been set in the context of effectively leading through complex change are authentic and adaptive leadership. These will be further discussed in the subsequent chapters.

2.2.2.2 Authentic Leadership

According to Northouse (2016), authentic leadership is among the leadership styles which have just recently caught the attention of researchers, since it is argued to be critical for challenges faced during the 21st century (Avolio & Gardner, 2005; Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Copeland, 2014; Gardner, Avolio, Luthans, May, & Walumbwa, 2005). Prior research such as Bass and Steidlmeier (1999) and Howell and Avolio (1992), have identified authentic leadership within the concept of transformational leadership without fully developing and discussing its scope (Northouse, 2016). Especially after occurrences such as 9/11 or the massive breakdown in the financial sector, people have been demanding for a trustworthy and honest leader (Northouse, 2016).

Despite the multiple definitions of authentic leadership in academic literature, common ground can be found in the concept of “authenticity” as being the main attribute of authentic leaders. Authenticity thereby can be described as the “unobstructed operations of one’s true, or core, self in one’s daily enterprise” (Kernis, 2003, p. 1) or as “owning one’s personal experiences including one’s thoughts, emotions, needs, desires or beliefs and acting in accord with the true self” (Harter, 2002 cited in Luthans & Avolio, 2003, p. 242). A well-known interpretation of authentic leadership by Luthans and Avolio (2003) is built upon the latter definition of authenticity, namely by describing it as a “process that draws from both positive psychological capacities and highly developed organizational context” (p. 243). This results in greater self-awareness as well as the positive self-regulated behaviour of leaders and associates alike. Authentic
leaders are described as individuals, who are conscious about their way of behaving and thinking and are perceived based on the values, strengths and, expertise of others (Avolio et al., 2004). Thus, authentic leaders are proposed as an example of true genuine leaders, who are led by conviction and personal experiences (Shamir & Eilam, 2005). Regarding this, an inference can be drawn to Avolio and Gardner (2005), who do not only view authenticity as a stable trait but also as something that can be developed over time and triggered by meaningful events in one’s personal and work life. George (2003) and Shamir and Eilam (2005) further characterise authentic leaders by their high level of self-discipline and consistency, which allows them to move ahead, especially in challenging times (Northouse, 2016).

Moreover, they are differentiated from less or inauthentic leaders based on the degree they hold onto their intrinsic values, which they in effect, are sharing and communicating with others (Avolio & Walumbwa, 2014; Shamir & Eilam, 2005). Due to mutual disclosure, the notions of trust and closeness between leader and follower are created, which positively impacts the leader-follower relationship, understanding, and productivity (Northouse, 2016). Besides, authentic leaders are regarded to be able to achieve noticeable differences in organisations by, for instance, their ability to build relationships, create optimism and hope. Also, adaptive leaders are capable of fostering relationships and they are highly trusted by their followers (Avolio et al., 2004; Avolio & Gardner, 2005). This can be supported by George (2003), who states that authentic leaders can be associated with the following five dimensions, namely: (1) Passionately pursuing a purpose, (2) incorporating solid values, (3) leading with emotions, (4) building long-lasting relationships, and (5) displaying high level of self-discipline. The outlined capacities that aim to create optimism and hope among others have been linked with positive attitudes (Larson & Luthans, 2006) and performance (Luthans & Avolio, 2003; Luthans, Avolio, Walumbwa, & Li, 2005) amongst their followers. Encouragement of followers for the achievement of differences and solicitation of others’ viewpoints before decision-making are further remarkable characteristics of this leadership style (Avolio & Walumbwa, 2014; George 2003).
Although some scholars (Cooper, Scandura, & Schriesheim, 2005; Sparrowe, 2005) outline their concern regarding Luthans’ and Avolio’s (2003) definition on authentic leadership, agreement is found on four factors covering the principles of authentic leadership, namely (1) balanced processing, (2) internalised moral perspective, (3) relational transparency, and (4) self-awareness. Genuineness, as displayed by authentic leaders, seems to build the basis for all positive leadership forms (Avolio et al., 2004). Thus, some researchers (Avolio & Gardner, 2005; Luthans & Avolio, 2003) have taken the position that for example transformational or charismatic leadership are incorporated by authentic leaders. Also, the concept of authentic followership is of importance, since the quality and level of authenticity is detected by followers rather than by the leaders themselves (Marques, Dhiman, & Biberman, 2011). The relevance of authentic followership is further emphasised by other scholars (Gardner et al., 2005; George, 2003; Shamir & Eilam, 2005), who are stating that authentic leadership cannot evolve without authentic followers and that the authenticity of followers is as equally important as the leaders’ authenticity (Gardner, Cogliser, Davis, & Dickens, 2011). However, it is highlighted that authentic followership has not yet been extensively investigated by empirical studies (Gardner et al., 2011).

2.2.2.3 Adaptive Leadership

The concept of adaptive leadership was first introduced by Heifetz (1994) and Heifetz and Sinder (1988) with the intention of creating a new approach to leadership. Instead of solving others’ problems or challenging situations, adaptive leaders encourage followers to do so by themselves. Adaptive leadership style has further been used to elaborate on how leaders promote change at multiple levels, such as the organisational, societal or individual level (Northouse, 2016). Although current findings on adaptive leadership are primarily based on observation and anecdotal data, the amount of research explicitly dedicated to this type of leadership behaviour is argued to be quite limited (Northouse, 2016; Yukl & Mahsud, 2010). Thus, literature is seen as not having been fully developed (Doyle, 2017). However, scholars’ attention to adaptive leadership has been increasing due to the recognition of adaptive leadership as favourable for executives operating in times where the pace of change is accelerating (Yukl &
Mentioned changes that demand a leader to be more flexible and adaptive include more diverse workforce, globalisation, changing of values, new forms of social networks and rapid technological change (Burke & Cooper, 2004). Heifetz (2004) further associates adaptive leaders with successful organisational outcomes, as such leaders are capable of leading through change and encouraging employees to generate solutions. According to dominating scholars such as Heifetz (1994) and Heifetz and Sinder (1988), an adaptable leader seeks to foster people’s willingness to face change and thereby provides them with space and possibilities necessary to cope with changes in attitudes, values, and behaviours they are likely to encounter. Moreover, adaptive leadership can be characterised by leaders as being involved in actions that facilitate, motivate, focus and arrange others’ mindfulness (Heifetz, 1994). Hence, adaptive leaders are defined as those who “prepare and encourage people to deal with change” (Northouse, 2016, p. 257) or as “the practice of mobilizing people to tackle through challenges and thrive” (Heifetz et al., 2009, p. 14). Consequently, supporting others to change, taking on new behaviours and developing further are regarded as their ultimate goal (Heifetz, 1994). The already mentioned lack of research to validate the claims on adaptive leadership and the need to conceptualise its concept are criticism of this type of leadership. However, Northouse (2016) concludes that adaptive leadership displays some significant strengths, namely, (1) adaptive leadership is a process whereby leaders and followers are engaging, (2) followers inherit a vital role and (3) coping with changing environments is encouraged by the leaders. Moreover, adaptive leaders have been associated with the following capabilities (Heifetz, 2004; Northouse, 2016): Strategic mindset, organisational knowledge, and interdependencies, the ability to control personal feelings, comfort with uncertain and ambiguous situations as well as communication and listening skills.

### 2.2.3 Views on Effective Leadership

The following chapter aims to present various perspectives on leadership effectiveness conceptualised through findings in the academic literature.

The concept of effective leadership represents a disputed field of research as definitions of leaders’ effectiveness differ from each other (Yukl, 2010). Hence,
leadership effectiveness is difficult to measure (Meindl, Ehrlich, & Dukerich, 1985; Yukl, 2010). According to Yukl (2010), the effectiveness of leaders has commonly been evaluated by the extent to which leadership has improved team or organisational performance or by how formulated goals have been achieved. Characteristics of effective leadership are perceived as “complex and multifaceted” (Riggio, Riggio Salinas, & Cole, 2003, p. 100). Setting a clear strategy, handling challenging situations, being inspiring, confident and charismatic, communicating the vision, having a high orientation towards goal achievement as well as strengthening trust and commitment can be named as recurring characteristics in the literature (Bryman, 2007; Wiley; 2010; Yukl, 2010).

Based on a conducted study by Higgs and Rowland (2005), the authors highlight competencies regarded to be effective for leadership in the context of change. Among those are the following (Higgs & Rowland, 2001): “creating case for change”, building commitment and engaging others in the whole process of change” (pp. 311-312).

However, these competencies cannot be universalised as the perspective on leadership is context-related (Senge, 1997). A prominent approach concerning effective leadership is taken by Goleman (2000) and Yukl (2010), who argue that effective leadership is context-dependent, proposing that some leadership behaviours can be more effective than others. Riggio and Reichard (2008) furthermore claim that a growing body in literature has been relating social skills such as communication and listening skills to effective leadership (Riggio et al., 2003). Based on the assumption of organisations displaying the feature of collectivism and interdependence, Meindl et al. (1985) state that effectiveness of an individual in the leadership role is hard to measure. This is supported by other scholars (Mintzberg, 2009) who are criticising the role of leadership in a way that it cannot only be linked to an individual’s behaviour but that it is also shared among others. Similar perspectives can be mentioned such as viewing leadership as being “shared” (Pearce & Conger, 2003), “collaborative” (Jameson, 2007) or “distributed” (Gronn, 2002). Consequently, an increased scholarly attention on followership, which can be related to “follower-centred leadership theory”, has
emerged, viewing followers as crucial for organisations’ success (Appelbaum et al., 2017; Howell & Shamir, 2005; Riggio, Chaleff, & Lipman-Blumen, 2008). Hence, followers’ attitudes and perceptions regarding leaders can be used as indicators of leadership effectiveness (Yukl, 2010). This is similarly perceived by Van Quaquebeke et al. (2011) who are stating that preferred perceptions of leadership by employees are setting the baseline for leaders’ effectiveness. More specifically and based on empirical findings via interviewing employees, the authors (Van Quaquebeke et al., 2011) suggest that the more a leader matches the employees’ ideal prototype of a leader, the more the leader is perceived as being effective and respected by employees.

The degree of employee satisfaction and commitment as well as trust, respect, and admiration for the leader have moreover been positively related to the effectiveness of leadership (Yukl, 2010). This can be supported by an empirical study having interviewed employees, which underlines the positive correlation between leadership behaviour and employees’ job satisfaction and commitment (Jaskyte, 2004). Such leadership behaviour that is positively affecting job satisfaction and commitment, is characterised by communicating and setting the vision, focus on common goals, high expectations on performance, giving individual support and stimulating intellect (Viator, 2001). In this regard, emotional intelligence is also argued to positively contribute to employee commitment and a positive work attitude and ultimately the perception of effective leadership (Carmeli, 2003; Dartey-Baah & Mekpor, 2017; Goleman, 2000; Maamari & Majdalani, 2017). According to Maamari and Majdalani (2017), the capacity of understanding, reasoning and evaluating feelings and emotions to ultimately manage oneself’s emotions and respond to others’ is described as emotional intelligence. Another study that has aimed to investigate employees’ perception of effective leadership was conducted by Collinson and Collinson (2009). However, it was set in the field of educational research. Thereby, it has been concluded that leaders, who are able to balance both strategic priorities and competing responsibilities, as well as ones who take different approaches according to the context, are likely to be effective leaders (Collinson & Collinson, 2009). Furthermore, it has been found that effective organisational leadership
positively impacts employee engagement (Wiley, 2010), which, as already mentioned, contributes to business success (Howell & Shamir, 2005; Riggio et al., 2008).

To conclude, the effectiveness of leadership so far has been reviewed from a theoretical as well as an empirical perspective. Although satisfaction and commitment of employees are often perceived to correlate with leadership effectiveness, those will not be in focus of the present paper. Rather, the empirical research aims to investigate which aspects of leadership employees perceive as being effective in times of a digitalised working environment.

### 2.2.4 Leadership in the Digital Age

Up to the current moment, leadership in the digital age has only received limited scholarly attention (Avolio & Walumbwa, 2014; Colbert, Yee, & George, 2016; Hesse, 2018). Nevertheless, a consensus amongst scholars about the importance of leadership in times of digitalisation can be found. It is widely agreed upon that digitalisation impacts businesses and leadership (Bennis, 2013; Bughin et al., 2015; Fitzgerald et al., 2013; Kohnke, 2017). For example, Bonnet and Nandan (2011) state that “digital transformation is about leadership” (p. 10).

When speaking of leading in the digital age, the term e-leadership has been established, which is defined as a socially influenced and digital technology-mediated process (Annunzio, 2001; Avolio, Kahai, & Dodge, 2000; Li, Liu, Belitski, Ghobadian, & O’Regan, 2016). E-leadership takes place in the virtual context, whereby a change in feelings, behaviours or attitudes can be achieved (Avolio et al., 2000; Li et al., 2016). However, this thesis focuses on leadership taking place in both the virtual and real world. Furthermore, Wilson III (2004) elaborates on “digital leadership”, which relates to leadership taking place in the main sectors of the knowledge society, i.e. computing, communication, content and multi-media, whereas “leading in the digital age” is a more inclusive conceptualisation that takes place in any type of sector or institution transitioning into a more knowledge-focused society (Wilson III, 2004).
Bennis (2013) and Wang (2017) state that leadership can either foster or hinder digital transformation and hence, is crucial for organisations to survive. Thereby, a connection can be drawn to research regarding leadership and organisational change. It is proposed that leaders in the digital age share similarities with leaders performing organisational change, whereas digitalisation, under the broad concept of technology, can be seen as a trigger of organisational change (Hearsum, 2015; Kotter, 1996; Oakland & Tanner, 2007; Wade & Marchand, 2014). However, as already outlined in Chapter 2.1, digitalisation has disruptive impacts on the company (Bolden & O’Regan, 2016; Carcary et al., 2016; Wade & Marchand, 2014). Digital transformation is “the ultimate challenge in change management because it affects not only industry structures and strategic positioning, but also all levels of an organization (every task, activity, process) as well as the extended supply chain” (Bonnet & Nandan, 2011, p. 10). Thus, it can be suggested that specific leadership capabilities for leaders operating in times of digitalisation are becoming more important (Bennis, 2013; Bonnet & Nandan, 2011; Carcary et al., 2016; Fitzgerald et al., 2013). Besides new technologies requiring a new set of skills and mindset within companies (Fitzgerald et al., 2013; McAfee & Welch, 2013), agreement in literature can be found in regard to certain capabilities that are striking for leadership to be effective and meeting the challenges arising through digital disruption (Bolden & O’Regan, 2016; Kane et al., 2015; Neubauer, Tarling, & Wade, 2017; Wang, 2017). Thereby, the most recurring leadership capabilities in the digital age are adaptability, technological understanding, risk-taking and willingness to fail, awareness of the internal and external environment, motivation, flexibility, and willingness to learn. An overview of all the capabilities and corresponding literature can be found in Appendix 1.

Besides the demand for specific skills for leadership in times of digitalisation, only little academic research has reviewed contemporary leadership styles in the context of leadership in the digital age. In fact, Wang (2017) is among the few academic scholars who attempts to propose a contemporary leadership style, such as authentic leadership as being adequate in times of uncertainty and leading in the digital age. The author suggests that although the basic understanding of leadership may remain unchanged, some new meanings do
evolve with the pace of changes alongside digitalisation. Wang (2017) concludes that further research must be conducted to validate his propositions.
3 Methodology

At the very beginning of this chapter, the research philosophy and the derived research approach are discussed. This is followed by the chosen research design, approach to data collection as well as data analysis. The chapter is concluded by presenting the underlying principles of research quality and ethics of our research paper.

3.1 Research Philosophy

In general, taking a philosophical stance on research is important as thereby, the viewpoint on how one perceives the world is exposed. Consequently, the philosophical perspective is of interest for our research and reasons the research strategy and method chosen. Thereby, the researcher’s way of perceiving and constructing the environment is influenced (Saunders, Lewis, & Thornhill, 2012).

As it has already been highlighted in previous chapters, our underlying research purpose was to investigate how leadership in digitalisation is perceived as effective by employees. Hence, we as researchers aimed to develop an understanding of “how humans view themselves and the world around them” (Robson, 2011, p. 151) by generating insights on effective aspects of leadership from employees’ points of view through social interaction with their leaders. Consequently, as we sought to make sense of social interaction between employees and leaders, an interpretative research philosophy was chosen over a positivist one. In contrast to an interpretivist philosophy whereby similarly to a relativist philosophy the reality is socially constructed, a positivist philosophy takes the viewpoint that only one single truth exists (Easterby-Smith, Thorpe, & Jackson, 2015). Choosing a research philosophy that stems from an interpretative point of view is suitable for this paper due to various reasons. Firstly, an interpretative approach was taken when trying to make sense of employees’ answers regarding the leadership approach they experience in a digitalised working environment. Secondly, employees’ perception and answers regarding leadership were interpreted in a way that we as researchers could create an understanding of how leadership can be seen effectively in
digitalisation. Moreover, we as researchers took an interpretative stance when evaluating whether employees observed leadership perception fits to one of the prior discussed leadership styles and capabilities proposed as being effective in our theoretical part. Finally, it occurred that employees’ answers were interpreted in a way that they could be linked to leadership aspects of another leadership style, which was not outlined in our frame of reference.

Consequently, the epistemological view of interpretivism was applied. Epistemology deals with the question of “what constitutes acceptable knowledge” (Saunders et al., 2012, p. 140) and researchers are, even if unintentionally, influencing the process of research based on their assumption of epistemology (Klenke, 2016). This impacted the way we as researchers interpreted and understood employees’ answers and perception of leadership. Moreover, the interpretation of others’ social roles was directed by our own understanding of meaning and interpretation (Klenke, 2016; Saunders et al., 2012), suggesting that our own knowledge and presumptions influenced the comprehension of effective aspect of leadership. Hence, the underlying assumption of the interpretivist view is that generated knowledge is not totally objective, but rather seeks to build meaning derived from qualitative data (Klenke, 2016; Willis, 2007).

Ontology deals with how researchers “view the reality of nature or being” (Saunders et al., 2012, p. 140). The present thesis dealt with the social phenomena, here leadership, being constructed based on social actors’ perceptions and actions, i.e., employees’ perception of leadership, which would lead to a subjectivist ontology (Saunders et al., 2012; Willis, 2007). We as researchers had to understand that the conceptualisation of effective aspects of leadership most likely differed among employees based on their own subjective perspective, which had to be taken into account when interpreting the data. Also, from a researchers’ point of view, our own prior experiences and assumptions of the concept of leadership influenced the data analysis. However, the aim of our research was to investigate employees’ perception of effective leadership in times of digitalisation. Digitalisation is seen as the phenomenon that influences the context of employees’ perception of effective leadership and thus, guided the
whole setting in which we conducted our research. Therefore, our underlying ontology could not be purely subjective. Instead, a critical realist ontological perspective guided this thesis, as this could “provide more detailed causal explanations of a given set of phenomena or events in terms of both the actors' interpretations and the structures and mechanisms that interact to produce the outcomes in question” (Wynn Jr & Williams, 2012, p. 788). In our thesis, this compilation of phenomena as described by Wynn Jr and Williams (2012) could be referred to as leadership in times of digitalisation. Also, for critical realists, phenomena cannot only be seen at the level of experiences but also at a level that is not easily observable (Kempster & Parry, 2011). Leadership can be named as such an example, as it only becomes apparent in the interaction between the employees and their executives. Hence, this fitted very well to our research has we had to conceptualise perceived leadership effectiveness in digitalisation by means of interpreting and making sense of our interviewees’ provided insights. Moreover, critical realists take the viewpoint that although one reality exists, it can be differently interpreted (Kempster & Parry, 2011). As already mentioned, if we take leadership, this presents the reality, which however is differently perceived by the employees. Furthermore, we choose critical realism as this allows researchers to be flexible in the data interpretation (Kempster & Parry, 2011), which in return fitted to our interpretative research philosophy and epistemology.

3.2 Research Approach

Concerning the research approach, it can be stated that our formulated research purpose displayed features which could be associated with an inductive research approach, namely by having theory building at the core and being the preferred outcome of data analysis (Saunders et al., 2012). Further, by taking an inductive approach, the researcher seeks to “get a feel of what is going on and [...] understand the nature of the problem” (p. 146) and is able to get an understanding of how humans make sense of their social world (Saunders et al., 2012).
Although both an abductive and inductive approach aim to generate new insights, our study predominantly leaned towards an abductive research approach. Understanding an “existing phenomena by examining these from a new perspective” (Kovács & Spens, 2005, p. 138) is in focus of an abductive research approach. This approach fitted well with our research purpose, wherein effective leadership represented the already existing phenomenon. It is researched from a new perspective, namely from the viewpoint of employees and set in the context of digitalisation. Moreover, the abductive approach features a very unique research process (Kovács & Spens, 2005) that shares similarities with the way our paper was built up. By taking an abductive approach, pre-perceptions and some theoretical frameworks are commonly established before the empirical research is conducted (Dubois & Gradde, 2002) and, data collection and theory building are done simultaneously (Taylor, Fisher, & Dufresne, 2002). This allows the researcher to go “back and forth between empirical observation and theory” (Dubois & Gradde, 2002, p. 555). These characteristics were accurate for our research in two respects. Firstly, a theoretical framework including for instance conceptualisations of leadership in the context of change or digitalisation was built prior to the collection of empirical data. Secondly, in case some unexpected findings were derived within the interpretation of our empirical data, additional literature was consulted to explain and discuss these unexpected outcomes. Consequently, our prior theoretical concepts were revised and expanded by additional theory.

3.3 Research Strategy

Based on our chosen research philosophy whereby we sought to unfold the meaning of leadership being effective in digitalisation, it became clear that we would have to pursue a qualitative research strategy. This further was supported by comparing assumptions, purpose, and approach of both quantitative and qualitative research. Qualitative research underlies the assumption that reality is not objective but socially constructed, the insider’s view is in focus, and the purpose is to contextualise and interpret as well as to understand participants’ voices (Klenke, 2016; Saunders et al., 2012). Thereby, making sense of the socially constructed and subjective meanings about a studied phenomenon lies
at the core of a qualitative research, which is consistent with our interpretive research philosophy already explained in Chapter 3.1. (Saunders et al., 2012). This enabled us to generate rich and context-sensitive descriptions, which did not only allow us to make a significant contribution to today’s emerging leadership research (Klenke, 2016), but also was in line with the rather explorative nature of our qualitative study that is outlined in the following (Easterby-Smith et al., 2015). By using a qualitative research method, we believe to add value to leadership theory on effective leadership behaviour in digitalisation by the generation of insights. However, the full scope of digitalisation and effective leadership might not have been fully explored through qualitative measures due to the complexity of both concepts.

3.4 Research Design

Considering the nature of our research design, an exploratory study helped us to gain insights and to clarify the understanding of the phenomenon being studied. Being flexible and able to adapt to changes, for instance through new insights or data acquired during the empirical research, are the advantages of an exploratory study (Saunders et al., 2012). Having outlined general leadership theory and focused on authentic and adaptive leadership in our frame of reference, an exploratory study allowed us as researchers to be able to change our research direction. Due to the disruptive character of digitalisation new insights could be generated through our conducted research when “interviewing ‘experts’ in the subject” (Saunders et al., 2012, p. 171). Thus, previously outlined emerging leadership styles and capabilities in times of digitalisation were adapted with additional literature.

3.5 Data Collection

3.5.1 Sampling Strategy

The development of the sampling strategy is the first step in preparing for the collection of data (Easterby-Smith et al., 2015). In qualitative research, data represents “pieces of information [which] is gathered in a non-numeric form” (Easterby-Smith et al., 2015, p. 129) and is created through interaction and interpretation. In this study, we based our empirical research on primary data collected with a theory-guided sampling by using semi-structured interviews. In
the non-probability design of theory-guiding sampling (Easterby-Smith et al., 2015), the collection of data is guided by the developed theory (Schatzmann & Strauß, 1973). This follows the distinction to selective sampling, whereby the identification of the population precedes the process of data collection (Schatzmann & Strauss, 1973). Moreover, by following a theory-guiding sampling strategy, researchers seek to identify the most typical instances for the phenomenon being investigated (Easterby-Smith et al., 2015).

Consequently, as perceived leadership effectiveness in digitalisation is the underlying phenomenon of our research, our sample was as following: Employees, who (1) interact with the top management level and (2) work in different small and medium-sized enterprises (SMEs) which (3) are not “digitally born” but are experiencing change due to digitalisation. The choice to focus on SMEs was based on several reasons. SMEs account for about 99% of companies in the European Union, which suggested that they pose an important and interesting field of research (European Commission, 2018; Li et al., 2016). The decision to choose traditional SMEs operating in Germany and Austria was foremost based on the German and Austrian background of us researchers. SMEs underlying the definition of the European Commission have a headcount of less than 250 employees and a turnover of less than 50 million Euro per year (European Commission, 2018). As the SMEs in focus for this study were located in Germany and Austria, the definition of the European Commission was used (European Commission, 2018). The business environment of SMEs, especially those of traditional SMEs that are not “born-digital”, is being disrupted through digital technologies. According to literature (Gartner, 2016), such “born-digital” companies are referred to as “a generation of organizations founded after 1995, whose operating models and capabilities are based on exploiting internet-era information and digital technologies as a core competency” (paragraph 2). On the one hand, digitalisation offers opportunities to develop and add significant value. On the other hand, “failures of SMEs are frequent and are often thought to be because of management and leadership weakness” (Li et al., 2016). This was in line with other scholars (Arham, Boucher, & Muenjohn, 2013; Beaver, 2003; Ihua, 2009), stating that leadership is a crucial factor for small businesses. Therefore,
our emphasis was set on employees that directly interact with the top management level of SMEs and thus, experience leadership of top management closer than it might be the case in larger companies with more hierarchy and management levels in between.

3.5.2 Semi-structured Interviews

Qualitative interviews are “based on series of questions that follow a particular purpose” (Easterby-Smith et al., 2015, p. 134), where it is essential to ask purposeful questions and carefully listen to the interviewees’ answers. Thereby, reliable and valid data can be gathered that contribute to the understanding of the purpose of the research. As the purpose of the conducted study underlay an exploratory study, we made use of semi-structured interviews for data collection.

In general, this provided background information and important contextual material. With semi-structured interviews, key questions and themes were covered to collect a detailed and rich dataset that included interviewees’ opinions and attitudes towards a defined research purpose. However, the overall structure of our interview varied concerning wording, timing, and covered topics, as researchers are left with the freedom to decide on how they want to structure semi-structured interviews (Robson, 2011). Also, some questions were omitted or added depending on conversation development, which can be referred to the flexible design of such interviews (Saunders et al., 2012). For these kind of guided open interviews, a topic guide is commonly used by researchers as it serves as a guideline and helps to select important topics and themes that need to be covered during the interview. Despite serving as a framework, the interview guide, however, allowed some deviations being made when interesting discussions arose (Easterby-Smith et al., 2015). By formulating a topic guide, the purpose of the research was reconsidered.

Based on our phenomenon guided by theory, questions were formulated accordingly. Openly worded “how” and “why” questions about leadership, digitalisation and respective leadership skills and behaviour were posed. This gave the respondents room to thoroughly communicate their viewpoints. Although critics might argue that we were influencing the output of the questions
as their formulation was directed by our theoretical concepts and themes of interest, we are convinced of not having imposed our opinion and expectations on our interviewees. We as researchers reflected upon possible answers of the interviewees, ensuring that the questions were properly designed to answer the research purpose. Generally, the questions posed were clearly formulated, understandable as well as open-ended, as this gives respondents the opportunity to respond freely (Easterby-Smith et al., 2015). To increase the replicability of our study, the full topic guide can be found in Appendix 2.

### 3.5.3 Interview Conduction

As a starting point for our interview conduction, two pilot interviews were conducted to test the responses to the interview questions and see whether the asked questions produced a reasonable outcome. To build a basic understanding of digitalisation and assure that the investigated cases would be affected by it, we provided all interviewees with our definition of the phenomenon. This can be found in the topic guide in Appendix 2.

For the actual interviews, we contacted 17 employees that met the sampling criteria, whereby twelve employees were willing to share their experiences. This is perceived as a reasonable number of interviews when collecting data through semi-structured or in-depth interviews (Saunders et al., 2012). The advantage of choosing employees of different companies and industries was seen in being able to compare to what extent a common perception of effective leadership in the digitalised business environment is shared across sectors. Moreover, we sought to point out the wide scope of digitalisation, namely companies of all industries being affected. The initial contact and recruitment of interviewees mainly took place via professional networking sites (e.g., LinkedIn) and personal contacts. This can be justified by the fact that both sides, researchers as well as interviewees, then felt more comfortable with having a long conversation. Further, we assumed that this would enhance the interviewees' willingness to share their thoughts and to extensively elaborate on their opinion. All the interviews were conducted within a timeframe of five weeks and the duration of each interview varied between 40-75 minutes, which enabled us to gain valuable in-depth
insights into the topic. Although face-to-face interviews were our preferred means of conversation, seven interviews were alternatively conducted via internet-mediated applications such as Skype or FaceTime due to the separated locations of interviewers and interviewees. With oral consent of the interviewees, all the interviews were recorded, which facilitated the process of data analysis.

All the interviews were conducted in English even though our interviewees were non-native speakers. This allowed us to directly refer and interpret the empirical data, whereas translating from, for example, German to English, would have left us with some further room to interpret. Despite an interpretative view being taken, whereby interpreting and deriving meaning from data is essential, we wanted to avoid data being interpreted in the translation process. We claim that in case we would have had to translate, crucial nuances in data would have gotten lost. However, we were aware that bias potentially occurred as such that the interviewees might not have been able to express themselves in the same way as in their native language. Hence, we tried to reduce the risk of bias to occur by choosing interviewees that are fluent in English. Selecting interviewees that are proficient speakers of the English language led to the circumstance that our employees were between 20 and 35 years old. The rather young age of our interviewees can further be attributed to the fact that we have used our personal network. This, in turn, can be associated with bias as employees of this age group possibly had a different approach and perspective towards the organisational environment than older-aged employees. Nonetheless, we were convinced that overall, the described biases did not compromise the quality of our research.
During the process of interview conduction, the role of the interviewer, whose role was taken on by us as researchers, is important as they are guiding the interview process (Saunders et al., 2012). Other notions considered as helpful and important when conducting interviews were further taken into account. Interviewers should display strong listening skills and avoid their own opinions and beliefs to influence the conversations (Easterby-Smith et al., 2015). Also, especially in studies that show an interpretative character and aim to investigate meaning, the interview process may include bias (Easterby-Smith et al., 2015). The occurrence of biases, some of them already discussed in Chapter 3.5.3, are further elaborated in Chapter 3.8.2.

Moreover, we made use of ‘probing’ throughout the interview process. This is applied in cases where interviewers wish interviewees to further elaborate on a question or give a more personal response. Examples of probing can include
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phrases such as “What is your personal view on this?” or “Could you go over this again?” (Robson, 2011, p. 284). Furthermore, the interviewer can make use of the concepts of ‘laddering up’ or ‘laddering down’. The first relates to moving from general statements to the interviewee’s individual values, which is done by asking questions starting with ‘why’ (Easterby-Smith et al., 2015). By ‘laddering down’, we posed questions such as ‘Could you give an example for that?’ in order for the interviewed person to share personal examples and give illustrations. These interview techniques were applied in our empirical research and allowed us to elaborate further on questions and examples where it seemed fruitful for the research’s purpose.

3.6 Data Analysis

In consideration of our research approach, data was analysed while it was collected and thereby, a conceptual framework was developed. This can be referred to as grounded analysis, which should not be confused with grounded theory (Easterby-Smith et al., 2015; Saunders et al., 2012). From the process of both collecting and analysing data with a grounded approach, categories can emerge in grounded analysis, which are ‘grounded’ in empirical data and hence, enabled us to build a theory that is more open with regards to new discoveries (Easterby-Smith et al., 2015; Saunders et al., 2012). Moreover, grounded analysis tries to “understand the meaning of data fragments” (p. 191) and puts emphasis on the specific contexts they are created in. This is in line with our chosen abductive research approach, through which by analysing and understanding empirical data and comparing it with an established theoretical framework simultaneously, we took additional theoretical concepts at hand to adapt and expanded our previously established theory.

According to Easterby-Smith et al. (2015), grounded analysis usually consists of the seven steps of familiarising, reflecting, open coding, conceptualising, focused re-coding, linking, and re-evaluating, to frame and interpret qualitative data. Prior to the seven steps of grounded analysis followed by us researchers in the subsequent way, we firstly recorded and secondly transcribed the interviews. To familiarise ourselves with the content, we read through the interview material and
fostered discussions among ourselves. Thereafter, the transcripts were put into an excel sheet to facilitate the process of data analysis. Since we made use of an interview guide including several questions we perceived as relevant to discuss, the respondents’ statements were allocated to the different questions. Within the first step, open coding was performed, meaning the statements were simplified by putting them into one word or short sentences. This step was done separately for each of the twelve interviews. Hereafter, all codes of the individual interviews were compared to derive a common pattern and to consequently, allocate them to different categories such as technological understanding or openness. Thereafter, we followed the step of re-coding (2\textsuperscript{nd} grade coding) to assure that no important statement was omitted. In cases where the 1\textsuperscript{st} order codes could not be summarised any further, 1\textsuperscript{st} grade codes reflected 2\textsuperscript{nd} grade codes. Afterwards, we detected similarities among the various categories and linked them with each other. This step resulted in creating our final concepts and themes such as leadership skills in digitalisation, leadership behaviour in digitalisation or organisational implication of digitalisation. The themes and concepts were regarded as building the basis for our analysis and interpretation.
The following figure exemplifies an extract of the applied grounded analysis.

**Figure 1: Example of Data Analysis**

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>STATEMENTS</th>
<th>OPEN CODING / 2ND GRADE CODING</th>
<th>CATEGORIES</th>
<th>THEME</th>
</tr>
</thead>
</table>
| Which specific leadership skills or capabilities do you perceive as necessary in times of digitalisation? | "I guess openness is really important because you have to get away from the strict leadership ways and how a company should act, you have to be open to change fast due to the things that are changing fast outside."

|                                                                  | "He should be keen on technology and he should be open minded, he should have trust in his employees, he should appreciate his people and the work the people are doing and he should [...]"
|                                                                  | "Different skills, on the one hand technological understanding of course. Yeah it is, I’m pretty sure it’s the most important things because if you are not open, you are not willing you are not motivating."
|                                                                  | "Technical understanding of the leader would be good and the leader should be open to new ideas. He also should communicate the changes and [...]" |

During the whole process of data analysis, we aimed to foster discussions among ourselves to make sure that we were on the same level of understanding the content. Besides, the process of data analysis was followed as a team to increase the level of objectivity. Following those steps further enabled us to put the huge amount of empirical data collected into a comprehensive way. This helped us to better understand employees’ perception concerning the established phenomena “leadership” in the rather unexplored context of digitalisation. Moreover, this allowed us to compare the empirical results with the developed theoretical framework that was guided by our abductive research approach.

In chapter 4, the empirical findings are analysed. Unless stated otherwise, the presented findings are to be seen as collectively shared, meaning the findings represent the perception and opinion of all twelve respondents. The statement-related number indicates the interviewee, referred to in Table 1. To better illustrate how we developed our empirical data some extracts of our process of data analysis are provided. Visualising extracts of our analysis does not only help
readers to comprehend our way of research conduction but also supports the replicability of our study.

3.7 Research Ethics

Ethics in the context of academic research can be referred to behavioural standards that guide the conduction of the study with regards to the investigated subjects. Ethical concerns emerged when designing and planning the research, seeking access to organisations and to individuals, collecting, analysing, managing and reporting the data (Easterby-Smith et al., 2015; Klenke, 2016; Saunders et al., 2012). In general, considering the occurrence of ethical issues is an important aspect before the conduction of any research study (Easterby-Smith et al., 2015; Saunders et al., 2012). During the different stages of our research process, we followed key principles in research ethics, which are exemplified in the following.

When formulating and clarifying our research topic, we were convinced of having fulfilled the ethical principles of integrity and objectivity as researchers by being truthful, acting openly and avoiding dishonesty or misrepresentation of our findings. Also, we allowed no harm coming to our participants and that the dignity of our participants was not violated. This means that we avoided any deception of our research and confidentiality; privacy and anonymity was ensured right from the beginning and upheld during the whole research process. Therefore, no names, neither of participants nor of the companies they work for, no gender, position, and function in the company as well as concrete age are revealed in this paper. During the stage of designing our research and gaining access to organisations and individuals, we ensured to inform our interviewees about participation rights and the use of collected data. Participants also had the opportunity to ask questions at any point of time during the interview process and could take their time to ensure voluntary participation in our research. While collecting data from our semi-structured interviews, interview participants had the right of refusing to respond to any question asked and we avoided asking questions that were in any way demeaning or offensive. Especially within the field of leadership research, sensitive topics like leadership failures might have evoked
emotional responses from the interviewees, which would have had to be handled carefully in order to ensure the well-being of our participants. When processing and storing our qualitative data, we focussed on confidentiality of the data, meaning that we avoided negligent actions that could lead to unauthorised access to the collected data. In the stage of analysing and reporting the empirical findings, we maintained our objectivity through reporting them fully and accurately.

3.8 Research Quality

3.8.1 Reliability

Reliability or dependability is referred to whether the findings can be replicated, having the study conducted by another researcher, but with the same sampling and similar context (Easterby-Smith et al., 2015; Guba, 1981; Robson, 2011). It is argued that especially flexible research designs such as semi-structured interviews oftentimes display a lack of standardisation. Hence, reliability cannot be guaranteed to the same extent as in quantitative research, as identical circumstances are unlikely to be re-created in qualitative research designs (Robson, 2011; Saunders et al., 2012). However, we as researchers sought to create an environment and display a behaviour during our process of research whereby the reliability of our study was increased. This was done for instance by specifically explaining the underlying theoretical concepts and process of data analysis as well as providing an interview guide, to make other researchers able to conduct a similar study type. Furthermore, executing the whole process of the research as a team further increased the level of objectivity. This consequently contributed positively to the degree of the research being re-conducted in the same manner.

3.8.2 Confirmability and Bias

Research quality also is associated with the occurrence of bias, as the absence of bias in the process of study results in an increased confirmability (Easterby-Smith et al., 2015; Guba, 1981). Confirmability is associated with the research's degree of objectivity (Guba, 1981). In general, three types of bias can be differentiated, namely interviewer bias, interviewee bias and participation bias (Saunders et al., 2012), whereby the first and second mentioned raise the most
concern for us as researchers. Interviewer bias occurs when the interviewers' behaviour influences the respondents' answers or the way the interview is recorded. Hence, we as researchers sought to avoid our respondents' answers being influenced by our opinion. However, we were aware that in a flexible interview structure like in semi-structured interviews, interviewee bias sometimes naturally occurs (Saunders et al., 2012). This can be reasoned by the rather loose structure of the interview, whereby the respondents might not reveal insights to the same extent as in clearly structured interview designs.

In general, as we took an interpretative stance in our research, the interpretation of data and empirical findings was inevitable, hence, could not be prevented completely. We were thus further aware that the outcome of our study might not be as objective as research papers following other research philosophies. According to Easterby-Smith et al. (2015), studies displaying an interpretative character are likely to include bias. Besides our interpretative viewpoint leading to bias in the process of research, other forms of bias were taken into consideration such as in the sampling strategy or formulation of the interview questions. Those biases have been already elaborated on in Chapter 3.5.3.

3.8.3 Transferability

Furthermore, since we were using semi-structured interviews with a small sample, this raised the questions of transferability, namely if the results of our study could be transferred or applied to other contexts or with other respondents (Easterby-Smith et al., 2015; Guba, 1981; Saunders et al., 2012). We were aware that due to the chosen sampling size and method, the empirical findings could not be generalised, specifically, no large-scale generalisations could be derived from our research. The notion of leadership being socially-constructed and thus differing among employees (Saunders et al., 2012; Willis, 2007), further contributed to this assumption. However, we were positive that our empirical findings are applicable and of relevance for SMEs in similar situations, where leadership is affected by digitalisation and further that we can contribute to existing leadership theory. This can be supported by Saunders et al. (2012), stating that it is the responsibility of researchers having built a relationship
between theory and empirical findings, to decide whether this will be used to highlight significance on a broader scope or not. Transferability within our research is further elaborated in Chapter 7.2.

3.8.4 Credibility

The criterion of credibility in research reflects to what extent the findings of the research conform with reality and is perceived as the most important notion to establish trustworthiness (Guba, 1981). In research, the concept of triangulation is commonly used to increase a study’s credibility, by making use of multiple sources of data, comparing different methods and exchanging viewpoints (Guba, 1981). We applied triangulation by for instance individually coding the different views of our interview respondents and then comparing the results collectively to create a credible research paper.

To conclude, we as researchers strove for ensured quality of research within the present work and hence, the above-mentioned notions arguing to influence a study's quality were considered throughout the whole process of empirical research.
4 Empirical Findings

After having introduced the underlying theoretical framework and the applied methodological approach, the current chapter presents the empirical findings stemming from the data collected throughout the twelve semi-structured interviews. This chapter is divided into several sub-chapters representing the themes and categories evolving from our interview conduction that are perceived as relevant to answering our research purpose.

4.1 Perceptions of Benefits and Challenges of Digitalisation

As our research question is concerned with the topic of digitalisation, we wanted to gather employees’ insights on how digitalisation and new technologies are perceived in their company. Consequently, we posed questions of how digitalisation has been influencing their companies.

The majority of interviewees (1, 4, 6, and 10) stated that digitalisation in general is speeding up the working environment, making everything change at a faster pace and thereby, affecting the organisation’s decision making, communication or interaction with customers. “Not keeping up with the pace, the speed of digitalisation” (5) was perceived as the biggest problem in the organisation. Further, digitalisation is seen to trigger changes within the company that among others, leave the enterprise with the need to use new programs or tools. Regarding necessary actions taken by organisations to face digitalisation, nearly all employees’ responses were consistent and overlapping. It was stated that companies need to adapt and adjust their working environment to digitalisation, elsewise they will be left behind. Although it was critically expressed by an interviewee that adapting to new circumstances every day “is a very hard job” (9), other respondents mentioned that digitalisation also comes with a lot of opportunities for companies. Interviewee 3 and 8 exemplified this by stating that “everything gets more flexible, people are not restricted as they can work from everywhere” (3) and “information is able to be passed on more quickly, allowing for more tasks being completed in the same time than before” (8).
Another challenge companies are faced with nowadays is the complexity that is brought up or increased due to digitalisation. This complexity can for example be revealed in the implementation of new technologies, “I often fight with the system, but that’s normal, because they are complex” as stated by interviewee 1. This can be referred to interviewee 3 saying that “sometimes you are just confronted with the harsh reality, that you have to use something and you don’t know what it is or where it is”. Regarding this, interviewee 11 summarised that “every new technology basically comes with some degree of uncertainty and also complexity, so that’s a big challenge because you never know why digitalisation is useful for me or how it might help me”.

In the specific context of new technologies, digitalisation is further affecting companies in a way that new digital tools have to be implemented. Most of the respondents reported the benefits of the digital tools as assisting them in their daily lives and being convenient, thus, enabling them “to handle all this speed that is currently in the working environment” (1) or “supporting companies to deal with digitalisation” (10). In return, other employees also shared some criticism. It was articulated that there are “too many tools in the company that no one is actually using” (5) and that digital tools also display complexity and are sometimes not easy to handle. New tools or programs are further associated with challenges, as with each innovation, a lot of training is required. Interviewee 7 emphasised that this “takes a lot of time and people usually stick to the old processes”. In order to prevent challenges to arise from the complexity of new technologies, employees 3, 10 and 11 stressed that it is therefore crucial to communicate how those digital tools work and to reason why the implementation of the tools is important for the company.

Besides, digitalisation proves to be a challenge in itself, as companies constantly have to try keeping up with digitalisation, “which I think is very hard for companies” (6). For instance, customers nowadays can easily compare products and competition, argued by interviewee 8. Another interviewee outlined some concerns about the pressure to keep up with technological changes, as it is “sometimes not easy to have a feeling for how far you want to go and how far you
want to adapt to that” (4). Regarding this, interviewee 10 critically reviewed that digitalisation might lead companies to rush into changes and make hasty decisions.

Some interviewees mentioned that digitalisation is challenging their organisations as thereby, the communication within the company is affected. It has been highlighted by both interviewees, 5 and 11, that with an increase of virtual communication among employees, emotions tend to get lost. Consequently, the decrease of face-to-face communication “could be a very big problem” (5), especially in international teams where virtual interaction is part of the daily business. Moreover, it was pointed out that the use of various communication tools within the company often leads to misunderstandings and information getting lost (8). However, interviewee 7 also argued that new forms of communication can pose an advantage for companies, in a sense that one can work together and share processes with colleagues from different locations.

Additionally, the resistance and attitude of people towards digitalisation was mentioned as being a significant challenge in a company’s transformation to become more digital. One interviewee argued that “people usually stick to old processes and are not so open to new tools” (7), hence, a lot of effort is needed to implement those tools. This was perceived in a similar way by interviewee 8 by pointing out that not all employees are “too excited about the usage of new tools”. People being comfortable in their way of doing and having the mindset of “never change a winning team” (2), were partly used as explanations for such an attitude. Sometimes “to be open to change is difficult” (4) for some people.

Several of the interviewees (1, 6, 8, and 10) shared the viewpoint that other employees’ resistance to change, being open and adapting to digitalisation, is related to age. Interviewee 6 explained that “older colleagues don’t like new systems, want to stick to the old way of doing”, which was supported by interviewee 1 stating that “there are always exceptions, and you cannot really generalise in total, but the older generations might have more problems implementing digitalisation into their working life than younger generations”. Interviewee 8 further elaborated that colleagues of older generations are more
reluctant to use new tools than younger employees, “some of them (older employees; authors’ note) have this reluctance against every new additional kind of medium”. The difficulties of older generations to use new tools was argued by interviewee 8 by being scared and lacking know-how regarding the tools’ usage. Others suggested that younger generations’ ability to more easily deal with digitalisation and switching to new tools is due to having grown up in a digital environment and with new forms of communication such as social media. However, it was repeatedly stressed by the interviewed employees like 4 and 5 that “technological understanding can be learned, if there’s willingness to learn”, and hence, technological understanding can be acquired by everyone.

Several interviewees have not only reported reluctance of employees towards digitalisation, but also challenging situations associated with the leader. For instance, the leader’s lack of understanding for modern technologies such as social media platforms and its impacts has been brought up by an employee. “He (the leader; authors’ note) does not know what is going on outside and what has an impact on young people” (2). Further, it was indicated by our respondents (4, 5, and 7) that leadership is not very open to new changes and likes to stick to well-known procedures. Another interviewee (4) underlined that although some people in leading positions have recognised the importance of digitalisation, there are other leaders within the top management level holding a different point of view, which then prevents changes from taking place. Interviewee 5 went as far as claiming that leadership’s inability to implement new tools is the "biggest problem". Leaders “don’t cope with them (new technologies; authors’ note) very well as they are not very good with technologies themselves” (5). The following chapters will go into detail about employees’ view on leadership, and the influence digitalisation has on it.

4.2 Perceptions of Leadership

4.2.1 General Concept of Leadership

Before we aimed to get further insights into employees’ perception of leadership in digitalisation, we sought to detect how employees conceptualise leadership in
Empirical Findings

general. Answering this question would further help us to find out whether there is a shared understanding of leadership among employees. This was regarded as being useful for the topics that we liked to cover in the following stages of data collection.

Overall, it can be said that all our interviewees had a clear understanding of the concept of leadership and were able to answer this question easily. For most of the employees, the ability to guide a group of people or team was the central notion defining leadership. According to interviewee 2, “leadership is to unite a team of people”, which was similarly explained by other respondents stating that “leadership is guiding a group” (3) and a leader being “a person, who is responsible for someone else, so for another team” (6). Moreover, our interviewees agreed that “leading towards a common goal” (11) is another defining characteristic of leadership as employees 2, 9 or 11 argued that “leadership is to focus them (the team; authors’ note) on one aim” (2) or to “achieve a goal that is shared among all of us” (9). Others comparably mentioned this, namely by saying that leadership leads the team “towards the goals of the company or the team in general” (5) or by specifically describing leadership as the ability to “guide others towards achieving a common goal” (8). Also, the concept of leadership was articulated as having the attributes of motivating, encouraging and supporting others. For most of our interviewed employees, leadership is associated with a person. However, this does not necessarily have to be the case, which was reasoned by one interviewee proposing that a team besides being led by a person, can also be guided by the vision and mission of the company, “just something that tells me what the company stands for that shows me the right way, where they probably want me to go” (5). An interesting viewpoint that caught our attention was an employee’s statement that it barely is the case that someone is a true-born leader. Rather than because of their personal attributes, leaders are perceived to hold their leading position due to their know-how and technical skills. It was suggested that “there’s just a couple of exceptions [...], they have other factors and characteristics that make them attractive or want to be followed by their team” (3).
4.2.2 General Concept of Leadership in Digitalisation

Another perception which was of interest to discover was how the concept of leadership has changed due to digitalisation. In general, it was argued that the basic concept of leadership has not lost its importance as for almost all the respondents, leadership is still “very important” (2). Due to “digital transformation making the life faster and the range of decisions wider” (2), the leader focussing on the aim was pointed out as being essential in this regard. A similar point of view was shared by interviewee 3, who despite not being able to confirm whether leadership has become more important, emphasised the need “to find a way or to give a direction and to focus on a goal where everybody can work to”. Interviewees 5 and 8 both considered leadership as essential due to leading the company in the right direction. “In my opinion, the leader is responsible for guiding the process of digital transformation in the company” (10). “To explain digitalisation takes time, but this should be the responsibility of the leader”, articulated by interviewee 12, further highlighted that especially in digitalisation, the leader has to explain the vision and “why it is important to go there”. This came hand in hand with other interviewees agreeing upon the fact that leaders setting out the vision and mission of the company is still a desired behaviour of leadership in the digital age. As trust was mentioned to build the basis for a good relationship between the leader and the employees by almost all interviewees, we were curious to investigate how trust has been influenced by digitalisation. Whereas some respondents (1 and 2) argued that the importance of trust has not obviously changed, others (5, 9, 11, and 12) described trust as “becoming more important nowadays” (11). Respondent 11 further articulated that “in order to, for instance, allow your employees to work more flexible nowadays, you really need to trust them. And at the same time, employees need to trust the management that they make the right decisions. So, in both ways, there has to be a lot of trust involved.” Interviewee 12 shared a similar viewpoint, underlining that trust is important as through new technologies “you sometimes do not see the other person’s reaction and emotions”. This was supported by interviewee 9, highlighting that in times of digitalisation “where the organisation has to change constantly and rapidly”, trust is essential.
4.2.3 Leadership Skills and Capabilities in Digitalisation

We thematised employees’ perception of necessary skills and capabilities of leaders in times of digitalisation to gain further insights on the topic of digitalisation and leadership. The following Table 2 exemplifies how our respondents have articulated openness to be an important leadership skill.

Table 2: Empirical Findings on Leadership Skills and Capabilities

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Statement</th>
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<tbody>
<tr>
<td>1</td>
<td>“I guess openness is really important because you have to get away from this strict leadership ways and how a company should act, you have to be open to change fast due to the things that are changing fast outside.”</td>
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<td>2</td>
<td>“I would wish that my leader would be more open-minded about new ideas and not be too focused. Sometimes you have to think and act a bit “outside the box” I would say, so be open to new ideas. But in my case, my leader definitely would need to be more open to do so.”</td>
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<tr>
<td>4</td>
<td>“Yes, but I think this comes hand in hand with openness. The only thing with being open is that I think it’s important to not go with every… how shall I say, I think it’s hard to act in digitalisation and to adapt to new things but also knowing that we’re using this or NOT using that because it fits to the company or not.”</td>
</tr>
<tr>
<td>6</td>
<td>“My leaders are basically open-minded for digitalisation I would say, but decisions in the company still take a very long time still and everything needs to be discussed, especially in regard to so many different departments involved in one decision. It doesn’t make it easy to make those decisions, and also my leader, he is not like from our generation, so it takes him longer to understand why things like e.g. social media platforms are necessary… because they don’t use them by themselves, which is a bit of a pity to be honest because if we want to implement new things and new systems, they have to be completely behind it.”</td>
</tr>
<tr>
<td>11</td>
<td>“I would say being commitment to change themselves… otherwise it doesn’t work and the leader cannot convince anyone else… so I would say being open is a key attribute, otherwise he doesn’t even recognize that changes have to be made. So it’s kind of a prerequisite I would say.”</td>
</tr>
<tr>
<td>12</td>
<td>“Open-mindedness is super important! I see it with myself, changes are so common nowadays and especially fast changes of technology… so you really have to have an open-mindset and I think that’s also the case for a leader in digitalisation. I think my leader could be a bit more open, sometimes I feel like we have to tell him what’s going on outside so to say.”</td>
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</tbody>
</table>
The clear majority of interviewees perceived openness as a vital skill of leaders. Being open-minded as a leader was emphasised by interviewee 2, 4, 5, and 10. Interviewee 4 defined a leader’s openness in general as the “basis for what you need for change”. According to employee 9, having an open mindset is argued as a prerequisite for leaders being willing to adapt to challenges, which was further regarded to be important, especially in times of digitalisation. Respondents 1, 2, and 6 mentioned openness in a more concrete context, namely the leader being “open to change”, “open to new ideas” or “open-minded for all the new stuff”. In this regard, creativity was also mentioned (interviewee 4, 8, and 10) as a facilitator to handle new situations and uncertainty. Regarding this, it was suggested by interviewees such as 4, 11, and 12, that the willingness to take risk is a crucial capability for leaders. This was reasoned by stating that “when trying new things, you have to accept to fail” (11) and “you have to be open in digitalisation, especially to the new things, I mean you don’t know if they work or not, but it’s important to try it” (4).

Various interviewees highlighted adaptability as an essential leadership skill alongside openness, which was reasoned by interviewee 7 that “digital technologies are changing so fast”. Interviewee 1 agreed that despite openness being the most important skill, leaders have to “be fast” and “adapt quickly”. Interviewee 1 went as far as stating that without adaptation, “you don’t know how long you’re going to last”. Leaders’ skill to adapt was also reasoned by interviewee 3, articulating that due to digitalisation “you have to adapt to different goals, interests, necessities”. Although interviewees 4, 10, and 12 also agreed on adaptability being crucial, it was clarified that it is also “important to not go with every idea and lose your soul if it does not fit with the company” (4). However, other employees perceived the skill to adapt as being built upon openness. Regarding this, interviewee 5 articulated that “adaptability is a further step, but not in regard to a higher ranking, it’s the next step, so you have to face change, you have to be open, and then you have to adapt”.

Additionally, empathy was mentioned several times when asking respondents for a significant leadership capability. In times of digitalisation, where a lot of virtual
interaction takes place, “because of Skype meetings, for example, a lot of personal feelings get lost and a lot of empathy as well” (5). Therefore, a leader showing empathy and “understanding the people” (5) was named a desirable skill in the digital age. This was similarly articulated by interviewees 2 and 10. In times of digitalisation “I would wish my leader to show more empathy, that he shows understanding of us employees” (2) and interviewee 10 further highlighting that nowadays, “we don’t only need him, he also needs us”. Also, from a general perspective, empathy was underlined from interviewees 4 and 5 alike, stating that a good leader is “trying to know how they (the employees; authors’ note) are and how they feel” (4) and should “face the different needs and capabilities of team members” (5). Interviewee 10 further wishes for a leader to especially pay attention to the needs of those employees who have difficulties to adapt to new technologies. Corresponding with the statement that the leader “should appreciate his people and the work the people are doing” (2), interviewee 3 argued that “good leaders see the teams for who they are”. This can be confirmed by a similar statement, namely that the “leader should not forget about people or leave them behind” (6).

Apart from the mentioned skills, leaders being “able to motivate them (employees; authors’ note)” (2) was seen as another crucial capability within our interviews. This was reasoned by some interviewees arguing that thereby, employees’ willingness to face changes as well as commitment is positively influenced. Interviewee 8 agreed that “in times of digitalisation, you need somebody who’s guiding you and who’s motivating you on a constant level”. Although motivation was named as being especially important in digitalisation, this was also associated with being an important skill in general. For both interviewees 1 and 4, a good leader is “able to motivate his employees” (1) and thereby, able “to help them to evolve” (4).

Another leadership capability the interviewees shared different opinions about, is leaders’ understanding for technology. On the one hand, interviewees such as 2, 5, and 11 were convinced that technological understanding of leadership is crucial. Respondent 2, for instance, highlighted that the leader should be “keen
on technology” as well as have a “technological understanding and fascination for technology” as otherwise, he would not realise the need for digitalisation. Concerning new technologies, “he (the leader; authors’ note) should have a basic technological understanding so that he or she knows when and how to use new technologies to leverage the business and make use of digitalisation in the best way” (11). Hence, the leader should be the first who is informed about the usage of new technologies to answer the questions of the employees. In this way, it can be assured that he is the best-informed employee and “is able to keep the pace of his employees” according to interviewee 5. On the other hand, respondent 5 supported the perception of other respondents like 4, 6, 8 or 12. These interviewees articulated that technological understanding, despite being important, can be acquired as long as there is a willingness to learn. “It can be learned, definitely, if there is a personal interest in learning it”, articulated by interviewee 5, was almost identically stated by both interviewees 4 and 8. While interviewee 4 pointed out that having an understanding for technology is “not too bad”, but not a necessity for all members of the leadership team, it was emphasised that a technological understanding is not a requirement as long as there is “only the willingness to use them and to learn how to handle new technologies” (8). Due to the many digital tools used in the company of interviewee 2, having a technological understanding was suggested to be a big advantage. Nevertheless, there always is the opportunity to ask others or to make use of companies' internally provided online forums. As explained by interviewees 2 and 5, some leaders’ lack of technological understanding can be ascribed to not having to work with the technologies themselves. “My leader is not the person to actively work with digital tools” (5) and “they (top management; authors’ note) don’t have to work with those new tools because they are more involved in strategic decisions than in operative work” (2).

Lastly, communication was declared as one of the most crucial skills for leaders by various respondents such as 3, 4 9, and 10, referring to timing, addressee, and context, “I would say the whole package of communication is very important” (3). It was further elaborated that this concerns both written and spoken communication. Interviewees 3, 8, and 10 agreed that good communication of
the leader is essential. Thereby, if done well, every employee is on the same level, for example in the usage of digital tools and in recognising the importance for digitalisation in general. Moreover, communication was perceived to be especially important since other skills like motivating and engaging others are built upon leaders’ communication skills. Similarly, interviewee 4 indicated communication as “the most important thing between human beings” and in a leader-follower relationship, is expressed in the way that the employee can talk to leadership “if there’s a problem or if you’re not satisfied” (4). Interviewee 10 further addressed effective communication in a sense that the leader should share the current status of the digital transformation with the employees. Apart from that, communication was often associated with the leader being able to prepare the employees for changes and digitalisation. By underlining that “I don’t really like it when things happen behind my back”, interviewee 1 highlighted the importance of the leader to communicate if changes affecting the employees take place.

Besides the dominating skills according to the interviewees, other traits were pointed out as well. One interviewee (12) mentioned multi-tasking to be important nowadays as due to digitalisation, more things happen at the same time. In contrary, interviewee 3 denied that multitasking is a necessity but highlighted "good time-management" instead. Both interviewees 4 and 7 noted that due to the easy access to a vast amount of information and lots of changes in digitalisation it is essential, to “not accept every information” (7) and “not go with everything” (4). Hence, being critical and questioning the available information are necessary skills.

4.2.4 Leadership Behaviour in Digitalisation

Subsequently, we asked our respondents to exemplify how the specific skills and capabilities they mentioned as becoming more critical in digitalisation are displayed in their leaders’ behaviour.

Regarding openness, interviewees 2 and 9, for example, stated that their leaders depicted this by “being open-minded and trying out new things” (2) or “having an
open-mindset” (9). Interviewee 4 and 10 exemplified an open behaviour in the way that the leader should be the first person in the organisation to recognise the importance of digitalisation and to “stand behind digitalisation and new tools” (6). Interviewee 12 went as far as arguing that leaders in digitalisation should “want to be the first one, that you want to be a pioneer in something”. Hereafter, the leader in digitalisation should try to “get everyone on the same level” (6). It was further suggested by respondents 1, 3, and 8 that leadership should act as a role model for employees in regard to using new technologies, as employees are then more committed to the changes coming with digitalisation. One employee (2) pointed out that in case leadership would display a more risk-taking attitude, this would enable the organisation to better cope with digitalisation and stimulate a more open-mindset of employees as well. Interviewee 6 emphasised that it is more crucial than ever that leadership nowadays has “an overview of all the different things that are happening”. When asking to concretise how openness can further become apparent in the leader’s behaviour, interviewee 8 and 11 stated that willingness to try out new things and ideas is advantageous, even if the outcome is uncertain. Interviewees 2, 10, and 11 even went as far as stating that a leader should be willing to fail and taking the risk of failure, “that he is motivated and has that trial-and-error attitude” (2). In response to the question of how employees would best exemplify their leaders’ ability to adapt, interviewee 1 said that the leader is “really trying to adjust” to new situations and changes such as new technologies being implemented. Other employees stated the leader is trying to “actively integrate digitalisation into the company” (10).
The ability to motivate others was articulated by several employees, which is exemplified in the following table.

### Table 3: Empirical Findings on Leadership Behaviour

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Statement</th>
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<tbody>
<tr>
<td>1</td>
<td>“He really tries to get the best out of me and my whole team, I really appreciate that. Even though it’s sometimes challenging, it motivates us every time we accomplish something.”</td>
</tr>
<tr>
<td>2</td>
<td>“He should be enthusiastic and able to transfer the enthusiasm to his employees. So that he motivates me. Especially with all the challenges I’ve described, I sometimes need the support and motivation of my leader to see ‘light at the end of the tunnel.’”</td>
</tr>
<tr>
<td>3</td>
<td>“We have one senior manager and he’s an expert in his field, but on top of that he has some personal qualities, he knows how to manage a team, how to get people involved, motivated, the information and communication flows inside the team, so that the organisation works. So, someone e.g. can be good in his field, but he doesn’t know who to organise a team, doesn’t know how to bring people together, doesn’t motivate them or he doesn’t lead by example. Then he is not like a real role model where I say I want to be with him, and for me he’s not a true leader.”</td>
</tr>
<tr>
<td>7</td>
<td>“She is always available, I think it’s important that there is always someone who I can ask and come to with a question. So, she is always available, and she is motivating me by giving me a lot of input and encourages me to work on tasks that are new for me. I think she is kind of role model for me, she’s doing a great job and especially because she is a good manager in her field and a role model for me at the same time.”</td>
</tr>
<tr>
<td>8</td>
<td>“I always like it when he encourages and motivates me to share my ideas… so my leaders is asking me to come up with ideas and present them in front of my colleagues and it helps me to keep up my motivation to perform good.”</td>
</tr>
</tbody>
</table>
Interviewees explained to feel motivated when their leaders encourage them to bring forth ideas and share them with their team colleagues. Corresponding to being asked to share ideas and thoughts according to interviewee 4, “my leader is asking me to come up with ideas and present them in front of my colleagues”, was articulated by 8. Interviewees 10 and 11 exemplified being motivated by their leader as “being pushed towards their full capabilities and their limits” (11). Similarly, interviewee 1 felt motivated as the leader is trying to get the best output of the team.

According to several employees, empathy is expressed in the leader’s behaviour to “listen to others’ ideas, especially if he (the leader; authors’ note) does not know too well about digitalisation” (4), to “show appreciation” (12), to “appreciate the value of the team” (10) and to “know how we (the employees; authors’ note) feel” (5). Furthermore, recognising the individual needs of the employees, for example, if one is lagging behind in respect to the usage of new technologies, displays an empathetic leadership behaviour. Showing empathy has moreover been highlighted in the context of the generational divide among employees in interacting with digital tools, which is further outlined in Chapter 4.4.

When asking for another crucial behaviour of their leader regarding digitalisation, communicating the need for digitalisation was mentioned. This was described by interviewees 1 and 12 by leadership “explaining the main purpose of the tool, explaining their adaptability, so that everyone can use it” (1) and communicating how “digitalisation can be used in employees’ daily lives” (12). Concerning this, it was stated multiple times that leadership should provide trainings and “digitalisation workshops” (12) for employees to familiarise themselves with the new digital tools. Further, this was underlined by the leader “giving constant information about the tools” (8) and reasoned that by informing about changes, why they are happening, and information about the advantages, employees’ behaviour towards changes can be positively affected. Interviewees 1 and 4 both supported the viewpoint as positively influencing the capability and willingness to adapt to new situations and changes. Here, transparency was also mentioned (3 and 12) as an appreciated behaviour in the context of open communication in the
digital transformation process. Corresponding to that, it was pointed out that the leader's clear communication about the importance of digitalisation has helped preparing the employees and organisation for digitalisation. Also, in case of interviewee 8, the leader enabled the company to become more digital by providing information, giving feedback and communicating “how other companies or teams have survived such situations”. Interviewee 10 did not only wish the leader to communicate more about the changes taking place, but also “to be actively involved [as an employee] in the process of digital transformation” and to have been assigned a specific role in the change process. Correspondingly, respondent 12 mentioned that the leader should encourage employees to share their ideas and try out new things and engage other employees in the process of digital transformation. This was confirmed by interviewee 5, who also expressed the desire for the leader to ask for employees’ opinions and ideas. In this regard, respondents associated an open communication of their leader with being honest, transparent and willing to seek the advice of their employees. For instance, employee 10 highlighted that the leader should also honestly “communicate about the status quo” during all stages of the digital transformation process.
5 Interpretation of Empirical Findings

To understand how digitalisation is shaping the corporate environment, the effects of digitalisation on companies and leadership from employees’ perception are interpreted. Therefore, in the present chapter, the outlined findings derived from the empirical data are analysed profoundly. In line with our abductive research approach, the findings will be simultaneously interpreted and discussed with the existing theoretical framework. Moreover, additional literature and theoretical concepts will be used to explain unexpected findings derived from our empirical data.

5.1 Effects of Digitalisation on the Organisational Environment

In the majority of interviewed cases, digitalisation has been speeding up the organisational environment and thereby, affected the organisations’ internal as well as external processes such as decision making, communication or relationships with customers. The disruptive character of digitalisation can further be recognised in the reported need for all the case companies to adapt and adjust. Our respondents perceive that especially companies that have been existing for a longer period should be aware that they will be affected by digitalisation and therefore, have to be open to digitalisation. According to the employees, without acknowledging the urge for digitalisation, companies are not able to develop further and consequently, might face the risk of failure and being left behind. Due to digitalisation increasing the speed in the organisational environment, organisations have to adjust constantly. This was articulated as being particularly challenging for organisations, as adaptation has to take place on a daily basis. When reviewing closely the viewpoints of the employees, the need to adjust to digitalisation is seen as being indispensable. As a result, a connection can be drawn to literature describing digital innovations as evolving at a “breath-taking speed” (Bolden & O’Regan, 2016, p. 43). Companies’ need to adapt in various ways and on different levels as revealed in the empirical data can be interpreted in the way that digitalisation triggers and initiates organisational change. This can be attributed to the viewpoint of literature arguing that change is at the very core of digitalisation (Henriette et al., 2015; Kohnke, 2017; Parviainen et al., 2017; Wade & Marchand, 2014). Overall, it can be said
that our empirical findings can underline the consensus of literature. Digitalisation impacts the business environment in a disruptive way and ultimately, has changes at its core (Bennis, 2013; Boggis et al., 2017; Bolden & O'Regan, 2016; Henriette at al., 2015, Kohnke, 2017; Wade & Marchand, 2014).

Our analysis further suggests that a lot of benefits coming along with digitalisation are rooted in new technologies being introduced. Digital tools do not only assist employees in their daily working life, but also support the organisation in coping with the speed of changes. Using digital tools, employees can finish their tasks more efficiently and effectively. Also, employees mentioned that the usage of new technologies allows them to exchange information more quickly and communication with colleagues, even if physically separated, is simplified. Moreover, digital tools also have advantages on an external level, as digital channels like social media facilitate to stay in touch with clients and thereby enable to build a closer relationship. Upon closer examination of our findings, it can be argued that digitalisation poses complexity for our case companies, especially if management does not properly explain the importance and usefulness of new technologies. Consequently, change in the considered companies was identified to be extraordinarily complex regarding the implementation and usage of new tools and systems. According to an interviewee, every new technology brings along some degree of uncertainty. We could further derive from our empirical data that the overload of digital tools hinders employees to make use of those tools and their usage sometimes leaves its users with difficulties. Challenges regarding new technologies were further perceived as being related to age groups. This represents an interesting finding since none of our interview questions aimed to detect a generational divide. Much more was the recurring generational gap emphasised by the interviewees themselves. However, the older generation's difficulties have to be considered with caution due to our interviewees being between 20 and 35 years old. This will be further discussed in the limitation chapter of this paper. Nevertheless, a connection can be drawn to academic literature. Scholars such as Prensky (2001), Palfrey and Gasser (2008) and Tapscott (2009) define the group of young people, born around 1980 until 1997, who have grown up with technology, as
Digital Natives. As they have spent their whole lives using tools of the digital age such as computers or video games, they are referred to as native speakers of the digital language, who behave differently than other generations (Prensky, 2001). Consequently, it can be argued that this reasons the interviewees' reported perception that younger employees in general are better able to handle new technologies being introduced and to cope with their complexity.

The juxtaposition of both the challenges and benefits coming along with digitalisation can also be found in literature. As outlined in Chapter 2.1.2, the disruptive character of digitalisation brings along both positive and challenging transformative effects (Bennis, 2013; Bonnet & Nandan, 2011; Bounfour, 2016; Fitzgerald et al., 2013; Kohnke, 2017; Wade & Marchand, 2014). In literature, various benefits are discussed that come along with digitalisation, both within the organisation itself and the whole environment. Productivity can be enhanced, and collaboration among employees fostered, for example through new technologies that enable virtual teamwork worldwide (Bonnet & Nandan, 2011; McAfee & Welch, 2013). As Bonnet and Nandan (2011) and Berman and Marshall (2014) further highlight, new technologies enable organisations to gain customer insights and allow companies to strengthen the communication and collaboration with its customers. However, the speed of change increases through digitalisation, which poses a significant challenge for companies, especially if those are not able to evolve and adapt (Carcary et al., 2016). This overall increased complexity companies are subjected to in the digital age is both stressed by our interviewees as well as by various scholars (Bughin et al., 2015; Carcary et al., 2016; Fitzgerald et al., 2013).

Since all our respondents pointed out different ways of how digitalisation has been affecting and triggering changes in their organisation, our empirical data provides significant evidence to stress the wide scope of digitalisation. This can be argued in two ways, namely by first having interviewed employees of enterprises operating within different industries, ranging from banking to communication to the manufacturing industry. Secondly, the empirical data suggests that digitalisation is triggering changes at all stages of the value chain. Thereby, a linkage can be drawn to our theoretical framework whereby scholars
argue that various industries are affected by digitalisation in one way or another (Bonnet & Nandan, 2011; Bounfour, 2016; Fitzgerald et al., 2013).

As it was already highlighted in the frame of reference, the role of leadership is crucial in digitalisation (Bennis, 2013; Kohnke, 2017; Lohrmann, 2017; Wade & Marchand, 2014; Westerman et al., 2014). How digitalisation has affected the general concept of leadership and specific leadership skills and behaviour, will be analysed and presented in the following chapters.

5.2 Leadership in Digitalisation

5.2.1 Leadership Conception

Overall, our interviewees’ conceptualisations of leadership in general suggest that first, the concept of leadership is easily to be defined and secondly, perceived similarly. In most cases, leaders were characterised based on their ability to unite a group of people, to be responsible for them and to lead them towards their own, or the company’s, goal. This exemplified that our set understanding about leadership can be verified. Adopting the leadership definition of Bass and Bass (2009), House et al. (2002), and Yukl (2010), leadership was previously defined as a socially influenced process that supports a group of people to achieve a common goal. Interestingly, although leading the team towards a common goal was seen as a dominant characteristic of the leadership concept, the perception of employees and leaders working towards the same goal differed in some cases. Thereby, it appeared obvious that these different perceptions correlate with other underlying factors. Those employees, who reported to work towards the same goal as the leader, provided us with rather positive examples and descriptions about leadership in their company. For instance, this was associated with the leader communicating properly, providing constant feedback and the existence of trust in the leader-follower relationship. On the contrary, respondents stating a disparity between their own and their leader’s goal, reviewed the behaviour of their leader more critically. In such cases, this was mainly argued by leadership pursuing goals from a more strategic, and employees from a more operative point of view. In this context, our empirical data proposed trust to be very important, since it does not only build the basis for a good leader-follower relationship, but
also increases employees’ willingness to follow the leader and be more open to changes and uncertainty. Hence, it can be suggested that trust also increases followers’ openness for digitalisation.

Despite the deviation in the perception of the pursuit of shared goals displayed in our findings, our analysis implies that, overall, the interviewees’ concept of leadership coincides with literature. Overall, it appears that the general concept of leadership has not changed significantly due to digitalisation. However, when further reflecting upon the interviewees’ perceptions, we noticed a strengthened desire of employees to be guided by their leaders in digitalisation. In most of our interviews, this was exemplified by leadership being responsible for digitalising the company – from recognising the need for digitalisation, combining it with the organisation’s vision and mission, to taking final decisions such as implementing specific digital tools. Especially due to the complexity and increased speed of changes in the digital transformation process, many employees stressed getting prepared by their leaders as being essential. Our respondents emphasised the leaders to communicate the vision and mission of the company, which can be interpreted in a way that a clearly formulated digital business strategy would be of advantage. This can facilitate guidance in the transformation process and leveraging its outcome (Matt et al., 2015). Further, academic literature (Lohrmann, 2017) outlines the responsibility of leadership to enhance people’s and organisations’ resilience as well as the ability to cope with changes. Furthermore, leaders oversee translating the digital vision into the organisations’ operations and should set the tone and context when leading through digitalisation (Bolden & O’Regan, 2016; Neubauer et al., 2017). Leadership setting a clear strategy and handling challenging situations can also be referred to attributes of effective leaders, according to Bryman (2007), Wiley (2010) and Yukl (2010).

5.2.2 Effective Leadership Skills and Capabilities

The role of the leader was perceived to be crucial in digitalisation since the leader is responsible for recognising the need to digitalise the company and should be the best-informed person concerning new technologies used in the organisation.
Whereas some of our interviewees’ leaders dealt with digitalisation in an appreciated manner, our findings also revealed that some leaders had difficulties to accustom to the changes of digitalisation. We found out that employees perceive certain leadership skills and behaviours to be more effective in the digital age than others, which will be interpreted in the following.

Adaptability was mentioned in our conducted interviews among those skills that are perceived as being particularly necessary in digitalisation. Leaders being flexible when changes occur and proactively looking for solutions to adapt to new situations were expressed as desirable by employees. As discussed in our theoretical framework, various authors have identified adaptability as an important skill for leaders to effectively lead and face challenges in times of digitalisation. Both Neubauer et al. (2017) and Wang (2016) state that leaders have to accept changes and adapt accordingly. It was elaborated that instead of one specific behaviour being suitable in digitalisation, leaders should constantly adapt their leadership behaviour to the needs of the environment (Bolden & O'Regan, 2016). Hence, Bolden and O'Regan (2016) further argue that leaders have to become more flexible. The significance of both these capabilities was also stressed by other literature (Burke & Cooper, 2014), highlighting that in times of organisational changes in the environment, adaptability and flexibility are becoming more important for leaders. Although one would suggest an adaptive leader to inherit adaptability, this cannot be confirmed by academic literature. Rather than an adaptive leader being adaptable, according to scholars, he seeks to encourage others to adapt to new situations (Heifetz et al., 2009; Northouse, 2016).

During our interview conduction, it became apparent that motivation is another relevant leadership skill in digitalisation, as employees wished for a leader who encourages and motivates them. This was perceived as being especially important due to the level of uncertainty and the changes that are increasing in digitalisation. Encouraging employees to try new things and stimulating discussions among the team were positively associated with the leader's behaviour to prepare the organisation for digitalisation. Providing guidelines,
workshops or trainings on how to deal with digitalisation and new digital technologies were named as further desired means of how leadership could prepare employees for digitalisation. Some employees critically reviewed their leaders’ behaviour in being actively included in the process of digitalisation, for instance by being asked to share ideas and personal experiences in regard to digitalisation. In other cases, the leader even encouraged the followers “to think outside the box” and to present their ideas in front of the team and share their knowledge with co-workers. Correspondingly, it was emphasised by literature that the ability to motivate others and help them to develop is more crucial than ever before and that leaders have to mobilise their employees (Kohnke, 2017; Lohrmann, 2017).

Moreover, it is described that organisational change can only be successfully performed if everyone affected by this change is involved in the transformational process (Beer & Nohria, 2000; Oakland & Tanner, 2007). Related to this, the perception of employees matches the theoretical viewpoint as such that leadership in digitalisation should actively involve every employee in the change process. Furthermore, it was mentioned by the respondents that leaders should assure that every team member has the same level of understanding for new technologies and the importance of digitalisation. Some scholars (Kane et al., 2015) highlighted leaders’ capacity to be influential as being important in the context of digitalisation. Here, a link can be drawn to both authentic and adaptive leadership. Alavi & Gill (2017) outline that authentic leaders are capable of triggering motivation and learning within followers and that authentic leaders’ psychological capacities can foster positive development within employees (George, 2003; Luthans & Avolio, 2003). A connection can also be drawn to adaptive leaders. Heifetz (1994) and Heifetz and Sinder (1988) propose that adaptive leaders are not only able to tackle other people’s problems in challenging situations, but also to encourage employees to solve those by themselves. Additionally, it is suggested that adaptive leaders can prepare and mobilise people to successfully cope with changes (Heifetz et al., 2009; Northouse, 2016). Influencing others to achieve a difference in their mindsets is typical for adaptive leaders as they are characterised by being involved in actions
that enable, motivate, strengthen and arrange others’ mindfulness (Heifetz, 1994). Another desired leadership behaviour perceived by employees is being pushed towards one’s limit to grow, which can also be referred to adaptive leadership behaviour. As argued by Heifetz (1994) and Heifetz et al. (2009), adaptive leaders are capable of mobilising others and aim to generate the best output of their followers.

Another capability that was perceived as being valuable in times of digitalisation and unexpectedly often mentioned throughout our twelve interviews was the wish for more empathy from the leader. According to our employees, digitalisation challenges the way of interacting and communicating. This was reasoned by communication and interaction taking place in the virtual world, which leads to a loss of empathy and emotions. Employees expressed leadership to ideally show more empathy by listening to employees, appreciating the team or knowing the individuals’ needs and consequently, addressing and responding to these. When reflecting on empathy as a leadership behaviour, we noticed that this characteristic does not instantly match with our proposed leadership styles, neither the authentic nor the adaptive type. As a result, we are not able to underpin the importance of empathy with our previously developed theory regarding a certain leadership style.

A connection can only be drawn to established theory on effective leadership, wherein Riggio et al. (2003) relate listening skills of leaders to effective leadership. Nevertheless, we have to expand our scope of research to explain and underline our respondents’ statements concerning an overall more empathetic behaviour of the leader. Thereby, the concept of servant leadership appears to indicate similarities. As paradoxical as the name might indicate, the key concept of servant leadership is that a leader is and should be both servant and leader. Followers are put first and are empowered by a servant leader, who then helps them to bring out their full capacities (Northouse, 2016). Although no commonly used theoretical framework is existent for the concept of servant leadership, Spears (2002) highlights ten key characteristics for a servant leader. Those are the following: Listening, empathy, healing, awareness, persuasion, conceptualisation, foresight, stewardship, commitment to the growth of people
and building community (Northouse, 2016; Spears, 2002). Three out of these ten characteristics, namely listening, empathy and conceptualisation, can be connected to statements of our respondents. Our respondents exemplified listening skills by a leader being able and willing to listen to his employees first and thus acknowledges the opinion and view of his followers. Furthermore, servant leaders show empathy as they are trying to understand the thoughts and feelings of followers (Northouse, 2016; Spears, 2002), which in turn confirms our interviewees’ perception. Besides, a servant leader focuses on the “big picture” of the organisation and provides a clear goal and direction for the company (Northouse, 2016; Spears, 2002), which was articulated as favourable for leaders in digitalisation by our respondents.

To thoroughly understand and interpret empathy in leadership in a holistic manner, we have to take a broader perspective and enlarge our scope of research. As outlined by Artley (2018), “the digital revolution needs a different, more human kind of leadership” (paragraph 13), namely emotional intelligent leaders that are not driven by ego, but empathy. Also, other literature indicates the human value to be appreciated by leaders in the digital age. In the future, leadership qualities such as adaptability and empathy will obtain greater significance in the context of digitalisation (PwC, 2017). The concept of emotional intelligence as already touched upon in Chapter 2.2.5 consequently regained our attention, as several scholars have established a positive connection between emotional intelligence and leadership effectiveness (Maamari & Majdalani, 2017). Leadership is seen as a process that is strongly influenced by emotions (Maamari & Majdalani, 2017; Sadri, 2012). According to Dartey-Baah and Mekpor (2017), “emotions are not excluded from the workplace setting because both leaders and their subordinates are equally exposed to work demands that influence their feelings, attitudes and behaviours” (p. 43). However, our interviewees stated that digitalisation causes emotions to get lost, which leads to misunderstandings and miscommunication. Emotional intelligent leaders understand both themselves as well as other people due to their high self- and social awareness, whereby the latter one is regarded to be mainly comprised by empathy (Goleman, 2000). An emotional intelligent leader therefore is seen as
capable to counteract to the negative implications occurring due to digitalisation. Hence, when taking into consideration our empirical findings and elaborated theory, it can be interpreted that both emotional intelligence as well as servant leadership should not be disregarded in digitalisation, as they can be attributed to a leader being empathetic.

Another leadership skill we noticed to be essential was communication expressed by the leader informing about the importance of digitalisation, its effects on the organisation and usefulness of new technologies. Leadership communication skills in digitalisation were elaborated to be important by the employees as they feel more appreciated when leaders are not hiding any information and are honest about the transformation progress. To openly inform about the status quo of digitalisation or asking about their point of view were associated with an honest and transparent leadership behaviour. Also, it is appreciated when employees have the chance to actively participate in the transformation process by sharing their ideas and opinions. Thereby, according to our respondents, both the motivation to participate in the digital transformation process as well as the employees’ general commitment towards changes can be increased. In this respect, parallels with academic literature on effective leadership can be recognised.

Whereas Bryman (2007), Wiley (2010) and Yukl (2010) associate leaders’ ability to enhance followers’ commitment with characteristics of effective leaders, Higgs and Rowland (2001) describe such leaders as being able to involve other people in the whole change process. Considering the initially proposed leadership styles, soliciting the viewpoints of employees before taking a course of action, is a common behaviour for authentic leaders (Avolio & Walumbwa, 2014). A connection between honesty and authentic leadership can be made, as authentic leaders usually develop the values they act upon through reflection and have experienced those values to be true (Shamir & Eilam, 2005). Acting upon those values builds the basis for authenticity and can further be interpreted as being displayed in an honest leadership behaviour. Moreover, mutual disclosure and an authentic way of exchanging information also facilitates followers to emulate their leaders’ authentic and open behaviour (Avolio & Walumbwa, 2014). This, in
turn, might increase authentic followership, which is as equally important in authentic leadership (Gardner et al., 2011). However, a leader who communicates openly is not only reflected in an authentic, but also in an adaptive leadership behaviour. Relying on scholars of adaptive leadership theory such as Heifetz et al. (2009) and Northouse (2016), adaptive leaders are able to positively influence followers’ willingness to change by providing them with necessary resources and possibilities that followers change more easily. The reported leaders’ behaviour of informing about digitalisation can be interpreted in a way that thereby, employees are allowed to better prepare themselves for the challenges arising through digitalisation. Thus, this can be viewed as beneficial in times of digitalisation.

Technological understanding was highlighted as another essential skill for leaders in digitalisation. However, we could derive from the empirical findings that the perception of technological understanding being a prerequisite for leaders differs among interviewees. Some respondents argued that technological understanding is a necessity for leadership as leaders should be knowledgeable in new technologies to answer employees’ questions. Others outlined that leaders’ lack of technological understanding can be compensated as long as there is willingness to learn how to deal with new technologies. This disparity in perception was against our presumptions, as literature highly stresses the importance of technological understanding for leaders in the digital age. For instance, Hoberg, Krcmar, Oswald, & Welz (2016) articulate that technological-savviness of leaders as well as of employees is one of the most important organisational resources. Especially, leaders’ digital savviness is outlined as a crucial characteristic by McAfee and Welch (2013) and Bolden and O’Regan (2016). The interviewees’ articulation of a leader’s willingness to learn can to some extent be confirmed by academic research articulating that leaders in the digital age should not only be conscious about their environment, but also be willing to learn from it and others (Hearsum, 2015; Kane et al., 2016). For the leader to recognise his lack of technological understanding, it can be argued that the leader has to be conscious and reflective about his own capabilities in the first place. This can be linked to the conceptualisation of authentic leadership by
Interpretation of Empirical Findings

George (2003), Luthans and Avolio (2003) and Shamir and Eilam (2005), whereby authentic leaders are characterised by their high level of self-awareness, self-discipline and consistency. This further positively corresponds to Avolio et al. (2004), describing authentic leaders as possessing great self-awareness and being conscious of their own behaviour and way of thinking. Besides, it can be suggested that also leaders who encompass characteristics of an adaptive leadership behaviour are able to develop an understanding for new technologies and acquire technological skills. This can be reasoned by adaptive leaders being able to adapt to organisational changes, which in turn suggests an ability to adapt to new technologies. Unlike the wide perception of importance amongst interviewees for leaders to display a great willingness to learn, academic literature has not yet recognised this as a leadership skill to be especially effective in digitalisation. However, several scholars express that effective leadership is context-dependent (Goleman, 2000; Senge, 1997; Yukl, 2010), which implies that some leadership skills are more effective than others. Hence, we propose that although the discussed leadership styles can be associated with technological understanding and a displayed willingness to learn, both capabilities are crucial for any leader operating in the context of digitalisation.

As reported by the interviewees, leaders who showed a willingness to learn about new technologies and develop an understanding for digitalisation in general also displayed an open-minded behaviour. In various interviews open-mindedness was perceived as being an effective leadership skill, especially in a digital working environment. This was expressed in a leader being open to new ideas or new technologies and trying new things. Openness in the context of leadership was further articulated in our interviews by the leader being able to recognise the need for digitalisation. Hence, it can be interpreted that the leader has to be aware of the organisational environment. This can be associated with Neubauer et al. (2015) accentuating that leaders should be constantly scanning the environment for opportunities and threats. The findings suggest that openness not only is an essential skill in itself, but also one that other skills are built upon. For instance, with an open-mindset, leaders are more likely to encompass curiosity and a willingness to learn. Also, a leader’s adaptive capacity was noticed to be built on
openness, which is why open-mindedness can be interpreted as a preceding skill. While openness was highlighted to be an essential capability for leaders from an employees’ perspective, it appeared that its importance has not yet been fully recognised by literature. Neither authentic nor adaptive leadership particularly highlight openness as a distinctive characteristic. Notwithstanding, based on our empirical findings, we interpret open-mindedness like technological understanding to be universally valid and crucial for leaders to be effective in the context of digitalisation.

When trying out new ideas and concepts, taking into account the possibility to fail was articulated as another important leadership skill in this context. From the reported leadership behaviour it was derived that in leaders a display of “trial and error”-behaviour is higher valued than one of “not having tried at all”. This can be underpinned by various scholars such as Bolden and O’Regan (2016), Lohrmann (2017), and Kohnke (2017) who stress the ability to take risks as being increasingly important for leaders in times of digitalisation. Some literature even elaborates further by stating that not only leaders should encompass a risk-taking attitude, but also the organisation itself. Therefore, leaders must first acknowledge and secondly promote failure as being a contributing factor for organisational success (Kane et al., 2015).
The following framework shows an example of how we interpreted our empirical findings and connected them with our existing theoretical framework.

**Table 4: Example of necessary Leadership Skills reflected in Leadership Style**

<table>
<thead>
<tr>
<th>Leadership Style</th>
<th>Adaptive Leadership</th>
<th>Authentic Leadership</th>
<th>Servant Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td>Not only able to tackle other people’s problems in challenging situations, but also encourage employees to solve those by themselves (Heifetz et al., 2009; Northouse, 2016)</td>
<td>Triggering motivation and learning within followers; psychological capacities can foster positive development within employees themselves (George, 2003; Luthans &amp; Avolio, 2003)</td>
<td></td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td></td>
<td></td>
<td>Followers are put first and empowered by the leader (Northouse, 2016)</td>
</tr>
<tr>
<td><strong>Openness</strong></td>
<td></td>
<td>CRUCIAL BUT INDEPENDENT OF LEADERSHIP STYLE</td>
<td></td>
</tr>
</tbody>
</table>

The matrix illustrates the connection between perceived necessary leadership skills in digitalisation such as motivation and empathy and how those are reflected in the prominent characteristics of the proposed leadership styles. The leadership skill of openness thereby is one example of the deducted effective skills for leaders that can be seen as context-related to digitalisation but independent from a specific leadership style.
6 Conclusion

In the following chapter, the research paper is concluded by answering the formulated research questions. Hence, our investigation allowed us to fulfil the purpose of the research. Furthermore, a conceptualised framework of perceived leadership effectiveness, contributions and implications for both theory and practice are presented.

6.1 Research Questions and Purpose

We are able to answer our first research question of how digitalisation is affecting the organisational environment by means of our study. According to our respondents, digitalisation speeds up the organisational environment, whereby changes are triggered at all levels of the organisation. The disruptive character of digitalisation does not only bear challenges for organisations but can also bring forth benefits. Consequently, companies need to adjust and develop on a constant basis as otherwise, they will not be able to stay competitive and develop further. After conducting our empirical study, it can be said that in general, implementing new technologies within the digital transformation process poses challenges for leadership and employees alike. Also, not only different levels of the organisation, but also all kinds of industries are affected by digitalisation. Thus, our research revealed the extensive scope of digitalisation, which is consistent with literature.

Our second research question was concerned with the investigation of how the general concept of leadership is affected by digitalisation from employees’ perspective. After having interpreted our empirical findings, it can be suggested that the concept of leadership has not significantly changed due to digitalisation. Leadership can still be described as a socially influenced process, whereby a group of people is united and led towards a shared goal. Although in some cases, the pursuit of a common goal was viewed from different angles by employees and leaders, it can be said that this is fundamental characteristic of leadership. Apart from the employees’ perception of general leadership matching academic literature, the empirical findings underlined that setting the vision and mission are essential notions within leadership in digitalisation. This was referred to the
workforce being better prepared for digitalisation and its organisational implications.

By having conducted our semi-structured interviews with employees and thoroughly analysed our findings, we could furthermore answer our third research question. Our research revealed seven leadership skills, which are perceived as necessary by employees in digitalisation, which are the following: Openness, willingness to fail, adaptability, empathy, motivation, communication, and technological understanding.

To conclude, it can be stated that we fulfilled the purpose of our research of how leadership in digitalisation is perceived as effective by employees. The following framework, which can also be found in Appendix 3, has been conceptualised to illustrate our research purpose.

Figure 2: Conceptualisation of Perceived Leadership Effectiveness (1)
As illustrated in the figure, companies of today are operating in an environment that is influenced by digitalisation. In the context of digitalisation, an interplay between the perceived seven necessary leadership skills, exemplified behaviours and proposed leadership styles is perceived to result in leadership effectiveness in digitalisation. More precisely, whereas some leadership skills and exemplified behaviours can partly be reflected in authentic, adaptive and servant leadership, others are equally important but independent from a specific leadership style.

6.2 Contribution and Implications

We believe that the outcome of our research paper contributes to both theory and practice in a substantial way. By means of our empirical research we are able to reason scholars’ increasing interest in the topic of digitalisation. The importance of digitalisation was specifically underpinned by discussing organisational effects of the phenomenon on an internal as well as external level. Moreover, our research has proven further evidence that digitalisation affects enterprises of various industries. Hence, it can be implied that the wide scope of digitalisation highlighted by theory can be confirmed. Due to the disruptive character of digitalisation and the speed of changes that come with it, we assume that literature also is affected by this pace and hence, develops quickly. As we perceive it hard for research to get a holistic understanding of this phenomenon, we believe having contributed to a more holistic conceptualisation of digitalisation and its implications.

For academic literature, our outcome stresses the importance of digitalisation being further researched due to its delineated disruptive character. Also, our thesis can be seen as a valuable contribution for research on leadership in digitalisation, as we not only shed led on digitalisations’ implication for companies, but also for leadership. For instance, our paper can add to existing leadership theory as significant insights on effective leadership within the digital age were revealed. Moreover, unlike previous studies where leadership was mainly investigated from leaders’ perspective, our thesis aimed to investigate
leadership effectiveness from employees' point of view. This further adds to digitalisation being researched in a holistic manner.

From practitioners' perspective, our paper can be of equal relevance. As already mentioned, it can be stated that all kinds of industries are affected by digitalisation. For companies that are facing digital transformation, our paper serves as evidence that this is an industry-wide phenomenon, which similarly challenges other companies. Useful insights on organisational effects of digitalisation were given in our thesis, which can help enterprises that encounter a digital transformation so to get prepared. Also, the interpreted and discussed leadership skills and behaviours, to some extent being reflected by the proposed leadership styles, can serve as reference points for managers and leaders alike in practice. Hence, our thesis serves as an impetus for practitioners acting upon the challenges of digitalisation. Ultimately, the conceptualised framework can be viewed as a recommendation on how to effectively lead in the digital age.
7 Discussion

In the last chapter of this paper, a summary of our research is firstly presented. Thereafter, limitations regarding our conducted study are discussed. Based on this, the chapter concludes with giving recommendations on how future research in this field could be conducted.

7.1 Summary

The present thesis investigated leadership effectiveness in times of digitalisation from employees’ perspective. Being an example of complex change, the disruptive and challenging character of digitalisation on organisations was outlined at the beginning of the thesis. As leadership is seen to be crucial in times of organisational complexity, an introduction of leadership theory, leadership in the context of change and scholars’ conceptualisations of leadership effectiveness were given. Thereby, authentic and adaptive leadership were outlined in particular. In line with our research purpose and underlying interpretative research philosophy, twelve semi-structured interviews with employees were conducted. Following our abductive research approach, our empirical material was compared with our previously developed theoretical framework. Additional literature was further consulted to explain unexpected findings in our data.

To conclude, we were able to fulfil our purpose of research by providing evidence for our research questions. We uncovered that organisations are affected by digitalisation in both a beneficial and challenging way. Although the general concept of leadership in digitalisation has not significantly changed according to employees, the role of leadership has become more important. We were able to conceive seven leadership skills and exemplified behaviours that are perceived as necessary in times of digitalisation by employees. Some of these skills are partly reflected in our proposed leadership styles, whereas others are independent from a specific style, yet equally crucial. Based upon this, a conceptual framework of leadership effectiveness in digitalisation as perceived by employees, was established. Ultimately, we made a contribution to existing literature on effective leadership and digitalisation as well as to practitioners alike.
7.2 Limitations

In respect to the time frame given for our research, we believe that this limited our research in scope and depth. This led to our decision to choose twelve interviewees and focus on one method of qualitative data collection only. Given more time and flexibility, we would have conducted most interviews face-to-face, which might have positively influenced the quality of our research. Under different circumstances we might also have expanded our study by a bigger sampling size or bigger-sized companies, which would have increased the credibility of our findings. Besides enlarging the scope of data collection, future studies could also conduct research in other countries than Germany and Austria. This would be of interest since applying our research in a different setting could help increasing the transferability of our research. In general, it has to be considered that the mentioned degree of transferability and credibility was partly limited due to our interpretative research philosophy. Regarding this, potential bias from us researchers must be taken into account, as described in Chapter 3.8.2. However, we sought to in detail explain how our research was conducted, from the chosen research method and sampling strategy to the individual steps of data collection and analysis. Especially by illustrating extracts of how we analysed our data and by providing our interview guide, we believe that similar findings and conclusions can be derived in case the study is replicated with the same sampling strategy.

The topics of digitalisation as well as leadership in digitalisation are relatively new and unexplored fields of research. Hence, we encountered a limited scope of existing literature on both. Moreover, the general concept of effective leadership appeared not to be clearly defined, as it has been addressed from various perspectives. Especially regarding some scholars claiming that effective leadership is context-dependent, this implies that our propositions of perceived leadership effectiveness are limited to the current state of academic research. Although we are convinced that this does not decrease the meaningfulness or relevance of our research, some conclusions might be different in case more literature on leadership in digitalisation would have existed. Moreover, it should be taken into account that the speed of change in the context of digitalisation might also influence the amount of literature on digitalisation-related topics being
available. Thus, it has to be considered that what has been proposed to be adequate in digitalisation now, might be perceived different in the future.

Finally, a limitation should be made concerning the detected generational divide outlined in Chapter 4.4. The perceived generational difference represents an interesting finding since none of our interview questions aimed or were formulated in a way to detect generational differences. However, this has to be considered with caution regarding our interview sample’s age group. Since the respondents are between 20 and 35 years old, this suggests that the reported difficulties of older generations coping with digital tools were observed from one viewpoint only. Hence, it would have been of interest having investigated the perception of older employees as well.

### 7.3 Future Research

Besides our thesis contributing to theory and practice of leadership in digitalisation, this paper can provide an impulse for future research. For instance, the perceived effectiveness of the seven leadership skills and exemplified behaviours revealed in our study could be quantitatively measured by researchers. Thereby, this would not only prove or disprove the skills’ credibility, but also statistically verify to what extent the proposed skills and behaviours are associated with the proposed leadership styles. In case the propositions would turn out to be valid, this would hence positively influence the transferability and credibility of the outcome of our thesis.

In respect to the outlined limitations of our study, future research could be conducted in several ways. To increase transferability, both employees’ and leaders’ perspective on effective leadership in digitalisation could be investigated. For instance, leaders and employees of the same company could be interviewed. Moreover, future research might also conduct interviews with older generations to firstly find out about whether the difficulties in handling new technologies is a one-sided assumption, and secondly to derive an understanding of how older generations perceive leadership effectiveness in digitalisation and if this differs from other age groups’ conceptualisation.
As we aimed for a high level of research quality, employees representing different traditional firms of various industries were interviewed. However, as already outlined, transferability can only be claimed in the context of SMEs. Moreover, the study's outcome transferability could be increased if our research, for example, would be extended to “born-digital companies”. Expanding research to born-digital companies can further advance research in two ways. Firstly, even though recent reports showed that different sectors have different strengths and weaknesses which have to be addressed (Kane et al., 2015), it would be of interest to find out whether there is consistency regarding challenges and benefits between traditional and digitally born companies. Secondly, the effectiveness of leadership might be perceived differently by employees of born-digital and non-born-digital companies, which would further contribute to research in this field.
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**Table:**

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<tr>
<th>Capability</th>
<th>Description</th>
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<tr>
<td>Awareness of Change</td>
<td>Helps leaders identify opportunities and challenges, fostering a culture of innovation and growth.</td>
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<tr>
<td>Motivating a Culture</td>
<td>Inspirational leadership that encourages team members to engage and excel.</td>
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<tr>
<td>Flexibility &amp; Drive</td>
<td>Ability to adapt to change and remain effective in diverse environments.</td>
</tr>
<tr>
<td>Understanding Technology</td>
<td>Knowledge and application of digital tools and platforms to enhance operational efficiency.</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Capacity to learn and grow, embracing new ideas and strategies.</td>
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**Notes:**

1. Source: Various leadership theories and models, including situational leadership and adaptive leadership.
<table>
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<th>Awareness of Change</th>
<th>Mindfulness to Learn</th>
<th>Full Engagement in a Variety of Environments</th>
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<td>Risk-taking &amp; Mindfulness</td>
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Reaching Leadership Capabilities in Literature

Wang (2017)

Kane (2017)

Kane (2017)

Kane (2017)

Kane (2017)

Kane (2017)

Kane (2017)

Kane (2017)
Appendix 2: Interview Guide

*We refer to digitalisation as the phenomenon of a company in change due to the digitalised business environment. Thereby, companies make use of new digital technologies in order to improve performance. New technologies are understood as a combination of connectivity.*

1. Using your own words, how would you describe leadership?
2. How would you best describe your leader’s behaviour or qualities regarding this?
3. How do you think digitalisation is influencing companies nowadays?
   - Can you give any examples of your company?
4. What role do new technologies play in your company?
   - How does your leader behave when such new technologies are implemented?
5. Have you ever experienced any challenges during the transformation to a more digital environment in your company?
   - If yes, how did leadership react to face those challenges?
   - How would you have wished for your leader to act?
6. Which specific behaviour of your leader encourages you to face new challenges or uncertainty?
   - Could you exemplify?
   - How would an ideal leader behave?
7. Why is trust in the relationship between you and your leader important?
   - Which behaviour of your leader increases trust?
   - Which behaviour of your leader decreases trust?
   - How is trust affected by digitalisation?
8. Why do you think is the role of leadership important in times of digitalisation?
9. Which specific leadership skills or capabilities do you perceive as necessary in times of digitalisation?
   - Which ones do you perceive as becoming more important in digitalisation?
   - Why?
10. How does your leader meet/display those necessary capabilities?
    - Can you exemplify this with a specific situation you have experienced?
11. How is your leader preparing the organisation for digitalisation?
    - Can you give specific examples?
    - Could you elaborate on a situation in regard to digitalisation where your leader could have behaved differently?
12. How do you perceive your leader’s commitment to change?
    - How is your personal commitment to change in the company?
    - How is this influenced by your leader’s behaviour?
13. How do you perceive you and your leader as working towards the same goal?
    - Which behaviour of your leader makes you perceive that?
Appendix 3: Conceptualisation of Perceived Leadership Effectiveness (2)