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Abstract

The rapid development of digital technologies already started affecting the whole world. The digital disruption caused by this has challenged the traditional business to either adapt in the new world or disappear from existence. The research was conducted on a large-scale retail business store located in Nepal. Since, this country has just started seeing effects of digitalization, this type of research would be very useful for businesses that are trying to transform themselves digitally. Therefore, as a researcher, it seemed sensible to conduct a research on this topic where very few literatures was available.

The objective of this research was to know how any company could implement digital transformation in to their business practice. In order to get answer to this question, this paper was segmented into two parts: a. theoretical framework, where huge amount of literature and several theories relevant to this paper was reviewed and b. a single case study was conducted in a retail business who successfully conducted digital transformation recently. This paper used qualitative and mixed approach for data analysis and collected empirical data by interviewing five top-level employees of the company. The findings were validated by triangulating the output generated from both, the literature and case study.

The main findings of this study show that the concept of digital transformation has not yet been defined. The result identified three key drivers that forces companies to adopt DT: *market pressure* and *changing customer behaviour* resulted by *rapid growth of digital technologies*. To transform digitally, the company can *initiate the transformation by developing a digital domain in the operation* and *digitalizing the operation* by incorporating *reinvention and innovation*. All the elements of business; *organisational, operational and processual* are affected by this phenomenon so the company should develop *good leadership, competent workforce, good communication channel and choose appropriate digital technologies* to ensure success in digital transformation journey.

Keywords:

Digitalization, Retail business, Digital Transformation, Digital Technologies, Leadership, Workforce, Communication.

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Introduction

This paper examines the strategic leading of digitalization and digital transformation in manufacturing and retail business. The paper is divided in two parts: theoretical and Empirical part. The first part consists a through literature review on related topics- digitalization, digital innovations, disruption of industries, digital transformation etc. The later part of the paper studies the digital transformation of two companies- one manufacturing company and one retail company. The data has been collected by conducting interview with the managers and staffs of the companies.

In this chapter, first, an overview of the background and motivation for this thesis will be presented. Then statement of problem and research questions will be defined. After that, the objectives and scope of study will be discussed briefly and at last the structure of the paper will be set up.

Background

As the technologies are developing in rapid pace, business firms need to adapt and assimilate those technologies to achieve and maintain competitive advantage and promote potential new growths as well (Devaraj & Kohli, 2003). Due to development in digital technologies, businesses are becoming more interconnected with their components- products, processes, firms and services or even the whole industry (Bhardwaj et al., 2013). Digital technologies consist of information systems, communication, connectivity and computing technologies and the combination of these components is transforming the entire business industry (Bhardwaj et al., 2013). The businesses, nowadays, must adapt to changes quickly than before. The continuous and constant innovation and emergence of technologies pushes firms to change their processes, organisational structure and even business model to stay in the market (Bozorgkhou & Rahnavard, 2014; Chen et al., 2011).

The term digitalization is described as the process of adopting digital technologies in firms and businesses. The adoption or use of digital and computer technology by any firm, organisation, industry or country is simply Digitalization (Brennen & Kreiss, 2014). It also includes the connectivity of objects, people and organisation (Röglinger & Urbach, 2019). Digitalization has changed the way how things work in business world. The increasing use of information and communication technology in every part of our lives has affected the whole society and changed

the way of business (Kääriäinen & Tihinen, 2016). The concept started after the deployment of internet in 1969 and has been recognized as one of the significant trends that changed the world and is often compared to industrial revolution by many scholars (Degryse, 2016; Ailisto et al., 2016).

Digitization is the action or process of converting analog data into digital form (Kääriäinen & Tihinen, 2017) whereas Digitalization or in broader aspect, Digital transformation refers to changes related with the use of digital technology in all aspects of society (Fors & Stolterman, 2004). Digitalization turns existing products or services into digital form and thus helps to gain advantage over tangible product (Boughzala et al., 2015).

Globalization and expansion of economy go hand in hand and both are equally facilitated by digitalization which has dissolved the national borders, weakened the necessity of physical interaction and accelerated transfer of commodities, capital, culture and concepts (Atkinson, 2012). The industry has entered into a new era where it is becoming smarter by using IoT (Internet of things) technologies, massive data exchange and data analytics (Heppelmann & Porter, 2015). The automation of processes can enhance productivity and profitability since it saves cost, speeds up the production and reduces errors significantly (Leksell et al., 2018).

Research Problem

The introduction has described the context for laying the foundation for the research statement. The researcher will try to fill the gap with the following research problem:

Research Problem: How can a company implement digital transformation in to their business practice?

This paper will try to understand the concept of digital transformation (DT), the drivers of DT, how is it carried out, where does it create impact and what factors determine the success of DT. Hence, the following research questions can be formulated from the research problem:

- RQ no. 1. Why should a company adopt DT?
- RQ no. 2. How is DT carried out in a company?
- RQ no. 3. What elements does DT has impact upon?
- RQ no. 4. What are the key success factors of DT?

The first research question is formulated to understand the need for digital transformation. The intention is to recognize the drivers of DT which will help us to go further into the other two questions. The literature view chapter will examine the concepts, underlying factors, practices of DT which will subsequently give us a foundation for the empirical part of the thesis.

Objectives and scope

The overall objective of this paper is to gain a comprehensive understanding about adaptation of digital transformation in companies. The concept of digital transformation will be explained, the need for digital transformation will be examined, the role of executives to lead the transformation will also be discussed and finally the case study companies' activities and experience regarding digital transformation will also be discussed.

This paper's theoretical objective is to present an in-depth knowledge of concept of digitalization and digital transformation, its impacts and to provide a new digital transformation framework. There are not huge number of academic literatures regarding the topic of DT and most of them are focused on practice-oriented literatures (Gerster, 2017). Hence, this paper will try to contribute a thorough literature review of digital transformation, digital technologies and digital disruption of industries. There are only few literatures which provide comprehensive understanding of the fundamental mechanisms via which digital technologies and innovations induce changes in the firm. The overall literature review will help create a basis for exploring the process of DT by companies and will also enable us to understand how company is affected. For academic purpose, this paper will add knowledge regarding stages of digital transformation which will further facilitate ground for future researches too.

The practical objective of this paper is to gain insight how digital transformations take place in Nepalese company. This paper can offer invaluable knowledge to companies which want to go through the process of digital transformation since it will shed light upon the driving factors, internal practices, leadership roles and the changes that comes with DT. This paper will also provide valuable insights regarding the current state of DT in Nepalese companies by analysing the case company and reflecting it with the literature. It will also give practical recommendations based on the result and analysis on how to approach digital transformation.

Since the topic is relatively broad and there hasn't been many studies carried out on the topic, it is necessary to list out some limitations to the scope of this paper. Qualitative case study will be carried out and the data will be collected by conducting remote interviews and using the materials

provided by the companies. Because this study is focused on the general aspect of DT, the technical aspects of digital transformation are not included in the empirical part of this paper.

Outline of the paper

This paper is divided into five chapters. Chapter 1. Introduction, Chapter 2. Theoretical framework and Literature review, Chapter 3. Research Methodology, Chapter 4. Findings, and Chapter 5. Discussion. The first chapter has already been discussed. The second chapter discusses the theories and the literature is reviewed to lay foundation and understand the concept in depth. This chapter will help to grasp the feature of digital transformation, digital innovation, how digital disruptions are caused and the practice of implementation of DT. Chapter 3 is about the methodology that is used in this paper. It consists the research setting, methodology, Collection of data and data analysis. In chapter 4, the findings of the empirical research is discussed. This chapter includes the context of case company, drivers of DT and changes are discussed. The role of executives and reforms that DT brings in the company are also discussed and evaluated. The final chapter presents the discussion of the findings. It provides the answer to the research questions and also offer recommendation to related companies. It also consists of theoretical and practical implications and limitations of the study. At last, concluding remarks are also added to summarize the whole thesis.

Theoretical Background

This chapter presents the theoretical background on digital transformation. It intends to lay an underlying foundation for the empirical section of the paper and connects the paper with the literature. The first section of the literature review examines the concept of digital transformation, and how it is changing the corporate world and have disrupted the incumbent industries. It will also cover a section on how digital transformation is affecting the companies, so the impacts of DT will be discussed. This thorough examination is necessary to understand why digital transformation is indispensable in current situation for companies. The other section of literature review will cover the theoretical and conceptual frameworks related to digital transformation to create a foundation framework for this paper.

Evolution of Digitalization

Digitalization has changed the way how things work in business operation and in economy (Bygstad, 2018). There is no universal single definition of concept of digital transformation among researchers (Grace et al., 2017) but this concept has major impact on organisations (Degryse, 2016) and executives need to start adopting it on every activity in their business and firms (Grace et al., 2017). Though these terms were defined in introduction section, we need to address the difference between digitization, digitalization and digital transformation since they are mostly used simultaneously. Hence, in next section, a brief detail will be provided to clear up the difference between these three words by using the literature that was reviewed for this paper.

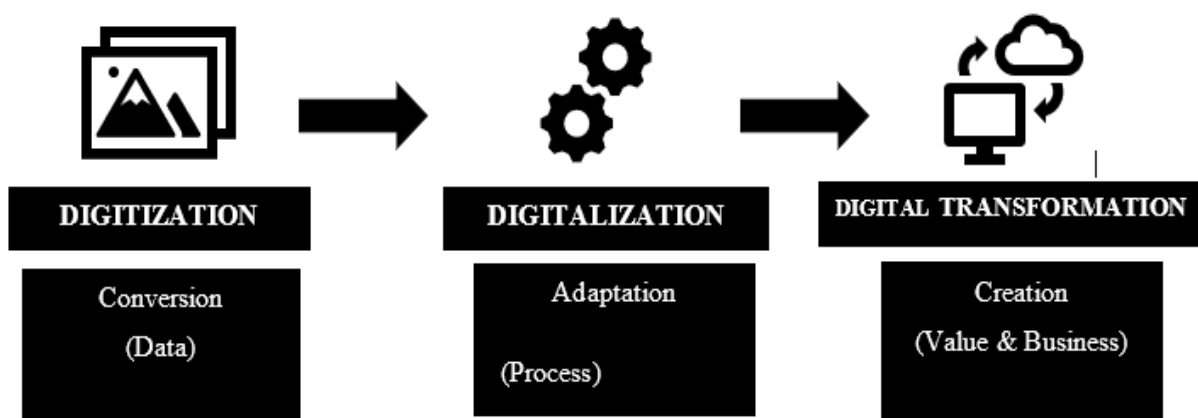


Figure no. 1 Digitization, Digitalization & Digital Transformation

Digitization

Gassmann et al. (2014) defined digitization as an ability to transform existing products or services into digital variants which offers advantage over tangible products. Likewise, Feldman (1998) defined digitization as a process, rather than ability, of basic conversion of information from physical or analog to a digital format. This definition of digitization being technical process of converting analog data to digital form is also emphasized by other scholars such as Lyytinen et al. (2016) and Henfridsson et al. (2010). Hence in this paper, this term will be used in accordance to this definition.

Digitalization

Digitalization has been recognized as a major transition of society for digital generations where digital technologies have been the fundamental tool used in people's everyday life (Boughzala et al., 2015). For that, many businesses are taking initiatives and different approach to reap the benefits of digital technologies such as social networks, mobile technology, internet of things, big data, cloud systems etc (Bonnet et al., 2014).

As already mentioned above, the literature still lacks complete definition of this phenomenon and there have been conflicting views regarding this topic and its characteristics (Grace et al., 2017). Digitalization, as referred by Fors & Stolterman (2004), is a dynamic concept which hasn't been completely defined by scholars or industries. However, it is can be described as an ongoing process of using digital technologies by any organisation, industry or country (Brennen & Kreiss, 2014). But the definition is often different depending on the type of business. In an organisation, digitalization is referred to use of digital technologies to modify organizational culture, processes, products and business model (Ojanen & Xin, 2018; Fichman et al., 2014). From business environment perspective, as described by Gartner (2016), it can be seen as the process of using digital technologies by a business company to transform its business model and advance towards digital world. From manufacturing industries' view, it can be seen as a process of designing products in digital form for simulation purpose to create it virtually and identify the components before actually producing the product, using technology to maintain customer and business relationships and for inventory management (Gray & Rumpe, 2015).

This paper will recognize digitalization as the process of using digital technologies to improve the organisational processes, products, business models as well as structure.

Digital Transformation

As described by Fors & Stolterman (2004) in above chapter, the whole society is going through the transformation due to these digital technologies. Many scholars have defined this concept in their own way. In business context, some scholars defined it as a business process (Berman & Marshall, 2014), some defined it as organizational strategy (Matt et al., 2015; Bharadwaj et al., 2013), and some defined it as a paradigm shift (Gregory et al., 2015). Similarly, some described its characteristics as disruptive (Bonnet et al., 2014; Berman, 2012), some described as complex (Matt et al., 2015) or evolutionary (Loebbecke & Picot, 2015), while some described it as radical (Bonnet et al., 2014; Berman & Marshall, 2014).

The word digital transformation is made up of words “digital” and “transformation” where the term “digital” refers to the technologies that is emerging in rapid pace and the term “transformation” refers to new innovations and creative development facilitated by those digital technologies (Gebayew et al., 2018). Bonnet et al. (2014) tried to define digital transformation as using technologies such as analytics, mobiles, social media and other embedded devices to further advance business improvements such as to create new business models, improve customer experience, streamline business operations etc. In other terms, digital transformation is much more than just a technical process of converting analog data into digital (Henfridsson, 2010).

Barney et al. (2001) had suggested to include the resource-based view of strategy in IT strategy by recognizing digital resources and Pagani (2013) had suggested to include business value in business strategy. Bharadwaj et al. (2013) tried to link strategy, digital resources and value creation by defining digital transformation as an organisational strategy which is formulated and executed by using digital resources to create differential value.

In this paper, the definitions provided by Bonnet et al. (2014) and Bharadwaj et al. (2013) will be integrated to understand how digital transformation as a continuous process, utilizes digital technologies to improve customer experience, reform business operation and create new and innovative business models and strategies to create business value.

Need for digitalization

There are many factors that drives the need for digital transformation. In this paper, the most important drivers are discussed:

Digital Technologies

The start of internet and worldwide adoption of world wide web, different types of related technologies such as smartphones, cloud system, online payment systems, Web 2.0, speech recognition, search engine optimization etc, have emerged which has boosted the development of e-commerce. According to Statista (2019), the global sales of e-commerce was about 2.3 trillion USD in 2017 and it has been projected to double to 4.88 trillion USD by 2021. The developing digital technologies such as big data, blockchain, IoT, artificial intelligence, robotics are designed and expected to have long term and valuable effects on businesses.

Even though not all of these technologies can perform as expectation, the increasing introduction of new digital technologies clearly indicates the need for businesses to transform digitally. Also, these technologies can reduce cost by replacing human cost with the use of automation, AI and virtual agents.

Competition

Due to rapid development of these digital technologies and globalization, the competition has risen to global scale and the competitive arena has also changed drastically. The industries no longer compete with their own kind but to other industries too. Big tech firms such as Apple, Amazon, Facebook, Alibaba has disrupted and dominated many industries other than tech. Manufacturing industries has shifted their sales to new digital businesses and retails have started to rely on digital technologies for sales instead of traditional method.

Just ten years ago in 2010, top five firms of S&P 500 were Exxon Mobil, Apple, Microsoft, Berkshire Hathaway and General Electric and only two of them were technology related company (ETF Database, 2010). In 2020, all the top five firms are digital- Microsoft, Apple, Amazon, Google and Facebook. In March 2017, these companies made up about 1% of the S&P

500 but their market valuation surged up to 260 billion USD whereas the remaining 99% lost that amount in that period (Insider, 2017). Interestingly, these companies now have collectively added \$4.4 trillion in market cap gains since 2013 which makes up about 18 % of the S&P 500 (Fortune, 2020).

Customer Behaviour

The customer behaviour is also changing in accordance to the digital development. Consumers are changing their buying behaviour from physical store to online stores. The concept of Digital Touchpoints has enhanced the customer experience which affects the sale as well as customer retention (Kannan & Li, 2017). Social medias and SEOs help customers to become more active, informed, connected with the business and products (Verhoef et al., 2017). This kind of technology helps the business to participate its customer in co-creating values, customisation of products, improving the products through instant and continuous feedback and also informing other customers through product and service reviews (Beckers et al., 2018).

Mobile phones has become the most effective device that affects consumer behaviour since consumers use it to search, examine and collect information about a product or service that they want to purchase and then also purchase it through mobile devices (Gensler et al., 2017). According to Statista (2020), the current number of mobile phone users in the world is about 4.78 billion which is about 61.51% of total population and by 2023, its estimated to grow up to 7.33 billion. As a result, these digital technologies are about to become the new system which will ultimately replace the traditional business methods. If a business cannot adapt according to these changes, they will not be attractive to consumers and will eventually become obsolete and will probably be replaced with companies that are one step ahead with these technologies.

Role of Leadership in Digital Transformation

The transformational leadership requires a leader interacting with others and creating a link that increases both the leader and the follower's level of commitment and morality (Northouse, 2019). This kind of leader takes control of followers' desires and motivations and aims to help followers achieve their ultimate potential (Northouse, 2019). Bass (1985) proposed that transformational leadership motivates followers to achieve better than they planned by (a) raising their awareness about the relevance and meaning of concrete and idealised objectives, (b) bringing followers to sacrifice their own desires to support the team or the organisation. Transformational leadership seeks to boost followers' efficiency and to optimise their ability (Avolio, 1999; Avolio & Bass, 1990a). People with transformational leaders are also highly motivated to behave in a way which serves the common good rather than their own personal interests (Kuhnert, 1994). They have clear internal beliefs and principles. Person intent to behave oneself in a constructive fashion appears to have much to do with successful conduct of change (Gilbert, Horsman & Kelloway, 2016).

In digital transformation process, Matt et al. (2015) and Westerman et al. (2011) note that transformational leadership is one of the major key success elements in DT. The digital transformations need a transformational leadership style in the company, where the executives take the responsibilities for the DT who have adequate amount of knowledge and experience and share the DT vision to the rest of the employees and company Matt et al. (2015). There are four transformational factors possessed in transformational leadership.

Idealised influence

It is the subjective aspect of leadership (Antonakis, 2012). Idealized power of influence identifies leaders that serve as role models to supporters; supporters agree with and seek to imitate these leaders (Northouse, 2019). Typically, those leaders have very high values and ethical principles and can depend on the best thing to do. The followers who normally put more faith in them are highly esteemed. They deliver a vision and a sense of purpose to followers (Northouse, 2019). Likewise, in DT, executives or managers are the leaders who plant the concept of DT in the company Matt et al. (2015). The roadmap from traditional process to digital transformation is built and guided by the executives and thoroughly shared to the rest of the company members

(ibid). The qualities in such executives as leaders have influence in the company to work in common vision of DT.

Inspirational Motivation

It defines leaders who express their followers' high aspirations and encourage them through inspiration to participate and become part of the organisation's common mission (Northouse, 2019). In realistic language, leaders use icons and motivational messages to guide the attention of community members to get something out of themselves. This kind of leadership strengthens the morale of the squad (Northouse, 2019).

As stated by Matt et al. (2015), supported management is required for DT. Assistance from Top management level through the whole transition is very necessary because DT methods impact the whole organisation (Matt et al., 2015). All stakeholders must fully engage in the phase of transformation. Thus, the motivation from top level management or executives encourages the staff and facilitates them to work on the common vision of DT and help them to adapt in the transformational process by strengthening their morale (Matt et al., 2015).

De la Boutetière et al. (2018) identified two key ways in which workers will respond to digital transformation. First is the development of new habits and ways of functioning by systematic process, and the other is the participation of all workers in innovative innovations and brainstorming. It also showed that businesses with dedication and risk-taking executives could inspire workers to collaborate together to achieve the global perspective (De la Boutetière et al., 2018).

Intellectual Stimulation

It requires leadership that inspires members to be imaginative, inventive and to contradict their own principles and ideals, the leadership and the organisation. This style of leadership assists followers in attempting to identify alternative answers to corporate challenges and creating novel approaches. It helps people to learn about things themselves and to solve their problems carefully (Northouse, 2019).

As the digital innovations need new inventions or imaginations to follow and adapt. Thus, transformational leadership stimulates the employees of the company to imagine and implement the digital innovations (Westerman et al., 2011). As the key success factor mentioned by Westerman et al. (2011), the workforce should be ready to process DT. They need to have the right knowledge and skills. This set of right knowledge and skills is stimulated by transformational leadership.

Individualized Consideration

This aspect reflects leaders who provide a welcoming environment in which the individual interests of their adherents are carefully listened to. Leaders act as mentors and advisors to help followers become fully up-to-date (Northouse, 2019). These leaders will enable their supporters to face their personal challenges by delegation.

According to De la Boutetière et al. (2018), the functions and duties of individual employees first need to be redefined and support them to tackle their personal challenges and enhance personal competencies, so they can comply with the mission in order to grow competent staff. Digital officials or collaboration partners must also contribute to the development of their subordinates' personal expertise and capacities by exchanging digital information and technological expertise. Companies are more likely to be successful if developments in emerging technology and leadership growth are made correctly (De la Boutetière et al., 2018).



Source: Adapted from “The Implications of Transactional and Transformational Leadership for Individual, Team, and Organizational Development,” by B. M. Bass and B. J. Avolio, 1990a, *Research in Organizational Change and Development*, 4, pp. 231–272.

The combination of these four factors lead the expected outcomes to be beyond expectations (Northouse, 2019). Transformational leadership has a supplementary effect; it drives individuals to do more than is generally anticipated. They are inspired to overcome their own self-interests for the benefit of the community or organisation. Indeed, the most possible consequences on the followers of transformational leaders are whether they connect with or see the value of their works (Caputi et al., 2013). Thus, the transformational leadership leads to the success of digital transformation in the companies.

Impacts of Digital Transformation

Digital transformation has impact on organisations in different levels and ways. Digital transformation transforms the character of products, processes, market and competition through the economy (Zysman, 2006). The literatures on DT mostly focus on consumer and organisational impact of DT. The pressure from competitors, customers and even from internal employees pushes the company to transform digitally (Westerman et al., 2011). The impact of DT is higher in companies or industries which relies on information as its core product (Shirky, 2008). In their study, Westerman et al. (2011) found that most of the digital transformation initiatives are focused on reforming operational processes, customer experience and business models. Tolboom (2016) also found that the greatest impacts of digital transformation are expected to be on the value proposition of the organisation, how they reach to their customers, the resources they use and on the customer segments that they can identify and serve. Furthermore, he stated that the products and services were impacted through various customization, accessibility, convenience and performance yielded by DT.

The literatures that was reviewed in the paper suggested that the impacting factors could be grouped into six topics a. Impacts on organisational strategies b. Impacts on Value creation & Business model c. Impact on relationships with customers and partners d. Impact on roles of executives and organizational structure e. Impacts on internal competencies and culture f. Impact on organisational efficiency.

Impacts on Organisational Strategies

Digitalisation generates new business features and presents executives with new strategic options. When business embrace emerging technologies, it offers some new prospects that have not been available in the company's tactics previously. Bharadwaj et al. (2013) outlined these emerging possibilities into four main themes of the modern digital strategy: scope, scale, speed and source of generating business value and capture. By acknowledging the potential of digital resources to develop new strategies for products and services, a company's scope can be expanded. For instance, Amazon developed cloud storage known as Amazon Web Services (AWS) as a main digital tool to facilitate connections between hardware of electronic retailing and online video streaming. It allowed new possibilities on the levels of applications and material to be reached (Henfridsson et al., 2010). The use of digital media also helps businesses to open

up conventional business boundaries and thus expand the accessibility of the product. For example, Apple has re-defined mobile utility for its iPhone by providing a new way for text, video and music to be accessed and consumed on handheld device. As a result, this dismantled the barriers of industry by also integrating books and magazines industry, film and music industry (Bharadwaj et al., 2013).

As further discussed by Bharadwaj et al., (2013), digital technologies also enable businesses to scale in new ways. With the increase in the extent of availability of cloud computing service, companies can scale up or down their businesses as required. Through the use of cloud infrastructure, businesses can tailor the capital flexibility to the competitive demands. Furthermore, as more and more goods and resources are being digitalised and get distributed and linked, network effects create accelerated capacity across multisided networks. It has also become the focus for smartphone app stores and likewise, this concept can be applied to other industries like auto and healthcare, when they are more digitally sound and advance.

In addition, to increase the possibilities of scaling business, the amount of information needs to be increased. As noticed by Huang et al. (2015), if companies have the ability to monitor the innovation by processing huge quantities of data then company can scale their businesses. Eventually, the scale of the business will be enhanced by collaborations and agreements as they share digital assets with the companies who do not possess competitive advantage. For example, the banks have their Application. Programming Interface (API) so that the third-party developers can develop their own applications using the data of bank. This helps bank to have excellent customer support, although the bank's own resources are not being utilised at all (Bharadwaj et al., 2013).

Impacts on Value Creation & Business Model

Using the technologies of digital transformation, the organisation can detect change in value creation which consequently affects the supply chain of the company and shifts the focus to digital activities which diverges the company from traditional and analog business to more modern and digitalized form (Matt et al., 2015). With new technologies such as artificial intelligence, automation, data interfaces etc, the company can reduce expensive human resources and save value out of it. They make the value chain more transparent (Berman & Marshall, 2014)

so that the company can analyse it to increase production efficiency to utilize the limited resources for generating maximum output. Also, these technologies lead to higher interdependency within the supply chain (Bharadwaj et al., 2013). Since digital transformation expands the degree of specialization, companies can pursue expansion or growth opportunities in specialized domain (Berman & Marshall, 2014).

As a result, Digital transformation impacts the business model of the organisation (Westerman et al. 2011). The growing culture of expanding the business into online business is a perfect example for this. Many companies have also setup their business digitally where they have an online version of their physical stores (Westerman et al., 2011). Furthermore, companies have expanded their products and services by including digital products in their business. Westerman et al. (2011) gave perfect example of a sports apparel manufacturing company adding digital tracking devices for workouts in their product line. Organisation can exploit the technologies to introduce new revenue models in their business and create new ways to generate value (Weiwei & Yue, 2015). Also, companies are capable of expanding their business globally with the help of DT but remain responsible locally (Westerman et al. 2011). Global shared services, a part of DT allows businesses to have global flexibility and reap benefit from utilizing centralized data to empower their business to adapt to local needs while being responsible to achieve their organisational goals (Westerman et al. 2011).

Impact on Relationships with Customers and Partners

The key activities of the companies are transitioning to the digital transformation such as change in business processes, stakeholder relationships, and operational modalities. As discussed above, digital transformation leads to value creation which ultimately enhances the performance of the businesses since business processes, both internal and external, are being digitalised by the digital technologies. According to Barrett et al. (2015), Information, Communication and Technology (ICT) enables the customers to perform self-service. This self-service mechanism gives companies an ability to gain more efficiency, saves cost and gives customer a sense of freedom of choice. E-commerce, customer support and self-service mechanism are the components of the digitalisation of the customer interfaces. Although digitalising the customer interfaces provides many advantages for businesses, some care must be taken into account. However, Scherer et al. (2015) emphasised that the combination of self service and customer service networks help to maintain the loyalty and retention of customers. The organisation

should also analyse how often and how the companies digitalize their customer interfaces. Ba et al. (2010) stated that the manual services which require human intervention are now automatized by digital technologies such as scheduling the bill payment, and tracking bus services.

Partnership is becoming more important as the digital technologies provide innovative process for co-creating value with stakeholders. Lindgren et al. (2017) analysed connected car initiative of Volvo and observed that their relationship with their supplier changes from the traditional one to a new form of partnership. It ensured that the successful relationships between value co-creators are more essential to produce the best possible results. Keen and Williams (2013) found that the competitive challenge in larger digital environments is to identify and capture various sources of value creation. Thus, the businesses need to adopt new kinds of collaboration, new processes and new systems. Since, there is always a constant shift in the digital world, having an innovative ecosystem with partners helps to overcome the new challenges.

Impact on Roles of Executives and Organizational Structure

Bonnet et al. (2014) used the term “Alignment of governance mechanism” which refers to the efforts put by the companies to set the organisation in motion and keep everyone moving along to the right direction through digital transformation. This involves improvements in the new digital leadership styles of the company, organisational structure and key performance structures (KPIs).

New leadership styles and roles are needed in the company for the digital transformations such as digital champions and chief digital officers (CDO) to handle the new situation and challenges accordingly (Bonnet et al., 2014). Basically, CDO is a complementary role to chief information officer (CIO) in order to manage the change in the organisation (Hess & Horlacher, 2016). CDOs can play the role of entrepreneurs to build and execute digital strategies and sometimes as the role of spokespeople and leaders to counter cultural resistance. CDOs provide technical support to the digital transformation process.

Hence, with the new roles as such, organisation can have control and ownership to digital transformation which ultimately leads to high chances of success (Hess et al., 2016). It is also important for companies to determine which style of organisational structure suits their digital transformation better. Zammuto et al. (2007) stated that because of digital transformation, the traditional hierarchical structures are becoming more flexible as the department units and teams

are being more organized and are being able to collaborate in network structures. The concept of mobile enterprise has been introduced as a result, to replace traditional workplace and delegate tasks remotely (Brockmann & Stieglitz, 2012).

Impacts on Internal Competencies and Culture

Digital transformation has a high impact on the human resources of the company as well. It involves changes to the firm's expertise level and community. To adopt digitally sound technologies in the company, human resources need to upgrade their skills and competencies in regard to use those technologies. Thus, the company needs to focus on building such required competencies and skills to their existing people. Hess et al. (2016) listed out four ways to obtain new skills for digital transformation: a. development of internal resources, b. outsourcing c. Mergers & Acquisitions and d. collaboration/partnerships.

Kane et al. (2017) stated that digital technologies can provide new methods over the traditional ones which are more efficient to learn and develop competencies such as interactive learning platforms, and idea sharing groups. For example, AUDI company recognised external consultants to identify the required competencies which were then facilitated to develop into the internal staffs of the company (Dremel et al., 2017). Next way of enhancing the digital competencies is outsourcing. Kane et al. (2017) argued that companies should themselves have the ability of attracting and building digital talents in order to make digital transformation possible. Similarly, partnerships and recruitment can be used to develop skills more efficiently. Partnership minimises the failure risks, but the competencies remain outside the organisation which increases third-party dependency. As digital skills become a core competence of companies, it can be a viable choice to acquire partner companies to ensure that competencies remain inside the organisation.

Sebastian et al. (2017) noted that the digital transformation has an influence across several aspects of corporate culture. Due to the changes in different roles in the organisation and working methods, it is also important for the culture of the companies to change. This transition can be challenging since a new form of work needs greater participation in the external environment and the interlinked structure that forms business identity and company's culture (Lindgren et al., 2017). Instead it may trigger new problems to the company. Thus, the development of digital culture is important so that it helps in the teamwork, partnerships, risk minimising and

continuous development (Kane et al., 2017). Kane et al. (2017) also recognize development of digital culture as an important requirement because it develops a positive cycle of values in the company in which it enhances the digital culture.

Impact on Organisational Efficiency

The speed gained from digitalization, will help achieve competitive advantages. As businesses add digital aspects to their company, the speed of launching the products will be increased. Huang et al. (2015) stated that by carrying out the user-responsive trial and adjustment, the company could reduce the time difference between the product concept development and deployment. It is possible because the content can be separated from the medium by using digital technologies and adding the features post launching of products (Henfridsson et al., 2010). Digital technologies also enable businesses to improve decision-making. This can be considered both as the ability of management to obtain summarised information from multiple channels and as the ability of customer service to answer requests in real time using various social media platforms like Twitter, Facebook and other interactive applications (Bharadwaj et al., 2013). Digitalization can provide modern methods of managing supply chains in distributed communication networks, which will then guarantee the delivery of new goods in broader market right after the launch of new products (ibid.)

Organisations have the opportunity to utilize the digital infrastructure and software to reduce their physical resources and digital solutions could be more cost efficient and enable economies of scale instead of time consuming and costlier traditional system (ibid.). Furthermore, digital transformation eliminates the limitation of one-way communication and knowledge sharing since it allows the organisation to have boarder and unrestricted collaborations no matter where the companies are located (Westerman et al. 2011). The executives can monitor the performance and efficiency through different digital tracking tools and helps them to collect extensive and important information regarding their operation (Westerman et al. 2011).

The work efficiencies increase even more as the digital technologies get more advanced (Ba et al., 2010). Artificial Intelligence (AI) is growing faster which is enabling the companies to digitise even more complicated internal processes. AI used in business provide insights into the market analysis and transactional behaviours.

Digital Transformation Frameworks

This section will review different theoretical and conceptual frameworks related to digital transformation. There are several frameworks that can be found regarding this topic, but they can be clustered in three perspectives: a. Organisational perspective b. Process and Operational perspective c. Innovation perspective

Organizational perspective

Digital Transformation Framework (Matt et al., 2015)

This framework identifies four major elements of digital transformation which are completely independent of any industry.

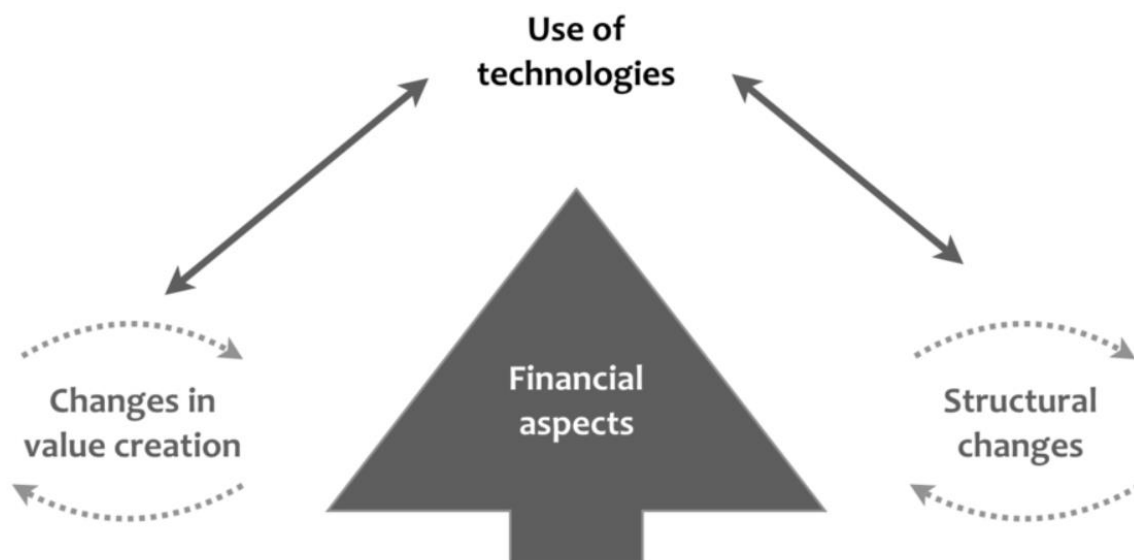


Figure no. 2 Digital Transformation Framework by Matt et al. (2015)

The first element, use of technologies signifies the organisational outlook and interest to utilize new technologies and capabilities. The organisation needs to determine how it is going to use the technology, to become leader in industry through technological exploitation to achieve competitive advantage or to keep using traditional methods and standards to just run business operations. It is about the strategic role of technology in the company and its future technological ambition.

Second element, changes in value creation refers to the changes in value creation that is resulted from frequent use of new technologies. Use of digital technologies expand the product and

service portfolio of business (Matt et al. 2015). It is concerned to the impact of technologies on the value chain. This is a two-way cause and effect of use of technologies in the organisation. Third element, structural changes, is also a two-way cause and effect of use of technologies in the organisation. After the organisation adjusts to new technologies and starts creating values, it needs to have partial or full structural changes which is basically some changes in the organisational architecture. It is concerned with placement of new digital activities in the organisational structure.

The last element is financial aspects which is the core element of this framework is concerned to both the organisation’s priority on basis of declining core business and its ability to finance digital transformation project (Matt et al., 2015). According to Matt et al., (2015) all four elements are required to be aligned together in order to achieve full exploitation of the desired effect. This framework provides basic depiction of digitalization with four important dimensions of digital transformation.

Digital Transformation Framework (Westerman et al. 2011)

This framework was designed by the authors in cooperation with Capgemini Consulting and 157 executives of 50 large traditional companies.

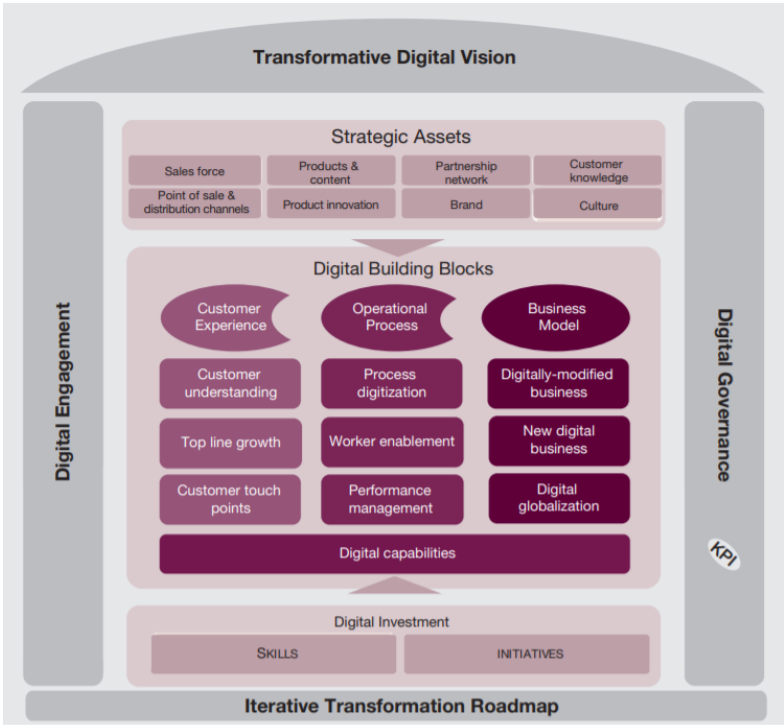


Figure no. 3 Digital Transformation Framework (Westerman et al. 2011)

The external layer includes i. Transformative digital vision ii. Digital governance iii. Iterative transformation Roadmap and iv. Digital Engagement (Westerman et al. 2011). The first element refers to how leaders evaluate their organisation's assets and capabilities and form a vision accordingly for digital transformation. Second element, digital governance is about the organisation's governance and effective communication to ensure that the organisation is on right path. Third element- iterative transformation roadmap refers to the iterative process of the prior two elements that senior executives drive DT through. They envision the digital future of the organisation, invest in digital initiatives and skills and take charge of the change from top level. Fourth element, digital engagement is the process of transforming the old organisational culture into a new corporate culture based on digital transformation approach.

Similarly, the internal layer consist of three central themes i. Strategic assets ii. Digital building blocks iii. Digital investments. As pointed out by Westerman et al., (2011), strategic assets includes sales force, products & content, partnership network, customer knowledge, point of sales & distribution channels, product innovation, brand and culture. These assets together produce the second element, digital building blocks which consist i. Customer experience ii. Operational processes and iii. Business models (Westerman et al. 2011). The first factor customer experience includes customer understanding, top line growth and customer touch points. Second factor operational process includes process digitization, worker enablement and performance management. Third factor business model includes digitally-modified business, new digital business and digital globalization.

Similarly, the third theme, Digital investment includes skills and initiatives that is necessary to invest in digital infrastructures such as data analytics, cloud systems, ERP etc. This theme helps to produce the digital capabilities which will operate the digital building blocks in order to complete the digital transformation process. Furthermore, the authors recommended to integrate three step iterative approach which the top-level executives need to follow to lead their organisation successfully through digital transformation process. They are i. introduce digital future in the organisation ii. invest in digital transformation iii. top-down organisational structure (Westerman et al. 2011).

Digital Transformation Framework-Cognizant (Corver & Elkhuisen, 2014)

This framework is based on four core blocks i. Customer ii. Product iii. Processes and systems and iv. Organisation. The authors have given more emphasis on customers and argued that

customers are the cornerstone of digital transformation and this core stakeholder should be treated accordingly. These core elements are further divided into sub categories.

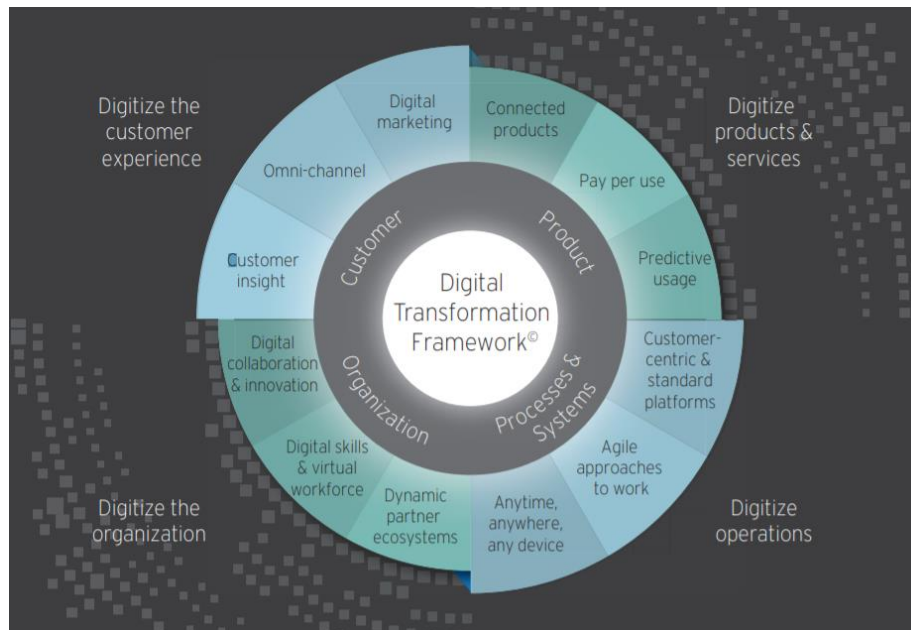


Figure no. 4 Digital Transformation Framework (Corver & Elkhuisen 2014)

The first element is divided in a. Customer insight b. Omni-channel and c. Digital marketing (Corver & Elkhuisen, 2014). The authors argued that companies could communicate with customers and identify their preferences and wants with the use of digital technologies like social media platforms, data analytics, customer relationship management (CRM) etc. Second element, product is also grouped in a. connected products b. pay per use and c. predictive usage (Corver & Elkhuisen, 2014). The purpose of digitalizing the core products and services is to be able to collect and analyse customer data in order to improve customer experience. In addition, the digitalization of products and services also creates opportunity to expand the product portfolio and predict maintenance services. Third element, processes & systems, also has three sub categories a. customer-centric and standard platforms b. agile approaches to work and c. anytime, anywhere and any device. Using advance digital technologies together with digital approaches such as SMAC (social, mobile, analytics and cloud) to upgrade the organisational business processes and systems (Corver & Elkhuisen, 2014). Finally, the last element, organization, is also divided into three sub categories a. dynamic partner ecosystems b. digital skills and virtual workforce and c. digital collaboration and innovations (Corver & Elkhuisen, 2014). This framework debates that this kind of interconnection of value chains in the business facilitates improved and better end-to-end products and services offerings to customers and also promotes integration of the business in larger ecosystems.

The authors, Corver and Elkhuizen (2014) argued that this framework supports the digital transformation process by developing a digital vision and new business models based on digital opportunities.

Process and Operational perspective

Digital Business Transformation Framework-Digitisation Piano (Wade, 2015)

This framework was prepared in cooperation with Global Center for Digital Business Transformation. It consists of seven elements which defines the core of digital transformation of a business i. Business model ii. Structure iii. People iv. Processes e. IT capability f. Offerings and g. Engagement (Wade, 2015). The author describes that successful digital transformation is linked with organisational change and improved performance resulted from the combination of digital technologies and business models. The basic theoretical assumption of this framework is using digital technologies such as mobile technologies, social media and online platforms to achieve transformation of organisation and business model.

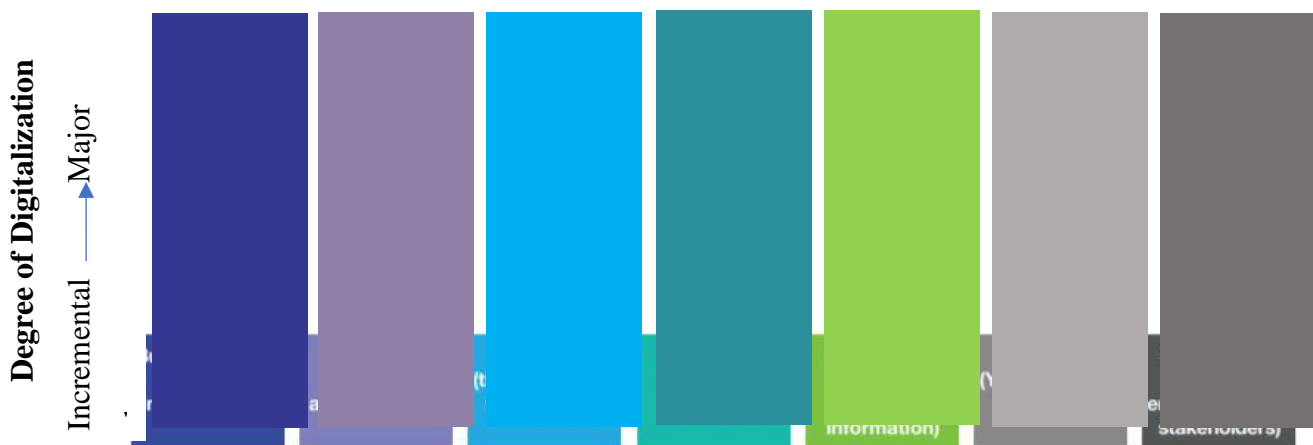


Figure no. 5 Digital Transformation Framework-Digitisation Piano (Wade, 2015)

This framework, generally known as digitization piano framework, integrates the organisational strategy with the use of digital technologies. Moreover, this framework completely emphasises on the enterprise aspects but does not analyse external factors and variables which can impact on the organisation (Nwaiwu, 2018).

Digital Orchestra Framework (Wade et al., 2017)

This framework was introduced as an official replacement of the digital piano framework (Wade et al., 2017).

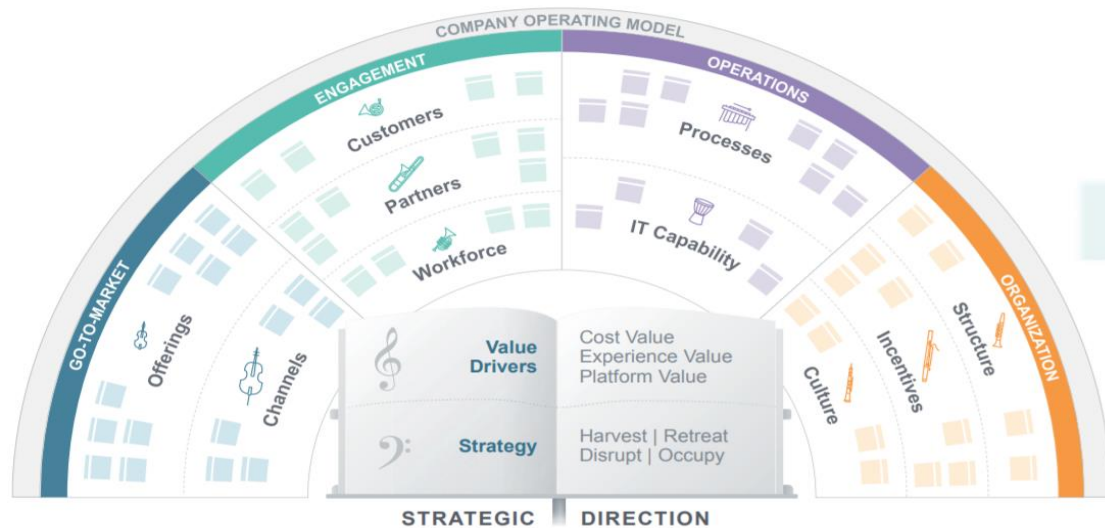


Figure no. 6 Digital Transformation Framework-Digital Orchestra (Wade et al., 2017)

The underlying basis of this framework is that the leadership should determine what kind of value they want to create and adopt strategy accordingly to achieve that value (Wade et al., 2017). It interprets the whole concept of digital transformation in the language of orchestra and in order to understand the digital orchestra, first, the strategic direction- “the music” needs to be defined and then the specific strategies- “the orchestration” (Wade et al., 2017). The leaders- “the players” must have the musicianship to give provide captivating performance. This framework regards the leadership as a crucial factor which can set the strategic direction to develop the required skills and orchestrate the symphony.

The Digital Orchestra framework consists of four elements. The first element, Go-to-market includes a. Offerings and b. Channels. Second element, Engagement includes a. Customers b. Partners and c. Workforce. The third element, Operations consists of a. Processes and b. IT capability and the last element, Organisation includes a. Structure b. Incentive and c. Culture (Wade et al., 2017). The authors stress on the fact that all these sections need to operate in the concert for the orchestra to play the symphony- maximum utilization of digital transformation in the organisation.

Reinvention and Innovation perspective

Digital Reinvention Framework (Berman et al., 2016)

This framework focuses on reinvention instead of transformation as the above frameworks. It was developed by the authors in cooperation with IBM Institute for business value and argues that in order to achieve successful digital reinvention, the organisation need to adapt to new strategic focus, build new expertise and establish new methods of operation (Berman et al., 2016). The organisations which looks forward to achieving successful digital reinvention, they need to adopt basic bottom up reinvention of operations, strategy and technology. Hence, the priority is given to experience instead of productivity (Berman et al., 2016).

As a result, the Digital Reinvention Framework proposes ways to achieve a digitally transformed organisation with “experience first” approach which focuses on adopting digital drivers such as internet of things, blockchains, data analytics, cloud computing systems, mobile technology etc and is built on three major organisational priorities i. New focus ii. New expertise and iii. New ways of work (Berman et al. 2016).



Figure no. 7 Digital Reinvention Framework (Berman et al. 2016)

Digital Innovation Strategy Framework (Nylén & Holmström, 2015)

This framework focuses only on digital products and services which is its major shortcoming but nonetheless, it provides effective tools which helps businesses to have digital products and services diagnosis to understand their position on the path towards achieving improved digital products and services (Nylén & Holmström, 2015). The authors claimed that after managing digitalization, organisations face a challenge to regard their products and services portfolio, digital environment and methods of organizing innovation which can be addressed with this framework since it supports organizations to track their digital efforts.

In order to implement this framework, the authors proposed to cut across three dimension of the organisation which are impacted by digitalization i. Products ii. Digital environment and iii. Organizational properties. These three dimensions are further divided into key areas where Product dimension consists of two key areas a. User experience and b. Value proposition. Environment dimension consists of one key area c. Digital evolution scanning. The organisation dimension consist of two key areas d. Skills and e. Improvisation.

Dimension	Area	Scope	Element
Product	User experience	Digital products and services must offer high levels of usability, possess carefully designed aesthetic properties, and evoke engagement.	Usability
			Aesthetics
			Engagement
	Value proposition	Digital innovation involves an articulated value proposition; i.e., a customer segmentation including strategic pricing and positioning of the product portfolio, dynamic bundling of product units, and carefully negotiated commissions to channel owners.	Segmentation
			Bundling
			Commissions
Environment	Digital evolution scanning	In order to identify opportunities for innovation, firms need to scan their digital environment. This involves gathering information on new digital devices, channels, and associated user behaviors.	Devices*
			Channels**
			Behaviors
Organization	Skills	In order to reap the benefits of digital innovation, firms need to acquire new skills both internally and externally while establishing new digital roles. In doing so, firms should promote continuous learning of the unique properties of digital technologies in order to secure dynamic innovation teams.	Learning
			Roles
			Teams
	Improvisation	The malleability and low cost of digital technologies affords a higher degree of improvisation. As a consequence, managers need to ensure that they provide organizational members with an improvisational space where structure and flexibility is balanced in such a way that the constraints maximize creativity, dedicated time is given, and improvisational efforts are coordinated to deal with overlaps and waste.	Space
			Time
			Coordination

* Hardware such as memory, processors, chips, PCs, smartphones, tablets, etc.
 ** Web services and platforms such as social media and app stores

Figure no. 8 Digital Innovation Strategy Framework (Nylén & Holmström, 2015)

Summary of the Frameworks

Framework	Author(s)	No. of elements	Elements (what to transform)	Process (How to transform)	Limitation
A. Organisational perspective					
Digital Transformation Framework	Matt et al. 2015	4	Use of technologies Changes in Value creation Structural changes Financial aspects	Digital technologies as core concept. Focus on integration and alignment of DT.	Designed for academic scope, not been officially validated.
Digital Transformation Framework	Westerman et al. 2011	7	<u>External layers:</u> Transformative digital vision Digital governance Iterative transformation roadmap Digital engagement <u>Internal layers:</u> Strategic assets Digital building blocks Digital investments	None	Detailed process guideline missing. Not empirically validated and tested yet.

Digital Transformation Framework-Cognizant	Corver & Elkhuizen 2014	4	Customer Product Processes and systems Organization	None	Precise guideline missing.
B. Process and Operational perspective					
Digital Business Transformation Framework-Digitisation Piano	Wade 2015	7	Business model & Structure People Processes IT Capability Offerings Engagement	Digital transformation processes leading to whole structural adaptation. Expanding organizational agility	Focuses only on enterprise. Doesn't analyse external organizational impacts and variables
Digital Orchestra Framework	Wade et al. 2017	6	Go-to market Engagement Operations Organization Value drivers Strategy	Top executives and leaders determine the organisational value. Focus on strategical aspects to achieve expected values.	Empirical and scientific data missing.

C. Reinvention and Innovation perspective

<p align="center">Digital Reinvention Framework</p>	<p align="center">Berman et al. 2016</p>	<p align="center">3</p>	<p align="center">New expertise New focus New ways to work</p>	<p align="center">Focus on bottom up approach and achieve digital reinvention</p>	<p>Based solely on theories. Doesn't state how to implement practically. Hypothesis has not been tested with empirical data.</p>
<p align="center">Digital Innovation Strategy Framework</p>	<p align="center">Nylén & Holmström 2015</p>	<p align="center">3</p>	<p align="center">Product Environment Organization</p>	<p align="center">Give priority to digital products and services</p>	<p>Missing detailed strategy Limited since only focuses on products and services Ignores external factors. Ignores internal process innovation.</p>

Table 1. Summary of frameworks from literature review

Factors determining the success of digital transformation

This chapter discusses various key success factors (KSFs) which support the digital transformation of organisation. The following section explores some major success factors found in the literature of DT. Some of the KSF are connected with the digital transformation frameworks discussed in previous chapter hence their connections will also be discussed.

Elements and Success Patterns- Matt et al., (2015)

In order to successfully implement digital transformation in the company, Matt et al. (2015) discussed few elements or success patterns that are responsible, which can be clustered into the five key focus areas relevant to DT Framework. These key focus areas are:

Transformational Leadership: Companies should make sure that the responsible person for the whole operation of DT should have knowledge with sufficient experience in that field to align their incentives with the strategy. The leader should preferably be same person over the whole process to avoid the break and risk. Transformational leadership skills are required to deal with resistances that may arise during the process (ibid).

Supportive Management: Top management support is very important throughout the whole transformation process since the DT strategies affect the whole organisation. All stakeholders need to have active involvement in the transformation process (ibid).

Adequate and skilful Human resources: Companies need to have adequate number of employees from the start phase till implementation. In spite of having the internal experts, companies may also have to outsource experts if additional support is required (ibid).

Clear procedure: The above factors should work together to set up clear procedures to formulate, implement, evaluate and adapt to the transformational strategies. All the stakeholders in the company needs to have a clear understanding on the vision, procedure, situation and consequence of the transformation (ibid).

Monitoring, Reassessment and evaluation: Since this transformation process is dynamic and can change rapidly, the assumptions are highly uncertain. Therefore, continuous reassessment and evaluation of strategies and progress should be carried out with clear procedures to ensure reassessments of strategies can be taken in situations where necessary. For that, specific intervals need to set up between reassessments, procedures need to be clearly defined, mechanisms to

evaluate progress and thresholds need to be set, based on which, preventive or corrective actions can be taken (ibid).

These factors are very important to carry out digital transformation effectively and successfully and also to build management credibility which helps the organisation to eliminate decision making biases (ibid).

Key success factors- Westerman et al., (2011)

The authors have used some common set of elements as they call it, which are necessary for successful digital transformation. Each of the elements can be used as lever by the leader to initiate and drive the transformation process into the organisation. Those elements are also clustered hereby which will be briefly discussed.

Dynamic leadership and Transformative vision: As also mentioned by Matt et al. (2015) in previous section, a dynamic leadership is the first element that is necessary for digital transformation. The leader(s) assess available and potential value of existing resources and assets and create a transformative vision that is suitable and necessary for the organisation. The success of digital transformation doesn't mean finding ways to use new technologies, but it is about envisioning new ways to use digital technology to improve performance and customer satisfaction. The authors claimed that to achieve success in DT, the leader needs to have a transformative vision rather than incremental vision (ibid). (Westerman et al., 2011).

Transform resources not replace: The authors believe that transformation is not radical replacement of the old resources with a new one but is rather evolvement the existing competencies and resources to adjust in a new environment. Although the process may change the leadership or replace few assets, but it basically involves reassignment or adapting assets or realignment of employees and at the same time discarding obsolete and unnecessary elements may also happen (ibid). The leader needs to identify and diagnose strategic assets and resources such as the sales force, point of sale and distribution channels, products and contents, product innovation, partnership network, brand, customer knowledge, culture etc. in order to find which of them provide value and how and which needs to be readjusted or removed (ibid).

Workforce: The organisation needs to find right people with right skills in order to carry out the transformation process(ibid). Since digital transformation is more technical, it is very important to find skilful workforce to work on the vision while implementing the new technologies. If good workforce is not available within the organisation then, the existing employees need to be

retrained or reassigned or may be even hire external personnel until the internal personnel learn enough so that the know-how can be converted into a knowledge asset (ibid).

Incremental investment: The authors found that most of the successfully transformed companies did not fully planned the transformation in advance (ibid). They did not make radical changes from the start, but they envisioned it. They started by building basic capabilities and went on adding capabilities incrementally. The companies invested in key initiatives that advanced the vision, then slowly kept on adding changes and expanded the processes and vision(ibid).

Effective communication: The authors found in their study that the successful companies recognized the importance of communication with people hence they communicated the initial vision by using the digital technologies to educate their workforce and mobilize them accordingly (ibid). The authors found two impactful methods for effective communication a. replace old cascading communication channel to wider and larger scope channels which replaces old tools such as emails to larger possibilities like webcast, social networks, video conferencing etc. and b. replacing one-way broadcasting model of communication with Enterprise 2.0 tools such as blogs, discussion forums, digital conversation channels, wikis etc. Using these methods, these companies could create awareness through communication and also increased the level of trust and transparency (ibid).

Top down approach: The authors highly emphasize the top-down approach for digital transformation since they believe that successful DT does not occur through bottom up approach (ibid). After defining the vision and setting good communication channel, now the leader, needs to turn the vision into set of ambition and flow it to all departments by using top-down approach.

Coordination and monitoring: In their study, the authors found that most of the successful companies used central coordination model and the companies which did not have effective digital coordination did not get the full possible value from their initiatives. After having clear ambition and coordination, the leader needs to set up metrics and key performance indicators which are transparent to all stakeholders in order to monitor and review progress constantly and ensure that whole organisation is aligned with the digital strategy.

Iterative approach: The authors found that top executives of successful companies drove digital transformation with three-step iterative approach: envisioning digital future of the organisation, investing in digital skills and initiatives and leading the transformation from top.

Digital Orchestra's Success Factors- Wade et al., (2017)

As we can see in the framework section, the authors, Wade et al., (2017) have described the whole digital business transformation as a musical symphony and emphasized on the having all instruments (elements) played together to create the symphony. They have figured out set of melodies (components) that needs to be played in order to have a good musical piece:

Holistic approach: The authors concluded that the companies which are holistic and encompasses the entire operating model have highest chance of success and could deliver sustainable results.

Versatile & Proficient Performers (Functional excellence): The authors emphasized on versatility and proficiency of the “players” for high level performance. Therefore, all levels of employees and executives need to keep improving their skills and knowledge because if one of them perform weak, the whole symphony will be affected. The authors named the “musicianship” of the orchestra as functional excellence which they defined as the ability of the players to perform and execute at highest level.

Digital business agility: Along with the versatility of the performers, the authors also give high importance to agile capabilities such as hyperawareness, informed decision-making, and fast execution. These elements are supposed to be razor-sharp, as the authors explained them, so that the companies have the ability to respond to changes in environment and strategies and be able to function in any type of dynamic situation.

The Keys to Success (De la Boutetière et al., 2018)

The authors, De la Boutetière et al. (2018) found out twenty-one keys to success from their research but they categorized all factors into five categories:

Having the right, digital-savvy leaders in place: Similar to the previous authors, De la Boutetière et al. (2018) also found leadership as one of the most crucial keys responsible for transformation success. High commitment and serious effort from digitally literate leader towards transformation contributed to the transformation’s success significantly (ibid).

Building capabilities for the workforce of the future: The survey conducted by the authors confirmed that developing talents and skills in the organisation is one of the most crucial factors for successful digital change (ibid). In order to develop capable workforce, first the roles and responsibilities of individuals need t be redefined in order to align them with the vision. Then, the digital officers or integrators need to help upgrade the skill and capabilities of their colleagues

by sharing digital knowledge and technical skills (ibid). The companies are more likely to have successful transformation when they make right investment in digital talents and talent development.

Empowering people to work in new ways: The authors found two primary ways to empower employees to adapt to the transformation. One is to reinforce new behaviours and working ways through formal mechanisms another one is to involve all employees in idea generation and brainstorming about digitization and where it should be adopted. The result of the survey showed that adopting these ways more likely contributed in successful transformation. It also showed that business which have engaging, and risk-taking leaders could empower employees to work together towards achieving the digital vision.

Giving day-to-day tools a digital upgrade: The company purchasing suitable digital tools, implementing digital self-serve technologies for employees and partners, integrating technology in operation and encouraging data-based decision making and endorsing use of interactive tools also doubled the likelihood of transformation success (ibid).

Communicating frequently via traditional and digital methods: The authors highly prioritized the importance of clear communication for digital transformation. They found that companies where communicating the change story to employees on why the changes are taking place, why they are important and where the organisation is heading, were three times more likely to succeed transformation. When clear target and vision is communicated using remote and digital tools to the all employees, the business is more likely to succeed in digital transformation.

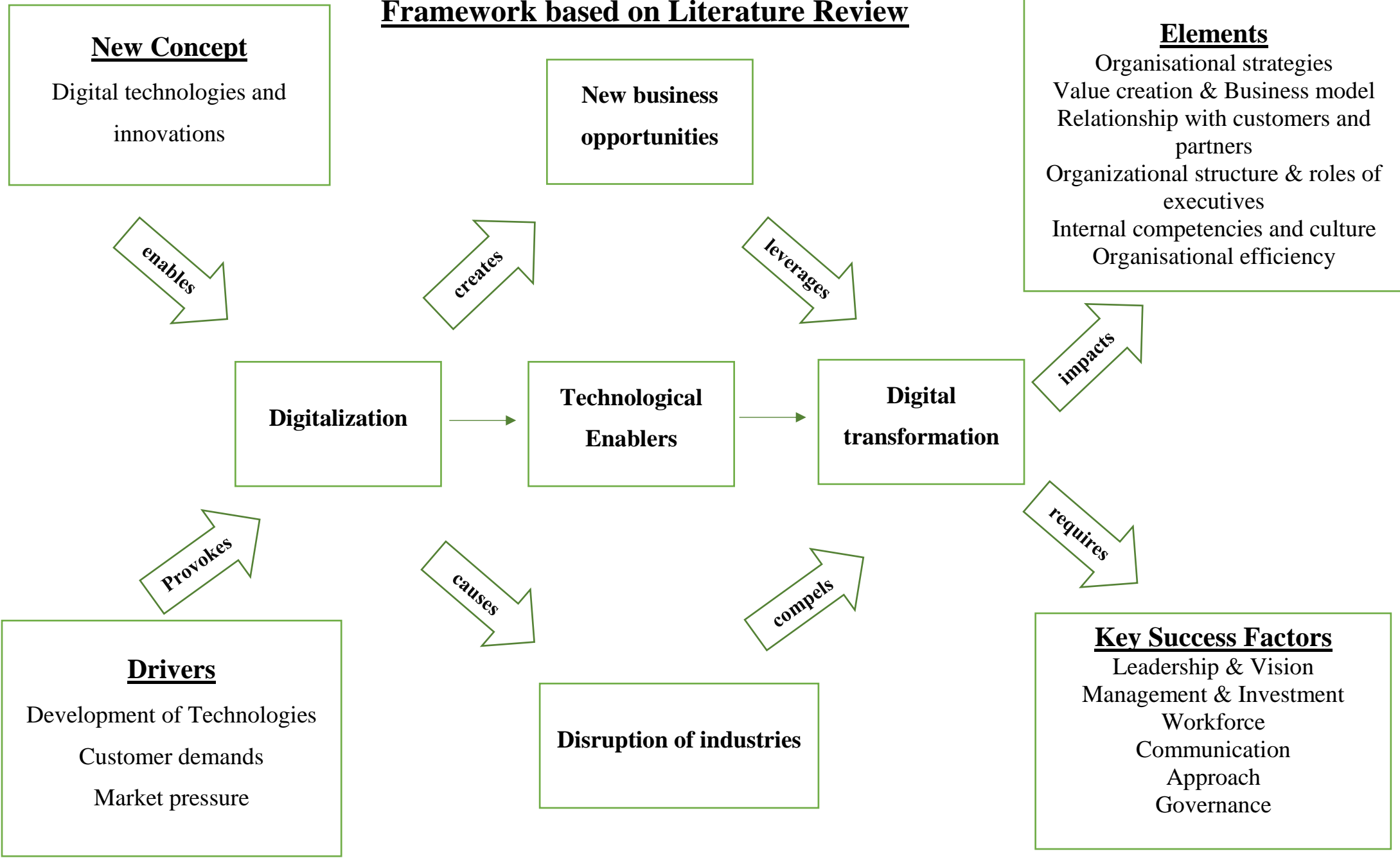
Summary of Key Success Factors

Framework	Author(s)	No. of elements	Focus area	List of KSF	Linked to DT Framework
Elements and Success Patterns	Matt et al., (2015)	5	Transformational Leadership Supportive Management Adequate and skilful Human resources Clear procedure Monitoring, Reassessment and evaluation	Capable person with sufficient experience Transformation leadership skills Top management support throughout the whole transformation process Active involvement of different stakeholders Adequate staffing Internal and external experts for additional support Procedures for formulating, implementing, evaluating and adapting transformational strategies Continuous reassessment and evaluation	Digital Transformation Framework Matt et al., (2015)
Key success factors	Westerman et al., (2011)	4	Dynamic leadership and Transformative vision Transform resources not replace Capable Workforce Incremental investment Effective communication Top down approach Coordination and monitoring Iterative approach	Identify and diagnose strategic assets. Create a transformative vision and ambition. Find the right skills Invest in initiatives that advance the vision Slowly expand the processes and vision. Communicate and Engage with workforce. Top down approach Coordinating and monitoring progress.	Digital Transformation Framework Westerman et al., (2011)

<p>Digital Orchestra's Success Factors</p>	<p>Wade et al., (2017)</p>	<p>3</p>	<p>Holistic transformation Versatile & Proficient Performers Digital business agility</p>	<p>Encompass the company's entire operating model. Developing Proficient, Versatile Performers Hyperawareness Informed decision-making, and fast execution Ability to respond to changes in environment and strategies.</p>	<p>Digital Orchestra Framework Wade et al., (2017)</p>
<p>The Keys to Success</p>	<p>De la Boutetière et al., (2018)</p>	<p>6</p>	<p>Digital Savvy Leadership Enhance workforce's digital capabilities Adoption of right technologies Monitoring, Reassessment & evaluation Clear communication & targets for KPIs</p>	<p>Developing talent and skills throughout the organization Well-funded and more robust approach to talent Self-serve technologies for all stakeholders Data-based decision making Visible use of interactive tools Day-to-day digital tools upgrade Use of remote and digital communications Set clear targets for KPIs</p>	<p>No Link</p>

Table 2. Summary of Key Success Factors from literature review

Framework based on Literature Review



Research Methodology

This chapter covers the research methodology used in this paper. The research approach outlines the methodological choices and the underlying philosophy. The research design provides concrete structure and defines the strategy of the research. The remaining sections includes brief description of method of the data collection and analysis strategy along with the tools and techniques. After that, the validity and reliability of this paper will be discussed.

Research approach

Research approach, according to Creswell and Creswell (2018), refers to plans and practices that outlines the actions to specific directions of data collection, data analysis and data interpretation. There are three types of research approaches: quantitative approach, qualitative approach and mixed method approach. In this paper, qualitative approach has been used since the research problem formulated in chapter one along with the analytical approach of objectives listed, needs to have an in-depth understanding as well as empirical interpretation (Creswell & Creswell, 2018). In order to understand the nature of digital transformation processes, conceptual grasp of knowledge on the field is necessary to generate theoretical as well as practical result. Qualitative approach helps to understand the concept, belief, behaviours and actions which are based on data and uses contextual viewpoints (ibid).

Therefore, the underlying epistemology of the research approach used in this paper is based on social constructivism, also rereferred as constructivist philosophy (ibid). Creswell & Creswell, 2018, explain this concept as a worldview that believes that individuals seek understanding of the world where they exist. Since individual form a subjective perception of certain objectives based on their experiences, different and multiple perceptions of reality can exist (Bell & Bryman, 2015).

In the literature of research, there are two approaches that we can use depending on what research strategy we use to generate conclusions and establish theories (Bell & Bryman, 2015). When we consider the choice of research approach and the epistemology selected for the paper, the existing literature suggests us to adopt an inductive research approach by using the bottom up technique to build theory (Creswell & Creswell, 2018) but looking at the other side, the literature also suggest to use deductive approach which is generally used for quantitative research in order

to challenge existing theories using top down technique (Bell & Bryman, 2015). But the objective of both approaches is the same which is to generate conclusions and establish theories. Hence, considering the objective of this research, it will be predominantly based on qualitative and inductive approach. But nonetheless this paper will also have some attributes of deductive approach since the digital transformation framework is tested against the empirical data. So, this simple the format of the approach will be considered while doing this thesis.

Therefore, we conducted literature review and analysed the whole framework and will be analysing primary data relevant to the topic, that is collected via case study approach. This can be recognized as iterative approach since it involves going back and forth between history and data (Bell & Bryman, 2015). Using relevant data analysis techniques and by interpreting the importance of the collected data, an inductive complex theme will be built for the paper.

Research Design

As Creswell and Creswell (2018) described research designs as concepts which provides specific courses of actions using techniques in research. Hence, the research design must be in line with the research question (Yin, 2018). To select appropriate design for this research, Yin's (2018) method is used in consideration to the three conditions as the author describes: a. research question constructed by the researcher b. where the research issue concentrates on; historical occurrence or contemporary and c. how much control the researcher has on the events.

The research questions of this study are based on what, how and which elements of the topic. The research issue of this paper mainly concentrates on historical aspect since we investigate the organisational digital transformation strategies and processes. And, from the researcher's perspective, I have no control or influence over the incidents that occur in the company that is studied. So basically, the precondition and feature of this paper is aligned with the description of case study explained by Yin (2018). Hence, a case study method is used in this paper based on in-depth analysis of a retail business company.

Case Study

Yin (2018) described case study as “as an empirical inquiry that investigates a contemporary phenomenon within its real-life context: when the boundaries between phenomenon and context

are not clearly evident; in which multiple sources of evidence are used”. Case study helps the researcher to fully examine the data within a specific context. Mostly, case study covers a limited area or number of individuals as subject in the research and explores real life phenomenon through extensive contextual analysis of certain events or situations and their inter-relationships (Zainal, 2007). Similarly, Yin (2018) further outlined another view on use of case study, to understand the objective of decision(s), why it was carried out, how it was implemented and what result did it get. Therefore, in this paper, the research approach is based on these three fundamental question techniques in order to examine why and how an organisation can implement digital transformation into their business practice. It is very important to establish overall understanding of the concept to outline the research objective both theoretically and academically. Yin (2018) further argued that case study would be very appropriate method to investigate the real-world cases and situation. Other methods such as survey method is predominantly restricted since they have lesser extent on context exploration which is very important for this research objective.

Before conducting case study research, the number of cases and time should also be taken into consideration. Multiple case study is appropriate for comparison and contradictory study (Saunders et al., 2009) whereas single case study is preferred for exploring specific setting (Yin, 2018), which is why this method is selected for this study. Regarding time constraint, this case study is cross sectional instead of longitudinal because this research is focused on the digital transformation phenomenon at present time rather than focusing on the overall changes over time.

However, case study has been often criticized because of some limitations such as: a. limitation of generalizability, b. large amount of data subject to various interpretation (Yin, 2018; Bell & Bryman, 2015). But Yin (2018) argued that case studies are only not generalizable to population or universes, but it is quite generalizable to theoretical proposition and regarding the limitation of ambiguity, Dubois and Gadde (2002) argued, in-depth case studies are necessary for clear understanding of interaction between the phenomenon and the context of it. If number of studies are carried out on similar phenomenon under different circumstances, it can help develop a comprehensive theory. Hence, single case studies are more preferable for expansion of these theories (Yin, 2018).

Furthermore, the research objective leads to go towards descriptive and exploratory case study. The research objective of this paper takes descriptive approach i.e. to understand the accurate

profile of persons or events or situations as Saunders et al. (2009) described. And, case studies can be considered exploratory since they generate insights on a topic or situation as well as explains different variables and their relationships (Bell & Bryman, 2015).

Thus, the objective of this research is to identify the impacts, driving factors, success factors in context of digital transformation on empirical ground. For that, the case study will support this thesis by incorporating more functional perspective towards the case company.

Therefore, this paper is based on qualitative and mixed approach, which includes attributes of both, inductive and deductive approach, to conduct a single case study which will be both descriptive and exploratory in nature.

Data Collection Approach

This section discusses the methods of data collection for this paper. First, the method of collecting empirical data is introduced and then, method of secondary data is explained in detail.

Primary Data Collection

This paper has adopted qualitative approach to examine the digital transformation processes, impacts and factors. In order to meet the objective of this paper, contextual understanding and organisational insights are necessary. For that, qualitative interview is suitable tool to collect primary data from the company. Generally, interviews are used to facilitate detailed investigation of the topic because it helps to extract in-depth and thorough responses from the respondents (Bell & Bryman, 2015). Interviews are also preferred because of their flexibility since it is possible to address additional issues which may be raised by the respondents. It helps to get unexpected information and insights not anticipated by the interviewer regarding the topic. Another plus point of taking qualitative interviews is that it enables follow-up questions to extract more deep and relevant information and also cross questioning helps to obtain broader aspects of the topic (Creswell & Creswell, 2018).

Qualitative interviews can be conducted based on structured, semi-structured and unstructured approach (Creswell & Creswell, 2018). Structured approach uses pre-defined and fixed set of questions which is not flexible at all. This interview structure is useful to cover specific topics and gather as much data as possible (ibid). Semi-structured approach uses key questions based

on certain theme that is intended by the interviewer, although their use may be different from interview to interview (Saunders et al. 2009). And lastly, unstructured interview is generally based on unique subject or issue which is to be investigated by the interviewer during the conversation (Bell & Bryman, 2015). Since we adopted inductive research approach, the best technique would be semi-structured interview because it enables the interviewees to have discussion regarding the topic which they find relevant and useful, enables the interviewer to ask follow-up questions to dig more deeper and thus, generates novel information and insights from the interview (Saunders et al., 2009).

Easterby- Smith et al. (2018) found that interviewing top level and mid-level employees is more productive since they are authorized and capable of providing exclusive information which may not be available from lower tier employees. So, to understand the overall spectrum of digital transformation in the case company, the interview was conducted with total five employees: General manager, IT manager, sales & marketing manager, Customer support supervisor and one consultant of the company. The interviewees' names are not included in the results part to ensure their privacy, which was requested by the company. Each of these interviewees were contacted via phone call and then a follow-up email was sent at the beginning. When they accepted the proposal for research, a compact interview guide (Annex A) was sent to them via email. This allowed them to understand more about the theme of the study and also helped them to prepare for the interview in advance as Creswell and Creswell (2018) suggested.

All five interviews were conducted via different communication applications such as Skype, Zoom and Viber, according to preference of interviewees, due to time and location constraints. The interviewees admitted that they did feel comfortable to give interview this way since they had started to work remote and could take their time out for the interview because of Covid-19 situation.

The interview questions were identical for all interviews, but the some cross- questions were also asked based on the position and experience of the interviewee.

As, the GM suggested, the first interview was conducted with the consultant to understand the overall situation of the company since he was one of the longest serving employee and had broader knowledge about the case company. He had excellent ties with the managers and he observed and monitored the whole process of DT and provided consultation in every step of the transformation. The consultant had experience in several companies within different industries since he also provided consultation in other companies which helped him to gather huge amount of knowledge. This allowed him to cross-analyse the performance of case companies in relation to other companies. Similarly, other managers also shared their expertise and experience in the

topic which helped to see the phenomenon from a larger perspective. As Gibbert et al. (2008) stated, this type of study establishes evidence by taking various viewpoints to see at the same phenomena which in turn provides rigour in the study. Based on these interviews, the distinctive features of the digital transformation of the case company were noted.

Secondary Data Collection

Besides the primary data from the company and the employees, other sources such as journals, relevant articles, news releases, business blogs, financial reports were also studied mostly from online databases and internet.

Media papers were gathered by reviewing publications in which executives expressed their new improvements in the company and digital transformations. Websites of the company and the workshops were also good source to see how they gave importance to digital transformation. Taking reference to social media, managers of the company were seen using social media tools for the promotion of their digital transformation. Basically, the aim was to identify related secondary data to enhance the significance of this paper and to relevance of the theoretical frameworks selected.

Data Analysis

In order to analyse the empirical data, the open coding method has been chosen. This method is used to break long texts and complex images into manageable chunks (Easterby- Smith et al., 2018). Based on inductive approach, the codes are used to develop concept and categories (ibid). The empirical data which have common themes are labelled and categorized into codes to organize the information collected from transcribed interviews and additionally from the case companies. As Bernard and Ryan (2003) suggested, similar and iterative contexts were searched to identify relevant themes in the empirical data. The purpose of this step is to gather codes that helps to organize the collected data (Easterby-Smith et al. 2018). Different outcomes can be generated because coding is more subjected to interpretation and is based on subjectivity (ibid). Hence, the decisive element on finalizing code is the frequency of occurrence. The codes which have lesser frequency are considered on basis of its relevance to the research object and the contextual necessity. After listing the codes, they were further categorized, and the number of themes were reduced to extract only the relevant themes which would be useful for the research

questions. Hence, the patterns from the codes were identified based on frequency, similarity, contrast, causation, sequence etc (Hatch, 2002). In other view, the concept interpretivism was considered to synthesize the analysis into concrete themes which integrated the human interest into the study (Saunders et al., 2009).

Validity and Reliability

Due to the existence of limitations, the research study needs to evaluate the validity and reliability. This section will be based on the concept discussed by Bell and Bryman (2015) who pointed out four criteria to test the validity of qualitative study:

Credibility: It is the most important factor for establishing trustworthiness of the study (Lincoln & Guba, 1985). The credibility of a research depends on the consistency of the empirical observations and the theoretical implications used (Bell & Bryman, 2015). In this paper, the degree of credibility is ensured by conducting interviews with the top-level employees of the company and also the participants are diverse because each of the department supervisor were included to ensure the information are valid and credible. Some of the cross questioning were based on secondary data to ensure its validity. Different sources of information were studied to confirm the information in order to improve the quality and trustworthiness of the study as Bell and Bryman (2015) suggested.

After transcribing the interview, each of the respondents were sent the draft, including their quotes, in email to confirm the accuracy of information collected from them. This was done to remove the doubt of information being misunderstood which further confirmed the data.

Transferability: In qualitative research, transferability can be used synonymously with generalizability which describes external validity (Bell & Bryman, 2015). Case study are generally criticized due to it restriction in generalizability. Keeping this in concern, this paper used analytic generalization method to generalize digital transformation theories by adapting limited single case study

Dependability: Dependability is related to the reliability and replicability aspect of the research (Bryman & Bell, 2015), which assumes that if the same activities are carried out again, in same context, with same approach and methods, with same participants, similar output would be generated (Shenton, 2004). In this paper, the research design and framework has been developed and presented in transparency which may allow other researchers to make their own conclusions.

Confirmability: Lastly, this criterion denotes the objectivity of the research (Bell & Bryman, 2015) and the findings are derived from the ideas and experiences of the participants not from the researcher (Shenton, 2004). Therefore, triangulation method is applied in this paper by using multiple sources of data. And also, it has adopted chain of evidences which supports verification , promotes transparency and cross-references (Yin, 2018)

Findings

This chapter presents the empirical findings from the data analysis. The first part of this chapter provides a brief introduction to the case company and its current situation in market. Next part examines how the managers define digital transformation concept, their understanding, drivers of digital transformation in the case company, the elements involved and the factors which made the transformation successful, which will answer our research questions.

Description of Case Company

This section gives a brief background of the company and their current view on digitalization. Since the managers/employees of the company wished to remain anonymous, only necessary information will be disclosed in this research paper.

SalesBerry Departmental Store

SalesBerry is the second largest retail chain store in Nepal which provides large assortment of products such as groceries, toiletries, kitchen equipment and accessories, electronic goods, garments and other daily use products to cater customers from all age and regions. This company has been working in retail business for 23 years but for 17 years, it used to be typical brick and mortar company, under different management and name (Saleways) which was very simple store and was way smaller in size. Around 2014, they decided to change the management and broke off to start with more investment and it started operating as SalesBerry.

This company has a vision similar to companies like Walmart, Costco, Tesco etc, to become the largest retail company in Nepal, by providing all kinds of household products, groceries, electronics and appliances, tools and equipment under same roof, in very low prices.

Currently they have ten big retail stores operating in different cities of Nepal such as Kathmandu, Dharan & Pokhara. Each store ranging from 10,000 sq. feet to 40,000 sq. feet., caters wide range of selection of products both local and some of them imported from countries like US, India, China, Thailand, Dubai etc. The management claims that they give most priority to local products to encourage local production and only import goods which are not produced in Nepal.

For this research, five top-level employees are interviewed. They chose to remain anonymous regarding their identity but felt comfortable to disclose their experience and position in the company. Since the business has multiple store around the country, one of the biggest branch stores was chosen for this research.

Since, this kind of more sophisticated business and transformation just started in Nepal, there has not been much study in this field. The management happily agreed to allow the research to conduct so that they could also understand the phenomenon from different perspective.

The participants of the interview are currently holding position in that specific branch. The executive himself agreed to give some of his insights regarding the whole transformation process. Next participant was the general manager of the company who had broader knowledge on how the business is running so his input was more general and broader in sense. The IT manager provided insights on the technical aspect of the transformation process and the Sales & marketing manager covered the aspects of operational and processual context. The consultant provided information from both external point view and also from the advisoral perspective.

Concept of Digital Transformation

The first basic question to the interviewees was asked to have an overall view on what they understood regarding the concept of digitalization and digital transformation. The executive stated that, *“my understanding of DT changed about 3-4 years ago when we started to digitalize all aspects of the organisation and recognized the value it could create from it. It is an ongoing process where we are transforming every step, in daily basis”*.

The GM defined DT in more holistic nature and outlined its importance with the opportunities and values it created for the company. He looked at DT from a processual perspective: *“we are always trying to find out ways to optimize the processes in order to give best performance in the core business.... (..)With the help of digital technologies, we were able to change our business model and offer better value to our customers”*.

The IT manager emphasized on the importance of digital technologies and stressed that in future, everything will be digitalized so it can be observed that he understood the concept as a natural phenomenon in digital world. He stated: *“Everything will change in near future, the way we live,*

work and how businesses and the whole society operate- everything will be digitally transformed”.

The S&M manager understood the phenomenon from an operational point of view: *“the growth of digital technologies have changed the perception of customers and in order to keep them engaged with us, we need to be in same page with them by transforming our business according to the need of time”.*

Even though each of them had different concept regarding DT, one thing was common between them- they all agreed that DT was not only about adopting technology but about how it could be used to create value and bring benefit to the company. There emerged a pattern of elements that defined the DT in the case company which shows its dynamic nature.

Definition	Features
<i>“It is an ongoing process where we are transforming every step, in daily basis”.</i>	An Ongoing process
<i>“we are always trying to find out ways to optimize the processes in order to give best performance in the core business”</i>	Optimization of processes
<i>“With the help of digital technologies, we were able to change our business model and offer better value to our customers”.</i>	Creation of new business model and values
<i>“Everything will change in near future, the way we live, work and how businesses and the whole society operate- everything will be digitally transformed”.</i>	Broader scope
<i>“we need to be in same page with them (customers) by transforming our business according to the need of time”.</i>	Customer-oriented

Table 3 Concept of DT from the interviewees

Drivers of Digital transformation

This section will discuss the factors that drove the case company to digital transformation. The data collected from the interviewees suggest that they basically categorized the factors into two themes: External drivers and Internal drivers.

External drivers

The case company admitted that the first provocation of course, came from outside of the organization. They were later recognized as potential threats to the company. The factors that drove the company towards digital transformations can be further sorted into five underlying themes.

Customer demand- Digital customers

The case company observed that their customers were slowly transforming towards digital customer which compelled the company to either respond to the changing needs or lose the customers. They had to make plans and strategies to offer digital solutions to customers. All of the managers admitted that their main priority was to follow the customer and were ready to go through any changes necessary.

The general manager said: *“This started about five years ago. By then, only big corporations and banks used technology for their business, you know, like websites and email services etc. Retail businesses, like us, did not have any plans on transforming digitally at that time. But then, the use of social media, globalization and other technology related factors started emerging and it slowly changed our customers’ buying behaviour.*

The GM had noticed the arrival of digitalization in the country but had not expected and planned on transforming themselves. But when he observed his own customer’s behaviour, only then he realized that it was a serious issue and they need to be ready to acknowledge it. We can see how the leaders sometimes cannot calculate the risk from macro level, but they can sense it once the effect touches their arena.

The executive said: *“We are a customer-oriented retail business where we sell what our customer demands. The business model of our company is based on customer needs. As the*

technology started growing rapidly and the use of internet started booming in Nepal, we knew we had to be able to address our customer's concern and be ready to adapt to this dynamic environment or else we could be pushed far behind.

The Sales & Marketing manager recalls: *“First we started using social media platforms to connect with our users since most of them were in Facebook and Instagram and suggested us to connect with them via those platforms. We just had a meeting about it and the GM immediately hired one IT manager who would work with me and we both started digitization of our products.*

Here we can see the leadership of the company at its best since all the top leaders acknowledged the potential threat and were ready to face it and not ignore it. This is a good example of leadership which we discussed in previous chapters. When the customers see the digital offerings in other countries via media or experience digital services in real world, they tend to expect the same services in other sectors too. Here, the customers drove the company by demanding similar services in this domain.

Competitive market

As customer behaviour and demands started shifting and technology arriving at the door of Nepalese market, the whole business and organisation sector was also affected. Competition started rising and all business and service sectors felt the pressure to change in the competitive environment. New entrants, both local and foreign, in the industry, started incorporating new technologies in their operation and they served as a catalyst for Salesberry' digital transformation.

The consultant said: *I had been talking to the executive about the digital disruption of industries happening around the world and how it could arrive at our domain any moment. When new players such as Bigmart and existing players such as Bhatbhateni (some of big rival retail businesses), emerged with digital business model, the executives just realized it was time and I suggested them to adapt to digital technologies quickly because it had already started affecting many businesses in foreign countries and as a consultant, I had to inform them.*

The executive: *“Not only the big players, but SMEs and online businesses also started to enter the market which was very difficult without technology. I could see the entry barrier in our industry slowly falling apart. Looking at other industries slowly losing their existence, at some point I have to admit, we felt the feeling of fear- like that's gonna happen to us”.*

This kind of strong pressure from the market, the competitors & dynamic situations forced the company to respond to the issue.

Rise of digital technologies

The IT manager, who recognized the technological factor, which he termed “rapid growing digital technologies”, explained its role: *“The payment services such as e-sewa and khalti had started getting popular. The banks also started developing mobile apps that allowed online payments. Introduction of digital technologies such as PoS systems, online websites, mobile technology, digital inventory management tools, increasing use of social media platforms etc. brought business revolution, which certainly affected our business.”*

He further recalled: *“I remember one time I first saw the mobile app interface of a bank and just knew it would change the way things work and how useful it could be to generate value to our business”.*

The S&M manager added: “Using these payment systems and digital tools, many online businesses started their operation and they had advantage that they could offer same products in cheaper price because their operational cost was very minimal. Every other business started adopting these technologies, so we also had to embrace them”.

The digital technologies introduced many new entrants in the market who could challenge the big businesses like SalesBerry, so now the competition was growing and the issue of digital disruption of industries showed them what could be- they had no other options rather than accepting the challenge.

Internal Drivers

Besides external drivers, the case company also was driven by internal pressure within the organisation. It had financial pressure from the shareholders to cut down costs as much as possible and at the same time, generate more revenue. Digital transformation was recognized as a means to that end. The internal drivers could be sorted into two underlying themes.

Generate revenue and sources of revenue

Salesberry did not have as much growth as they had expected in past years which is why the shareholders were pushing the management and executives to find new ways and sources of revenue. Although the company was adding new products in their shelf, it was not generating spike in the revenue. Thus, when digital innovations started appearing in the market, the internal stakeholders recognized a new source that could generate expected sales and revenue.

The executive noted: *“Every company in any industry will have that pressure to keep generating more revenue and finding new sources. At that time, we were only focused on expanding our product line, opening new outlets and improving customer satisfaction but there was not much growth in sense of revenue. But we knew that in other countries, large retail businesses like Amazon was growing exponentially both in size and revenue (..). So, we could see digital transformation had to be carried out if we wanted to generate more revenue and sources of revenue.”*

The digital transformation of the company improved the shopping experience and service quality by personalizing the offerings.

The IT manager said: *“We use data analytics to collect data and analyze it to improve customer experience, provide individualized products and services, segment the market and so on. For example, Users can automate their purchase which will reorder the same purchase within certain time, which will save their time and energy and at the same time, we can also track the demand and flow of certain goods for smooth inventory management”.*

The company also uses predictive algorithms to increase extra offerings. The sales & Marketing manager added: *“We started to boost our facebook and Instagram pages which helped us to track the performance easily and make decisions according to the reports. Since a large number of people use Facebook, it is very easy to reach our target customer. It has significantly increased our number of customers and we can now push products to them via these platforms”.*

Reduce costs

The company was also trying to find ways to reduce costs since the operating cost was way too high compared to the revenue generated. It has been established in the previous chapters that digital technologies allow businesses to digitalize and automate the operation and processes

which could increase efficiency and reduce costs. SalesBerry saw relatively high income-cost margin and it needed to adopt digital technologies to improve that.

The executive noted: *“Digitalization improved the efficiency of the processes and made it possible to automate many redundant tasks and ultimately improved the cost efficiency”*.

The S&M said: *“Using digital tools for sales and marketing is so much better than what we used to do. The marketing cost has significantly reduced because the tools we use for example Facebook and Instagram ads have billing threshold payment system, which means the threshold is set to a small amount and as we make to the threshold, then the amount is raised, and it keeps going up and up as we move above, which is pretty cool”*.

Process of DT

In this segment, we will discuss the elements which were transformed and how the case company actually carried out the process of digital transformation. In first section, the elements and processes of the case company will be presented and discussed. In second section, the empirical findings will be compared with the findings from literature. Here, deductive approach is taken to test the findings from literature review to understand if it is feasible and valid in real world. And we can draw conclusion based on that final finding.

Initiate Transformation

After the company decides to start their journey toward digital transformation, the managers need to take decision and initiate the process. According to the executive of SalesBerry, he was responsible to lead the company in the process of transformation. So, this first module will be based on his response. For the initial phase, he carried out three major decisions which will be discussed more in detail.

Develop a digital vision

After the acknowledgment of the external potential threat and internal pressure from the shareholders, the management unanimously decided to adopt digital transformation in the company. The executive recalls:

- *“first we learnt about the possibilities and potentiality of digital technologies and when we understood what those technologies could offer to us, we started to set a digital vision for the company”*.

From this statement, we can understand that, first of all, the company should recognize the technologies that are relevant for their line of business. Then they can calculate the possibilities and potentiality of those technologies in their specific businesses.

- *“...we identified our core values and business culture that we needed to consider as a foundation for the digital vision. I remember we had a meeting and all of us were brainstorming and discussing on what we could do. Some of us had really good ideas which were actually considered while incorporating the change and it indeed turned out to be very valuable input.”*

Here we can see that the core value of the company and their business culture, which centered on being a retail business, was used as a base of the digital vision because they did not want to transform their values and culture but only wanted to improve their operation. Similarly, another observation here is on the role of executive in generating ideas together with all employees which proved to be beneficial for the company.

- *“our vision is to become the largest retail business of the country, but our broader vision is to go beyond that vision and transform into a smart retail ecosystem”*

Develop digital business strategy

After developing the digital vision, the company had to develop suitable business strategy to achieve that vision using insights and top-level plans to define the business strategy. The strategy had to have a clear direction for the company on how to achieve the vision and what necessary actions needed to be taken for that.

- *“the strategy had to clearly specify the objectives, priorities, process, roles, and methods to be used.”*

SalesBerry’s digital business strategy was to digitalize their offline retail business and expand their horizon of online business to satisfy their customer needs. The executive believed that long term strategy could be unrealistic, so they went for immediate and achievable strategy which was necessary at that moment.

- *“our plan was to still remain as retail business even though we wanted to expand into e-commerce because we saw that we could benefit from both sectors and they could compliment each other”*.

Invest in digital transformation

The scale of transformation relies upon the investment made for digital transformation. The company did not disclose their investment, but they made it clear that they made considerable amount of investment (about 10-15% of their annual revenue) to speed up their transformation and expand their business.

- *“the shareholders were optimistic as well as desperate to make the investment, so the investment actually was not a big issue. Most of the investment focused on building digital platforms, applications, PoS system, database systems, building capable workforce-both recruiting new talents as well as training existing employees”.*

Develop Digital Domain

After the initiation of digital transformation, the next step is to use those elements and develop a digital domain for the company. To build digital domain, the company had to build their internal competencies, introduce new digital culture and start incorporating digital structure in the existing structure. All these steps would enable the company to make changes in the existing business model and develop even more suitable model for digital transformation.

Acquire & Develop digital competencies

- *“...we outsourced skills for building digital competencies at first because it was the easiest and fastest way to bring digital skills inside the company. Later, we hired them as one of our own so that the skills and information would remain internal and also would help other existing employees to learn and acquire the skills themselves.”*

SalesBerry also built a new digital department where they recruited a line of employees consisting of IT manager, Digital marketing officer, E-commerce officer and one part time technical officer. They hired some freelancing expertise to build their mobile application, UX designing and internal software and later appointed them as trainers to train their employees to use those technologies.

- *“frequent training programs and workshops were conducted so that all employees would be able to use the digital technologies according to their roles”.*

Cultivate digital culture

According to the executive, experiencing the change from a simple retail store to become a new digital player in the market was a challenging situation for the company. Many employees were not digitally literate. They had to be trained, encouraged and supported by the management as well as from the direct managers. The whole organizational culture needed to adapt to this transformation.

- “we all agreed to adjust our culture for the transformation but did not agree to cultivate a new culture at all. Nevertheless, we were ready to embrace digital culture in our company”.

They started with simple things such as starting a new trend for the employees to attend digital workshops every three months, encouraging them to use the mobile apps themselves to have a user perspective which could be used to generate feedbacks from the employees before launching it to public.

Develop Digital structure and business model

As discussed in Chapter 2, Westerman et al., (2017), claimed that changes in organisational structure is one of the core building blocks of digital transformation strategies. The case company developed digital structure by changing its traditional structure. For example, as mentioned above, they created a new digital department which was the most important structural change in the company. The executive wanted to change the top down approach in order to integrate all employees within same framework.

- “we knew we had to transform our business model, so we started changing the basic structure, but we also made sure each and every employee were comfortable with the change and made sure they knew the importance of doing so.”

After these activities, the company created a similar business model as shown in figure below.

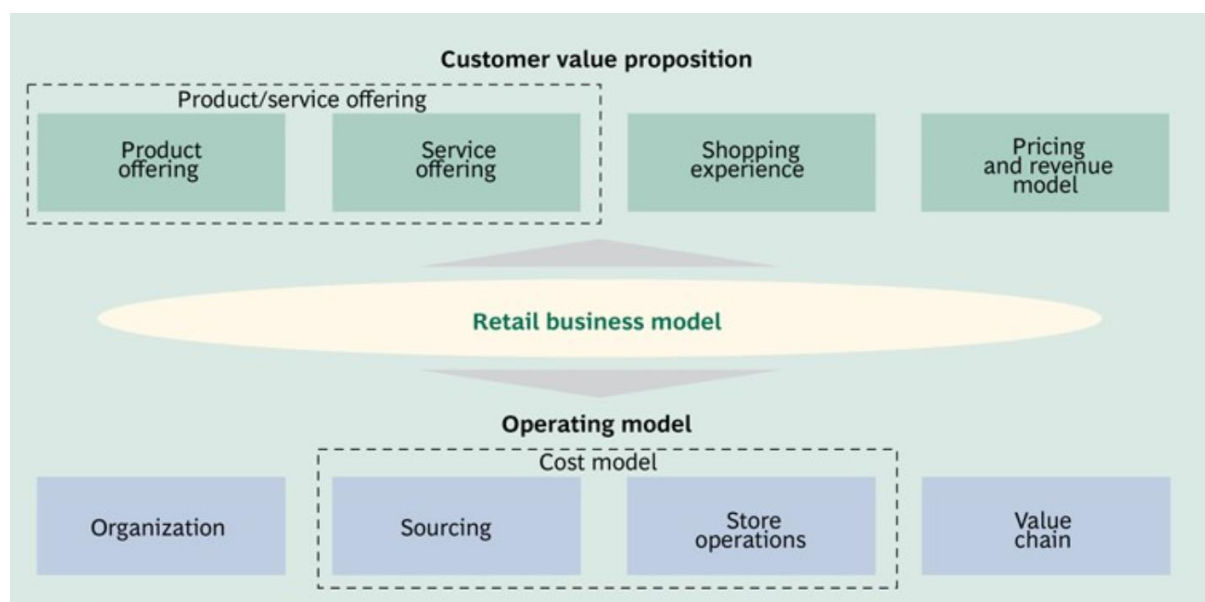


Figure no. 6 Retail business model

Digitalize operation

Based on the new business model, the company started to digitalize their operation. The GM said:

- *“...we started by digitalizing the business processes, co-creating values by collaborating with stakeholders and adopted new working methods to adjust in new environment.*

Digitalize external and internal business processes

Mobile application, interactive website and use of social media enabled the company to interact with the customer online.

- *“we used mobile apps and email to send deal alerts and promotions to keep customers engaged with us. The predictive analytics give us input to calculate and predict customer buying behavior which helps us to prepare personalized offers to users to cater their preferences”.*

The mobile wallet and digital payment system changed the payment method into digital. They slowly stopped advertising in traditional platforms and started using online platforms for advertisement.

- *“we changed our customer engagement strategy and started using social media to connect to our customers. Using Facebook and Instagram advertisements were more efficient and interactive, and we could easily track their data to offer them more segmented and personalized products and services”.*

Similarly, internal business processes were also digitalized and automated. They no longer depended on paper, but all the paper works were digitalized, and various software were introduced for record keeping. Even the attendance system got digital since the company introduced biometric fingerprint attendance system.

Value co-creation with stakeholders

As company adopts digital innovation, it creates newer connection with different players which in return creates possibilities to co-create value with them. SalesBerry partnered with many suppliers by providing them platform both online and offline and created value with existing resource. The GM recalled making some old rivals their new partners.

- *“...when we were planning to purchase the retail management software, we came to know that one of our rivals had purchased the same software. Out of curiosity, our IT manager asked them for a review but to our surprise, they proposed us to share the software with them since it was*

pretty expensive software at that time. We never thought we could co-create value with our rival, thanks to digitalization”.

Develop new KPIs

New key performance indicators (KPIs) are used by companies to measure and accelerate DT.

- *“...New KPIs were developed to track the change, activities of internal and external actors, and monitor financial activities etc. We use employee engagement index to monitor internal workforce and digital activity indicator and analytic dashboard to monitor customers ‘activity.*

The executives implement KPIs into their daily routine because it gave them analytics upon which they could base their decision making and implement changes in the business.

Key Success Factors

SalesBerry is a very successful as well as the second largest retail business of Nepal. After they transformed themselves digitally, they are almost close to achieving their immediate vision i.e. to become the largest retail store in the country. During the interview, the participants kept emphasizing many factors which helped them to succeed. Some of the factors they deemed to be important are briefly discussed below.

Good Leadership

All managers of SalesBerry agreed on the fact that their executive was most responsible for the success of the digital transformation. The GM said:

- *“the visionary skill, dynamic capabilities and charisma of our executive shows that he is a very good transformational leader who can handle the agility of the business and lead the whole company towards one vision. All of our employees respect him and fully support his vision and plans which helped us to work as a single unit – a family. That’s one of the major reasons we could work together to make this journey successful”.*

The IT manager added:

- *“...I had worked in several places before I arrived here and none of my previous workplaces had leader of this capacity. He was up-to-date with the technology and whenever I shared my opinion and suggestions on technical aspects, he always listened and took the suggestions and turn it in action if applicable”.*

The consultant also enthusiastically shared his words on this topic:

- *“...At first, when we had meeting with management about the digital transformation, nobody understood the seriousness and importance of the subject except him; in fact, he knew much more than I expected, and he showed very keen interest in DT. I just knew he could easily lead the company to success”.*

Finally, S&M manager also added:

- *“me and our executive were big time Facebook users and we used to talk about using the social media platform for advertising and communicating with users, which was not common at that time. One of the ex-employees of our company (older gen.) disapproved our idea saying that it would be informal, and people would not take our business seriously. But our exec. used to say that customers are our friends and we should be friendly with them instead of being formal. That idea really worked, and people highly appreciated our quick and friendly response”.*

Active and skilful Workforce

Company, in reality is just an abstract concept of human subject. It is just a group of people, associated together to achieve a common goal. Therefore, in order to calculate the success of any company or social phenomenon as such, the people working in that construct are responsible for it. The success of SalesBerry in achieving their vision completely depends on the people working in that company. This fact was also confirmed in the theoretical section, since majority of the authors confirmed this information. The executive and GM responded:

- *“...our employees were not digital savvy at first and they were mostly experienced in working in brick and mortar style companies. But when the idea of the transformation was introduced, they became willing to try the new concept and were excited too.”*
- *“I admit that we had some extra cost on capabilities and skill developing programmes, but it brought far more return than the actual investment. Our employees dedicated their time and energy to learn and adapt to the new change, so our investment did not go in vain”.*

The employees of SalesBerry contributed their time in learning the mechanisms, practice their knowledge in real life situation, learning how to operate the digital tools, even providing feedback, as one of the managers informed in previous section. This kind of active dedication and willingness to learn surely contributes to the success without a doubt.

Good communication

Next factor that the interviewees kept mentioning during the interview was good and clear communication. All involving parties need to have frequent and productive communication not only during digital transformation but in all circumstances but during DT, it is most essential. The IT manager said:

- *“the management wanted to have an internal communication channel to promote instant and secure communication among all stakeholders including staffs, partners, managers, executives, vendors etc. We use the application called “Slack” which is very segmented and easy tool to communicate with whole structure of people, but we are on working on building something of our own in near future”.*

The S&M manager stated:

- *“...as I mentioned earlier, our quick and friendly approach to communicate with our customers impressed them and we started working more on improving the channels and quality of*

communication. We setup feedback loop, email automation, automated chatbot to keep in touch with our customer to retain them and the analytics show that people actually get attracted and visit our website and app due to these communication technologies”.

The GM added:

- *“the analytics showed some visitors visited our website, filled up their cart but then just stopped the whole process and left. We came up with the idea to contact them via email and phone to ask if we could help them with anything. This way of connecting with the customers increased the probability of them actually being active in our website and making purchases”.*
- *“similarly, good communication helps build good relationship with all involving participants of the company. The top-level managers and executives need to communicate the vision, plans, strategies of the company to all stakeholders. If the communication is not effective, then there will not be coherence in the work and as Wade et al., (2015) mentioned, no symphony will be played if the instruments are not played together.*

Appropriate choice of digital technologies

Last but not the least, in order to achieve full potential of the technology, the concerning parties need to assess their needs and capabilities and choose technologies that give them full benefit. The IT manager said:

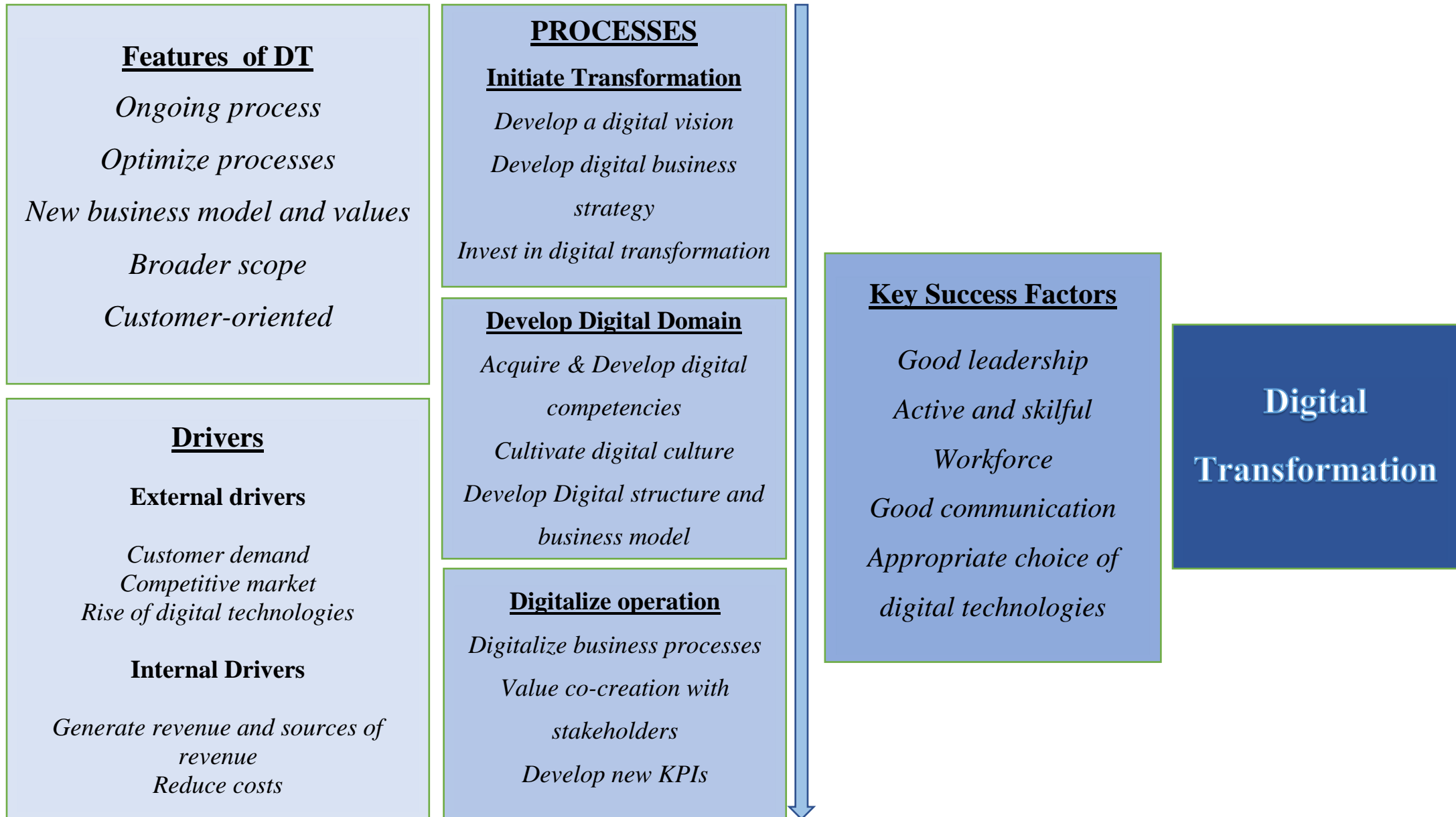
- *“since we are retail business and our core business is products and services and customers, so we needed to focus on these three themes while selecting tools & technologies then we could implement them in the business to make successful transition”.*

The consultant added:

- *“...in my previous workplace, the company had adopted technology because they thought it was necessary, but they did not focus on value creation, so huge amount of technology cost was there, but the company could not reap benefits out of that technology. This just a corporate disaster”.*

Therefore, digital champions and experts should be consulted before adopting any technology to see if it is suitable for that line of business and if it could really give what the company is expecting.

Summary of Findings from the Case Study



Discussion

This chapter will answer the research question by linking the findings from the empirical section to the literature findings. Then some recommendations will be provided, and the scope of study will also be briefly discussed and finally a concrete conclusion will be drawn from the whole paper.

Answer to the research questions

After reviewing considerable amount of literature on digital transformation, we developed an overview on the topic and to test the findings, we used a case study in a retail business where they successfully completed digital transformation. First of all, the research questions will be answered and finally the main research problem will be discussed.

RQ no. 1. Why do companies strive for DT?

This question attempts to find the causal factors which forces the company to adopt digital transformation. This question is answered from both literature and the case study. Let's compare the answer from both sources and extract the answer that is validated by both sources.

<u>Sources</u>	
Literature	Case Study
<i>Development of Technologies</i>	<i>Rise of digital technologies</i>
<i>Customer demands</i>	<i>Customer demand</i>
<i>Market pressure</i>	<i>Competitive market</i>
X	<i>Generate revenue and sources of revenue</i>
X	<i>Reduce costs</i>

Table 4. Research Answer 1

Observation: Here we can see that three factors: *Digital technologies, Customer Demand and Market Pressure* from literature is also outlined by the case study. So, we can conclude that this information is validate by both sources and hence can be used to answer the research question.

RA no. 1. Companies strive for digital technologies because they are driven by the growing use and benefits of digital technologies that attract them to adopt digital transformation and are also pressurized from the market and customer demands.

Limitation: Here we can see one limitation from literature that it did not cover the internal driving factors.

RQ no. 2. How is DT carried out in a company?

This question attempts to find the processes which are necessary to be carried out the company for digital transformation. Both, literature and the case study have answered this question so let's compare the answers from both sources and extract the answer that is validated by them.

Processes	
Literature	Case Study
<p><u>Organisational</u> <i>Use of technology</i> <i>Integration and Alignment to DT</i></p>	<p><u>Initiate Transformation</u> <i>Develop a digital vision</i> <i>Develop digital business strategy</i> <i>Invest in digital transformation</i></p>
<p><u>Operational</u> <i>Structural adaption</i> <i>Expand organisational agility</i> <i>Determine organisational value</i> <i>Focus on strategical aspects</i></p>	<p><u>Develop Digital Domain</u> <i>Acquire & Develop digital competencies</i> <i>Cultivate digital culture</i> <i>Develop Digital structure and business model</i></p>
<p><u>Reinvention and Innovation</u> <i>Adopt bottoms up approach</i> <i>Achieve digital reinvention</i> <i>Prioritize digital products and services</i></p>	<p><u>Digitalize operation</u> <i>Digitalize external and internal business processes</i> <i>Value co-creation with stakeholders</i> <i>Develop new KPIs</i></p>

Table 5. Research Answer 2

Here we can see that the literature is not quite explicit on the processes, however we can see the pattern emerging from both sources. It can be observed that first of all the organisational aspect is to be handled and then go for digitalizing the operation by transforming the structure and domain.

RA no. 2. *The company has to initiate the transformation by bringing change in the organisation, then develop the digital domain by focusing on operation and finally digitalize the operation by incorporating reinvention and innovation in order to successfully carry out digital transformation.*

Limitation: The answer from literature is pretty vague but it still validates the outcome from the case study. So, the answer for research question no. 2 is based on the answer from case study validated by the literature.

RQ no. 3. What elements does DT has impact upon?

This question attempts to find which elements of business gets most affected by DT. This question is answered from both literature and the case study. Let's compare the answer from both sources and extract the answer that is validated by both sources.

Impacts of DT	
Literature	Case Study
Roles of Executives	Vision
Organisational Strategies	Business strategy
X	Investment
Internal Competencies	Competencies
Culture	Culture
Organizational Structure	Structure
Business Model	Business model
Relationships with Customers and Partners	Business processes
Value Creation	Value co-creation
Organisational Efficiency	Key Performance Indicators

Table 6. Research Answer 3

We can see very interesting case here since 9 out of 10 elements are similar in both cases. 6 of them were identical whereas 3 of them are closely related. Only the investment aspect is missing from the literature. So, in order to answer the RQ no. 3, we can say:

RA no. 3. DT impacts on Roles of executive, Organisational Vision, Strategy, Investment, Internal Competencies, Organisational Culture, Structure, Business model, Business Processes, Value co-creation, Organisational efficiency and KPIs.

Limitation: The investment aspect is missing from the literature.

RQ no. 4. What are the key success factors of DT?

This question attempts to find key success factors that companies going through digital transformation needs to focus on. This question is also answered from both literature and the case study. Let's compare the answer from both sources and extract the answer that is validated by both sources.

Key Success factors	
Literature	Case Study
Leadership & Vision	Good leadership
Management	X
Investment	X
Workforce	Active and skilful Workforce
Communication	Good communication
Visible use of tools	Appropriate choice of digital technologies
Governance	X

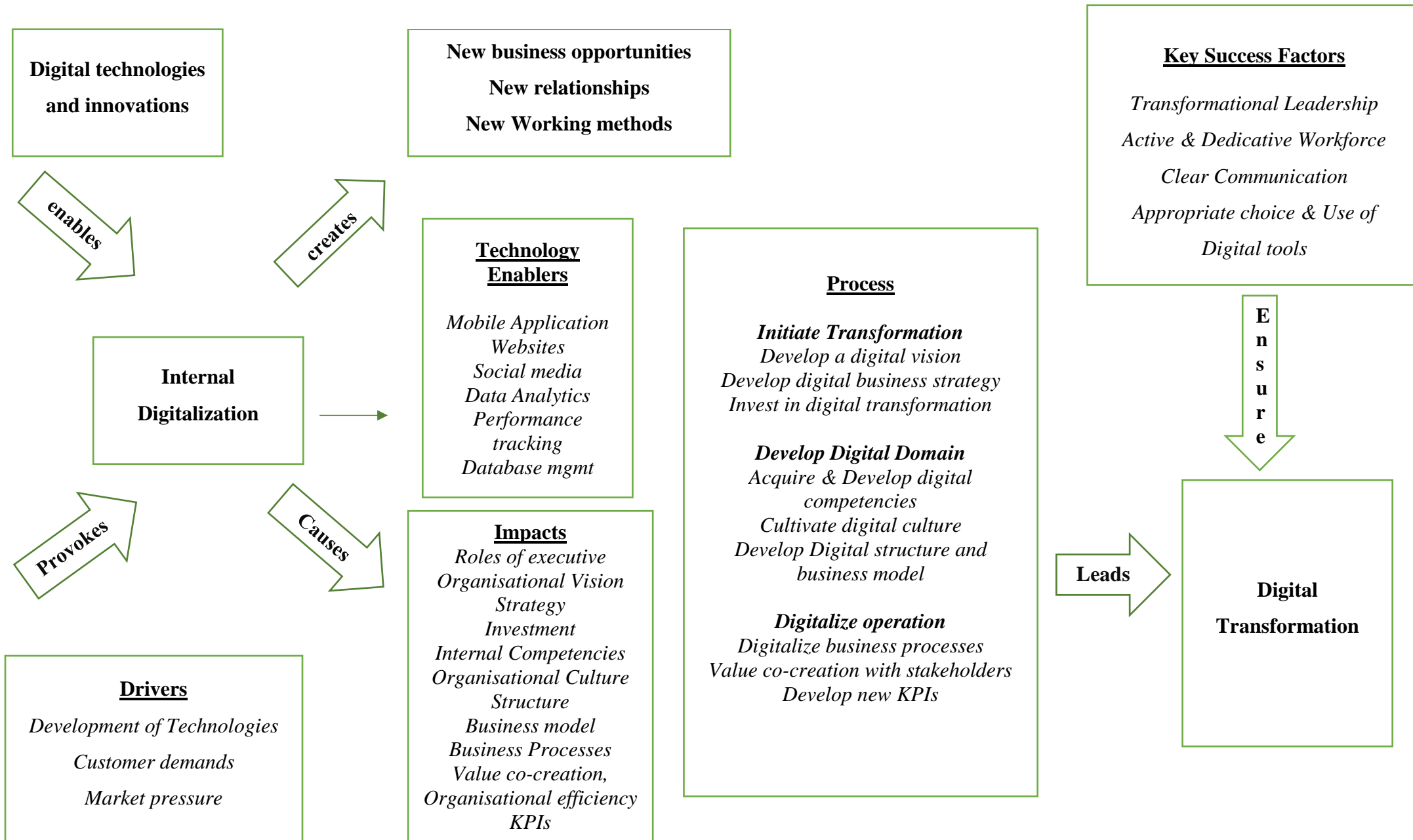
Table 7. Research Answer 4

In the table above, we can see that four out of seven factors were similar in both sections. Three of them are missing in case study findings. Therefore, we can now answer RQ no. 4 as:

RA no. 4. The key success factors that needs to be considered while adopting digital transformation are Leadership, Workforce, Communication, Use of Digital tools.

Limitation: Three of the factors are missing in case study findings.

Revised Framework for a Retail Business



Conclusion

This research aimed to present an in-depth knowledge of the concept of digitalization and digital transformation and its impacts and to provide a new digital transformation framework. Based on qualitative analysis of the literature review and data obtained from the case study, it can be concluded that the digital transformation is being adopted as new business model in the recent companies and are being motivated towards it due to driving forces like customer demand, rise of digital technologies, competitive market conditions, pressure to generate revenue and to reduce costs.

After analysing the collected data, it can be observed that understood that companies can initiate the transformation by developing a digital domain in the operation and digitalizing the operation by incorporating reinvention and innovation. The businesses are ensuring successful digital transformations by mainstreaming key factors like transformational leadership, digital communication, competent workforce and incorporating digital technologies in their daily operation of their company.

So, the main research answer that we extracted from this study is that companies can start process of the transformation by developing a digital culture in the operation and digitalizing the operation by reinvention and innovation. Business should digitalize the organisation, oepratin and processes by developing good leadership, generating competent workforce, setting up good communication channel and choosing appropriate digital technologies to ensure success in digital transformation journey.

Despite single case study, this research clearly illustrates that the framework of the DT fits with the result of the case study. Thus, this paper can offer invaluable knowledge to companies who want to go through the process of digital transformation since it will shed light upon all important aspects such as the driving factors, internal practices, leadership roles and also makes aware of the changes that come along with the transformation.

Research Limitations

As almost all research papers have some limitations, this paper is not an exception. There are several limitations of this thesis based on the approach, design, objectives etc. Some of the limitations which has to be cleared before going in the analysis are briefly discussed below:

1. Research process and data collection was limited due to situation and time constraints. The interviews were conducted remotely because of Covid-19 situation and the data were collected by using technology (both online and offline) so the data access was limited.
2. Even though the participants agreed to give some time for the interview since they were reluctant at first to share their strategies and vision, they only allowed limited time where all the information had to be gathered within that time period so the chance to extract more information was limited.
3. Since this is single case study, the availability and reliability of the data could be insufficient and hence, the analysis and the finding could be limited. Case study is an iterative process where replicating all the steps could generate more knowledge which could sharpen the focus of the research but that was not possible due to the constraints discussed above.
4. There is also a geographical and scope limitation in this study since the paper only studied one retail business in a specific location which may not cover the whole aspects and might be less reliable for study in other industries.
5. The general biasness of the human interaction could always affect the data collection process. This means that some situational or environmental factors could influence the reliability of the data and the outcome. Saunders et al. (2009) warned that the interviewees' responses could be influenced by the nature, comment, tone or behaviour of the interviewer, could be both intentional or unintentional.
6. Moreover, the interviewee's biases towards their understanding of the topic, their interpretation could also be considered as a limitation since it may not allow complete grasp of the issue and limit the findings.
7. This research used semi-structure interview which might make the interviewee react sensitive to the unstructured exploration and may not feel guided to reveal or discuss certain aspects.

8. All the interviews were carried out with internal employees which may lack the external perspective and there is always a chance of biasness when only the perspective of involved parties is taken into consideration.

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Appendix

Interview Guide

The Concepts

- How do you define digitalization and digital transformation?
- How did you learn about this and when?
- What was the most important event/ trend related to DT in your company?
- What are your future expectation after transformation?

Digital Transformation

- What inspired you to take this decision of going digital?
- How did digital transformation affect your company?
- What do you suggest to other companies who also want to adopt this concept?
- Any significant changes your experienced after DT?

Process

- What is the most important aspect that needs to be addressed before starting?
- Who initiates or takes responsibility for the transformation?
- How do you monitor the progress of transformation?
- How did you know which technology to adopt?

Success factors

- How do you know if your initiatives were successful or not?
- How do you measure the effects of DT?
- Any significant achievement you got from DT?
- Do you recommend other fellow business people to adopt it or not?
- Any important experience you want to share to other business enthusiasts like you?