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SME's digital transformation in terms of change management

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Master in Management of Services and Technology

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ISCTE Business School

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BUSINESS
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Department of Marketing, Strategy and Operations

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A transformação digital das PME em termos de gestão da mudança

Abstract

As pequenas e médias empresas desempenham um papel significativo a nível mundial e o seu contributo para o desempenho económico local não deve ser negligenciado. Tal como as grandes empresas multinacionais, as PME também enfrentam vários desafios colocados pela pandemia, pela tensão geopolítica global na Europa de Leste e pela necessidade de inovar, modernizar e estar à frente da concorrência. Atualmente, a implementação das tecnologias mais recentes e o acompanhamento das últimas tendências, como a digitalização, são de importância crucial para as PME, não só para manterem as suas empresas vivas, mas também para atraírem ainda mais clientes e ganharem a sua lealdade.

No entanto, a mudança nem sempre é percebida da mesma forma por todas as partes interessadas da organização, o que pode levar a conflitos ou tensões entre os funcionários e a direção. O principal objetivo da minha investigação é descobrir como as PME estão a gerir a transição da antiga forma tradicional de armazenamento de dados para o mundo digitalizado. Este documento destina-se a dar respostas sobre a forma como as pequenas e médias empresas estão a lidar com o processo de digitalização, quais são os desafios subjacentes que podem ser enfrentados, quais são os benefícios que esperam as empresas no final do processo e, em geral, como gerem a resistência e a atitude de não apoio dos funcionários durante este processo de desenvolvimento.

Durante a minha investigação, foi aplicada uma vasta gama de literatura académica, seguida da investigação primária de entrevistas aprofundadas. O seu objetivo era poder identificar um modelo de gestão da mudança aplicado pelas PME examinadas e se estes esforços foram bem sucedidos no processo de transformação digital, ou não, e, em caso negativo, porquê.

Os resultados apontaram que uma das principais razões para os obstáculos das PME húngaras à digitalização é a ausência de um plano de implementação, bem como a falta de um plano de gestão da mudança. A ausência destes planos preliminares causa várias perturbações no processo de transformação e na cultura da organização. A eliminação destas barreiras e a preparação de planos estratégicos são necessárias para o êxito dos processos de transformação digital.

Palavras-chave: transformação digital, gestão da mudança, PME

SME's digital transformation in terms of change management

Abstract

Small and Medium-size Enterprises play a significant role globally, and their contribution to local economic performance should not be neglected. Just as multinational, major companies do, SME's are also facing several challenges posed by the pandemic, the global geopolitical tension in Eastern Europe, and by the urge to innovate, modernize and be ahead of the competition. The implementation of the latest technologies and keeping up with the latest trends, such as digitalization is of crucial importance for SMEs nowadays not only to keep their businesses alive but also to attract even more customers and to gain their loyalty.

Nevertheless, change is not always perceived in the same way by all the stakeholders within the organization, which may lead to conflict or tension among employees and management. The main objective of my research is to find out how SMEs are managing the transition from the old traditional way of data storage to the digitalized world. This paper is destined to give answers to how small and medium-sized companies are coping with the process of digitalization, what are the underlying challenges that might be faced, what the benefits are waiting for the businesses at the end of the process, and on overall how do they manage resistance and unsupportive attitude from employees during this development process.

During my research, a wide array of academic literature has been applied, followed by the primary research of in-depth interviews. Their purpose was to be able to identify a change management model applied by the examined SMEs and whether these efforts were successful eventually in the process of digital transformation, or not, and if not, why.

The results have pointed out that one of the main reasons for the barriers of Hungarian SMEs to digitalization is the absence of an implementation plan, as well as the lack of a change management plan. The absence of these preliminary plans causes several disturbances within the transformation process and the organization culture, alike. The elimination of these barriers and the preparation of strategic plans are necessary for successful digital transformation processes.

Keywords: digital transformation, change management, SMEs

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1. Introduction

Nowadays, the importance of digitalization has become ever increasing for all businesses irrespective of size, scope and area of engagement. It not only enables businesses to enhance their effectiveness, productivity and attract new customers, but also to be one step ahead of their competitors, which is especially important for small-and medium size enterprises, which are exposed to intense competition from other SMEs and multinational companies alike.

In this research thesis, the digital transformation of SMEs will be investigated in terms of change management processes. The reason for the choice of the topic is its actuality, and since I am working at a an SME, I have witnessed the transformation process and the need for it, as well as the way the transition has been executed from the viewpoint of employees as a matter of change. It play a crucial role in the everyday life of a company to introduce and implement changes to operations in such manner that stakeholders are involved in the process. By doing so, management engages partners and employees to be participants, contributors and part of the transition. Nevertheless, the involvement of stakeholders is not always part of the change at several companies, which might result in tension between management and employees and cause disruptions to operations and eventually affect customer experience.

The aim of this thesis is to conduct a thorough analysis of how SMEs handle the situation of digitalization, which involves extensive change within company operations, based on the example of Békési Pig-Farm Ltd. Since currently I am an employee of Békési Pig-Farm, I can experience directly the impact of the digital transformation, the company is experiencing, as well as listen to the opinion of other colleagues about the transition process directly.

During the course of my thesis, academic and scientific literature will be explored to lay down the theoretical foundations of the practical part of my research, which involves in-depth interviews of executives, leaders and employees of small-and medium size enterprises. Their experience will be matched and compared with the theoretical findings of the literature review in order to provide a detailed and thorough aspect of the digital transformation and change management processes of SMEs.

Research methods will imply qualitative research including explanatory and interpretive approach to explore the characteristics of digital transformation in the SME environment, as well as the opportunities and challenges of the process in case of small and medium size businesses. The interpretive research method applied during the primary research will help understand the actions of the leadership and employees during these circumstances. The analysis of the research starts off by examining events and processes on a broad sense, and gradually as the thesis and research progress forward will the reader also receive a closer perspective, in particular on SMEs and their change management procedures.

2. Literature review

In the following chapter of literature overview, the available academic sources about the digital transformation will be closely examined, as well about its importance for small-and medium size enterprises. I will also give an overview of the most important change management models and strategies to the reader.

2.1 Digitalization within the environment of SMEs

Digitalization has changed and revolutionised our everyday lives, the way we communicate, live and do business. Digitalization has opened up the world to SMEs enabling them to enter the global business circulation, entering new markets and gaining access to a wider range of customer base. Those SMEs not keeping up with the innovations of the 21st century and the latest industrial revolution are exposed to a higher risk of lagging behind their competitors and eventually losing customers and business.

2.1.1 The evolution of digital transformation

In order to understand the history of digitalization, we need to first consider a wider perspective, the theory of innovation, which eventually will direct us to the transition process of digital transformation. Joseph Schumpeter, a German sociologist and economist identified three different eras in the history of mankind, based on the social and economic transformation of society as a result of technological innovations. Schumpeter defined cycles where the appearance of technological innovations or novelties resulted in the modernisation of social, economic and cultural life (Hilbert, 2022).

According to his research, innovation cycles, which differ in duration and intensity, initially result in prosperity as advantages and possibilities of the innovation are discovered and exploited. While the technological advancements consequently bring about economic boom, sooner or later other areas of life also become affected and raise a need for changes in such spheres as society. Nevertheless, social life is an area which is less prone to swift changes unlike economic, due to the presence of strong personal involvement, deeply rooting habits and ideologies. As a consequence, Schumpeter reasoned that these cycles are characterized by an economic and technological upswing, followed by a societal realization and enlightenment, which together results in a tension due to the difference in the rhythm of changes (Hilbert, 2022). These traits are to be found in the cycles identified by Schumpeter and depicted in the figure below:

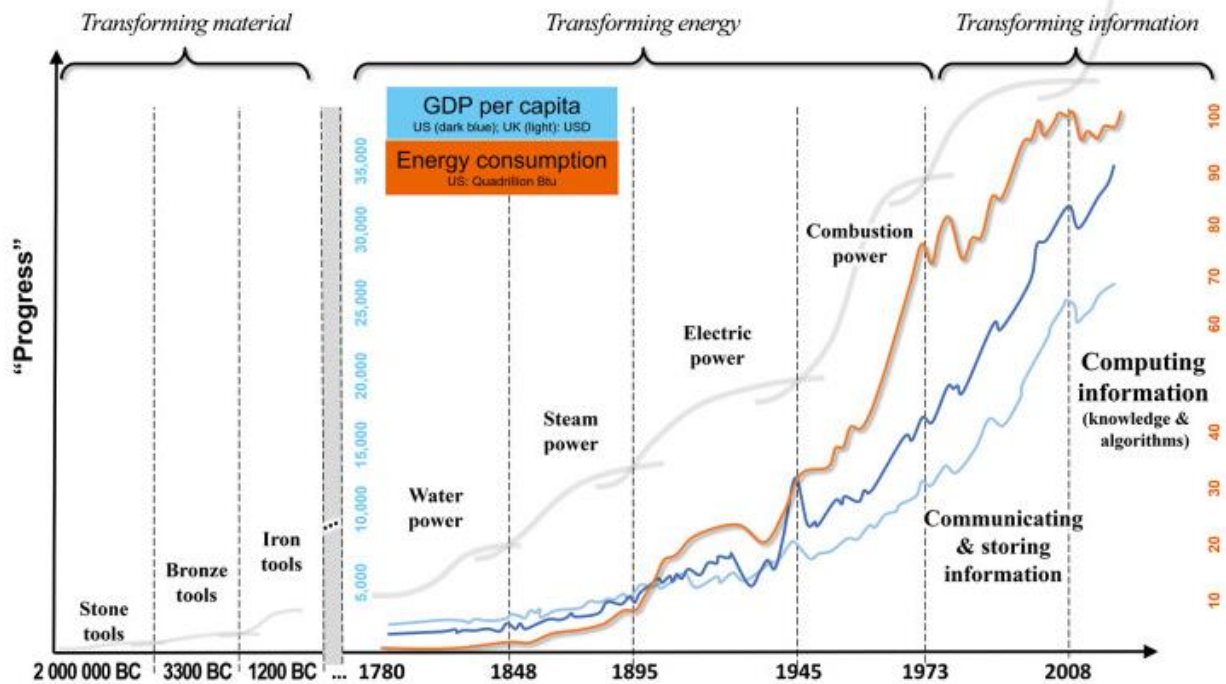


Figure 1: Schumpeterian cycles (Hilbert, 2022)

1. Prehistoric cycle

This era was characterized by the utilisation of different materials for everyday life purposes, where the innovation was the discovery of new materials. Exploitation of the advantages offered by their usage meant development for communities at the time, and increasing well-being for individuals. The Stone Age, was followed by the revolution of metals, first coming the Bronze Age and later on as equipment became more and more available and handy, and eventually the Iron Age set in with the advancement of metallurgic practises of the time.

According to Schumpeter, each subsequent cycle will be shorter in duration, than the previous one as the developments are implemented and societies are reaching higher levels of growth. This tendency can also be observed from the graph above, as the prehistoric cycle had lasted for thousands of years, followed by only hundreds of years of industrial revolutions. The German sociologist and economist argued in his works that societies and communities move forward in their development triggered by the will to increase the number of such activities that can be carried out automatically without much human interference.

This ambition gave spark to a series of major innovations, and the second cycle of technological developments.

2. The age of energy transformation

Schumpeter differentiated 4 separate eras according to the sources and nature of materials that had been utilized to be transformed into energy. He discovered that each cycle is composed of an upturn, when new possibilities are uncovered, nevertheless with time as motivation falls and societies start recognizing the downsides of the current innovation, which results in a time of disillusion. This tendency can be noticed on the example of the industrial revolutions as well, which contributed to a rapid economic expansion and increase in personal income (see increasing GDP on Figure 1.), nevertheless, as a consequence of uneven distribution of wealth and goods, innovations caused increasing social gaps and tension. This phenomenon is what Schumpeter called the ‘techno-economic paradigm’, and can also be experienced nowadays in terms of the digital transformation and social changes.

3. The age of information transformation

This era, which started approximately in the 1970s has been labelled in several ways, ranging from information age, the IT revolution and digital age, as well. In his research, Schumpeter identified and differentiated two segments of this time frame, the age of the change in communication and information storage possibilities, and the age of information computing transformation. Nevertheless, the era of digitalization is undoubtedly such a period of time in history that is characterised by the appearance of different technologies and streams of innovation that requires the segmentation of this age into further phases.

First of all, when talking about digitalization, we need to consider the process as a flow of change of knowledge, technological advancements and their implementation into our everyday lives. Accordingly, we can differentiate between three stages of the digital revolution, starting with digitization, which evolved into digitalization, and currently we are experiencing the era of digital transformation.

1. Digitization: The first stage of the process was digitization, which started already in the 1950s with the appearance of computers. Under the term digitization we understand the transformation of analogue data into a digital form by encoding the information into 0s and 1s, or so-called bits in order to enable computers to process these data. The emergence of digitization supported the development of technological innovations, since binary data was

applied by not only computers, but also several other new equipment with computing capabilities. During the conversion process, useful information is turned into a digitized configuration through encoding. Digitization can occur by recording data, data digitization, scanning, video digitization, etc. The most commonly used technique is data digitization, which is the most useful method to store, analyse and alter data.

Just as many other innovations, digitization also brought several advantages, such as smooth data analysis, enhanced buyer experience, accessible digital libraries, as well as cost reduction for companies, among others. Nevertheless, digitization also has its disadvantages, including, but not limited to data storage concerns, such as privacy, excessive exposure to technology and security risks, as well.

The era of digitization lasted for several decades and was followed by the age of digitalization.

2. Digitalization: First and foremost, it is important to emphasise that digitization and digitalization are two distinct phenomena. While digitization is the action of encoding, transforming and storing information in binary form for the purpose of easier processing, accessibility and analysis, defining digitalization is not as simple. Digitalization is a broad concept, influencing all areas of our everyday life ranging from social life to the way people do business. According to Brennen and Kreiss (2018) digitalization is the process where social life and the ways of communication are completely transformed from the traditional analogue methodologies (landline phone calls, mails) to digital technologies, such as emails, social media and various applications. Digitalization also impacts the business world, changing business operations and affecting the working environment. With the emergence of digitalization and with the implementation of digital solutions in businesses, employees and candidates for new positions are expected to be in full possession of digital skills, which has become a basic requirement from the viewpoint of employers and businesses. When talking about digitalization, we are referring to the process of transforming business procedures and operations to a higher level of efficiency by the utilization of digital technologies and automation (Bloomberg, 2018).
3. Digital transformation: The final stage is called the digital transformation, where businesses, by carrying out a series of digitalization action plans go through a digital transformation of their company processes and overall strategy. Digital transformation is understood in a much wider sense, referring to the application of digital technologies which necessitates such organization-wide adjustments that eventually lead to the transformation of the business strategies towards a much more customer-centred approach. Digital

transformation calls for a higher degree of change management on an organizational level, to tackle the challenges of the transformation processes (Bloomberg, 2018).

To summarize the full timeline of the stages of digital changeover, information is digitized into binary data, then during digitalization digital technologies are implemented into business processes and finally within the framework of digital transformation the whole strategy and structure of the businesses are re-organized around the customer and digital methodologies to improve efficiency and achieve higher output and increased revenue (Figure 2.).

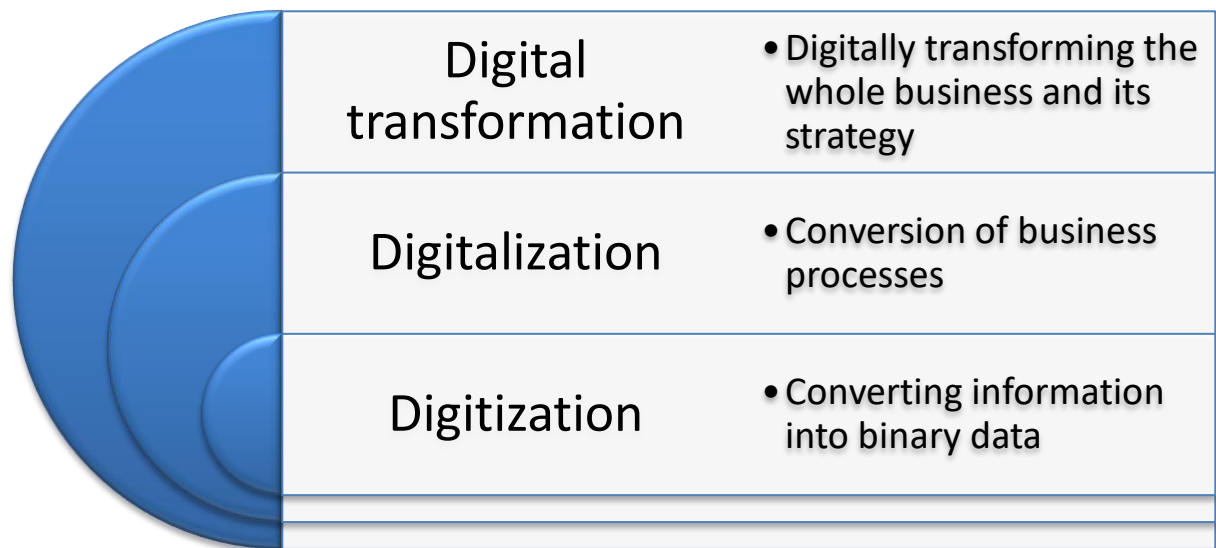


Figure 2: Stages of the digital era (Own edit, 2024)

Owyand (2019) recognized the need for the further division of the era of digital transformation due to its extensive and complex nature. He identified five distinct “ages” accordingly: the age of the internet, followed by the age of social media, then the age of collaborative economy, the age of autonomous world and finally the era of modern wellbeing. Based on his research, the first two eras have already been surpassed and in the current age of collaborative economy, the world is harvesting their benefits. The period of autonomous world is already in the preparation phase, and the modern wellbeing is projected to occur further in the future (Figure 3.)(Owyang, 2019).

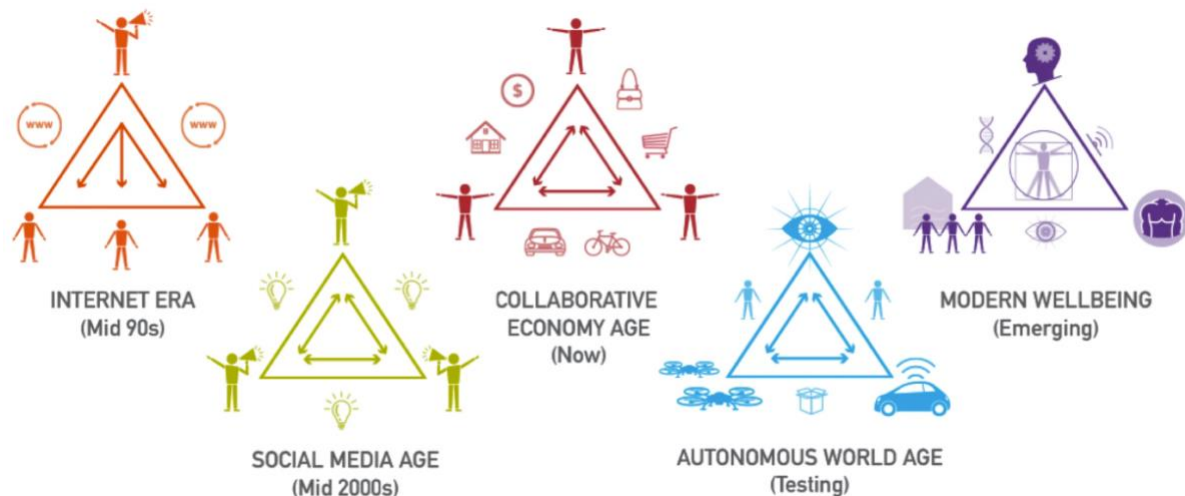


Figure 3.: The five ages of digital transformation (Owyang, 2019)

The figure above is a visual representation of the five eras of digital transformation. Of course, the beginning and the end of a phase is never a specific point in time, they overlap each other and go into a transition from one period to another, having an influence on each other.

2.1.2 Practical implications of digitalization

Digitalization provides several new possibilities as well as new challenges to businesses. As a result of the extensive global connectivity market players in all industries must re-evaluate their operations and their value-chain in order to integrate this new technological innovation into their business models. Digitalization is the force behind changes in all areas of business ranging from organizational and social to operational levels (Wilson et al., 2004). It goes beyond just the mere application of the latest innovations; it necessitates a full change towards a business management approach, which builds on innovation, flexibility and deftness. Digitalization plays such a great importance in the life of businesses that in 2023 more than 74% of companies named it as their top priority (Wrike, 2024).

The practical implications of digital transformation can be further classified into 3 segments: technology, human resources (the people who apply the technology) and business processes.

1.) Technology

Technology serves as the foundation and the main driver of digitalization, with its vital components being hardware, software and infrastructure. There are several innovative technological advancements which enhance business efficiency and drive digitalization, such as artificial intelligence (AI), blockchain, big data analytics, as well as the Internet of Things (Wrike, 2024).

- Big data analytics: The process of digitalization results in massive amounts of data and information which can serve as a basis for different analytics and researches aiming for improved marketing strategies and customer experience, enhanced process flow optimization and personalized products and services.
- Artificial Intelligence offers the ability to automate procedures, increase output and provide high level of customer service 24/7.
- The Internet of Things is a network linking several devices with physical objects with the aim of data collection and data exchange. The IoT has been useful in a numerous areas including logistics and procurement, healthcare, and the manufacturing industries, as well.

However, sheer technology in itself will not result in digital transformation unless we introduce human resource into the equation, who applies the technology. As mentioned previously, digitalization not only refers to the integration of novel technologies into business models, but it is a full scale transformation of the organizational culture, as well. In order to carry out digital transformation successfully within the business, companies need to set up such an organizational culture that promotes innovation, cooperation and a culture of continuous learning to supply employees with skills and knowledge necessary for the digital transformation. The most important key points to embrace of digital transformation within the working environment:

2.) Human resources

Digitalization also has its implication on the management of employees and their attitude towards innovation and change, which should be carefully monitored and handled.

- Investing in people and learning

Businesses must comprehend that technology also requires people who are able to utilize them and implement them into company procedures, and for this purpose

businesses must invest in the training of employees to ensure that they are skilled and empowered for the implementation of changes (Wrike, 2024).

- Encouraging change

Communication is of crucial importance when it comes to the introduction of a new technology or procedure. Encouraging employees to keep performing at a high level against the changing environment may help companies to tackle possible resistance. It requires efficient communication techniques and the involvement of employees in the management of the entire change process.

- Promote an innovative working environment

If employees are empowered to embrace innovation and have an experimental mindset, being open to new ideas, implementing new technologies and introducing new methodologies will less likely to meet resistance from their side. Nevertheless, to achieve such a working atmosphere, a Just Culture needs to be promoted where employees are not punished for making mistakes, but they are taken as possibilities to learn from.

3.) Business processes

The third area which is also heavily impacted by the digital transformation is the field of business processes and procedures.

- Enhanced efficiency

By significantly decreasing the amount of manual workload and time spent, digitalization leads to a higher level of productivity and automation, hence increasing the efficiency of processes and the overall performance of the business. As a result of the reduced paperwork as well as physical document storage digitalization also implies cost efficiency (Wrike, 2024).

- Improved availability, communication and customer experience

Digital technologies allow companies to explore new markets and reach out to new customers and communicate with them via different channels, including instant messaging on their websites, applications on social media, etc. These all facilitate immediate communication and improved availability of the business to its

customers on a global scale. As a result, customer will be provided with a higher level of service and customer experience which may lead to an overall increase in customer satisfaction, loyal customer base and higher revenue for the business (Wrike, 2024).

- Sustainability and supply chain optimization

Adopting digital solutions contributes to the promotion of sustainability and green environment by cutting the amount of paper used and by the optimization of business processes throughout the supply chain. Digital transformation supports the transparency of process flows by the enhanced technologies of tracking and coordination within the supply chain and among stakeholders.

- Disruptive transformation

One of the most important features and implications of digitalization is its disruptive nature, transforming traditional business models, which needs flexibility and agility from companies as a whole, including employees, organizational culture, technologies, as well as applied procedures (Wrike, 2024).

In summary, digitalization has a great deal of positive implications for businesses ranging from enhanced productivity, more efficient communication to extensive business models transformation. In order to integrate digital technologies into business processes, companies must realize the need for encouraged and empowered employees to avoid resistance to change, adopt technological innovations, such as big data analysis to increase customer satisfaction via needs analysis, and to view the organization as a whole as the subject of digital transformation to build a competitive advantage.

2.1.3 Opportunities of digitalization for SMEs

Small and medium-sized companies play an increasing economic importance not only in Hungary, but on a global scale. By providing jobs, promoting innovation and new business ideas they are major supporters of economic growth and job creation. Nevertheless, a large number of small businesses are facing pressure from large multinational companies due to several factors including limitations in funds and resources and the lack of expertise among employees. These are such constraints that limit the possibilities of SMEs to adopt the latest

technologies. The wave of digitalization has its impact on small businesses, as well, since keeping up with the competition means the integration of all those technological and digital innovations that enhance efficiency and increase customer satisfaction.

Patterson-Waites (2023) identified digital transformation as a major force behind the achievement of longstanding business growth for SMEs. The 5 most important benefits and opportunities of digitalization are presented in the figure below:

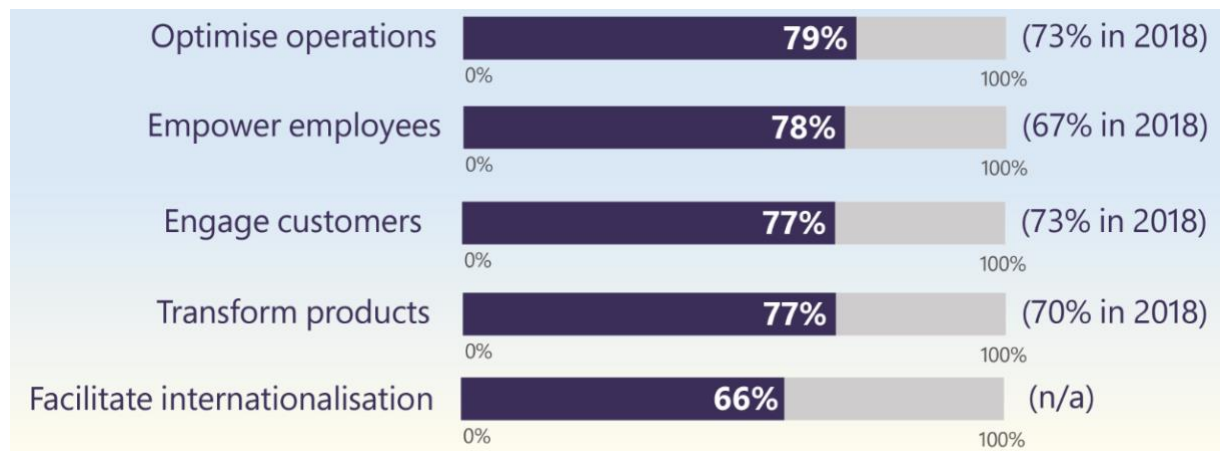


Figure 4: The most important benefits of digitalization according to SMEs (Microsoft, 2020)

- Optimizing operations

By offering new possibilities and methodologies for businesses, digitalization can create a significant improvement in the company operations. Technological innovations and solutions in the area of project management, communications, logistics, as well as information technology facilitate SMEs to organize procedures with a higher degree of efficiency and to have an insight into customer needs and shaping products and services accordingly. Optimizing operations and redesigning products play a crucial importance for SMEs in staying in the front lines of the market and retaining competitive edge against other market participants (Microsoft, 2020).

- Empower employees

As seen previously among the implications of digitalization, encouraging and empowering employees to embrace organizational change and technological transformation helps companies to avoid resistance from workers and at the same time builds motivation towards a culture of innovation. Furthermore, if employees are given the opportunity to have an insight into decision-making processes regarding the digital integration and transformation

mechanisms, they tend to be not only more loyal towards the company, but as a result more flexible towards changes.

- Engage customers

Digital solutions and technologies revolutionized the way companies do business, and the way they look at the customer's needs. Digitalization with the availability of big data analytics allows businesses to gain a deeper understanding of customer behaviour and demand. As a result, companies shifted from the inside-out customer view and marketing their products and services to target customers. Instead, first customer preferences are analysed and only then are products and services tailored according to their needs (outside-in customer approach). Now that businesses are more aware of what customers wish to consume and buy, their rate of satisfaction and conversion into loyal customers can be increased, which in the long-run increases revenue and overall company performance (Microsoft, 2020).

- Decreasing costs

Since the majority of SMEs are exposed to financial challenges, it is one of the most significant benefits of digitalization in respect of small businesses. By integrating digital solutions into their everyday operations, SMEs can cut costs not only by the reduce usage of paper, but most importantly by decreasing the costs related to logistics and transportation, new market penetration and operations management. According to a research conducted by Deloitte (2022) 20% of small and medium-sized businesses in the U.S. named cost reduction as one of the most beneficial advantages of digital solutions for their businesses.

- Facilitate internationalization

Digitalization opens new doors for SMEs to utilize new strategic market opportunities and it is a major driver for SME internationalization. The expansion of e-commerce platforms enables SMEs to compete with major multinational businesses, while having smaller expenses. In addition, digital technologies facilitate easier access to new markets by knowledge acquisition and data accessibility. Digital transformation also provides the opportunity for SMEs to redesign their value chain operations to reach out to new markets (Microsoft, 2020).

To summarize we can say that the integration of novel technology into business processes has several benefits for small and medium-sized companies. Taking advantage of these opportunities allows SMEs not only to enhance customer experience, but also to extend its activities to new markets and reach higher levels of growth.

2.1.4 Challenges and constraints of digital transformation for SMEs

Besides the several benefits and opportunities of digitalization, it also implies its barriers and constraints to the development of SMEs. The challenges to be faced include the lack of skilled workforce, financial barriers, the lack of digital infrastructures and lack of implementation plans among others. The diagram below summarizes the results of a survey conducted among employees of SMEs and microbusinesses to find out what is the extent of the challenges they experience related to digitalization.

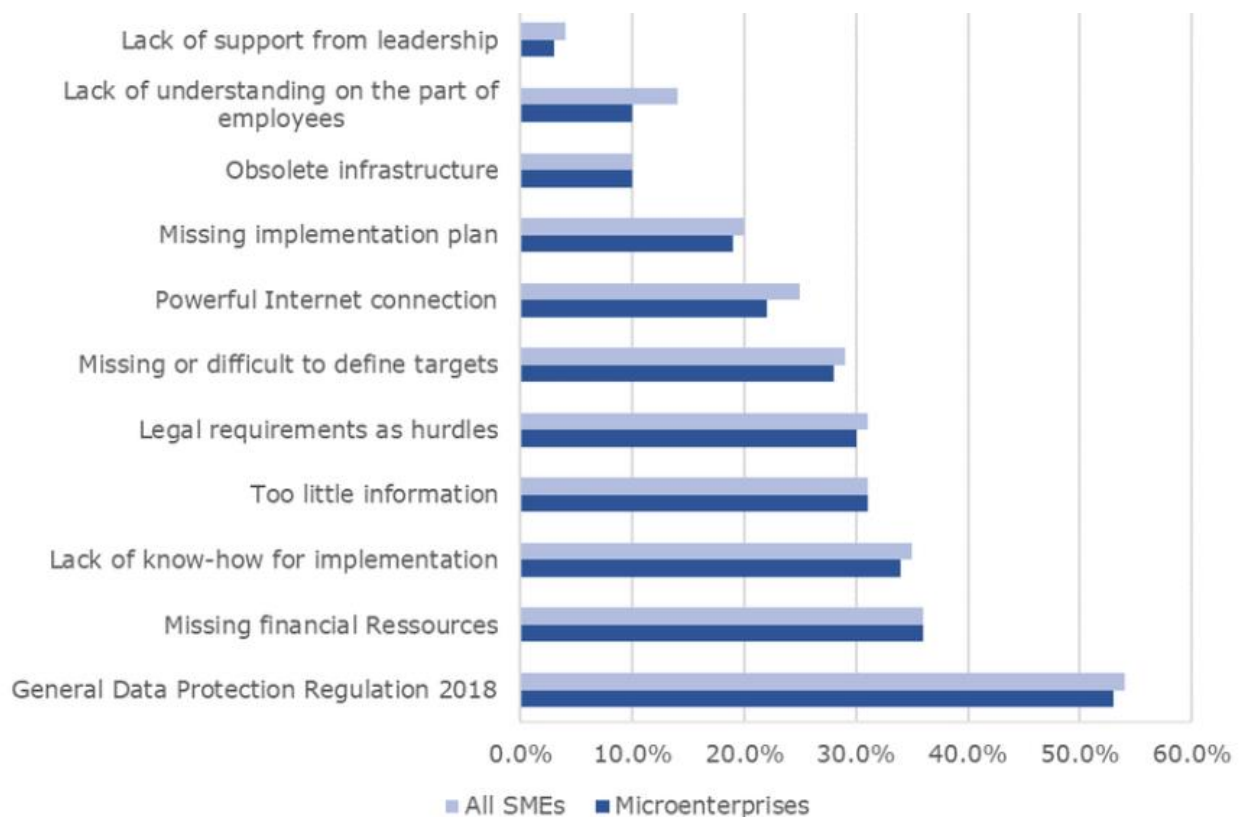


Figure 5: Barriers to digitalization according to SME and microbusiness employees (Hölzl et al., 2019)

According to the graph, the employees have named several challenges SMEs and microbusinesses have to face when it comes to the digital transformation of the business. The length of the bars represents how significant the barriers are in their opinion. Based on these data and information, we can conclude that even 2 years after its introduction, the

GDPR regulation still acts as a major hindrance to digitalization due to the data privacy measures. Furthermore, the second most major barrier to digitalization is considered to be the lack of financial resources. Unfortunately SMEs are still exposed to difficulties due to not enough or due to missing financial resources. As a result of monetary constraints SMEs are lagging behind competition due to missing digital assets and infrastructure and due to the lack of skilled workforce. Trainings, the provision of knowledge and information, as well as the availability of necessary assets are such substantial and vital necessities that should be readily available for employees to accomplish the digital transformation of the business successfully. Even without just one of the above factors missing would significantly hinder the process, because trained and skilful employees cannot accomplish results without the technological resources of digitalization, and the other way around. The availability of assets and the latest innovations will be unutilized if employees are not provided with the required training. States and governments also play an important role in supporting the establishment of talent pools and providing funds for SMEs for upskilling their human resources enabling SMEs to keep up with the competition.

The next significant obstacle to digitalization according to SME employees is directly linked to the above mentioned barriers. The lack of know-how for implementation is a typical constraint for SMEs and it is the result of the nature of the businesses, since in most cases small and micro companies are so far beyond multinational companies that they are just merely getting by, and having (again) no finances to invest in expertise to lead the digitalization initiatives.

Some of the above mentioned barriers, such as "Too little information", "Missing or difficult to define targets" or "Lack of support from leadership" can be identified under the weaknesses of the organizational culture, acting as hindrances to the implementation of digitalization. The successful integration of digital solutions into business procedures requires clear communication, setting common goals, sharing information and empowering employees to strive for innovative thinking and organizational culture.

Even though in today's fast paced environment it seems unlikely that some businesses are still struggling with the speed of the internet, yet it is still a real problem that employees are facing at some of the SMEs day by day. Of course, when talking about the implementation of the latest and most innovative digital solutions, it must be imperative that businesses are in possession of a strong and reliable network connection to ensure the smooth flow of

operations and transition. Unfortunately, for technical or financial reasons this is still a hindrance to overcome for small businesses.

The economic and financial significance of digitalization is undoubted yet 64% of SMEs are facing difficulties in using efficiently data from their database and an even higher 74% are struggling to make use of the business' data investments (World Economic Forum, 2023).

Another barrier to digitalization in SMEs is the lack of initiatives from conservative higher management. Some of the traditional, small businesses especially within the trading segment still rely on traditional leadership and organizational culture settings reluctant to open towards innovations. In most cases managers are not fully aware of the benefits and challenges of integrating digital innovations into their business processes (Arnesh et al., 2023, pp.692) .

2.2 SMEs and change management

This chapter of my academic research uncovers the different strategies SMEs apply to guide the business and its employees through the digital transformation process. The different stages of the change management process will be discussed, as well as strategies on how to overcome the challenges posed by the process of digitalization.

2.2.1 Stages of change management

Companies are constantly exposed to external and internal impacts inspiring them to grow and adapt to the new situations, such as legal changes, intensifying competition on the market, fluctuating economic movements, as well as the appearance of new technologies and trends. Businesses must answer these challenges by adapting their business models, processes and organizational culture; otherwise they will have to accept to lag behind competition, to stagnate or to eventually fail to continue operations. Change management refers to the series of actions regarding an organizational change, governing the transition from the very first steps of idea establishment, all the way to final resolution. Understanding the importance of change management and the way it is carried out is crucial for businesses and the leadership in order to facilitate the flawless transition from one stage to the next (Miller, 2020).

The proper management of a change procedure can affect the overall success of the transition, and hence the future of the business, as well. As a result of this crucial nature of

change management, several models have been established by experts to provide guidance to companies to implement changes successfully.

One of the most popular and most widely used models for change management is Kurt Lewin's 3 Stage model. While conducting his research on organizational changes and transitions with special attention to group coherence and change behaviour of employees, he identified 3 specific stages of an organizational change process based on the life cycle and timeline of the change being introduced. His work laid down the foundations for change management and is still widely applied nowadays. Critics argue that the 3-step model is way too simple for the complexities of an organizational change process occurring nowadays, nevertheless, for SMEs it is still providing an excellent guidance and should not be underestimated (Raza, 2019).

According to Lewin's framework, one of the drivers of change in an organization can be viewed as the organizational environment itself, where the behaviour of certain groups plays a central role in the adaptation process. Accordingly, the way individuals perceive and act in a changing environment is significantly impacted by the group they belong to. As a result, the 3 main points in the change management process are unfreeze, movement (or change) and refreeze (Figure 6).

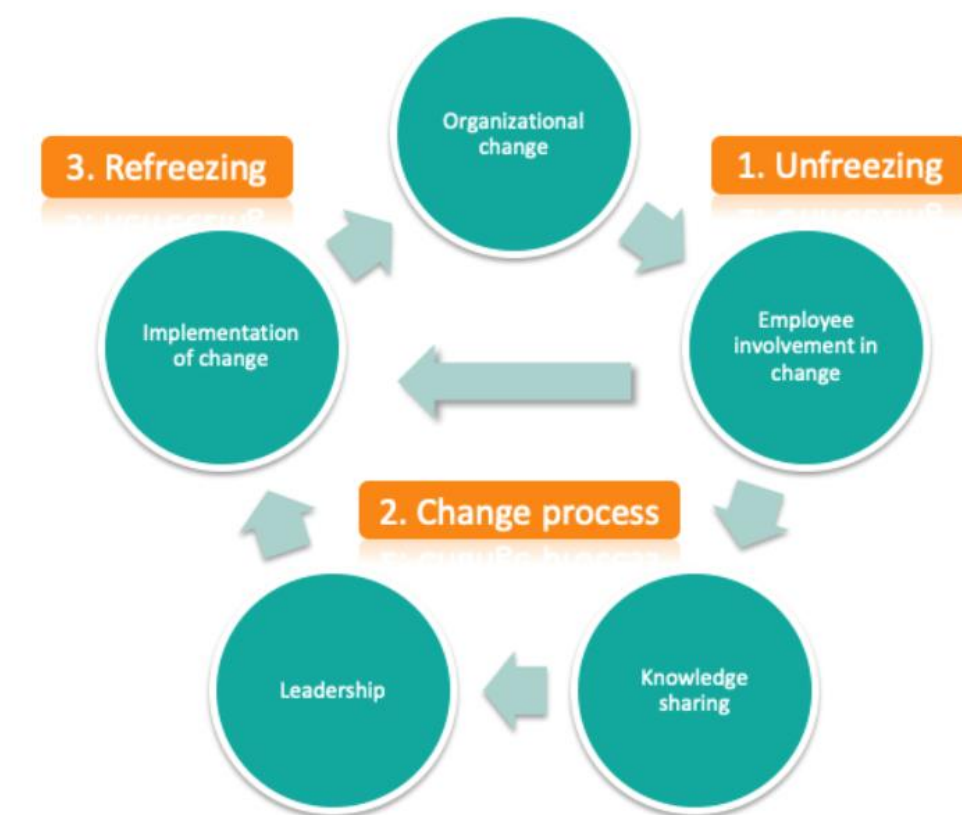


Figure 6: Lewin's 3-Step change management model (Raza, 2019)

The figure illustrates the process of change based on the 3-step model.

Stage 1: Unfreeze

Under the term unfreezing we understand the strategy of convincing people to stop clinging to old habits and ways of working methods, which were not as productive as the new status quo will possibly be. In order to understand the importance of unfreezing, Lewin in his work described human nature and behaviour in a changing environment as being in a state of balance. Lewin argues that group coherence results in individual opposition against change, hampering people to benefit from the positive advantages of the process. As result, this state of equilibrium must be disturbed in order to stimulate those behaviours in individuals that are susceptible to change. Once the management has identified the need for a change and the affected areas and stakeholders, the change is communicated throughout the organization and key employees are involved as supporters of the process. They can also be assigned with the task of identifying resistance. Once the requirement for change is recognized, an implementation plan has been set up and resistance to change is identified, management can start working on how to resolve trust issues towards the process (Raza, 2019). According to Lewin, the imbalance of the psychological equilibrium can be achieved by:

- Building a certain degree of guilt in individuals for rejecting change
- Giving sufficient amount of reasons for employees to understand why the change is necessary
- Create a thought and feeling of safety, security and comfort around the concept of change
- Boost those factors that guide individuals away from the old habits

Stage 2: Movement /Change

During the first stage of change management, resistance and negative attitude are resolved. The “Movement” or “Change” part of the change management procedure implies the application and integration of the change management plan into operation and practice. During the planning, several roadmaps and alternates must be prepared, since change is perceived by each individual in a different manner, hence leadership must monitor the movement stage very carefully to point out those practices working, and to find alternatives for those measures that turned out to be unsuccessful during the procedure (Raza, 2019).

Two key factors of the movement period, which are vital for the successful implementation of change, are knowledge sharing and the presence of leadership.

- Knowledge sharing: The significance of knowledge and information sharing cannot be emphasized enough when it comes to organizational change. It refers to the transferring skills, knowledge of best practises, experience, and expertise as well as to looking for solutions to arising issues and concerns.
- Leadership: The reason why it is named among the most important drivers of organizational change processes is that a strong leadership and navigation throughout the proceedings of change are vital not only to overcome resistance, but also to give an example and support to the employees. Leadership is the third link within the circle of drivers to successful change management: a vision for the accomplishment of which, the change is necessary, a structured and carefully planned agenda for the process, and motivation to carry out the change, which is provided by leaders and the management (Miller, 2020).

The movement can be either slow and gradual, or relatively fast-paced. This stage is characterized by the learning process of employees who are participating in new tasks and the related accountability, which in general might take some time. If all stakeholders of the business are able to view change as a long-term investment, concerning not only finances but also time and energy turned into learning and practising new procedures, methodologies and tasks, success is guaranteed (Raza, 2019).

Success factors for an efficient “Movement” stage:

- Communication: Effective communication refers to informing employees and stakeholders about the change and about its planned implementation agenda, those being affected and to what extent, as well as eliminating doubts and fears.
- Inclusion: The involvement of employees in the process of organizational change with the aim of winning as many supporters of the flow as possible.
- Empowering employees: motivating employees to participate in the transformation of the business (Miller, 2020).

Stage 3: Refreeze

An important element of organizational change is reinforcement. Managers of the change process must ensure that change is not temporary but will remain well established within the framework of the organization. This stage is called refreezing. According to Lewin, when the change has been implemented successfully, it is necessary to refreeze the conditions and working environment in order to maintain durable and long-lasting success. If this step is skipped, employees are likely to turn back to their old habits, behaviours and methodologies used. The best strategies in the refreeze phase to be applied are the following:

- Integrate the newly accepted scenarios and changes into the culture of the business
- Establish training and learning opportunities for stakeholders in order to affirm the implementation of the change in short-and in the long-run, as well.
- Strive for maintaining the already established new order by setting up a feedback system to learn from and monitor the opinion and experience of employees. In addition, a reward-based scheme can also be beneficial to increase the motivation of employees for retaining the achieved status quo (Raza, 2019).

To sum up, Lewin's 3-stage change management model supplies a thorough insight into the mechanism of organizational change and the behavioural features of employees typical in these business situations. Even though Lewin laid down the foundations of his theory nearly a century ago, the principles implied can still be applied to current issues and processes nowadays.

2.2.2 Strategies for tackling digitalization challenges

In the previous chapters we have seen the barriers and challenges SMEs are facing during their digital transformation processes. In this section, we will go into more details about the strategies SME's apply to fight these challenges.

1. Leverage flexibility

One of the greatest advantages of SMEs compared to large multinational companies is their agility and ability to make decisions quickly due to the simplified organizational structure, and the openness to adapt to new conditions at a faster pace.

2. Open communication

Facilitating open communication is such a tool in the hands of the management which encourages sharing new thoughts and ideas, while also fostering strong bonds between the business and its employees. This strategy is further supported by the smaller size of the enterprises that enables the establishment of this type of communication strategy. In a small firm, where the atmosphere is more like in a family, communications tends to be more informal among employees and between employees and management, as well (Rinne, 2023). As a result, there is a higher chance that in case of an organizational change process, employees will demonstrate higher degree of openness towards the new situation, and also more likely to speak up in case of any doubts.

3. Change-oriented mindset of the leadership

In several instances, executives in SMEs are in charge of multiple roles within the company, meaning that they might be the ones directing, organizing and monitoring the implementation of the change. For the sake of efficient transitional process, managers must be aware that in case of small businesses the positive attitude of the leadership determines the success of a change, since they have the power to motivate, encourage and empower employees for such an organizational culture that promotes innovation, development, and as such, change (Rinne, 2023).

4. Starting small

Another advantage of being a small business is that when it comes to the implementation of digitalization, the company can start by concentrating initially on small, but important areas, where the most instantaneous results can be experienced. This will not only provide feedback on the progress of the change implementation, but also reflect how the new technologies integrate into the business processes, if any adjustments are necessary in the meanwhile (Yip, 2023).

5. Measuring success and progress

In all sorts of change, it is significant to measure the progress and success of the transition in some ways and it is no different in case of digitalization. By doing so, businesses can optimize the change management plan, detect weak points and strongholds of the transformation process at an early stage, which allows them to act swiftly and implement corrective actions if necessary (Tripathi, 2024).



Figure 7: Key Performance Indicators of digital transformation (Tripathi, 2024)

The figure above summarizes the most widely used KPI's in order to monitor if the digital transformation of the business is progressing according to initially set objectives. One of the aims of digitalization is to enhance customer experience, so it is essential to track if this viewpoint is being met during the transition. Customer satisfaction may be reviewed with the help of questionnaires or personal testimonials for instance.

Monitoring and overseeing the digital engagement implies measurement of how customers connect with the business' digital channels, such as social media applications, websites, etc. By tracking the engagement, businesses can detect which areas are the most popular with customers and which are the ones in need of improvement (Tripathi, 2024).

Tracking the conversion rate of customers, operational efficiency, including streamlining of process flows, as well as employee productivity are all playing a crucial role in measuring how the digital transformation process is performing within the company.

All these strategies help SMEs to overcome the obstacles during the digitalization process to optimize work flow and change management processes.

2.3 Overview of the digitalization status of Hungarian SMEs

Hungarian SMEs are in a relatively difficult situation when it comes to digitalization. Although the Hungarian SMEs are developing gradually, they are still lagging far behind in the field of digitalisation. This is illustrated by the fact that many Hungarian SMEs still do not employ skilled IT specialists. According to experts, (Világgazdaság, 2023) a generational change could bring about a digital revolution in the SME sector. This situation is expected to radically change by the current generational shift in business leaders, so companies that do not upgrade to higher levels of IT infrastructure may soon face a significant lag behind the competition. This finding is also supported by the results of the survey of the European Union, in which the digitalization level of member states were analysed.

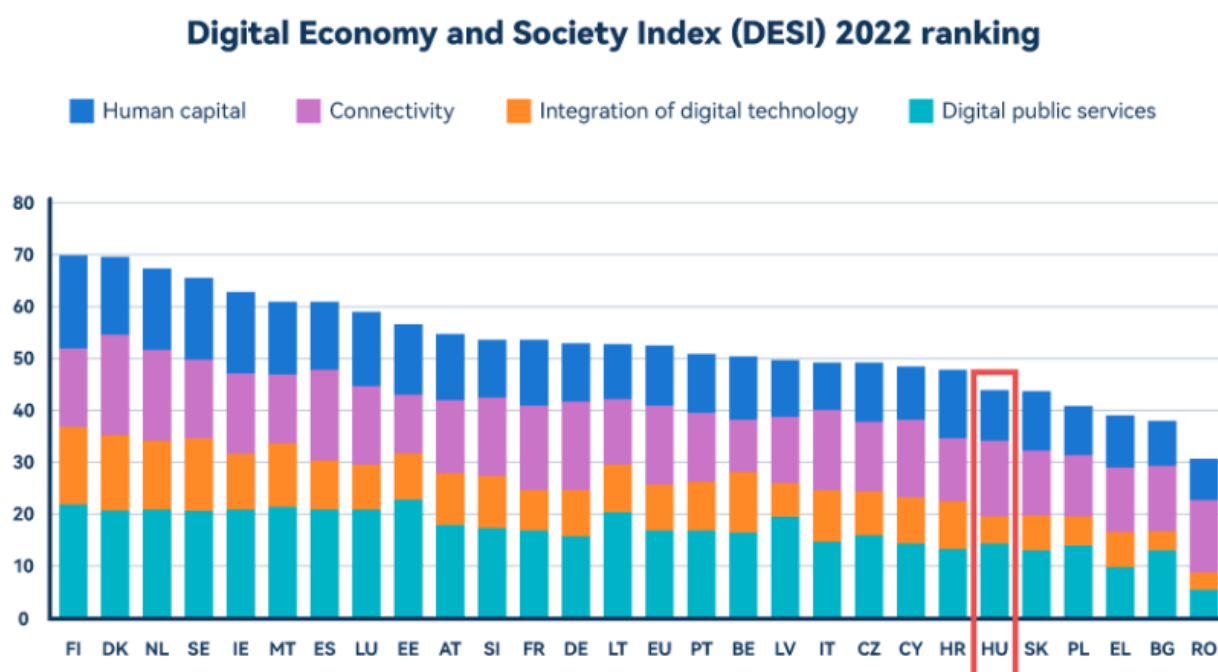


Figure 8: Digitalization Index of the European member states in 2022 (DESI, 2022)

Based on the figure we can also deduce that Hungary is ranked in the last segment of the list of member states, meaning that the level of digitalization and digital transformation is still in its infancy stage and there is ample of room for development. Of course, since the dawn of the digitalization era major improvement have been achieved.

The ratio of SMEs using business management systems has increased and more and more businesses are looking for online solutions to acquire customers, nevertheless there is still room

for improvement. The digital maturity of Hungarian SMEs has not changed significantly in 2022 compared to 2021, based on the research of Digimeter (2023). The survey asked nearly 50 questions in six areas to assess the digital competitiveness of the SME sector. The main index score was 41 last year, compared to 40 in the previous two years. The biggest improvement was in agriculture, which scored 30 compared to 19 a year earlier.

Concerning flexibility and remote working conditions, home office is available at least one day a week in nearly a quarter (24%) of companies, but only 8% of all employees in all companies surveyed have this option. Even though a whole year has passed, still 67% of employees in SME were utilizing IT tools in 2022, exactly the same amount as in 2021.

Regarding the utilization of advertising and marketing channels the research also showed that around half of Hungarian SMEs do not advertise their services online at all. In 2021 this ratio amounted to 41%, which has increased only two percent by 2022 (TIMOCOM, 2023).

The main advertising platforms are mainly Facebook and occasionally Google Ads. At the same time, more and more businesses are looking for online solutions to attract customers. More than a third (34%) of respondents now regard that this is an important area. The majority believe primarily in email newsletters, but search engine optimisation has been used by significantly more respondents than at the time of the last survey (TIMOCOM, 2023).

In summary, we can conclude that Hungarian SMEs require a higher pace of digitalization, as well as raising awareness of the importance and benefits of digitalization for SMEs. Generational change might be a solution that will bring fresh ideas, openness to change and an innovative organizational culture into the lives and procedures of SMEs.

2.4 Research aim

Based on the literature review it can be deduced that for a significant number of Hungarian SMEs digitalization is still a major challenge, and the majority of local SMEs in general are lagging behind European competitors and standards, as well. The main aim of this research is to address this problem and challenges faced by Hungarian SMEs and to conduct a thorough analysis of this issue based on the example of a Hungarian pig farm operating within the legal framework of an SME.

The research aims at identifying the underlying specific reasons and barriers to the implementation of digitalization measures at Hungarian SMEs. As now the perspective of the research is being narrowed down from general SME digitalization processes to a specific

company, the scope of the research is also further reduced into more specific aspects. As the analysis progresses, by the end of the research it is expected that reasons for the failure of digitalization processes will be identified and broken down into specific sub-areas, such as managerial reasons, HR-related reasons or due to lack of assets and IT support.

As an employee of Békési PIG Farm I am convinced that by going into a deep analysis in this area can contribute to the future success of my employer company by being able to propose solutions to the digitalization challenges of Hungarian SMEs.

3. Methodology

The following chapter gives a thorough overview of the importance of the research, as well as the methodology applied. In order to achieve the objectives set previously, a carefully planned and comprehensive research was conducted to address the research problem.

3.1 Significance of the research

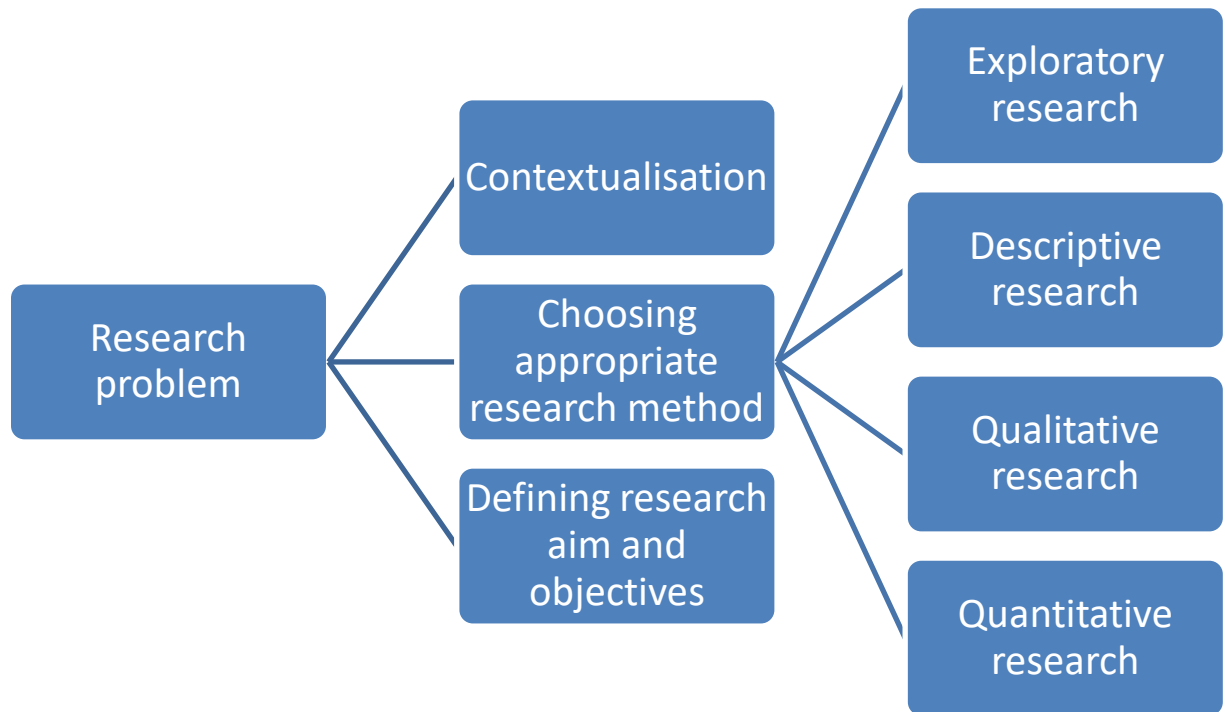
The research plays an important role in excavating and analysing the reasons for the problems and barriers of Hungarian SMEs to develop their methods of operation and enter into the era of digitalization. As discovered during the examination of academic literature, as well as by experiencing personally, Hungarian SMEs are struggling to implement digitalization into their day-to-day activities even though they are aware of its importance in enhancing competitiveness in the market.

Working for a Hungarian SME in the south-eastern part of the country has strongly motivated me to examine this field from a closer viewpoint. Having a first-hand experience gave me not only an insight into this issue of local SMEs but also encouraged me to find the underlying reasons for this trend, and by doing so proposing solutions which could help not only in the area of the implementation of digital solutions but also in the viewpoint of change management, which in my experience is a major barrier to digital transformation of local SMEs.

This research can serve as a reference point for Hungarian SMEs to move out of a stagnation point and develop their business, by providing them with reasons, patterns and possible solutions they can apply to their own organization.

Due to the scope of the research, it may be viewed not only as a general research paper, but as an aid and blueprint for business people looking for ways to apply digitalization into their processes in such a way that meets both customer's, employee's and employer's needs.

The research is conducted based on the following pattern:



The main outline of the research is the following:

1. Definition of research problem (based on literature review)
2. Contextualisation
3. Defining research aim and objectives
4. Design of research methodology and research methods
5. Planning the steps of qualitative research
6. Pre-defining limitations of the research
7. Analysis and interpretation of results
8. Are research objectives achieved?

3.2 Definition of the research problem

By the end of the literature review and its theoretical analysis, it became apparent that Hungarian SMEs are clearly facing challenges when it comes to the introduction of digital solutions, technologies and best practices. There is not only a timely lag between Hungarian SMEs and their European and Western European counterparts, but there is also a gap in terms of workforce skills, availability of trainings and an overall lack of knowledge on the know-hows of digitalization.

By taking a closer look at the situation of local SMEs, it can be concluded that the most crucial question in this case is why Hungarian SMEs are struggling to adjust their operations and processes to meet digitalization standards. So, the research problem can be defined as the inability or challenged situation of Hungarian SMEs to implement digitalization measures into their company procedures. So, based on the research problem, the research aims at finding the roots and causes of the research problem.

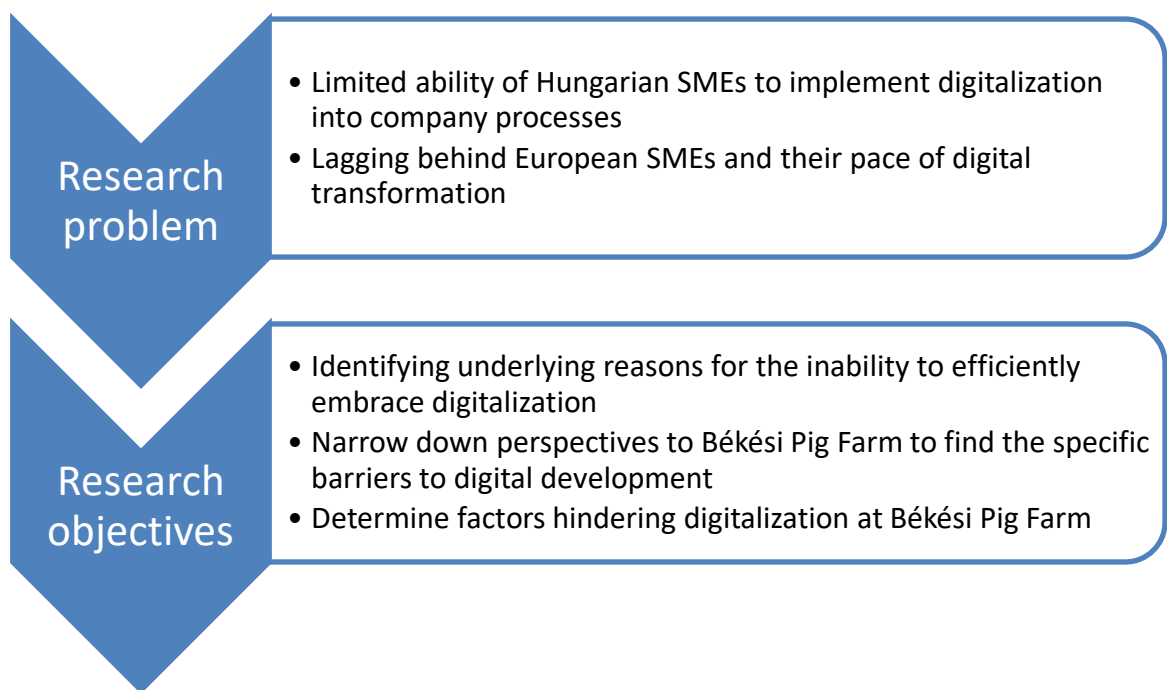


Figure 9: Research flow chart outline (Own edit, 2024)

Once identifying what the problem is, it also has be asked why it is a problem, or more precisely, why the current status causes challenges and why it should be analysed.

3.3 Contextualisation

As the research problem and research objectives have been outlined, it is also important to define the relevance and background of the topic and the applicability of the research.

Competition among small-and medium sized companies is getting tighter in Hungary due to the increasing number of SMEs. To stay competitive in the market, these small companies must implement the latest technologies into their processes to gain as many customers as possible and to retain the existing ones. Nevertheless, against all these market requirements, the majority of Hungarian SMEs are still struggling to fully grasp digitalization and its importance to their company. Final results and conclusions of this research will be applied at Békési Pig Farm. with the aim of providing useful advice and insights into how their digital transformation process could be improved in order to successfully shift to digitalization.

Having a clearly defined problem and the understanding of its applicability facilitates setting the right research objectives.

3.4 Research objectives

Once the research problem and its applicability have been identified, the next step in the research process is to draft the research objectives. These are the set targets of the analysis to be achieved by the end of the research process. Outlining aims and objectives at this stage allows researchers to rely on at any point during the process, when being in doubt or when reaffirmation is necessary regarding the aims of the investigations.

- To examine contributing factors to slow digital transformation processes at Hungarian SMEs
- To analyse whether there is a relationship between change management strategies and the quality and pace of digital transformation at Hungarian SMEs
- To examine the causes and roots of the research problem

By answering and addressing the above mentioned research objectives, the research paper will be able to provide reliable information to SMEs in Hungary and also serve as a basis for future digitalization action plans for SMEs by drawing their attention to the pitfalls and challenges of digital transformation within the structure of their organizations. By being aware of the possible barriers to digitalization, companies can already prepare themselves to avoid those mistakes and problems identified within this research.

3.5 Research methodology

The methodological approach applied during the analysis was qualitative research, using the answers from in-depth interviews as reference. Concerning both the research problem and

objectives, conducting thorough interviews and drawing conclusions from the answers was considered as the most appropriate research method to carry out.

As mentioned above, the research tool was chosen to be in-depth interviews, conducted among employees of Békési PIG Farm. In order to receive a comprehensive view on the issue discussed, representatives from different levels of management and employment participated in the research. By doing so, all aspects of the digitalization process and change management at the company were analysed leaving no angles uncovered. The personal in-depth interviews took place at a previously agreed time and meeting-room in order to make interviewees feel as comfortable as possible in hope of their most genuine answers.

Each interview took approximately 1-1.5 hours. At the beginning of each personal interview, interviewees were informed about the conduct and expected duration of the interview. They also received a short briefing about the research itself, about its objectives, why it was being conducted, the reasons behind, as well as about its possible implications to Békési Pig Farm. Interviewees were informed that their data and information will be handled as sensitive information, and the answers they provide during the interview could be modified or revoked at any point during the interview. Attention has also been brought to the voluntary nature of the research to emphasize that no monetary motives can impact the objectivity of research results. All interviewees understood the mentioned information and the discussion of the questions could begin.

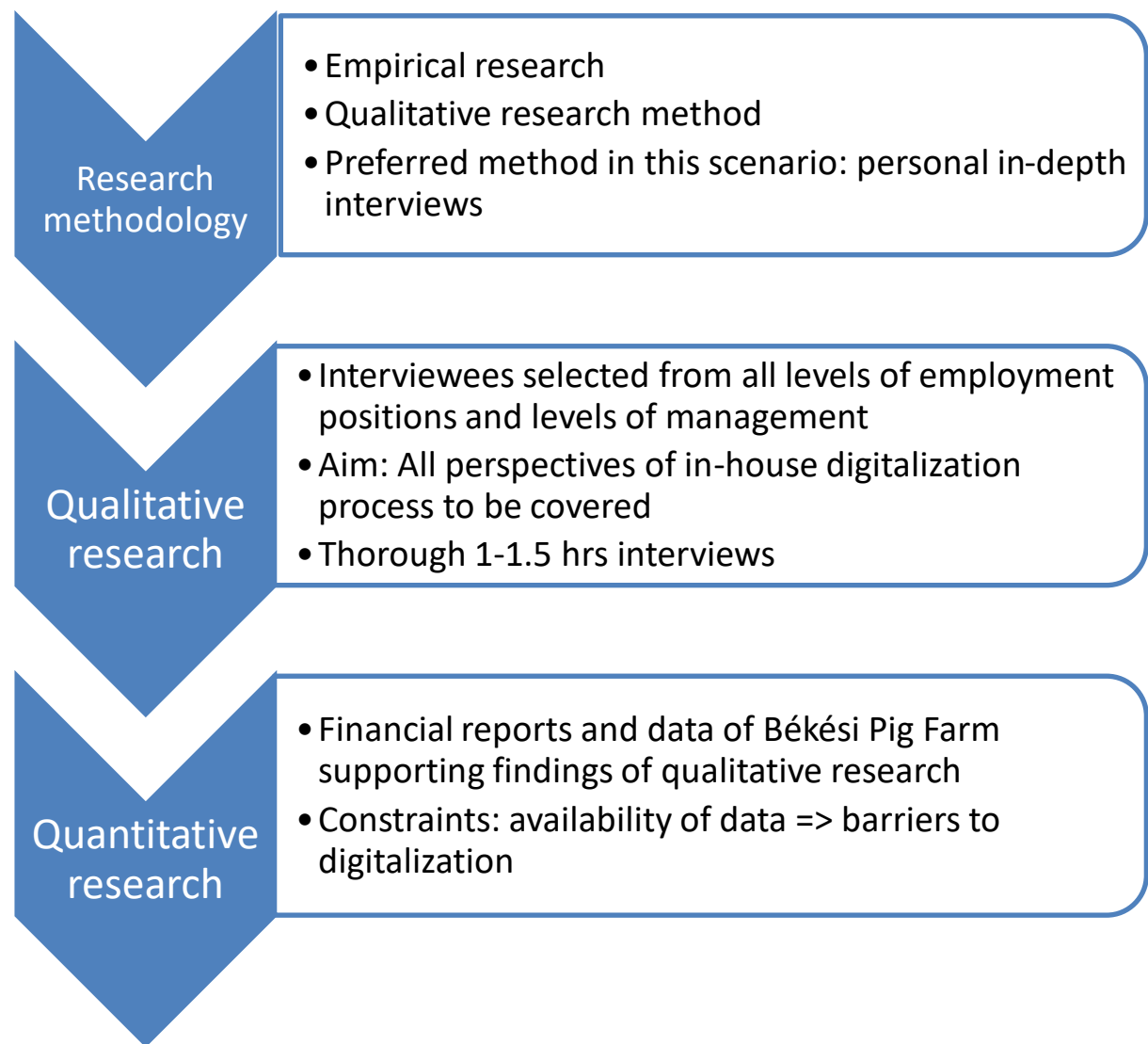


Figure 10: Research flow chart #2 (Own edit, 2024)

Slightly different set of questions were prepared for members of the higher management and for the members of staff to be able to differentiate how employees and leaders viewed the in-house digitalization process, and their contribution to it. Questions were grouped based on their relevance to either the digital transformation of Békési Pig Farm, or to the change management approaches of the SME and its management.

As a result of the empirical feature of the qualitative research, data and information processing was carried out by evaluation and deduction.

To support the findings of the qualitative research, a quantitative research was conducted as well applying the research methodology of statistics. Financial databases of Békési Pig

Farm were analysed to find any tendency of change after the initiation of the digitalization process at the company.

As an employee currently under the employment of the analysed SME, access to databases and financial information was readily available and accessible which made the research process smoother at this stage.

Nevertheless, limitations of the research had to be realized and accepted as the investigation progressed.

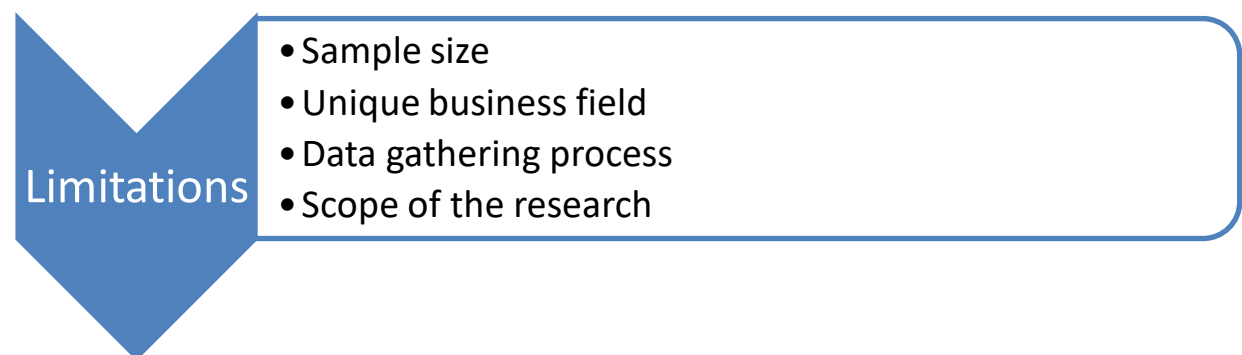


Figure 11: Research flow chart #3 (Own edit, 2024)

3.6 Analysis and interpretation of the results

The analysis of results occurred by combining the reviewed theoretical perspectives with the observed and interpreted behaviours, as well as process flows. Prior to the inspection of answers the following expectations were outlined:

- To be able to specify certain areas of the business where the application of digital solutions is hindered
- To determine whether the main barriers are human-and change management or professionally-related (Are digital transformation processes slow/hanging up due to the resistance of employees or due to the lack of trainings or lack of appropriate IT personnel?)
- To find cause-and-effect within the progress of transformation and thereby being able to propose solutions to the research problem

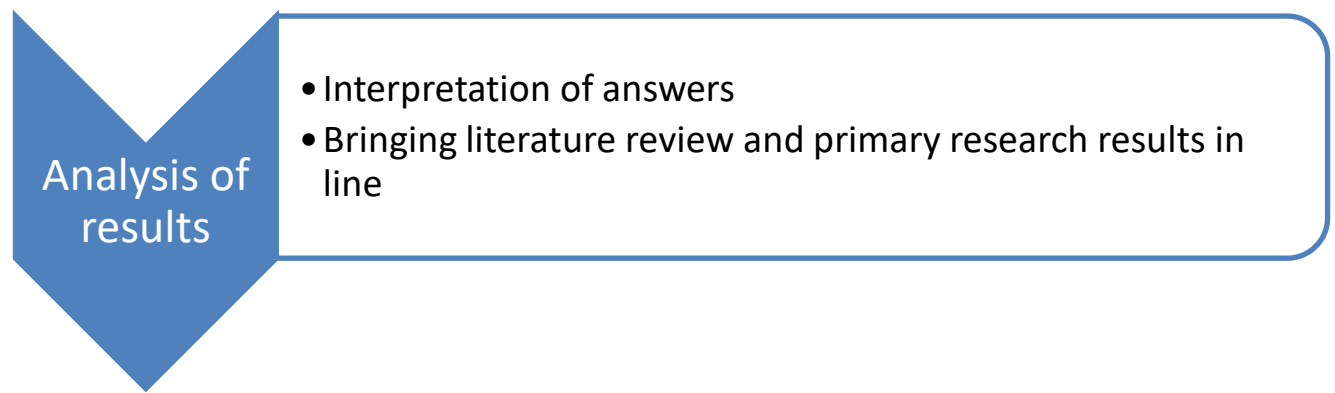


Figure 12: Research flow chart #4 (Own edit, 2024)

The answers received during personal in-depth interviews were analysed based on empirical methods, to investigate reasons for behaviour, approaches towards change, digitalization, leadership methods and company procedures within Békési Pig Farm.

At this point in the course of the research, final outcomes of primary and secondary researches were brought together to be interpreted under the concept of digital transformation and its management as a state of change within the organization.

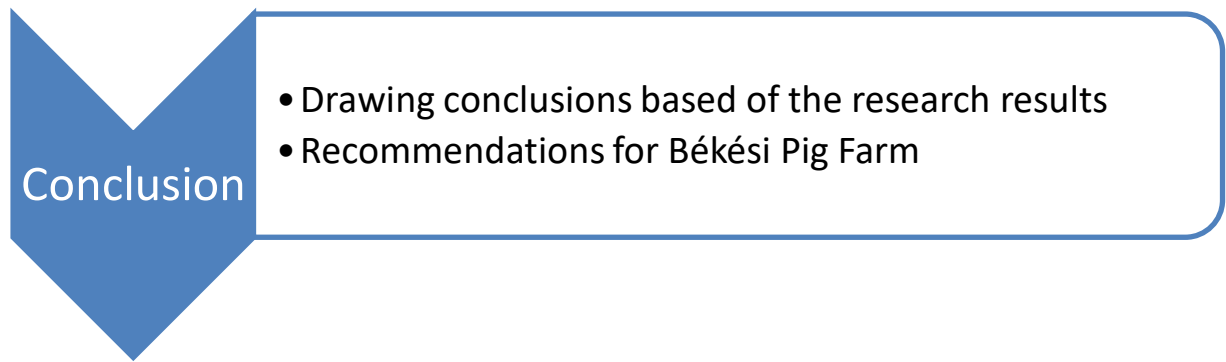


Figure 13: Research flow chart #5 (Own edit, 2024)

The analysis of research results was followed by drawing the conclusions of the investigation and drafting recommendations for Békési Pig Farm accordingly. Coming to a final conclusion in the research process also means going back to the initial stage of the research to see whether the initially defined research objectives are achieved, answered and if the research problem was successfully investigated to be able to provide a proposal as possible solution to address the problem.

Based on the conclusion, recommendations were summarized based on the experience gained throughout the research.

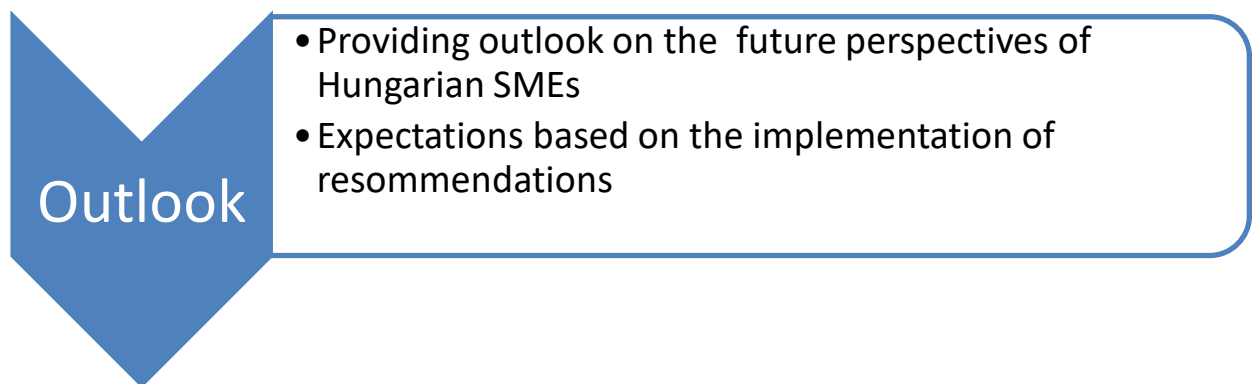


Figure 14: Research flow chart #6 (Own edit, 2024)

The research was concluded with a final summary of results and achievements, as well as with the provision of an outlook of future prospects of Small-and Medium sized Enterprises. The future possibilities were considered while taking into consideration current trends and with the expectation that Békési Pig Farm accepts the recommendations of this research and implements them into company practices.

4. Results

The following chapter of this research paper covers the thorough description of the research problem, the research process conducted with the aim of identifying the specific hindrances to the implementation of digitalization into company processes within Hungarian SMEs, as well as the final results and conclusions.

The research subject is a Hungarian SME, Békési Pig Farm, operating within the agrarian industry in the South-East part of Hungary. The research will be narrowed down from a generalized viewpoint on Hungarian SMEs and their challenges within the field of digitalization, to the aspects of Békési Pig Farm, as a local SME with regards to their own experience regarding the digital transformation and change management. The approach of the literature review discussing Hungarian SMEs in general is also further specified in the following section of the research to the agricultural sector of the industry and its SME market participants.

Even though the Hungarian agricultural sector plays a crucial role in the economy and has historic importance as well, it has always been the one lagging behind other industry segments and the last one to implement technological innovations already present in other markets. This is the challenging environment where the local Small-and Medium sized Enterprise, Békési Pig Farm runs its business.

4.1 Békési Pig Farm introduction

Békési Pig Farm Ltd. was founded in 1993, with its main area of activity being pig breeding. In addition, an important part of its operation is the service of contract fattening. The concept of contract fattening means that 10 week old weaned piglets are moved to a contracted site anywhere in the country, with specialist advice, appropriate feed and medication they are grown and fattened, and then when reaching adulthood in size, the grown animals are sold. Under contract fattening, the producer pays for the site, workers and site maintenance costs, while Békés PIG provides the fattening material, feed, transport, medicines, technology and background knowledge. The developed programme of the concept is the following: The Békési Pig Farm Ltd. buys the piglets, delivers them to the production partner, who returns only the 110-120 kg fattened pigs as final product to the fattening plant. The pig is then sold to the slaughterhouse. The animals remain the sole property of Békési Pig until the end of the process. Settlement is made on the basis of losses and feed type, from which the fattening premium is paid to the production partner. All producers are sponsored by the state for this activity by means of a so-called animal

welfare subsidy, which is also received by the producer as financial assistance. The production process consists of staggered introduction, emptying of the sheds and settlement of accounts after the animals have been delivered to the slaughterhouse. The company's operations are covered by two Ltds, Békési Pig Farm Ltd., which operates the farms in the eastern part of the country, and Molnárfarm-2000 Ltd., which ensures serving all the partners in Transdanubia.

4.2 Analysis of research results

The primary research segment of the research included in-depth interviews, conducted among employees and members of the management at Békési Pig Farm Ltd. The personal interviews were conducted with the following employees and members of management at Békési Pig Farm:

DEMOGRAPHIC DATA	Age	Gender	Place of residence	Current position
1 st interviewee	46 years	Male	Major city	Owner of the business
2 nd interviewee	58 years	Male	Major city	Depute CEO
3 rd interviewee	53 years	Female	Major city	Trainer
4 th interviewee	27 years	Male	Capital	Managing director
5 th interviewee	60years	Male	Small town	Agricultural counsellor

Figure 15: Interviewees of the primary research (Own edit, 2024)

Major findings and results based on the in-depth interviews are the following:

1. Digitalization-related results

Initiation

Based on the personal in-depth interviews, we can conclude that first and foremost, the digital transformation at Békési Pig Farm was initiated by a new employee approximately 5 years ago, when he joined the company. Coming from a multinational corporation, he had extensive experience in the application of digital solutions, the introduction of which he initiated upon his arrival at Békési Pig (Annex E, answer #4). Without his initiatives, it

would have taken some time for the SME to start applying digitalization methods in their activities.

In addition to this new employee's inventiveness, few years later another newcomer at Békési Pig joined the digital transformation process of the company by bringing his ideas and new practises regarding data analysis, organization, storage and sharing. These two employees are considered as the initiators of the digital transformation process at Békési Pig Farm.

Based on this information we can conclude that having an initiator at the firm who has the knowledge, expertise and know-how of digital processes is essential in providing the kick-off of the transformation process. Lacking such a person might as well delay the transition process, and would require motivation for digital development from within the company.

Action plan regarding the digital transformation process

It has also been pointed out during the primary research that there has been no action plan, nor preliminary strategy for the implementation of the new technologies and methods at Békési Pig Farm. The digital transformation process as such started and is still conducted in an ad hoc manner based on the answers of all employees (Annex “all Tables” answers #5). Not having a thorough execution plan has several drawbacks and long term consequences, as well, which can be observed at Békési Pig:

- A plan, or strategic action plan serves as a roadmap for the whole organization and its members to follow. It helps employees understand what are the objectives and goals of the project, and what their roles are within this new environment. This is exactly what is missing from the digitalization process of Békési Pig Farm. Several employees expressed their opinion on not having been informed prior to the start of the process. Even though they have heard before of digitalization and they are aware that it is essential for businesses, in lack of a plan, and as a result in lack of goals, employees did not have a clear path to follow, which resulted in several emails with questions and doubts regarding the know-how of new processes.
- In addition, a plan helps defining short-term and long-term goals, as well as milestones to track the pace of progress. Now, due to the lack of all of the above mentioned factors, Békési Pig has difficulties in defining what they want to achieve, how and by what date. This is also presented by that fact that even though the transformation process has started 5 years ago already, however no factual evidence or data are available to support how the process is going and how the company is performing since then. They might feel that with the new systems and digital solutions the workflow is smoother and faster, nevertheless, there is no proof, as no goals had been set previously. Furthermore, without pre-defined milestones, it is challenging for employees to follow if the company is ahead or behind the schedule of the implementation process. When employees are left without defining clear directions for them, they might not know how to utilize new resources, and may lead to confusion and lack of prioritization and poor time management, as well, which symptoms can be detected in case of Békési Pig Farm.
- Even though, the main aim of digitalization is to enhance the competitiveness of companies, still if no strategy is available to provide a reference on how to cope with market challenges with the help of new solutions, it could lead to the SME to miss out on opportunities and lose competitive edge. As mentioned in the interviews, Békési Pig

Farm has some major competitors in the industry, some of which, such as Mangal Ilona Ltd. are forerunners in the field of agricultural digitalization, as has been awarded with the prize of the Digital Agrarian Academy in 2023. In such a competitive industry, it is of crucial importance for Békési Pig Farm to do everything possible to implement digital technologies as efficiently as possible. However, for that purpose, the existence and application of a strategic plan is inevitable.

- One of the main characteristic features of a successful company is having clearly defined and measureable goals. The lack of these aims can also be observed on the example of Békési Pig Farm. The firm cannot provide any measurable results concerning the efficiency of the digital transformation process. Employees and members of the management commented that they can all feel the positive impacts of digitalization, however results cannot be measured, and the progress made by the Hungarian SME cannot be objectively analysed and tracked. The poor level of progress traceability is also proved by the different opinions of employees on where the company stands within the transformation process (see: ‘all Tables’ answers #6). The fact that stakeholders do not have a common view on this matter points out that results are subjective and have no reference point to be compared against.

2. Change management-related results

After the analysis of the answers to the change-management-related questions, the following can be deduced:

Actions from the side of management

Similarly to the introduction of digitalization to company procedures, the application of new methods also took place without any plans on how to support human resources along the path of this project. As being pointed out in the literature review section of the research paper, the first stages of a change management procedure are planning and preparation. In case of Békési Pig Farm it is obvious that such planning had not taken place before the launch of the first digitalization initiatives (Annex B, answer #13). As a result, the process of digital transformation caused confusion, misunderstandings and miscommunication among employees at Békési Pig Farm. The change management strategy of the SME was very similar to their digitalization strategy, characterized by unplanned and ad hoc actions.

This approach is clearly reflected in the answers of the employees, who are aware of the benefits of digitalization, nevertheless, the lack of communication from the side of higher management regarding the whole process, its impact on the everyday activities of employees, procedures, how it may change the tasks of the employees or their future at the company have not been communicated (Annex B, answer #14). One of the most stunning differences between management and employee perspectives was noticeable concerning the question and topic on the support provided to employees during the transition process. On one hand, members of the leadership at Békési Pig Farm are convinced that employees are provided with all the support by means of answering their questions, on the other hand some employees perceive this amount of help as barely enough and have to solve arising problems by helping out each other (Annex D, answer #13).

Consequences of the lack of communication

Miscommunication and the lack of clarity may also act as barriers to the successful implementation of digitalization. Employee confusion concerning the digital transformation process of Békési Pig can be pointed out in several instances during the in-depth interviews. Interviewees were asked whether there is a dedicated person for the coordination of the transition project, for which varying answers have been received. Based on the results, it is obvious for the leaders, such as the owner or the executive director of the firm, who the person in charge is, however, it turned out that some employees are not even aware of the existence of such a dedicated person, they can turn to (Annex 'all Tables' answers #17). This finding guides us directly to the root of several problems: for now disregarding the limitations of the sample size, we can deduce that communication failures exist within the organization, which seems to occur between top management and the employees. The leaders have all been conscious without exceptions of who the person in charge of guidance and support is, however this piece of information was not able to reach all employees, which would be crucial for the success of the implementation of digital innovations. After the examination of this issue, the slightly bitter approach of employees towards digitalization can be understood, as the situation they are dealing with is not only completely new for them, but they are also struggling to understand the process, in which sometimes they feel left alone. These factors contribute to the resistance of employees towards the newly introduced systems and their eagerness to utilize them. As one of the employees commented on the transition and application of the new technologies: "It (digitalization) is necessary in

today's fast-paced world, but I am not enjoying it". If they received all the support necessary, including technical help, this inconvenience factor could be opted out.

A positive note from the side of the management must be mentioned; the owner of Békési Pig Farm sets an example for the employees to follow by opening up to new technologies and solutions, even though he himself is not someone to live by the latest technological innovations and improvements, but he realized that as the head of the organization he must take the initiative. This type of attitude helps maintaining employee engagement and loyalty during the process of change. Nevertheless, his resistance to change might have acted as a hindrance to the earlier adoption of digital solutions (Annex A, answer #11).

Actions from the side of employees

Based on the answers we can deduce that employees are trying to do their best during the given circumstance and environment to cope with the challenges of the transition process (Annex C, answer #12). Even though, they are not particularly keen on using the new systems, yet they do not resist, they try to learn, help each other and ask questions from top level employees when necessary.

The following chart summarizes the results found during the analysis of the answers gained from the personal in-depth interviews. Based on these, it can be deduced that there are two main underlying reasons behind the inefficient digitalization process of Békési Pig Farm, and Hungarian SMEs: the lack of an implementation plan for the transformation process, as well as a change management plan to support employees during the whole process. These two factors are the major roots of the problem, which have several other related consequences, as seen on Figure 15:

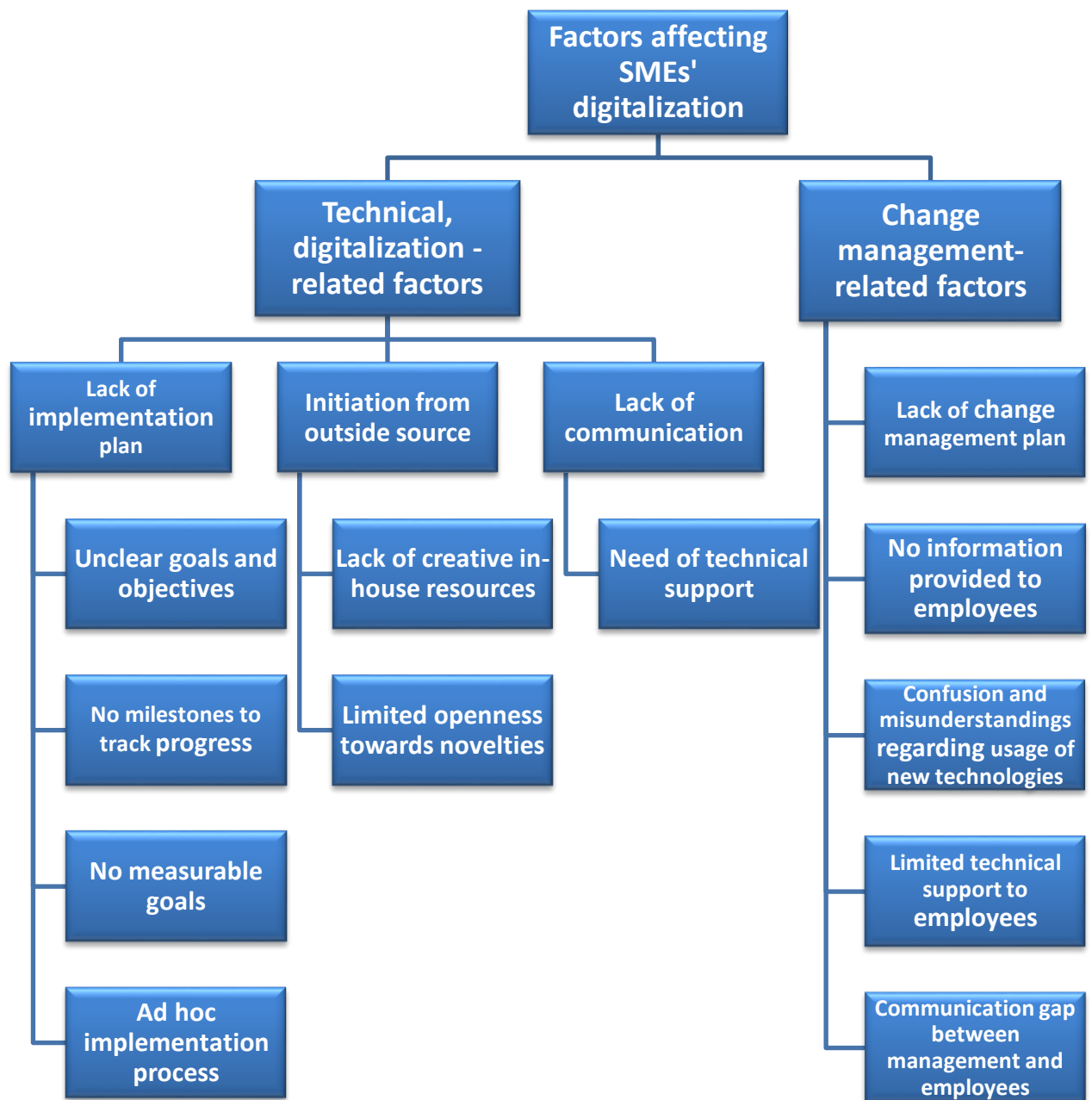


Figure 16: Factors affecting the digitalization process of Hungarian SMEs

4.3 Discussion

Based on the findings of the primary research, it can be concluded that the results can be directly linked to those stated and discovered during the literature review of the research. One of the key discoveries and statements in the literature review details the main challenges of digitalization for SMEs (See Figure 5. on page 15.), which findings are in line with the results of the in-depth interviews. Based on the literature, SMEs experience the lack of know-how for implementation, as one of the major barriers to their successful digitalization processes. This finding is also supported by the analysis of the in-depth interview answers, as based on Interviewee #2's answer (See Annex B., answers 5. and 11.) there was no preliminary plan for the digital transformation process, and the greatest challenge is posed by becoming familiar with the new systems. In addition, Interviewee #1 (See Annex A, answer 7.) also added that there is no formal employee training plan at place, support is provided via phone as the questions arise. So, this is one of the main reasons for the inefficient transformation of SMEs in Hungary.

Furthermore, Hölzl et al (2019) (See Figure 5.) also found that the lack of an implementation plan is another contributor to digitalization failures for SMEs. This is another finding of the literature review, which is confirmed by the qualitative research of the dissertation. All interviewees were questioned about the implementation plan of the company's digital transformation, all of them without exception (Annex, all tables: answer #5) described the absence of a preliminary implementation plan, which would be essential for carrying out the transformation successfully.

Regarding change management strategy, in the literature review it has been pointed out that the most important tactics for tackling digitalization challenges include open communication and change-oriented mindset of leadership (See page 22). This discovery can also be supported by the primary research findings as answers are contradicting each other (See Annex A, answers #17) when it comes to the question of having a dedicated assist person during the transformation or not. The confusion and the lack of efficient communication are reflected within the answers, as some of the interviewees had no idea that such a person exists within the company. In addition, the change-oriented mindset of the leadership is also of crucial importance for effective digitalization. Based on the interviews (See Annex A, answer #11) one of the greatest challenges in case of Békési Pig Farm was to convince the CEO of the necessity for a change towards digitalization and to overcome his resistance. This finding also stands in line with the literature, as the CEO's resistance might have hindered the digital transformation of the SME, which could have started already years ago.

To summarize the discoveries it can be concluded that the findings of the literature review and those found during the primary research are in agreement.

4.4 Conclusion

This chapter of the dissertation covers the implications of the research, providing a thorough interpretation of the results. Furthermore, limitations of this research are also defined which eventually give a prospect on the necessity of further future research.

As a conclusion to the research results we can say that those findings which had been discovered during the literature review about the challenges of Hungarian SMEs and the lag of their digital development behind other European SMEs, have been answered based on the analysis of the results of the primary research. During the literature review, the scope of the research was set on a broader view on Hungarian SMEs and the objectives of the research were defined to find the underlying reasons for this phenomenon. In the next stage of the primary research, the scope had been narrowed down to the examination of a particular Hungarian SME, Békési Pig Farm, where the digitalization process of the company was analysed in terms of change management, as well.

Research results have outlined that the reason behind the digital transformation challenges of Hungarian SMEs (based on the example of Békési Pig Farm) can be first grouped into two main specific areas: challenges which are directly linked to digitalization, and challenges due to change management disorganizations.

Results have pointed out that main barrier to the digital transformation of Hungarian SMEs in terms of technical considerations is the lack of an implementation plan, which has several consequences. The lack of an initial plan results not only in misunderstandings among employees related to goals and objectives, but also misses milestones which could serve as a great support in tracking the progress of the implementation. In addition, without a plan timeline and defined, measurable goals employees have difficulties in having an overview of the process and reasons, which hinders not only the success of the implementation of the digitalization process, but can also cause disruptions in the everyday activities of the company. The lack of communication also poses a threat to the successful digitalization of company operations, as employees at Békési Pig Farm had to send several emails to their managers to clarify questions related to the new technologies, while some of them are not even aware that there is a person in charge of the transformation process they can turn to in case of queries.

In terms of change management, deficiencies have also been discovered which may have contributed to the slow digitalization of Békési Pig Farm, and Hungarian SMEs, as well. Similarly to the lack of a digital transformation plan, a change management plan was not set up prior to the start of the transition, either. Having such an agenda could have avoided the misunderstandings and the discontent of some employees regarding the support they receive from higher management. This could be the root of the communication gap between employees and management, where employees consider that the leadership could have done more to increase the efficiency of the transformation process, and from the side of management regarding that all have been done from their side for the successful implementation of digital solutions into company procedures.

These factors are all considered as the main reasons behind the slow and inefficient digitalization process of Hungarian SMEs. As an employee of Békési Pig Farm, based on the research results the following recommendations are defined not only for Békési Pig Farm, but also towards Hungarian SMEs:

- To have an implementation plan before the start of the digitalization process
- To have clearly defined goals and objectives
- To keep stakeholders and employees informed and maintain transparency
- To set up a change management plan for the smooth implementation of the digitalization plan

These recommendations and suggestions are strongly believed to be in help of SMEs in their digital transformations processes in the Hungarian market and contribute to an upswing in the number of Hungarian SMEs applying digital solutions within their daily operations, resulting in an increase in their competitiveness on the global market, as well.

With the existence of a few best practises and know-hows, those small-and medium sized enterprises which have been so far reluctant to start digitalizing could gain support from the experience of this research. Nevertheless, it must be emphasized that the scope of this research is limited due to the size of the sample, and as a result cannot be considered as a general analysis of Hungarian SMEs. Further examinations including a representative sample of local SMEs will be necessary in the future to be able to draw such conclusions which have a wider scope on this particular segment of the Hungarian market. However, for the purpose of this research, this limitation is accepted and compromised for the sake of deductions.

4.4.1 Limitations

Certainly there are several limitations of this research, including the sample size of in-depth interviews, sample size of SMEs and the nature of the business. Even though personally conducted in-depth interviews are considered in this case the most appropriate research method, the small sample size may not be enough to be fully representative and help those mainly affected by the research problem. The unique nature of the business is also a challenge to conducting a comprehensive research, since agriculture and especially pig farming in Hungary are not among the first industries to pioneer in the digital transformation process, and as so, experience and data are relatively limited in availability for analysis. Regarding the sample size of SMEs inspected, the research is conducted on the basis of a single SME analysis, which means that results may be interpreted and extended to a general view on digitalization challenges of Hungarian SMEs, however exceptions may certainly exist, but are out of the scope of this research.

The scope of the research poses another barrier to the efficiency of the analysis. The qualitative and quantitative researches were conducted at and based on the example of Békési Pig Farm, which is only one representative of the industry in Hungary. Results can be interpreted as achievements to regard all SMEs within the agrarian sector, nevertheless within ideal research conditions, subjects to be analysed should be more in number to be representative in terms of industry and business sector as well.

4.4.2 Future research

The results of the dissertation open new ways for additional studies in the future within this area. As seen from the analysis of the results as well as from the various limitations of the research, we can deduce that the dissertation addresses the problem of Hungarian SMEs in terms of digitalization and change management on a limited scope. A continuation of this initial research can be conducted by eliminating some of the currently existing limitations, such as the sample size by extending the scope on several Hungarian agricultural SMEs especially engaged within the field of pig farming. By the involvement of various stakeholders of the sector, a more comprehensive conclusion might be drawn due to a more representative number of interviews and feedbacks. As result, a future research might be of higher importance in terms of providing useful information and supporting materials for Hungarian SMEs ahead of their digital transformation journey.

List of References

- Ates, A. & Bititci, U. (2011) Change process: a key enabler for building resilient SMEs. *International Journal of Production Research*. vol. 49 (18). 5601-5618.
- Bloomberg, J. (2018). Digitization, Digitalization and Digital Transformation: Confuse Them at Your Peril. *Forbes*. Retrieved from: <https://www.forbes.com/sites/jasonbloomberg/2018/04/29/digitization-digitalization-and-digital-transformation-confuse-them-at-your-peril/?sh=334232892f2c>
- Bouwman, H., Nikou, S. & de Reuver, M. (2019) Digitalization, business models, and SMEs: How do business model innovation practices improve performance of digitalizing SMEs? *Telecommunications Policy*. ELSEVIER. vol. 43(9).
- Calderon-Monge, E. & Riberio-Soriano, D. (2023) The role of digitalization in business and management: a systematic literature review. *Review of Managerial Science*. Vol. 1 (43)
- Hölzl, W. et al (2019). Digitalization in Austria: State of Play And Reform Needs. Published for Internal Market. European Commission.
- Hussain, S.T. et al (2016). Kurt Lewin's Change Model: A critical Review of the Role of Leadership and Employee involvement in Organizational Change. *Journal of Innovation & Knowledge*. Vol. 3. Issue 3. pp. 123-127. Retrieved from: <https://doi.org/10.1016/j.jik.2016.07.002>
- Singapore News Center (2020, October 22) Over 80% of Singapore SMEs embrace digital transformation; more than half report slowdowns due to COVID-19: *ASME-Microsoft study 2020*. Retrieved from: <https://news.microsoft.com/en-sg/2020/10/22/over-80-of-singapore-smes-embrace-digital-transformation-more-than-half-report-slowdowns-due-to-covid-19-asme-microsoft-study-2020/>
- Miller, K. (2020). 5 Critical Steps in the Change Management Process. *Harvard Business School Online*. Retrieved from: <https://online.hbs.edu/blog/post/change-management-process>
- Owyang, J. (2019). Roadmap: Five Phases of Digital Eras. *Web Strategist*. Retrieved from: <https://web-strategist.com/blog/2019/01/04/roadmap-five-phases-of-digital-eras/>
- Raza, M. (2019). Lewin's 3 Stage Model of Change Explained. *The Business of IT Blog*. Retrieved from: <https://www.bmc.com/blogs/lewin-three-stage-model-change/>
- Reim, W., Yli-Viitala, P., Arrasvuori, J. & Parida, V. (2022) Tackling business model challenges in SME internationalization through digitalization. *Journal of Innovation & Knowledge*. vol. 7 (3)
- Rinne, A. (2023, May 18). Change Management Requires a Change Mindset. *Harvard Business Review*. <https://hbr.org/2023/05/change-management-requires-a-change-mindset>
- Stich, V., Zeller, V., Hicking, J. & Kraut, A. (2020) Measures for a successful digital transformation of SMEs. *ELSEVIER. Procedia CIRP* 93. 286-291.
- Telukdarie et al (2023). Opportunities and Challenges of Digitalization. *Procedia Computer Science*. Elsevier B.V. pp. 689-698.

Thrassou, A., Uzunboyly, N., Vrontis, D. & Christofi, M. (2020) Digitalization of SMEs: A review of opportunities and challenges. *The Changing Role of SMEs in Global Business*. Palgrave Macmillan. 179-200.

Tripathi, P. (2024). How to Measure The Impact of Digital Transformation? Retrieved from: <https://www.docsumo.com/blog/digital-transformation-kpi>

Világgazdaság (2023) *Hungarian SMEs Unable to Digitalize, Revolution is Expected with the New Generation*. Retrieved from: <https://www.vg.hu/vilaggazdasag-magyar-gazdasag/2023/08/a-magyar-kkv-k-keptelenek-digitalizalni-a-forradalom-a-generaciovaltassal-erkezhethet>

Wrike Team (2024, February 13) *How Digital Transformation Leads to Business Success*. Retrieved from: <https://www.wrike.com/blog/impact-of-digital-transformation/>

Yasar, K. (n.d.). What is Digital Transformation? *TechTarget*. Retrieved from: <https://www.techtarget.com/whatis/definition/digitization>

Yip, T. (2023). How SME's Can Overcome the Challenges of Digital Transformation. Retrieved from: <https://www.linkedin.com/pulse/how-smes-can-overcome-challenges-digital-thomas-yip/>

Annex

Annex A,: Interviewee #1 answers

Attila's Responses:

1. ****Demographic Summary****:

- Male, 58, married, Székesfehérvár, Agriculture, Chief owner, second in command.

2. ****Company Establishment and Main Profile****:

- The business was established 6 years ago, focusing on contract pig fattening integration.

3. ****Major Competitors****:

- Our major competitors are Bonafarm and UBM.

4. ****Start of Digitalization****:

- We started moving towards digital processing of data 5 years ago when I took on a leadership role.

5. ****Preliminary Plan****:

- There was no specific preliminary plan to carry out the digital transformation process. We implemented changes gradually as the need arose.

6. ****Current Stage****:

- Currently, about 85% of our processes are digitalized. We still have some steps to complete the transition fully.

7. ****Employee Training Plan****:

- There is no formal training plan for employees. However, I provide significant phone support to colleagues at various levels, assisting them as needed.

8. ****Paper-based Processes****:

- Yes, certain documents like contracts and delivery notes are still paper-based. However, important data from these documents are digitized.

9. ****Effectiveness and Success****:

- The effectiveness and success of the digitization are evident. Processes are noticeably faster, more streamlined, and there are fewer questions and shorter phone calls.

10. ****Feelings About Digitalization****:

- Digitalization is essential for our present and future operations. It makes life easier, faster, and more transparent, although it has been a challenge to get here.

11. ****Greatest Challenge****:

- The greatest challenge has been convincing the owner to adopt digital practices and the initial resistance to change.

12. ****Average Age and Examples****:

- The average age of employees is around 45. There was an older employee who struggled initially but adapted through regular support and guidance.
-

13. **Management Handling and Assistance:**

- The management, including myself, provides phone support but there hasn't been structured assistance or training programs.

14. **Awareness and Impact:**

- Employees and stakeholders are made aware of their impact on the process through regular meetings and updates on progress and results.

15. **Information About Impact:**

- We have been informed well in advance about the impact of the changes on our positions and how it benefits us, mostly through direct discussions.

16. **Understanding Necessity:**

- Yes, I understand why the change is necessary. It is crucial for our efficiency and future growth.

17. **Employee Representation:**

- There isn't a designated person representing the employee side in the change management process, but I act as the main point of contact.

18. **Company Culture:**

- I believe our company culture is capable of coping with this change, as we have shown adaptability and resilience throughout the process.

Annex B: Interviewee #2 answers

Ildikó's Responses:

1. **Demographic Summary:**

- Female, 53, married, county seat, Education, Instructor.

2. **Company Establishment and Main Profile:**

- The training center has been established for 25 years, focusing on various educational programs.

3. **Major Competitors:**

- Our major competitors are other training centers in the region.

4. **Start of Digitalization:**

- We started moving towards digital processing around 2012, with significant developments during the COVID-19 pandemic when we introduced the ERP system.

5. **Preliminary Plan:**

- There was no specific preliminary plan for the digital transformation. We adopted digital tools as the need arose.

6. **Current Stage:**

- We are still in the early stages of digitalization, with some digital tools in place but many processes still relying on paper.

7. **Employee Training Plan:**

- Employees received basic instructions on digital tools, but there wasn't a comprehensive training program. We learned and adapted as we went along.

8. **Paper-based Processes:**

- Yes, many of our processes are still documented on paper, especially in areas where digital tools are not fully integrated.

9. **Effectiveness and Success:**

- The digitalization process hasn't had a significant impact yet. We are still evaluating its effectiveness and success.

10. **Feelings About Digitalization:**

- Personally, I don't like digitalization but understand its necessity for modernizing our processes and staying competitive.

11. **Greatest Challenge:**

- The greatest challenge has been getting familiar with the new systems and adapting to the changes.

12. **Average Age and Examples:**

- The average age of employees is around 50. An older colleague struggled with using the new ERP system, but we provided additional support and training to help them adapt.

13. **Management Handling and Assistance:**

- The management provided basic instructions but no significant ongoing support. We had to figure out many aspects on our own.

14. **Awareness and Impact:**

- The management informed us about the impact of digitalization through meetings and updates, but it was not always clear how it would affect our daily work.

15. **Information About Impact:**

- We were informed about the changes, but the details on how it would benefit us were sometimes vague.

16. **Understanding Necessity:**

- Yes, I understand why the change is necessary, although it has been a challenging adjustment.

17. **Employee Representation:**

- There isn't a designated person representing employees in the change management process.

18. **Company Culture:**

- Our company culture is gradually adapting to the changes, but there is still resistance among some employees.

Annex C: Interviewee #3 answers

Márk's Responses:

1. ****Demographic Summary****:

- Male, 27, single, capital city, Workforce Accommodation, Managing owner.

2. ****Company Establishment and Main Profile****:

- The business was established 5 years ago, specializing in workforce accommodation.

3. ****Major Competitors****:

- Our major competitors are close circles connected to the government, making it difficult to compete.

4. ****Start of Digitalization****:

- We started using Excel from the beginning. True digitalization began 4 years ago with automation, and now we are developing our own platform for digital process integration.

5. ****Preliminary Plan****:

- We didn't have a specific preliminary plan, but we focused on automation and gradually built our digital capabilities.

6. ****Current Stage****:

- Currently, 90% of our processes are digitalized. Only a few rare processes remain non-digital.

7. ****Employee Training Plan****:

- We hired a specialist to manage the digital transition and provide training to employees.

8. ****Paper-based Processes****:

- We rarely use paper now, as most processes have been digitized.

9. ****Effectiveness and Success****:

- Digitalization has significantly increased efficiency, allowing us more time for useful activities and improving overall effectiveness.

10. ****Feelings About Digitalization****:

- Digitalization is crucial and already a present reality. It has streamlined our operations and enhanced productivity.

11. ****Greatest Challenge****:

- The greatest challenge was finding the right person to manage the digital transition and ensuring employees adapted to the changes.

12. ****Average Age and Examples****:

- The average age of employees is around 35. Initially, some employees resisted the changes, but continuous support and training helped them adapt.

13. ****Management Handling and Assistance****:

- The management handled the introduction of digitalization well, providing support and answering employees' questions as needed.

14. **Awareness and Impact:**

- We communicated the impact of digitalization to employees through regular meetings and updates, making them aware of their role in the process.

15. **Information About Impact:**

- Employees were informed in advance about the impact of the changes on their positions and how it would benefit them.

16. **Understanding Necessity:**

- Yes, I understand why the change is necessary for our efficiency and competitiveness.

17. **Employee Representation:**

- There isn't a designated person representing employees, but the management maintains open communication channels.

18. **Company Culture:**

- Our company culture is adaptable, with a generally young team that is open to new technologies and changes.

Annex D: Interviewee #4 answers

Csaba's Responses:

1. **Demographic Summary:**

- Male, 60, married, small town, Agriculture, Agricultural advisor.

2. **Company Establishment and Main Profile:**

- I have been working as an agricultural advisor for 30 years, providing consultancy to farmers.

3. **Major Competitors:**

- Our major competitors are established advisors within a fixed circle, with few new entrants.

4. **Start of Digitalization:**

- We started moving towards digital processing with the introduction of online invoicing and NAV synchronization.

5. **Preliminary Plan:**

- There was no specific preliminary plan for the digital transition. We adopted digital tools as required by regulations.

6. **Current Stage:**

- We are in the initial stages of digitalization, with some processes still relying on traditional methods.

7. **Employee Training Plan:**

- There has been no formal training plan. We are adapting to digital tools as we learn about them.

8. **Paper-based Processes:**

- Yes, many processes are still documented on paper, particularly with older partners who prefer traditional methods.

9. **Effectiveness and Success:**

- The benefits of digitalization are limited due to partner preferences, but there are some improvements in efficiency.

10. **Feelings About Digitalization:**

- Digitalization is necessary but not particularly enjoyable. It adds complexity to our interactions with partners.

11. **Greatest Challenge:**

- The greatest challenge has been dealing with partners who struggle with digital communication, leading to frequent phone calls for assistance.

12. **Average Age and Examples:**

- The average age of employees is around 60. One older partner had difficulty with emails, so we provided personal assistance and step-by-step guidance.

13. **Management Handling and Assistance:**

- The management hasn't provided significant assistance. We are mostly figuring out digital tools on our own.

14. **Awareness and Impact:**

- We have communicated the impact of digitalization to partners, but acceptance varies.

15. **Information About Impact:**

- Information about the impact has been provided, but many partners are resistant to change.

16. **Understanding Necessity:**

- Yes, I understand why the change is necessary, but it has been challenging to implement.

17. **Employee Representation:**

- There isn't a designated person representing employees in the change management process.

18. **Company Culture:**

- Our company culture is slowly adapting, but there is significant resistance due to the age and preferences of our partners.

Annex E: Interviewee #5 answers

Tamás's Responses:

1. **Demographic Summary:**

- Male, 46, married, county seat, Agriculture, Owner, and manager for 20 years.

2. **Company Establishment and Main Profile:**

- The business was established 6 years ago, focusing on contract pig fattening integration.

3. **Major Competitors:**

- Our major competitors are Bonafarm and UBM.

4. **Start of Digitalization:**

- We began moving towards digital processing when we hired Attila, who introduced structured data management practices.

5. **Preliminary Plan:**

- There was no specific preliminary plan. The transition was driven by necessity and implemented gradually.

6. **Current Stage:**

- We have made significant progress over the years. We use Drive for shared access and automated data handling, and most processes are now digitalized.

7. **Employee Training Plan:**

- Attila and later Máté have provided significant help in adopting new digital practices, offering continuous support and training.

8. **Paper-based Processes:**

- Some paper-based processes remain, like purchase tickets and certain documents. However, most important data is digitized.

9. **Effectiveness and Success:**

- The digitalization has drastically improved process efficiency and data transparency, making operations smoother and faster.

10. **Feelings About Digitalization:**

- Digitalization is essential for efficient operations and future growth. Although personally challenging to adopt, it has proven beneficial.

11. **Greatest Challenge:**

- The greatest challenge has been training partners and staff to adapt to new systems and ensuring everyone is comfortable with the changes.

12. **Average Age and Examples:**

- The average age of employees is around 40. Some employees, especially older ones, resisted initially but adapted with continuous support and training.

13. **Management Handling and Assistance:**

- The management has handled the introduction of digitalization well, providing regular discussions and assistance to help employees understand and use digital tools.

14. **Awareness and Impact:**

- Employees and stakeholders were made aware of their impact on the process through contractual clauses, regular updates, and meetings.

15. **Information About Impact:**

- We have been informed well in advance about the impact of the changes on our positions and how it will benefit us, mostly through direct discussions and continuous updates.

16. **Understanding Necessity:**

- Yes, I understand why the change is necessary. It is crucial for our efficiency and future growth.

17. **Employee Representation:**

- There isn't a designated person representing the employee side in the change management process, but regular communication channels are maintained.

18. **Company Culture:**

- I believe our company culture is capable of coping with this change, as we have shown adaptability and resilience throughout the process.
