

**DIGITALIZATION OPPORTUNITIES FOR MURMANSK
TRAWL FLEET COMPANY**

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Ubiquitous spread of technology has already influenced the everyday life and business. The aim of the businesses is to learn how to use the technology and how to adjust existing structure for the new environment. Digitalization and digital transformation are the concepts that will help businesses to keep updated with the new environment. The companies that will not understand the importance of the transformation will be pushed out from the market in near future. The study is discovering the possible transformation mechanisms based on the traditional business represented by the case company.

The case company for the study is at the beginning of the digitalization process. The exploratory research was made to create the theoretical framework for the study. Qualitative and quantitative data for the study were collected through a survey and interviews. Further understanding was reached through discussions with the industry representatives and the author's involvement as a trainee in the company business. The business process modeling technique was used for the representation and redesign of the company's business process. In addition, mobile devices in the corporate structure models were used for the case company's overall digitalization development.

As an outcome of the thesis work, a set of recommendations were developed and they can be seen as opportunities for the case company. The discussed arguments of the implications of technology or the company's strategy changes can lead the company to a modern digitalized environment. The results can be applied to the case company or some other companies on the similar stage of digitalization.

The thesis work reveals the necessity of changes in the case company. It is hoped that the study will help traditional businesses to overcome difficulties with decisions on investing into digitalization.

Key words Digitalization, Digital Transformation, BYOD, Digital Presence

ABSTRACT

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SYMBOLS AND ABBREVIATIONS

MTF	Murmansk Trawl Fleet
BYOD	Bring Your Own Device
BYOT	Bring Your Own Technology
RQ	Research Question
DT	Digital transformation
IoT	Internet of things
DPD	Digital Presence Deficiency
LSG	Lerøy Seafood Group
ATF	Arkhangelsk Trawl Fleet
MSC	Marine Stewardship Council
BPM	Business Process Modelling

1 INTRODUCTION

The general information and topic description are discussed and justified at first. Secondly, the case company is presented. The structure of the thesis work is presented at the end of the current chapter.

1.1 Background and Motivation

The general research area of the study is digitalization and technology influence on the case company's business. Digitalization is a part of modern society. Transformation to a digital way of conducting business is essential for many reasons. Scientists discuss the following reasons among others: competition advantage, possible cost savings in a long run, data and work flow adjustments. Many companies are still at the beginning of Digital Transformation process (hereinafter DT), including Murmansk Trawl Fleet company (hereinafter MTF). Innovative concepts continue to call the attention of company leaders. The Bring Your Own Device concept (hereinafter BYOD) is one of these concepts that need to be studied and analysed before implementation. On the one hand, the implementation of BYOD will positively affect employees' productivity and increase work efficiency. On the other hand, great preparations should be done and many aspects should be forecasted.

The topic of the work represents DT processes in MTF Company. The process was caused by the high level of technology development in the past decades. It is impossible for the company to ignore world changes and continue the development of their business. Digitalization aspects will be analysed based on the MTF case company. The company have already started their DT to respond to modern business tendencies. However, much more should be done to bring that company to the digital era. Mobile technology breakthrough transformed almost every user to a professional user, and therefore it is important for companies to correspond to that tendency.

Online and mobile platforms have become very important for today's modern society. In the business area, the same mechanisms are active. An increasing

number of companies have started to adopt their businesses to online environment. In other words, transformation from traditional business to e-business is an on-going process. For companies that do not understand the significance of DT, it will be impossible to stay in a competitive market. Moreover, such new research topics are necessary for progress. Based on the described topic, necessary changes could be made in the case company or some other companies. The topic is relevant for a wide audience of users and employers.

1.2 Description of Case Company

Murmansk Trawl Fleet Company is one of the biggest fishery companies in Russia. The official date of establishment of MTF is 19th of March 1920. However, at that time, the main port and headquarters were in the city of Arkhangelsk. Later, from 1926 all vessels and the headquarters were transferred to Murmansk. The main fishery grounds for the company are North Atlantic Ocean, Norwegian Sea, Greenland Sea and Barents Sea. MTF is mostly concentrated on fishing of cod, haddock, Greenland halibut, red fish, herring, blue whiting, mackerel, and capelin. The average amount of fish products produced is around 100 thousand ton per year. All the production is exported around the world or sold on Russian markets. (MTF 2017.)

The turnover of the company is high, even though the number of the office employees is around 180. There are nine fishery vessels that work for the company in different fishery grounds. Currently, MTF Company is a part of a fishery holding Norebo. The holding unites several fishery companies as well as logistic, production, maintenance and trade companies. The main office of MTF is in the city center of Murmansk. The building hosts the HR, IT, Connection, Finance, Purchase, Marketing, Control and Legal departments. The management department is in a separate office in Murmansk. The company is well equipped with high standard technology and has specialists that can monitor and control that equipment. Especially vessels are high standard with modern equipment. (MTF 2017.)

The work is well organized and monitored by managers efficiently (MTF 2017). However, for such big companies, it is necessary to involve more technologies

and specialists to correspond developed technology standards of the world. Many changes might be made to the company to improve the working process and efficiency. The amount of traditional and paper processes is still very high; such omissions are reasons of the company traditional industry and big size. It is not easy to convert traditional industry companies to the modern technology business. On the other hand, it is hard for the company to invest in unclear technology benefits that will give results mostly in a long-run period. Moreover, the amount of work that needs to be done to bring the company to the modern digital world is significant. Lastly, it is common to start with some small improvements that can lead to bigger changes in the future; such mechanisms have already been launched by the company.

1.3 Scope and Limitations

Exploration and description of digital transformation for the case company is the main aim of the study. The fishery industry will be studied to compare progresses in digitalization of the competitors with the case company. The study focuses on opportunities for the case company to conduct DT. In addition, an analysis of the necessity and the company opinion on digitalization is conducted in the study. Furthermore, the thesis work will focus on IT and business aspects of DT.

As one of the digitalization concepts, mobile device models will be discussed. Information management, mobile security, user needs and virtualization are among the core aspects that will be discussed. However, practical implementation of suggestions is not planned in the work, because of the size of the case company. Additionally, the study will not focus on analysing managerial policies.

There are several limitations in this thesis work. The case company operates in a very traditional business; therefore, the topic of digital transformation is not discovered, yet. There has been no previous experience of implementation of technology-based strategies in the company. Correspondingly, there is a lack of relevant information, experience or opinions on the topic in the company. In addition, the topic of the study is fast developing with new technology improvements. Only new materials were used for the study to correspond to the

modern conditions. Moreover, the case company's existing policies were taken into consideration to exclude possible logical conflicts. Lastly, the outcome of the thesis work might be slightly different from the planned outcome, because of the limitations discussed above or unexpected challenges.

1.4 Structure of Thesis

The thesis study is presented in eight chapters. In the first chapter, basic information was presented and the case company description was provided. In Chapter 2, objectives and methodology of the work are presented. Chapter 3 provides a presentation of theoretical information on DT and the case company's perspective for DT. In Chapter 4 and 5, selected business processes of the case company are presented and discussed. Additionally, the modification of these processes with additional technology integration is presented. In Chapter 6, the possibility of implementation of mobile device models to the case company is discussed and reviewed. In Chapter 7, digital presence is explored and adapted to the fishery industry. Further, an analysis of competitors and necessary modifications is discussed. Lastly, the conclusion is made to summarize and review the research material. As an appendix, the reader can find enclosed interview transcripts and questionnaires reports.

2 OBJECTIVES, RESEARCH QUESTIONS AND METHODOLOGY

2.1 Objectives and Research Questions

The research objectives are forming analysis of digital transformation possibility in the case company and provide motivation and solutions for that. In addition, this research pursues to the realization of an analysis of the situation of the case company concerning implemented solutions, technologies and employees' digitalization awareness. Moreover, the study concentrates on the development of logic for digital solutions including e-commerce solution and integration of BYOD model. The company's digital presence is overviewed and improvement solutions are presented in the work.

Several research questions were developed for the study. Answers to these questions form the research base.

How does the case company perceive digital transformation? Is there an understanding of the concept by the case company?

The answer on that research question provided the knowledge on concepts of digitalization and digital transformation combined with opinion and knowledge of the case company's representatives. The material contains positive and negative aspects of DT, as well as its challenges.

What kind of digitalization features could or should be implemented in MTF? Are there any challenges for the case company?

The question led the research to the practical adoption of the material to the case company's need. Possible implementation proposals are made for the case company's business improvement. Key solutions in the thesis work include business processes re-design, BYOD, e-market solution and digital presence advice list. The description of such solutions with later analysis included in the thesis study. The research question helped to understand the case company's current condition and to connect the theoretical research with the practical implication with the case company. In addition, opinions and findings inside the

company about technology integration into their work process were reviewed. The answers on the questions are based on the interview results and technology infrastructure analysis of the case company.

What is the employees' perception regarding mobile device integration to working life? What kind of organizational and technical challenges does it imply?

To understand the necessity of integration of mobile solutions to the case company, it is important to analyse the opinion of employees and their current mobile device use. The answer was based on conducted survey that was responded by the most employees. The analysis of potential challenges while implementing the solution is included into the study. An analysis of challenges and preparation of instructions on implementation of such concept took place.

How does the digital presence of the case company affect the business? Is there a room for improvement of digital presence strategy?

Digital presence is an essential part of any type of business at present. Digital presence is important part of the case company digitalization strategy. The possible improvement of digital presence of the case company can bring positive impact on the company performance.

2.2 Methodology

This study focuses on the case company's digital development through several approaches. Exploratory and descriptive research methods were used to discuss and comprehend the core concepts of the study field. Books and articles on the topic were studied. Secondary sources of data are employed to obtain theoretical knowledge in the study.

The use of exploratory research method gives precise understanding of the problem discussed in the study. Exploratory research helps in provision of the flexibility to the research work with the simultaneous concretization on the material. (v. Manerikar & S. Manerikar 2014, 96.) On the other hand, descriptive research method as an opposition to exploratory research method brings completeness and actuality to the research and helps in the foundation of real results (Kothari 2004, 2-3).

The process of triangulation is used in the study that combines advantages of qualitative and quantitative methods of data collection and analysis. The mix of methods is used to completely review the existing case company conditions and discuss future opportunities. (Remler & Van Ryzin 2011, 10) Qualitative research was employed to collect important for the study opinion and reflection of the case company on digitalization. On the other hand, quantitative research was used to collect numeric data of the topic related aspects to open the possibility of analysis. (Kothari 2004, 16)

Techniques such as surveys and interviews were conducted to fulfil the data necessity for the study. Survey that was conducted in the case company gave clear view on the employees' involvement into digital environment. The interview techniques were used to understand opinions of the case company employees. The interview with the case company's representative provided the overall understanding of the company's infrastructure. Several development discussions with the experts of the digitalisation and fishery fields provided the core points of the study.

Additional information was collected through the participation of topical events and presentations. The presentation of the company's business process was made through the business process modeling technique. This technique was used for documentation of the selected business processes to have a possibility of development in order to provide the design of improved and modern business processes with a digital technology elements (Fasbinder 2007, 1). The selected business processes were analyzed based on the combination of the case company's representative and experts' opinion. In addition, techniques of linking theoretical knowledge and practical analysis in the work were utilized to bridge the research parts.

3 DIGITAL TRANSFORMATION OF BUSINESSES

3.1 Digitalization Overview

'Digitalization', 'digitization' and 'digital transformation' are three concepts that belong to the same area of IT. In some opinions, these terms can be substitutional for one another. However, all three have slightly different meanings. To make this study specific, the definitions of each term is presented.

Digitalization is the use of technologies for business modification to improve business (Gartner Inc. 2016). Digitization is a process of converting analogue items as text, pictures or sounds into the form that can be processed by computer (Cleveland 1998, 5). These definitions were provided to emphasis the difference in the meaning. The terms are confused frequently by wide audience.

Digital transformation is the reinvention of an organisation through the use of digital technologies to correspond modern foundations as an important part of their company's overall business strategy. The purpose of the reinvention is the improvement of the company's business. Digital are technologies that contribute to data operations. It is not enough to bring technology to the company to conduct DT in the company, but to teach the company to evolve, based on the understanding of technology can be enough. (Rouse 2015.) Based on these definitions, it can be assumed that digitalization and DT are comparable concepts with difference in the size of changes and involved operations.

From another point of view, DT is the method of acceleration of business activities, processes and competencies with the use of technologies (i-SCOOP 2017). Based on that, digital transformation is business transformation. Thus, the term of digital business transformation came into being. Digital transformation is not just about the implementation and adoption of innovation technologies for company's use. This is something more complex. The process of DT must be followed and controlled by specialists. After it seems that DT has been completed, the organization must analyse the outcome. Innovations' value must be evaluated. Difficulties during adoption process must be analysed. Employee's and customer's demands and expectations on the business change must be

revealed. Lastly, the company must deal with outside and inside regulations as laws, economic changes, politics, market competition and partners' agreement. (Edmead 2016.)

Referring to Dorner's and Edelman's article, there are three steps to define the digital way of the company. Firstly, there is a step of 'Creating value at new frontiers'. The company must be ready for the whole business change and understand where the new frontiers of value are. At the same time, customers' and employees' expectations acquire great importance. Secondly, the step of 'Creating value in core business' is about the company's re-comprehension of new business capabilities that have been brought by DT. As an example, the company's supply chain can be developed to improve efficiency, flexibility and speed of products' delivery. Lastly, there is a step of 'Building foundational digital capabilities'. The last step consists of two connected concepts, i.e. the mind-set system and data architecture. It is important that the company will start to use mechanisms that have been given by DT for communication inside of the company. Cooperation within and between departments and teams will be increased. Decision making will be raised to the next level. After all, improvements will extend to the company's communication with partners and customers. Apart from that, IT infrastructure will be more complex and functional. Networks of devices, objects and people are build and managed. Optimized processes with automated systems are monitored by IT teams. (Dorner & Edelman 2015.)

3.2 Why Is Digital Transformation Happening?

According to Porter and Heppelman (2014), in the past 50 years there have been two transformations of competition and strategy caused by high technology development. These transformations converted business 'on paper' to the modern business with computers and the Internet. The next transformation is digital transformation and it is an ongoing process.

The first transformation, taking place in the 1960s and 1970s, have changed the way to conduct business. Only verbal communication was used for agreements and decisions. Value chain activities were done manually with paper processes. With the implication of the IT sphere to business, old activities started to be

conducted in a new way. Manufacture resource planning became possible for companies. Big amount (for those times) of new data flow led to productivity increase. This caused the standardization of processes around companies. (Porter & Millar 1985.)

The second transformation happened because of the Internet spread in the 1980s and 1990s. Communication was raised to a new level. This development helped companies to cooperate and coordinate their activities. Growth to the international or global size became usual as an outsourcing concept. E-business strategy became possible. Sales figures became obsolete and needed to be changed. Moreover, internet created new businesses that can shift traditional ones. (Porter 2001.)

After these two transformations of the economy, technologies continue to develop and that leads to the third transformation, digital transformation that is an ongoing process. For now, technologies are becoming an integral part of the business and product. Analysis of data becomes more important than data collection. Sensors and micro-processors can be found in almost any product. The new concept of smart, connected products reaches the world. Smart products manufacture will cause the redesign of the value chain. Economic growth will be noticed only in the companies that understand the inevitability of transformation. (Porter & Heppelman 2014.)

Digital transformation increases the turnover of companies. Customers can find all necessary information on products or companies anytime and anywhere through an internet page or application. Thus, the companies can influence customers through these channels. From these channels, additional customer data can be gathered and analysed to optimize the product or change the strategy. An additional channel is popular social networks that help deliver information right to the target group. (Clickworker GmbH 2016.) Digital presence of a company is a must for today's businesses, otherwise there is no future. Digital presence is described more detailed in the Chapter 7.

Another significant concept was introduced by Mark Weiser; ubiquitous computing was presented in the 1990s and it has been developed since then. The main idea of ubiquitous computing is the spread of technology from the

desktop or static computers to everywhere. Ubiquitous computing can be referred to as a pervasive computing or third paradigm computing. The commonly used explanation for the concept is inverted virtual reality. With the ubiquitous computing, computers enter humans' environment while with VR, humans enter the computer. Development of microprocessors made it possible to include computers to any device to turn them to something more than just a calculator. (Weiser 1996; Rouse 2016.) The explanation reminds of the Internet of Things (hereinafter the IoT) concept that was developed later based on the ubiquitous computing theory. The Internet of Things is the next step of evolution after the ubiquitous computing. (Rouse 2016.)

“Some have suggested that the internet of things “changes everything,” but that is a dangerous oversimplification” (Porter & Heppelman 2014). Porter and Heppelman mean that it is incorrect to attribute all factors and mechanisms of current technology revolution to the IoT. There are much more to describe and study apart from the IoT. However, the IoT is an essential part of digital transformation and one of the key concepts of the close future.

The physical world transforms to the similarity of information system. It has started to happen because of widespread sensors and actuators have become included into physical objects. Sensors transmit data from objects for later analysis. In addition, the objects started to relate to the computers and each other, forming the connection called the IoT. It has opened new mechanisms for companies to adjust, improve and personalize their products. On the other hand, manufacturing process can be controlled more efficiently. IoT is divided on two phases of information and analysis, automation and control. The first phase is mostly focused on data proceeding that includes collection, filtering and analysis. The second phase represents the conversion of the first phase's results into the physical company's modification. Thus, these two phases represent a loop that links data processing and automated application. (Chui, Loffer & Robberts 2010.)

Working on digital transformation of the company is not just about creating one outstanding customer journey. It is about creating cyclical dynamics of continuously evolving processes and competences that are based on analysed

data. To carry this in, four core capabilities are used refer to Dorner and Edelman (2015). These capabilities are presented in the next paragraph.

Firstly, 'Proactive decision making' must be applied for improvement of content delivery to the customer. Personalized decisions must be made concerning every customer. The personalization can be achieved with use of an intelligence that predicts the customer behaviour based on the analysed data from different channels. Secondly, 'Contextual interactivity' is important for the company to established communication between the customer and the company. Modification of the communication leads to improvements of the customer's experience. Various devices spread and the IoT development added many more touch points to the companies to manage their communication relationships. Thirdly, 'Real-time automation' is used to support cyclical dynamics that was mentioned earlier in the study. The company should increase the number of self-service options to provide fast and reliable customer journeys to every customer. Automation of the supply chain will decrease the manufacture cost and increase productivity of the company. Lastly, 'Journey-focused innovation' will help companies to concentrate on implication of innovations. Both parties will benefit from innovations in the sphere of interaction. (Dorner & Edelman 2015.)

3.3 Digital Transformation Perspective for Case Company

Digital transformation gives huge potential to the companies in the improvement of their businesses from different sides. The most significant changes can be achieved in productivity and efficiency of the business. Increased flexibility will open another perspective for the company. Successful DT can boost the profitability of the company by 20 to 30 percent. Automation and optimization of business processes with technology can shorten back-office processes. That will cause an increase in the work efficiency. (Booth, Mohr & Peters 2016.) Integration of new technology and reconstruction of old business models and processes can open new markets for the company. With DT, new ways of connection of supply and demand can be found. Old ways can be improved into increasingly cheaper or faster ways of connection. New markets occur on such connections (Bughin, LaBerge & Mellbye 2017, 4-6; Dawson, Hirt & Scanlan 2016, 4).

According to the representative of MTF, the company is already well equipped with all necessary technology. Currently, the company concentrates on training of employees to work with different software products and finalizing implemented solutions. For now, the company development is directed to Amos and 1C Fleet Management software. (Starkov 2017.) In this section, other possible opportunities are presented for the case company's business improvement.

One of the possible improvement areas can be related to the sensors implication. Two new business models have been defined recently. With the development of sensors and data collection methods, it became possible to use the sensors for business purposes. The two models are 'Seller of sensor information' and 'Sensor-enabled service innovator'. Both models involve gathering data via different sensors. (Remane, Hildebrandt, Hanelt & Kolbe 2016, 11.) MTF Company has nine vessels that are most of their time on fishery. With the introduction of the sensors to these vessels, it became possible to conduct research based on the gathered data or just sell the data. All the vessels are connected to a Vessel Monitor System (hereinafter VMS) that helps in tracking and recognizing vessels. However, with the increase of the number of sensors and their variety, it will become possible to track and analyze for example water, weather and solar conditions. Such data will provide the possibility of conducting some serious research or additional profits. For the company, the data will give an opportunity of analyses of their own efficiency. The analyses will help in planning and managing processes.

Another efficient perspective for the case company can be cloud computing. Cloud computing is a way of usage of the servers that are remotely located. Users access remote servers through the Internet to manage, store, modify or execute data and applications. (Passary 2014.) For MTF, cloud computing can be used both as a private and public technology. Since some of corporate data need to be more protected, it can be accessed through the local company servers. Other data can be proceeded through the cloud servers that can be outsourced or established by the company. Cloud computing can increase the comfort and efficiency of the work. Through the past years, several models of service provision have been developed on the concept of cloud computing. All the models consist of 'as a service' approach; Infrastructure (IaaS), Analytics (AaaS), Mobility

(MaaS), Security (SaaS), Platform (PaaS), Software (SaaS) and Learning (LaaS). All listed approaches imply the implementation of cloud usage strategy with the purpose of outsourcing measure instead of implication. Such models can save a significant amount of resources on the company activities or processes. (Andriole 2017.)

Running the digital transformation in the company is a very complex process. Employees that will be affected by the changes need to be educated and are aware of changes in advance. The responsibility is assigned to the senior management. The motivation and clarity of upcoming changes need to be provided to all employees and departments involved. The explanation of strategic goals and necessity of changes in the currently working business. Responsibility for informing and motivating employees spreads from the senior managers to every manager in the company. (Chili 2016.) Digital transformation is not only about technology implementation; it is more about change of understanding how the work should be completed and about re-consideration of current business strategies and processes. To lead the DT, it is important to involve 'digital talents'; people who are inspired by the idea of the DT and familiar with all the technology and processes. (Vickers et al 2016, 5.) The changes that will be made during the DT will change the management team as well. The management will be transformed to a more resultative, educated, efficient and innovative team. New possible ways of managing can be found and developed by company leaders.

To increase the society's interest in the case company, another digital transformation advantage can be used. There are many cameras used by MTF to track security of the vessels. These cameras are mostly connected to the video servers and can be watched in real time. Some of the cameras can be redirected/ copied to the public server time to time and the video can be streamed in real time to raise the attention of people to the company's business.

3.4 Digital Transformation of Industrial Enterprises

As was indicated above, the case company is the part of the holding that includes several types of businesses. DT affects not only the business that is transformed, but the connections and partners as well. MTF Company is the provider of raw

material for manufacture companies. DT of industrial companies will have an impact called the Industry 4.0. This concept can be applied to the partner companies to raise the overall holding performance.

Overall, digital transformation in the industrial sector is rather slow due to the high number of factors that influence the companies in the sector. However, DT influences everything. DT in the industrial sector is referred to as Industry 4.0, Industrial Internet or Industrial Internet of Things (IIoT). The main goals of industrial DT are the same as in other sectors to increase efficiency, reduce costs, innovate, find new revenue sources, automate, optimize and ensuring customer satisfaction. The manufacture area is the main platform of IoT's implementation because of the high number of machines and computers and the possibility of substitution of uneducated employees by machines and a big development potential. Moreover, if implemented correctly, DT in the area have a positive influence on the company's supply chain. (i-Scoop 2016.)

One of the world leaders in industrial DT is Germany. The term Industry 4.0 has been developed there as well. German Science Academy provided a report on the implementation of Industry 4.0 with the main recommended action to reach the goals of the DT. The first step of Industry 4.0 implementation is the development of a set of standards based on the common terminology. Standardization needs to be agreed on among all the partners of the company. The existing standards must be reinterpreted and adopted for future changes. All the partners must agree on the same approaches of development and aims to achieve. The second action is the complex management approach for smart fabric conversion. A team of professionals must be in control of all plans, developments and models concerning the manufacture are DT. The goals and targets of the transformation should be set. In addition, possible guidelines and recommended actions need to be documented. Apart from that, continuous professional development should be provided to the people involved in the transformation. Another action will be provision of connection quality. Since the data operation takes one of major roles in smart fabric's implication, it is important to provide high quality and volume data exchange capabilities within involved objects. (Kagermann, Wahlster & Johannes 2013, 39-63.)

The other two actions are safety and security. On the one hand, production and products must be safe for human and for the environment. On the other hand, the production mechanisms and technology should be protected from competitors and intruders. The digital industrial age brings about another important action of the working process' organization. Analysis of the working life of employees on the new position inside the new environment needs to be done. Possible change in competences or additional education problems can arise. To avoid such problems, preliminary analysis should be made and training provided for the employees. Apart from that, all the legal aspects of the transformation must be settled to avoid future problems. Finally, efficient consumption of the resources strategy needs to be applied. Energy, raw materials, human resource, additives, financial resource and other types of resource need to be estimated beforehand. Mechanisms of reuse and recycling of resources after production should be developed. Possible resource saving methods can be included. (Kagermann, Wahlster & Johannes 2013, 39-63.) Discussed aspects can be applied to the new production factory that was opened in Murmansk by Norebo holding. The fabric has a production with the brand name Borealis.

4 DIGITALIZATION OPPORTUNITIES FOR HR DEPARTMENT

4.1 Business Process Modelling as a Tool of Business Analysis

Business Process Modelling (hereinafter BPM) is the method of description of the business process. The reasons for describing the company business processes are different: correction, recording, improvement, automation, audit or even creation of the business process. In general, there are three drivers of the business processes: documentation, redesign and execution. The drives can also be correlated with stages of the business process' change. The documentation stage involves design of the business process. Design represents business process to the people who are involved into the business process operation. The aim of the stage is to show the start and the end, as well as all the activities in the process. All the actors of the business process need to be shown. The documentation needs to be done as simple and informative as possible to present it to the people that are not part of the process. (Fasbinder 2007, 1-3.)

The redesign stage is done only after documentation. To change the business process, it is very important to understand it. Through the redesign stage, the process is analyzed and understood. Possible changes are made to the process and documented. The last stage is execution. The execution is made based on the documentation from the redesign stage. Mostly, companies try to lower the costs of the process, increasing the speed and/or automate it. The application of the changes is mostly done by integration of the new solution or renovation of the old ones. To go through these three stages, the company needs to use a tool that will represent the process easily and informatively with all inclusions. One of the options is a text-based document tool. With that tool, all the processes and renovations are described in a plain text in any word processor. Another option is a drawing tool. The drawing tool complexity can vary from the very simple picture to complex diagram that includes many rules and meanings. Lastly, the BPM tool has been created as a combination of diagram with basic rules and signs and the names of the activities or its descriptions. (Fasbinder 2007, 1-3.)

In the study, two business processes of the case company are presented. These processes are described in the following sections. Unusual choice of processes was made to help the company in rethinking of their business processes and to present the example of digital transformation of the business process. Apart from that, the company is well equipped with all the necessary technology and what is need to be done is the business process adjustment with modern technologies. The BPM tool has been used to document and redesign the processes. The reasons of the BPM choice are presented in the following paragraph.

The BPM tool is better than any other tool by all the aspects. The drawing tool cannot be informative and the text-based tool cannot be easily understood. The BPM tool gives a company full set of actions to represent the business process. Activity names, comments and documentations, if needed bring content into the diagram. After understanding of a set of rules in BPM, the person can understand any processes described as BPM diagram. Standard-based artifacts can be imported by the modeling tool to secure the IT department from information re-typing. The process simulation can be done with BPM; it can show the errors and bottleneck activities on the early analysis stages. (Fasbinder 2007, 4-5.)

4.2 Design of Recruiting Process in Case Company

The section presents the recruiting process in Murmansk Trawl Fleet Company. The process is part of the Human Resource Management department of the company. Currently, the work is well organised in the department; however, the amount of paper work and the complexity of the processes is high. The decision of analysis recruitment business process was made.

The digital transformation of business influenced on overall Human Resource department structure and processes. The main changes are made in the recruitment process. The corporate success and image depend widely on the people involved in the company business. The recruitment procedure can be improved in efficiency. In addition, the recruitment should be changed since the new generation of employees are accustomed with digital technologies and valuable skills have changed. (Bernhard 2015.) The opportunities opened by the digitalization for the companies brought the concept of the 'Smart Recruiting' that

allows to avoid 'Chaos of recruiting' by implementing new hiring strategies to search for talents and reduce costs of the hiring process. (Gallist 2016.)

After the necessity of a new employee required was understood, the HR department proceed to the process of searching and testing of a new employee. The BPM of the recruitment process of the case company is presented below on the Figure 1.

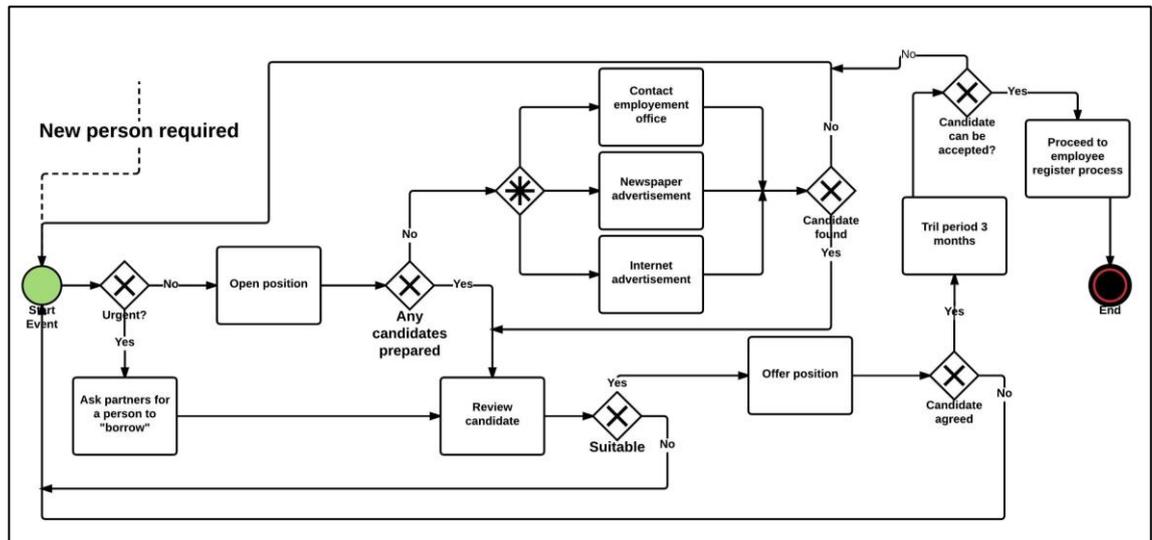


Figure 1. BPM of Recruitment Process in MTF (MTF 2017)

In case of an urgent need, a specialist can be asked from other companies of the industry. The part time contract can be offered to the specialist. If the permanent employee needed or the need is not urgent, then the HR proceed to normal process of recruitment. Firstly, the HR need to publish advertisement of the position available. The required profile is described and advertised through the newspaper, the Internet and occasionally the employment office separately. All possible candidates that are suitable by the education requirement visit the HR office for the documentation check and the interview. The most suitable person is offered a position. If the persons agree on the position, they start the three-month trial period. After the trial period, the recruit is examined by the supervisor and may get hired as a permanent employee for MTF Company. The registration process itself is very complex, because the employee must be registered both on paper and in the system. When the position is opened on the fishery work, the candidate will need to have a lot of documents to approve his qualifications as well as health conditions. (Starkov 2017.)

Modern recruiting has shifted towards marketing and sales approaches while attempting to increase efficiency of recruitment process. Modern marketing and social recruitment marketing will help the companies to achieve their goals in qualitative and efficient hiring. Social recruitment for the majority will mean publishing of the advertisement in the social media channels. Social recruitment focuses on reaching, finding and engaging the targeted audience that potentially can consist of ideal candidates. Moreover, the process of searching for the candidate shifts from the 'active' candidates, people who are searching for a job to everyone who can be an ideal candidate. Same processes happen in recruitment as in marketing. It does not matter if the person is already employed; he/she still can be a good candidate for the position. That approach became possible with transparency of the people profiles that has been enabled by social media development. A candidate experience model and candidate journey models have been borrowed from marketing for better position and candidate description. (Li 2015, 4-12.)

Another challenge that is met by the people involved in the recruiting process in different companies is necessity of correspondence to the candidate's expectations. All professionals that are applying to the position and can be valued have understanding of personal brand. This people are not ready to wait for too long for the response or participate the interview with hundreds of other people. In addition, such candidates can find the opportunity for themselves in competitor's company or some other company. By that reasons it is important to make the recruitment process simple and efficient for all the participants. (Fallon 2016.)

4.3 Recruiting Process Redesign Example

In terms of digital transformation of HR related processes, the focus is on the human issues and strategy. However, the technology is an essential part of the transformation as well. The technology tools' improvement divides on two areas of digitalization. The first area is the data about candidates and employees of the company. While discussing the recruitment process, the candidates' data remain the most important aspect of the process. The collection and analysis of the data helps the company in hiring of the most suitable person for the position. Many

companies have already started to use the Application Tracking System (hereinafter ATS). The ATS software can be developed by the company, since it is not a complex solution. The software could be attached to the company's ERP system or separate system or web-based system. The main goal of such system is to help in gathering and analysis of important candidate data. The system helps in identifying candidate experience as well as touch points. The ATS system is not just about collecting and storing all the data about candidate but more of identifying key pieces of data that characterize the candidate's suitability to the position. (Li 2015, 21-23.)

The second area of development is automation. One of the aims of HR department as was discussed previously is the company reputation building. If the aim was achieved and the marketing of the position was done properly, the number of candidates for the open position will be high. With the high number of candidates, it is impossible for the HR department to review all the candidates manually. The technology improvement helps the HR select the most suitable candidates from the overall mass of people. In addition, the stages of advertisement and marketing of the position can be automated with the system integration as well. Other candidates for the open position can be found from the list of people who have already applied for other positions of the company before. Automation in testing of the candidates via online tests can help in better review of the candidates' abilities and skills. (Li 2015, 21-23.)

The possible redesign of recruitment process of MTF Company is represented below on the Figure 2. From the first sight, the process looks more complex than before. However, the main changes can be achieved with automation, through which the hiring will become more efficient and simpler for the case company. The recruitment process in the company should be started with the creation of the position description and creation of the candidate persona that suits the described position perfectly. Such approach makes the process of choosing the candidate for the position offer easier. The main difference of the current process with the one represented before is usage of the recruitment system by the company. With the recruitment system integration, some possibilities will open for the company.

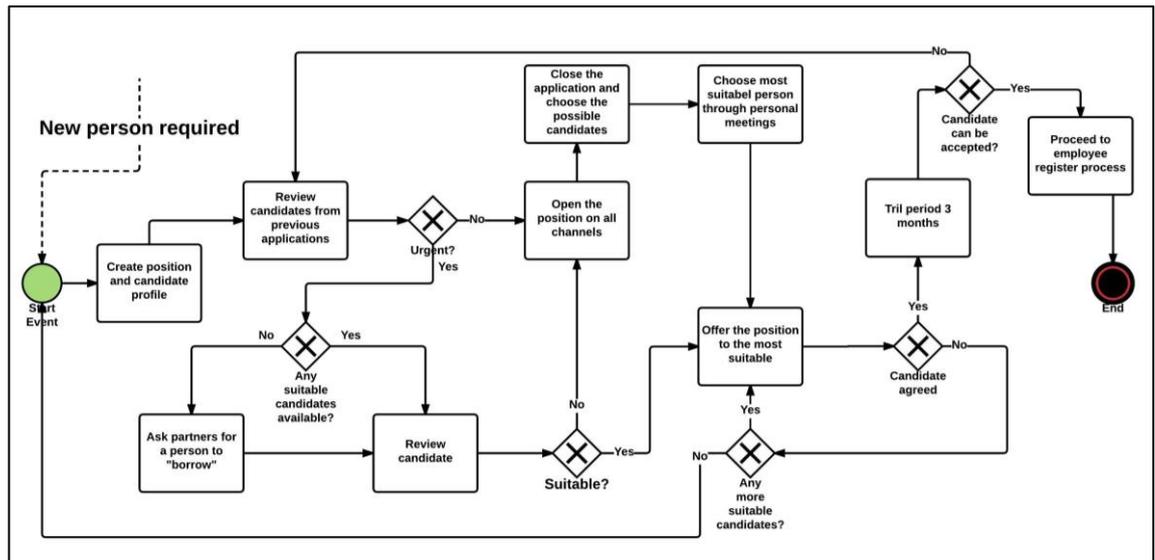


Figure 2. BPM of Improved Recruitment Process in MTF

Firstly, since the records of all applicants will be stored and easily sorted, with every new position opening it will be possible to check for the existing in database candidate's profiles. This type of candidates will be mostly suitable for the urgent need for a new employee. The possibility of request of the employee from the partner company remains the same and does not need to be changed, since it is more of an urgent activity. If the person is required not urgent, the recruiting mechanism will continue. The activity of opening the position on all channels' takes place. Through the system, it is possible to publish the open position description on all marketing channels that will be chosen by the company. Today, the Internet is the most used channel for recruiting; however, the channels on the Internet should be chosen as well. If it will be the company web site or the social media pages or a special recruiting web site or the mix of possible channels, is the decision of MTF Company. Newspaper advertisement can still be used by the company but in some special cases.

After the advertisement is made and the application time is over the candidates should be reviewed. With the system, the first stage of review will be automated. The system will exclude from the process candidates that do not match the required position, but still the application will be stored for possible future need. Additional online testing can be provided to the applicants to lower the number of candidates and identify the most talented ones. Thus, the people who will be asked for the interview will be the most suitable for the position. Those candidates

who did not get the job, will receive the automatically generated email by the system with the company appreciation and information that their application will be stored in case of future need. Such measure will help in the company reputation building. The system will free some time for the HR department that can be used for example for corporate reputation building. The last stages of the process remain unchanged.

Applicant Tracking System integration can be difficult for the company. However, successful integration will increase the company's ability to discover, interest and involve the most talented candidates. The ATS system can be purchased as a service or it can be developed by the company and integrated into the existing solution. The main difficulty with third party solutions is that they have lack of personalization in the most of the cases and made for various companies at once. Apart from that, the Application Program Interface (hereinafter API) should be provided by the service provider to have the possibility of necessary changes in the system. APIs contain all necessary documentation and tools set for personalization of the system. The problem with ATS system providers is that APIs are very limited or not existing at all or the access is forbidden. All these problems will cause the difficulties with inserting and extracting the data from the ATS system. If such problems occur it makes no point in purchasing the system. It is necessary to analyze the functionality and the customization in advance. To avoid the scenarios with purchasing the system and inability of usage the system. Another solution is building the case company's own ATS system. The process of integrating the own ATS system is much more complex than purchasing one as a service. The expenses in both solutions are approximately same. The ATS system is a complex software solution with its own back and front end challenges. It is impossible for the company to create acceptable ATS system by performing several lines of code with sorting functions. The main advantage of creating is about possibility of integrating the solution with ERP or another existing system. (Kozak 2015.)

For the MTF company, the most suitable solution is developing the own ATS system based on the ERP 1C system of the company. The 1C system allows the company to do all manipulations with the source code to adjust it for the corporate needs. In the IT department, there is a team of developers working on the system.

Undoubtedly, such a big project will take some time and value from the IT and HR departments; however, the outcome can be significant.

The influence of digital transformation of the company on the HR department is high. The HR department needs to adjust itself for the new company structure. The department should be prepared for the new positions appearing in the company. The amount of training that should be provided to the employees will increase significantly. The new training method can be applied. Distance and online learning are the most popular methods currently. Massive Online Open Courses (hereinafter MOOCs) is the e-learning concept that can be applied to all company employees at once. More value should be included into the company e-reputation because talented candidates can decide not apply for a position at a company that do not build own image in the internet. (Desormes 2016.)

5 DIGITALIZATION OPPORTUNITIES FOR SALES DEPARTMENT

“Digitalization is rapidly changing B2B business, but sales is still doing what it has always done” (Roland Berger GMBH 2015, 3). This quote indicates that the sales falls behind from digitalization process of the whole company. At a same time, sales process, can be named as one of the core business processes of the business. Without established sales process the company cannot make any profit. The digitalization of the sales business process should be conducted in one of the first stages of transformation. This chapter presents importance and mechanisms of the sales business process digitalization. MTF sales process redesign was taken as an example for the sales process digitalization.

5.1 Digitalization Influence on Sales

The sales process digitalization is driven by almost the same factors as an overall digitalization. The competition in the market changes frequently. New companies appear in every market. For B2B sellers' new competitors come from B2C segment mostly. Some companies are online-only distribution that easily adjust their sale's models depending on B2B and B2C sales segments. In addition, such companies are experienced with customer satisfaction, customer experience and customer lifecycle work. These bring big advantage to such companies, because B2B companies are not aware or do not fill necessity in improvement. Another factor that influences the digitalization is a change of generations. Now, more and more people under the age of 35 fill a purchasing manager position. The communication and relation behavior of the people is significantly different from the previous generation. Young people involved more to the Internet communication and prefer to complete online purchase instead of the sales department contact. The process of purchase effects the professional decision of such person, these where B2B businesses lose their market positions. (Roland Berger GMBH 2015, 3-5.)

The sales process of the company should now be connected to the digital presence of the company. The company should increase the use of an additional sales channels in addition to the established ones. There is no need in conducting

deals through the social media for example; however, the knowledge on the customer behavior and formatting of a product offer as well as a product development can be done through unusual for the traditional sales channels. The data analysis should be done by the sales department. Today, it is possible to track from where customers are coming and what is the main interest. Such knowledge will help to shorten the interaction of a salesman and a buyer. The offers will become more customer targeted and will be accepted easier. In the new environment, sales pitches can be conducted more efficient, since the sales representative will have ability to see in real time all the possible sales capacities. The sales representative will be able to create customized sales pitch on his device for specific customer in real time. (Roland Berger GMBH 2015, 6-7.)

Strategically thinking, the digitalization of a separate divisions or a company departments can be harmful for the overall company performance. However, if the overall company's strategy is properly described and departments are following the main course in digitalization than the company can possibly achieve better results. In addition, the departments that have been given sufficient independence can achieve some outstanding results, because the work and processes are understood better from inside. The main digitalization aspect of sales as well as of HR is fastened to the business process modification, not to the technology integration. It is not hard anymore to implement technology, but the business process change is still complex. Business process change influence directly on the company performance. In that case, the management commitment to the changes should be as high as possible, because people do not like to change the way they perform, especially if it still brings good results. (Kanerva 2014.)

With the digitalization of the company sales and marketing departments merge more and more. The main duties and responsibilities of department's shifts depending on the company's re-design processes. In the new models, more areas of responsibility belong to the marketing department. The marketing itself moves more to online based solutions and tasks. The shifting happens not accidentally, but with the purpose of reducing the salesperson ambivalence and persuading the integration of new sales channels into the job. The Figure 3.

represents the shift of responsible areas of sales and marketing department before and after digitalization of the company. (Tempest 2015.)



Figure 3. DT Influence on Marketing and Sales (Tempest 2015)

The inverted triangle from diagram above represent usual sales and marketing funnel that is classic presentation of functions and areas of salesperson and marketer responsibilities. As can be seen, before the digitalization of the business most of the areas have been covered by the sales department, but with the new approach marketing department gets more. The represented model does not claim that the marketing department is more important or more work is assigned. The model shows the change in accents for the sales department.

The sales require almost the same measures to achieve best results as in the overall digitalization. An education and training of the employees must be done to prepare for the work in the new environment. While conduction of changes it is important to keep all the employees in the process so the mechanisms and new actions will be understood on practice. By the experience from different companies it is known that employees will not support the digitalization idea brought by the customers, so all the changes initiatives should come from managers and leaders. Competition based structures of the department should be avoided at least for the period of transformation. Lastly, the modern technology tools of conducting activities should be brought to the company. ERP, CRM and

other systems have to be developed and adjusted exactly for the company needs to exclude possibility of efficiency loss among the employees of sales department. (Robinson 2015.)

5.2 Design of Sales Process in Case Company

This section describes one of sales business processes. Presented process is a part of sales department activities of the case company. In the sales relations MTF Company is B2B only business. The fishery companies nowadays cannot do as much fishery as wanted. The regulation of usage of marine resources is very strict in order to maintain the population of all the species. Total available catch (hereinafter TAC) annually established by international agreements or national legislation based on scientific recommendations, for example ICES organization. After the fishery quotas for the specific company was allocated by the governmental authorities the company can start to plan the amount of fish that will reach the sales stage. During the planning process MTF signs the contracts for the fish supply for other organizations. The contracts could be very complex and contain several types of fish and different supply time. Nevertheless, there is always fish that was legally fished and not assigned to any of existing contracts of the company. (MTF 2017.) The process of realization of the fish that is not assigned to any of the contracts was taken for the redesign purposes in the study and presented below on the Figure 4.

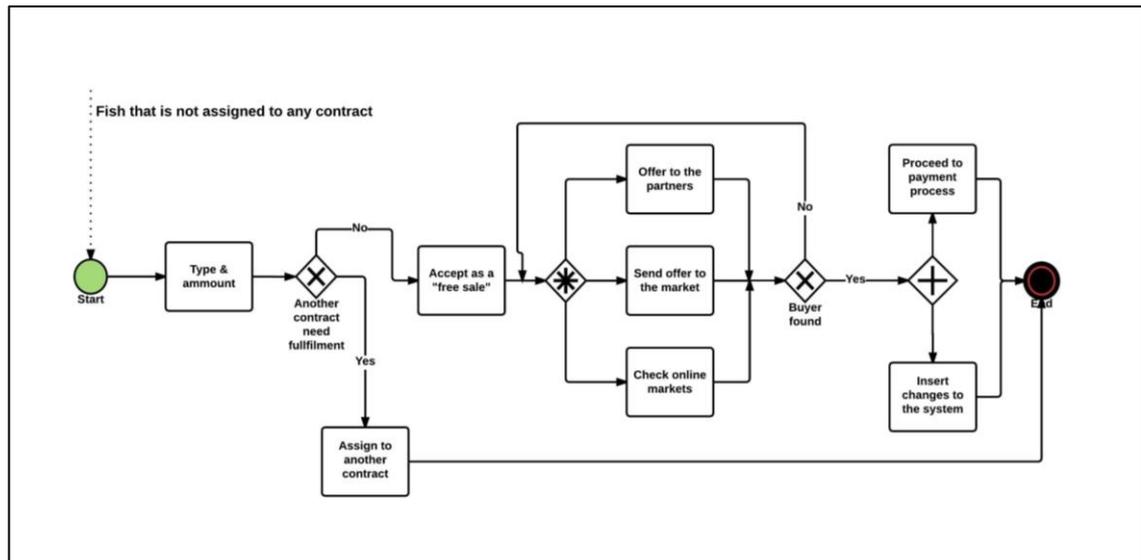


Figure 4. BPM of Sales Process in MTF (MTF 2017)

The diagram, represents the business process model of the above described process. As soon as fish that is not allocated to any of contracts arrives to the sales department for the realization the first activity that is conducted is check of fish type and amount. The activity is done to understand the possible sales opportunities and to register the fish. Since many contracts are signed in advance it is necessary to fulfil those contracts to avoid unnecessary delays. The possibility of including of out of contract fish to some other contracts is checked. If the fish is needed to some other contract than it is assigned and the process is ended. With another outcome, the fish is registered as a free sale fish and the process continues. After the registration is made there is a complex choice of activities to find the buyer for the fish. The choice and order of the activities are fully depending on the experience of salesperson and current market situation. One of the options is to offer the fish to the partners. The partners in that case are the companies that purchasing the fish frequently and the most of the time in big amounts. This process is done manually. The salesperson has a list of such companies and he makes a phone call to the representatives from the list with the offer. (Starkov 2017.)

Another two options are related to online trade markets. There are several online markets that allows companies to place their offers. The salesperson of the company can place own offer on such online market or find a request on purchase of the fish. These three actions continue until a buyer will be found. When the

buyer was found, the sales process ends with registration in the system and payment process. (Starkov 2017.)

Represented process of MTF company is based on the experience of sales department through the time in current industry and for now it is still working good. However, it is not clear how profitable will be the same process with the time. An examples of other companies shows that the profit will decrease. The process is based on the opinion that the sales process is the only process of the company that conduct revenue-generation. This opinion prevent development of the company from usage of all the opportunities created by modern digital sales and marketing funnel. (Petrova 2017.) The funnel was described more detailed in the previous section.

5.3 Sales Process Redesign Example

To bring the process to digital age several main changes in the company should be made. Firstly, it is necessary to establish and develop digital marketing strategy of the company that will work on the purposes of sales department. The digital marketing strategy should correspond to all demands of modern customer. Secondly, the customer data should be gathered and analysed. Currently, the sales process in MTF is an example of well designed traditional process, but the traditional process will not work anymore in close future. The customer data will help in reviewing of customer touch points and customer experience development. Additionally, some innovative solutions of sales channels can be reviewed to bring freshness in the company sales strategy. Lastly, integration of CRM system by the company can be considered as a process automation activity. The redesign of the sales process is represented below on the Figure 5. The business process model of new sales process looks more complex but more efficient in terms of digital sales. The model assumes additional development of digital marketing and digital presence of the company.

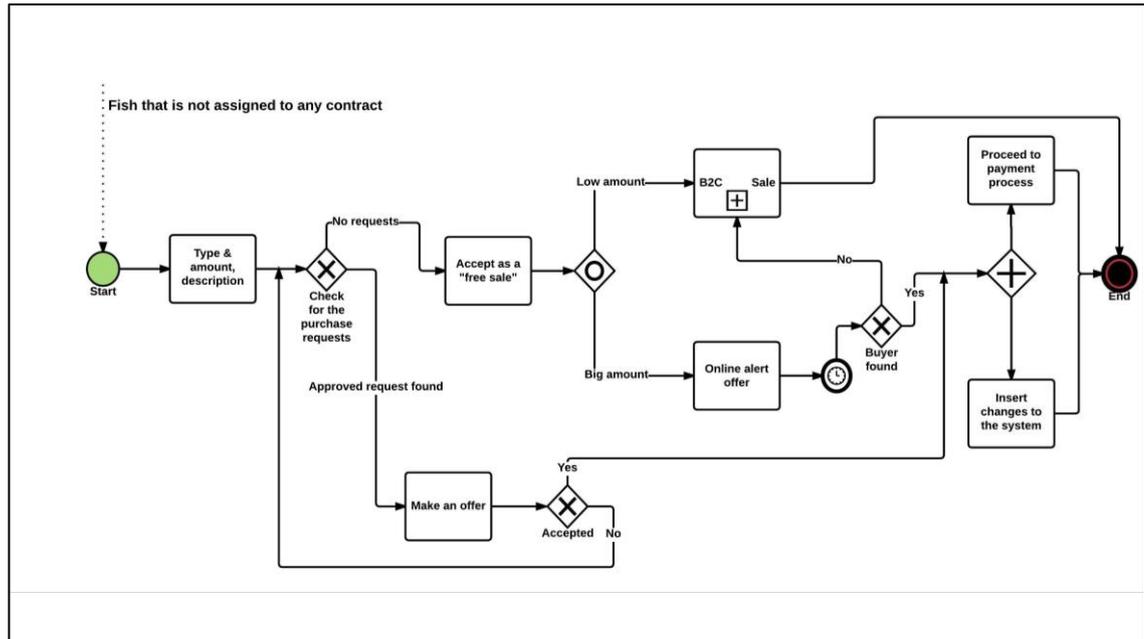


Figure 5. BPM of Improved Sales Process in MTF.

New process starts with almost the same action as previous one, but with additional activity. For now, the company will need to prepare the description of received fish. The description is necessary for the future sales advertisement or sales pitches and can be made based on advance prepared scripts. One of the significant changes in the process is an absence of the possibility of fulfillment unfilled contract with the fish. The company has a very strong planning process that makes plans on the most of the fishery quotas. Filling the contract with the fish that is not planned for this contract can cause confusion in the planning or inefficient use of resources. With development of the company's digital presence it will be possible to add opportunity for requesting the fish from MTF Company. In this process the check for the purchase requests is shown after the first activity. The requests can be gathered through the company web site and stored. Type of the fish, amount and check through request are automated processes and can be done by the system without involvement of the salesperson. If the request on similar type and amount of the fish was found, the salesperson will make an offer and proceed to the closing of the process activities.

In case the buyer was not found through the requests, the fish is accepted for a free sale. In compartment to the previous business process model, after the free sales there are no more a complex gateway in the process. According to majority of sources it is better to avoid such complexity in the business process, because

of the number of factors that can influence the decision maker. The complex gateway was substituted with the event based gateway. The following activities have been changed as well. The event-based gateway is based on the amount of the fish that entered the process. If the amount of fish is big, the salesperson places the advertisement of the sale on all the existing sales channels. This activity can be automated and all the advertisements can be placed automatically by the system. Now the only sales channel that is used by the case company is online market. For the near future, it is possible to add the company web site as a channel. Later, social media and other touchpoints of the company with potential customers can be used as channels. As soon as buyer was found, the salesperson proceeds to the closing of the process activities. If with the time the buyer was not found, the fish is transferred to a sub process of B2C sale that is conducted when the amount of entered the process fish is not big. The transfer of fish to the sub process can also indicate that the sales channels are not developed properly, so the notification to the marketing department should be made.

Many B2C businesses are entering the market of B2B sales, how it was described earlier. Some of the B2B businesses to secure the revenue and profits started to enter B2C markets as well. This could sound unprofitable for manufacturers or hard to implement, however online sales through the web site gives such a possibility. The model of 'direct distribution' was presented and developed recently. With that model manufacturers start to sell their product directly to the costumers through an online shop. (Strauss & Frost 2014, 58.) The sub-process of B2C sales included in the Figure 5. implies the introduction of direct distribution model in the case company. The online shop can be opened based on the MTF or Norebo website. There is no need in complex planning or special researching on the amount of fish that should be delivered to the online sales, because the offers can be based on the current available amounts and types of the fish. Thus, the company will not sell the variety of fish in the shop, but only some available amounts. Since, the shop will be online only sale the company will not have additional expenses on physical processes. On the other hand, some customers would be glad to purchase the product straight from the manufacturer to avoid possible price and quality manipulations by a reseller.

6 MOBILE DEVICES IN CORPORATE ENVIRONMENT

The possible increase of mobile device use for the corporate tasks by the employees is discussed first. Several models of the integration of mobile devices to the company environment are reviewed and analysed. The application of models to the case company business is discussed.

6.1 BYOD, COPE and CYOD Models

“Today's science is tomorrow's technology” (Teller 1962, 146). He meant that technologies develop fast and some of the early stage developments can become everyday use objects soon. This statement was made in the last century; however rapid growth of technology has been happening for the past years only. According to Nickolaisen (2014), changes happen quickly and this is exactly what makes the world unpredictable and interesting. Currently, human's lives consist of everything social and mobile. At the same time, mobile devices become smarter and more powerful; the amount of data increases rapidly; networks that transfer that data become faster and new technologies enter people's everyday life. A few years ago, those changes accompany companies to start consider the possibility of involvement of mobile devices to the corporate life. (Nickolaisen 2014.) With the time, some business concepts have been developed to regulate the usage of mobile devices for the working purposes. Such concepts as Bring Your Own Device (hereinafter BYOD), Bring Your Own Technology (hereinafter BYOT), Bring Your Own Phone (hereinafter BYOP), or Corporate-Owned, Personally-Enabled (hereinafter COPE), and Choose Your Own Device (hereinafter CYOD). All these concepts brought up the new trendy term called Consumerization of IT. (Evans 2015, 1-2.) BYOD, COPE, CYOD are described in detail in the paragraphs to follow.

The BYOD model allows employees the usage of their personal mobile devices or technologies to complete working tasks as well as being informed about working updates. The most commonly, smartphones are included in such models of company working life. (Rouse 2012.) The main goals of such models are to increase the productivity of workers, reduce costs and increase employees'

satisfaction during their work. Productivity increase is reached by increasing satisfaction among employees, and therefore they work faster with their own devices. Satisfaction adds flexibility to the working processes, because personal devices are portable that gives opportunity to continue the work even outside the office. Costs savings come from reducing spending on hardware, software and different licensees. HBR Analytic Service (2014, 1-5) survey confirms such positive tendencies in mobile device integration to the working life.

GOOD NEWS ABOUT MOBILITY

Which of the following have occurred in your organization as a result of the use of mobile devices, their apps and technology?



*Employees able to work from home or on the road by using mobile devices

Figure 6. Tendencies in Mobile Device Use (HBR Analytic Service 2014, 2)

The introduction of BYOD can be overviewed as a threat for the company. The introduction without regulations and full understanding of the model use may cause corporate or personal data loss or can be even a hole in the company's security system. At present, some people already complete some of their work tasks with own devices. In that case, it is the time to regulate the company environment. The easiest way of regulation is to forbid employee's own devices usage for working purposes. However, this will not have beneficial outcome for the company. (Evans 2015, 4-6.)

Corporate-Owned, Personally-Enabled model is another possible solution for mobile device management in a company. With that model, a company can purchase and pre-set devices for the employees for the proper corporate usage. However, the employees can use the company devices for personal needs and out of working time. Apart from BYOD, COPE model gives more freedom in

regulation of such devices for the companies. The company's IT department can prepare the list of acceptable and safe devices and operation systems that can be purchased. During the pre-set process, IT department can insure the data protection mechanisms on the smartphone and install necessary application, as well as blacklist some application from future installment. COPE model is cost-efficient for both parties, employer and employees. For the company, it is possible to buy devices at wholesale or bulk prices and connect them to corporate connection package. (Rouse 2014.) Choose Your Own Device model is comparable with COPE model. In case of CYOD, employees select the device for use, but company owns it. Purchase of the device is the exchange price for the pre-settings that will be made on the device. (Brodin 2016, 58.)

After all, there are two main models: BYOD and CYOD. There are a lot of similarities in them and the outcomes are almost identical. The differences in money spent on devices is irrelevant, because the costs are moved from company to employee or clockwise depending on the model. (Brodin 2016, 60-61.) However, the BYOD model appeared to be more common in businesses and became very popular as a tool of improving business. However, proper BYOD implementation is considered more as a challenge for IT departments than a tool of improvement. The CYOD model has been made to facilitate introduction of mobile devices to the work process. The CYOD model makes it easier for IT department to monitor and control organization security. (Sheldon 2013.) Help to the IT department can be provided by the Mobile Device Management (hereinafter MDM) and the Mobile Application Management (hereinafter MAM) systems that can control, monitor and secure all devices in the same time. Such systems can be easily integrated with the CYOD model. Individuals in the BYOD model will not positively greet such systems on personal devices. (Rouse 2014.) Apart from that, the CYOD model can be a solution for legal governmental regulation of companies' control over personal devices of the employees. In the CYOD, devices are belonging to the companies, thereby data erasing or blocking can be done freely. (Sheldon 2013.)

6.2 Models Suitability for MTF

This section is based on survey that was conducted in Murmansk Trawl Fleet Company in 2016. The survey was done among the employees in Murmansk head office. The survey consisted of eight simple questions connected to personal mobile devices of workers. The number of employees is around 110 in the office. The amount of responses to the questionnaire's is 80. Due to the absence of some employees and possible repetitions of the email addresses, the result represents a clear picture of the mobile device usage in the company. Received data and analysis makes it obvious that regulations and changes need to be done to the company's environment concerning mobile devices.

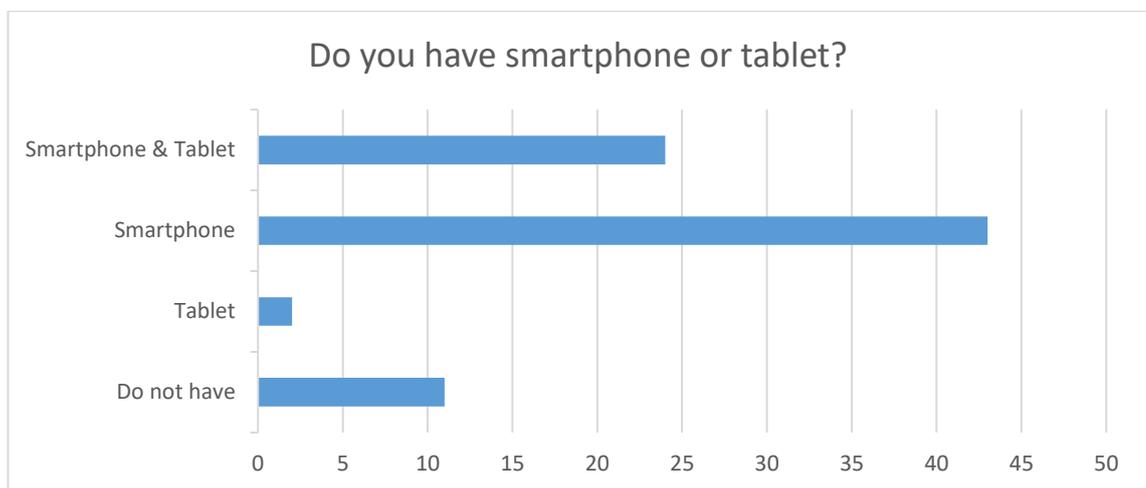


Figure 7. Number of Personal Devices Used by Employees of MTF

The results of the first question are represented in the diagram above. The majority of the employees use modern phones daily. Number of people that still stayed with their ordinary phones is only eleven. For a better understanding of the results, responses of the eleven people were excluded from the analysis of the results. Moreover, the number of people that use more than one device is significantly high. Based on that, it can be assumed that employees might have started to use their devices for working purposes, and therefor regulations are needed.

Even though the number of modern devices is high, it is unclear how people use the devices. It is possible that only phone calls are made from smartphones and books are read from tablets. Responses on the second question displayed in

Figure 8. showed that the employees use their devices for more than just calls and reading. The majority of respondents revealed that they use the mobile Internet on their devices.

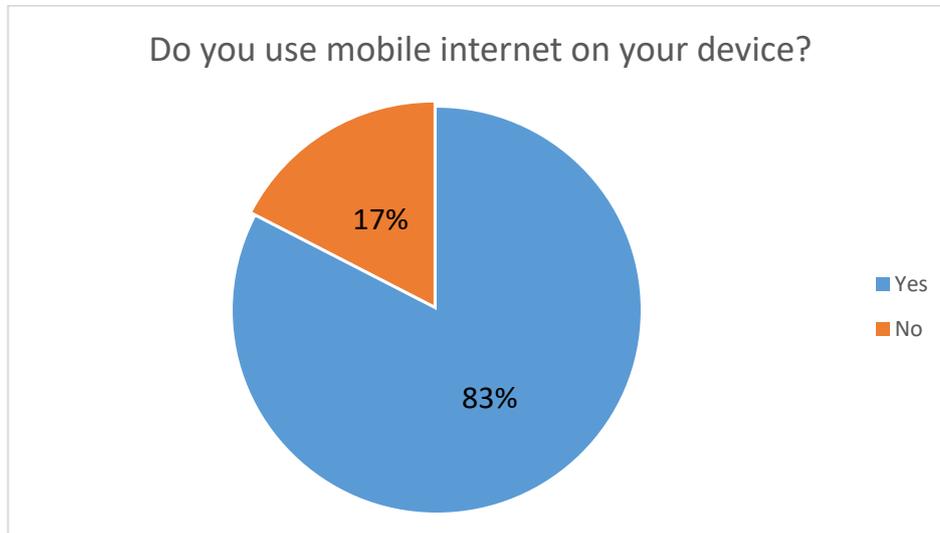


Figure 8. Usage of Mobile Internet on Personal Devices

The mobile Internet usage represents the ability and readiness of employees to extend their usage on corporate tasks. Following responses on next question approved broadness of device usage by employees. The results are presented on the diagrams below. Absolute majority of employees have Messengers installed on their personal devices; the availability of messengers approves the frequent usage of the devices.

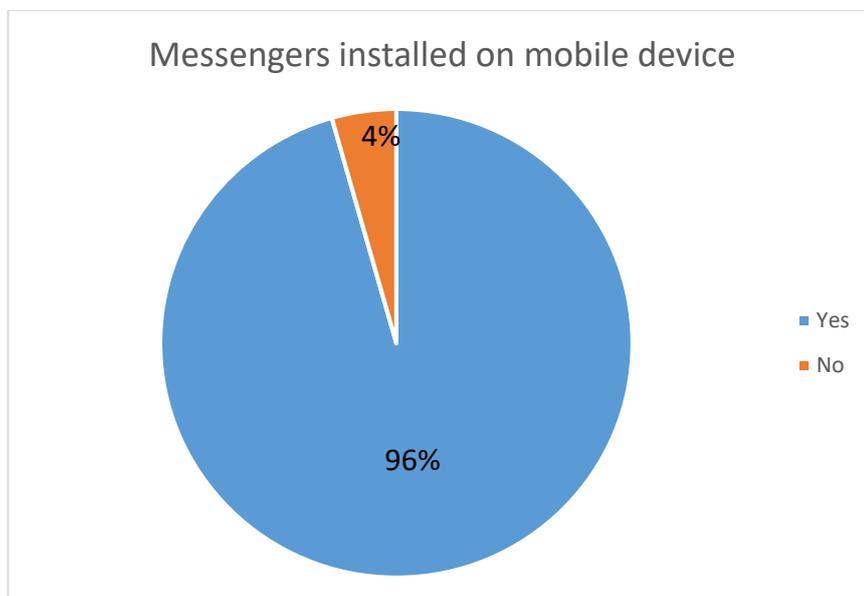


Figure 9. Installed Messengers

Moreover, the majority of the respondents responded that they are exchanging files through their devices. The results are represented below on the Figure 10. File exchange represents the ability of advancing use of mobile devices by users and the necessity of securing data exchange.

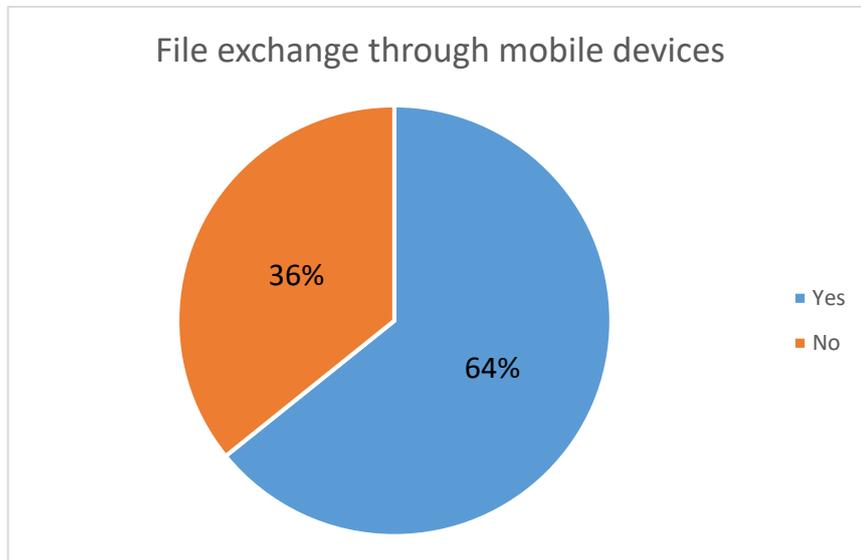


Figure 10. File Exchange through Mobile Device

The variety of mobile devices among employees was approved by defining of operation system of personal devices. As shown on the Figure 11. below, the majority of devices are Android based; however, the variety of OS demonstrates necessity of more detailed IT policies development.

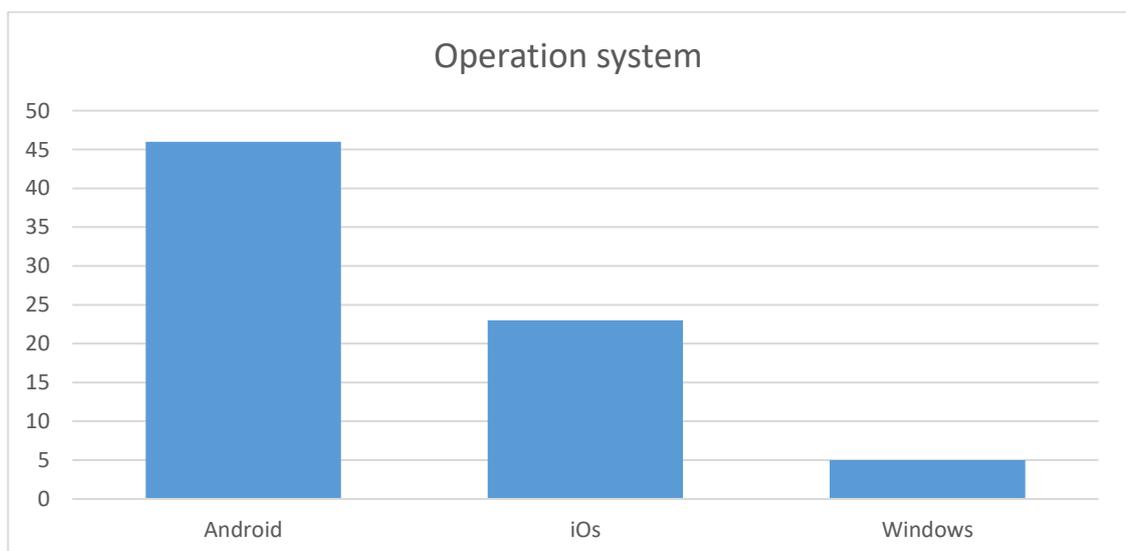


Figure 11. Operation Systems of Personal Devices

Even though there are no regulations about work connection with personal devices, there are many people who use corporate emails on their own devices. According to the Figure 12. below, almost half of the employees use their own devices to receive corporate emails. The necessity of being in contact is high for some employees.

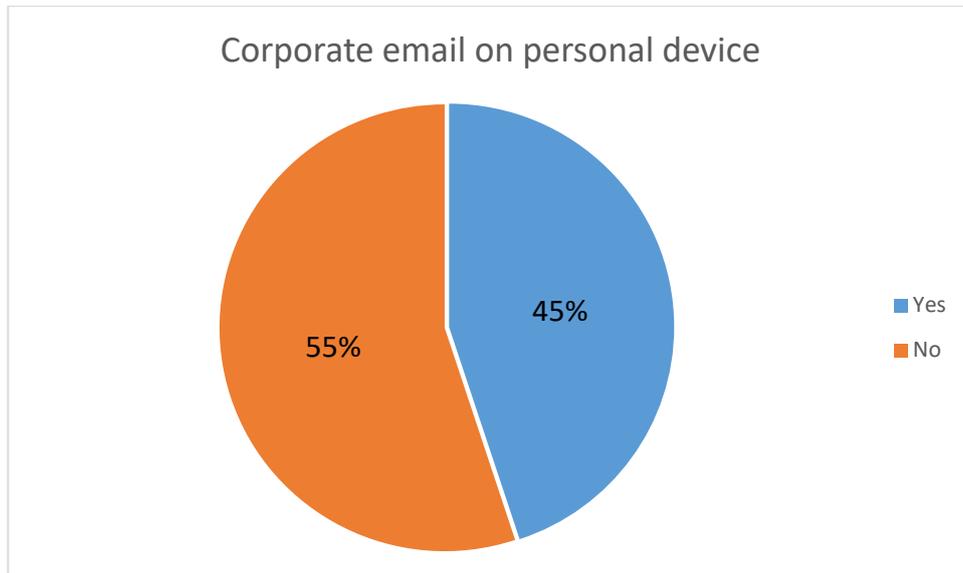


Figure 12. Corporate email on personal devices

Employees that do not use corporate email through their own devices are the most probably not aware of such possibility or do not have a need because of their positions and duties. Since the action is already done, necessary regulation should be written as soon as possible to avoid mistakes or data loss. Security issues on the mobile device integration to corporate life is going to be presented in the next section in a more detailed manner.

6.3 Security Challenge

'The good news is that the mobile revolution isn't coming- it's here' (HBR Analytic Service 2014, 1).

In this section, the BYOD model's security issues are discussed because there are more concerns than in the CYOD model. Nevertheless, all solutions and explanations are applicable to both models. The emphasis of the security description is made on MTF Company.

A good number of the security issues for the BYOD arise because devices are owned by employees. Companies simply lack control over these devices. Firstly, corporate and personal data should be separated on the device in order not to merge into one unsafe mass. Secondly, necessary documentation must be developed for the company. The documentation must regulate the BYOD model itself and include policies as well as instruction. Specification of data that can be processed by devices should be clear. Possible encryption methods and secured accesses must be provided by the company. The regulation of data must comprise the actions including storing, transferring and deleting. (Long 2013.)

On the other hand, the main topic is the actual development of the BYOD model. Before the introduction of the model risks, goals, lists of supported devices and OS, policies, instructions, access levels, legal documentation, storage and backup policies, violence of policies, security methods and support should be developed. In addition, even after a successful introduction, it is important to keep development process and start the maintenance and supervision. (Glynn 2017.) To plan and design BYOD model, it is better to gather team members from different departments, such as IT, HR, and Legal. Members that are not connected with IT will provide relevant information on everyday usage of devices and possible regulations. IT specialists frequently underestimate or misunderstand some of the employees' concerns. (Nickolaisen 2014.)

The weak point in interaction chain is the user. Users are employees of the company; in the most of the cases users are not warned of the possible security issues. To prevent the data loss, it is important to educate and train employees. It is not enough to provide extensive policies that will regulate everything, but the company must make employees understand and follow the policies. The awareness on the possible consequences of policies' violations makes the employees follow regulations and to prevent the security breaks. (Brodin 2016.)

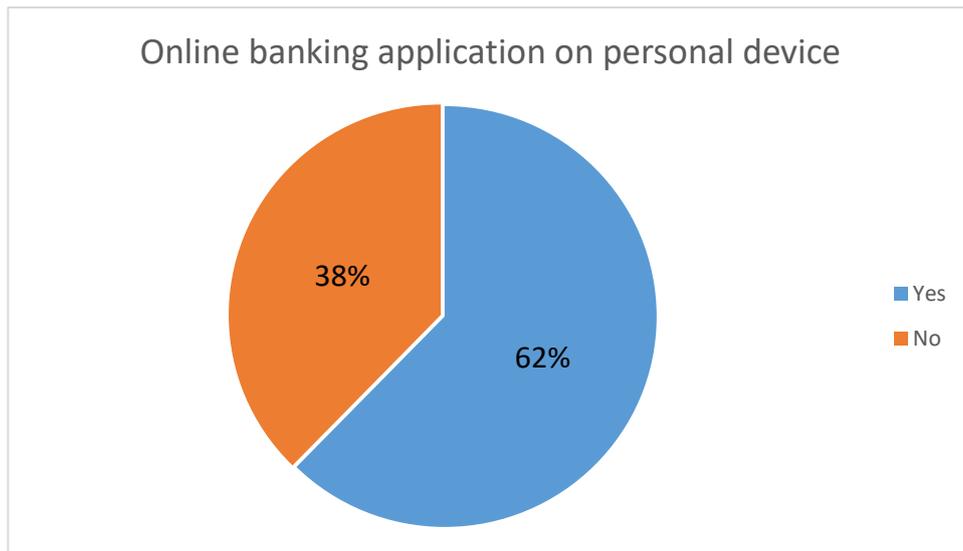


Figure 13. Online Banking Application Presence on Personal Device

The Figure 13. represents the number of people that use their devices for financial operations. People who keep their financial data on the device have probably thought of securing their devices and are prepared to improve the security. Integration of company policies that will increase overall security of the device will help to keep such data more secured as well. Nevertheless, the corporate and financial data must be separated on the device, as it was stated previously.

In addition to all above, following security activities must be conducted in order to minimize the possibility of data loss (Glynn 2017).

- Authentication. All devices must have passwords that will secure the device from the usage of another person. The password should be complex and impossible to guess. Advanced biometrical methods of device lock can be used as well.
- User control on networks and applications. The user must control networks and other devices that he/she is connecting to the own device. All the connections must be trusted. Application control manifested in application permissions must be set.

- Updates. IT department must be aware of security patches and updates needed for working purposes. Users must frequently update their own devices to install the security patches.
- Back-up and recovery. Back-up and recovery procedures must be set by the company and explained to the end-users. Such procedures need to be done periodically.
- Antivirus software. Such software need to be adjusted for the company's environment and installed on the devices. Scanning should be done periodically.
- Device location and wipe. Procedures of location in case of loss or stolen device and possible data wipe from device should be developed by the IT department. (Glynn 2017.)

Additional training for the employees can be conducted based on the policies that are made outside of the company. For example, Information Commissioner's Office of UK published guidance on information security for companies on their web site. The document can be accessed at <https://ico.org.uk/for-organisations/guide-to-data-protection/principle-7-security/>. The document describes the core aspects of data protection for the companies and answers the most popular questions of that field. Unfortunately, there are no public guidelines from authorities available in Russia. However, there are some official guidelines for the companies and many open guidelines available that can be used for the users' training.

6.4 Mobile Models Overview for Case Company

From the survey, it is understood that employees use their personal devices for corporate tasks. Regulations must be made before some data loss occur. Lack of knowledge in technology security can lead to data loss. On the other hand, the IT department should prepare infrastructure for the opposition of risks and threats.

The easiest solution for mobile device integration can seem introduction of MDM system into the company. However, the choice of MDM can be a tough task.

Presently, there are many MDM solutions that regulate and control devices differently. All of them have their own strengths and weaknesses. The choice of MDM systems depends on the number of devices that need to be managed, on the corporate tasks that will be handled through the devices, on the data type and amount, on the compatibility with regions and model types of BYOD, CYOD or mix. Moreover, as the market of MDM systems changes rapidly, it makes the choice harder in terms of the company long-run perspective. (Bushnell & Attkisson 2016.) One of the possible solutions for MTF Company can be the product of Rostelekom Company. The company is a Russian provider of phone and internet connections. Rostelecom MDM system can be reviewed at <https://cloud.rt.ru/#/for/business/products/75/functions>. There are positive and negative sides of the Rostelekom, however this could be the easiest solution, because of the full integration service that is provided by Rostelecom Company.

The raise of productivity can be considered as a threat for the company and employees in some cases. If the employee starts to be available 24 hours per day and easily reached out of working hours, that can cause change in the employees' wellbeing and comfort. People can start to disable their mail-sync function or devices or use another phone instead of the one for work and all the logic of mobile devices for the corporate needs crash. In addition, some start to spend more time on personal needs as social media and games during working time with explanation that the time is interchanged with the time spent for the work during non-working hours. (Brodin 2016.) To exclude possible negative impact of productivity raise, it is important to inform employees on the goals of model introduction. Guiding and supervising should be done during whole time of the company adjustment.

On balance, CYOD model seems to be more efficient and easier to introduce than BYOD. Table 1 represents the compartment of key aspects of these models.

Table 1. Compartment of CYOD and BYOD (Brodin 2016)

Management issue	BYOD	CYOD
Personal productivity	Increasing; work any time, any place	Increasing; work any time, any place
Flexibility	High	High
Satisfaction	High; user likes own device	High; user likes device and gets it for free
Information control	Organizational data main remains on private device	Information might be stored outside the organization
Device protection	Up to the user	Organization control the device
Awareness	More important; devices are not controlled	Important
Support	More pressure on support; devices are not controlled	Organization control devices as devices would be stationary

There are not many differences in management issues in the introduction of BYOD and CYOD models. However, the CYOD model does not match all the needs of the case company. The BYOD model would be a better solution for MTF Company. Nearly all employees will agree on a MDM or similar system use to protect data and regulate the usage if the concept will be explained fully with all the advantages. The system will help with improving of Device protection, Awareness and Support management issues without converting device ownership to corporately owned.

7 DIGITAL PRESENCE IN FISHERY INDUSTRY

7.1 Second Wind for Traditional Business

This section will present the popular concept of digital presence that is part of the digital transformation. “Second wind” expression in the title refers to an opportunity for companies to gain new power and improve their business positions with digital presence mechanisms assistance.

Digital presence represents engagement and involvement of customers to the company’s business through digitally prepared touch points. However, simple posting and spamming cannot be attributed to the company digital presence. To reach the certain level of the digital presence, the company must develop strategy of the company’s involvement to social networking and publishing. Social media development has pushed internet marketing to the next step. It is not enough anymore just to publish something interesting on Facebook or Twitter; the customer must be involved, educated or entertained to stay with the company. Depending on how company will succeed on that, a company will be separated from the competitors and the other brands. Moreover, targeting is important for the company’s digital presence. If the target group is not defined and strategy is not concentrated on that target group, the company will fail in reaching their goals. (World Internet Marketing Inc. 2013.)

From the first sight, it seems that everything in the digital presence is beneficial, but there is a probability that Digital Presence Deficiency (hereinafter DPD) occurs. DPD is a symptom of a “dying” business when the digital presence strategy is not working. Web-traffic goes down, an amount of comments and visitors decreases with the time. These are just some examples of the DPD symptom. Nevertheless, the meaning is that the company is disappearing from the online world. The DPD mainly happens because of the mistakes as static and repetitive content, lack of appropriate media, absence of mobile solution, unavailability, slow display speed, lack of conversation and communication between customers and the company and big difference in channels content. Lastly, ignoring the problems by the company will cause bigger impact on their

digital presence and exacerbate the situation. To avoid DPD in the company, next three steps must be considered as a certainty. Firstly, it is important to unite all the digital channels under one management or strategy. Otherwise, the content will seem crushed. Secondly, all published content must be interesting for the target readers to make them discuss and share that. Lastly, the company should include their own people and share the success stories and some experiences. (Thibeault & Williams 2013, 15-20.)

From the first view, it can seem that the online presence only suitable for B2C companies to interact with their customers. However, for the Advertising Age (2016, 12-13), the most of the B2B parties conduct some online investigation of the potential partners before the actual contact of the company. Based on that, we can be sure that currently digital presence matters for all types of businesses. (Franklin 2015.) That means that secondary sector of the economy must be involved to the online environment along with tertiary and quaternary sectors that defined in the theory of economic division.

Digital presence is almost always the first impression of the company. As was stated previously, every person checks online before taking steps in business. People are self-educated. They do not rely on gossips or opinions; they prefer to investigate themselves and it is easy to do in digitalized world. If the company is not presented online or presented poorly, there are no chance that potential partners or customers will find it. (Frozen Fire 2016.)

According to late researches, companies from secondary economic sector are not presented digitally yet. This adds the possibility for the company to stand out from the crowd of similar companies. In this case, the company can present itself from a better perspective and gain huge benefits in comparison to the competitors from the market. (Franklin 2015.) On the other hand, if the company do not understand full necessity of the digital presence, competitors will be glad to seize their market's share of customers, suppliers and partners. The same is applied to the quality of online presence. (Frozen Fire 2016.)

Customer service is important in every business. Customer lifecycle length depends on the quality of customer service. The digital presence gives extra tools for customer service without complex integration. The future is now and everyone

is online, and therefore companies should respond to. The situation will not reverse in time, because everyone can see next generations and their passions in mobile device use. (Franklin 2015; Frozen Fire 2016.)

For successful digital presence implementation, the following basic steps' checklist was prepared:

- User friendly website
- Social media page(s)
- Discussion forum and reviews
- Online paper presence
- Company blog
- Online catalogues presence

These are some core modifications that must be made by a company to succeed in their online presence. The most important is to integrate the changes properly with all the rules of digital marketing. Moreover, the changes are flexible and can be combined to tailor digital presence solution for the concrete company.

For companies that do not have an opportunity to achieve appropriate level of digital presence, new online agencies have opened. Such agencies analyse the company business and prepare solutions based on the business needs. Marketing, branding, social networking, blogging, customer service, sales boost, web and app development, optimization and testing are some key services that are provided by such agencies. As an example, three of such agencies are presented. Accenture agency is one of the best in the world agencies that offer building of digital presence for companies. Accenture is US agency that provide much more services to the companies than was highlighted previously. Imos and Amplexor agencies are Russian companies that provide just basic services in digital presence. Imos agency can be found at <http://imos.one/>. Amplexor agency can be found at <http://www.amplexor.com/>.

7.2 Competitors Go Digital

Marine Stewardship Council (hereinafter MSC) is an international non-profit organisation that aims at sustainability of all companies of the fishery industry and safeguarding of seafood. Presently, being part of that organisation is the necessity because it is valued by the most of the countries and fishery companies. According to MSC (2017), the fishery industry is a highly developed economic sector that offers jobs and source GDP. Global consumption as well as demand for fishery products increase with the increase of the Earth population. However, the volume of fishery cannot be changed significantly due to reproduction issues. Based on that development of fishery efficiency is essential for all the companies. "We will need fisheries that are well-managed and sustainable," (MSC 2017). Such approach of the organisation motivates and stimulates the industry companies. (MSC 2017.) Some competitors of MTF from the digital presence side are observed in the following paragraphs.

As a first competitor, Arkhangelsk Trawl Fleet (hereinafter ATF) company was chosen. ATF Company is a commensurable company with MTF Company. These two fleets are the oldest ones for northern fishery industry. The main difference is in the location of the main port and fish delivery places; however, after the main port location, fish goes by contracts to the same locations in central Russia. MTF and ATF companies could be named as the main competitors to each other. As is stated in the name of ATF Company, it is mainly based in Arkhangelsk. The amount of ships, the productivity capacity and the turnover of both companies are almost identical. Moreover, the companies conduct fishery of e.g. cod, haddock, Greenland halibut, red fish, herring, blue whiting, mackerel and capelin on the same fishery grounds. The compartment of digital presences of MTF and ATF companies shows that both companies are at the very beginning phases. The companies have not realized and understood necessity and profitability of such strategies, yet. However, ATF has instinctively prepared a bit more digital presence than MTF. (ATF & MTF 2017.)

As a main resource and online presence tool of ATF Company web site is used. The web site can be found at <http://www.oaotf.ru/index.php.htm>. The web-site is very informative and full of company data. The problem is that the data is

structured poorly and the most of it is displayed on the front page. It is hard for users to find necessary data. Another drawback is the lack of media content; mostly just plain text is presented on the web-pages. After all, availability of English version for such a company can be a big advantage. However, the English version for the site is not prepared and represents even less than basic company information. Another small advantage of the company is its presence in VK social media. The link to the community is <https://vk.com/tralflot>. Even though it is visible that the community is not managed by professionals, it is interesting for people who are involved in the company business. All possible information about ATF that can be found from the web site in English can be seen below at the Figure 14.

Личный кабинет:
Войти / Зарегистрироваться

Архангельский траловый флот

90 лет
Безупречной Работы

EN/RU

Главная →

**JSC "Arkhangelsk Trawl Fleet":
high experience, old traditions, best quality**

It's the oldest fleet in the North of Russia, the year of establishment - 1920.
20 fishing vessels, the developed coastal structure: cargo area, warehouses, refrigerators, fish processing plant, are currently owned by ATF.

ATF's trawlers has been catching cod, haddock, herring, blue whiting, mackerel, capelin and other ground and pelagic fish species. The enterprise offers premium-class products: cod's tongues and cheeks. The high quality of the products may be relied on: ATF is a prize holder of many international and Russian exhibitions and competitions.

The vessels of ATF are certified according to the European standards. Optimum ratio of reasonable price and first-class quality of the products has made Arkhangelsk trawl fleet worthy and reliable partner for European companies. At the same time according to ATF - provision of the Russian consumer with high quality fish products is the main task of the company.

Fishing vessels of ATF
Presentation

ATF сегодня:

- промышленные суда
- рыбный порт в Архангельске
- собственная судовой верфь с доком
- рыбоперерабатывающий завод
- учебно-тренажерный комплекс "Белокаменка"
- технический центр

Подробная информация в разделе "Услуги"

АО "АРХАНГЕЛЬСКИЙ ТРАЛОВЫЙ ФЛОТ"
Россия, 163030, г. Архангельск, пр. Ленинградский, 324
ТЕЛЕФОН: +7 (8182) 42-18-65
ФАКС: +7 (8182) 42-18-70
E-MAIL: flot@oaotf.ru

Figure 14. English Version of ATF Web Site (ATF 2017)

As a second competitor, Nergård AS is presented in this study. The company web site could be found from the following web address at <http://nergard.no/>. Nergård AS is a Norwegian fishery industry company that conducts fishery mostly in northern seas with the headquarters in Tromsø. The company is specialized in fishery, processing and sales of the fish and fish resources. By the size, the company is second in northern Norway and not much smaller than MTF

Company. The company has its own history and traditions that help maintain business and provide sustainable growth. From the development point of view, the company is a stable business that is not in the rush for the size or the profit increase. As the main strategy, step by step business development is selected to build the future for the company, not the current profit. Moreover, the company is part of MSC fisheries certification program. The certification provides sense of responsibility and traceability for the customers and the environment. (Nergård AS 2017.)

From the digital presence point of view, the company is well presented and developed. First, properly structured and filled, the web-site is the main element of digital presence. All necessary information in interactive form could be found from the site. Amount of text and media are in balance. Moreover, some interactive maps are represented on some pages that gives the opportunity to fully understand company's business. The Availability of proper English version of the websites opens international community for the company. Social media presence for the company is limited with the only Facebook page at <https://www.facebook.com/Nerg%C3%A5rd-As-517380738333017/>.

Nevertheless, for Nergård AS presence through the web site and Facebook page with additional mentions in some web journals and news is enough to be known and do not have a DPD symptom. Comparing the digital presence of Nergård AS and MTF companies, the problem of MTF website usability and design arises. From the first point, it seemed that it was hard to create proper website for a company that works with fish resources. Nevertheless, the example of Nergård AS and Norebo holding website shows that a proper website creation is possible. The presence in Facebook gives another big advantage for Nergård AS. The following figure presents the design solutions of the above described websites.

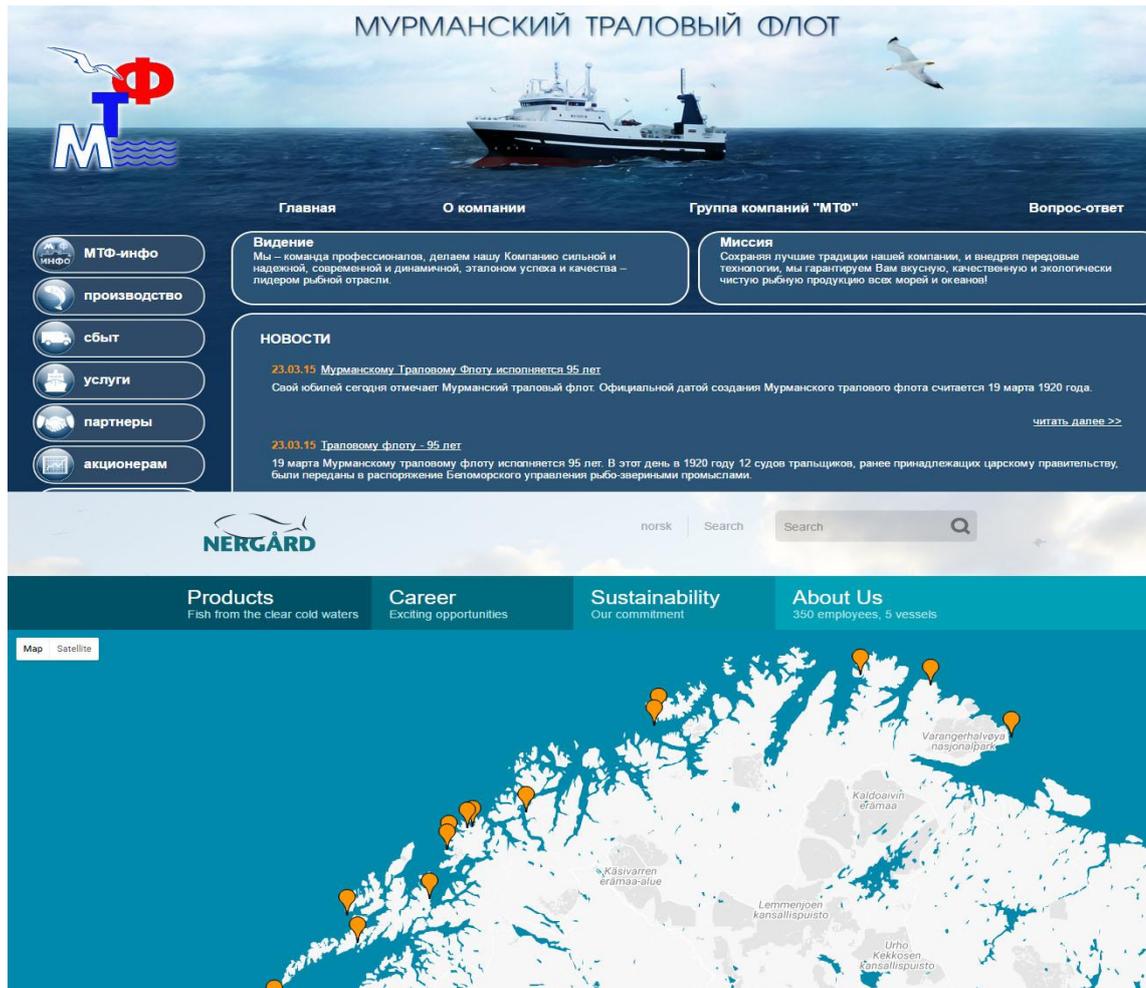


Figure 15. Compartment of Web Site Designs (Nergård AS & MTF 2017)

As a last competitor, Lerøy Seafood Group was taken (hereinafter LSG). By the business field, this company cannot stand in a same line with MTF, ATF and Nergård AS, due to the different focus and bigger size. However, LSG is a perfect example of a proper digital presence strategy implementation for the fishery industry company. LSG is another Norwegian group of companies that specify mostly on producing of Atlantic salmon, however they are also involved into fishery of various fish resources. LSG exports to more than 70 markets worldwide. Key activities for the group include production, development, distribution, marketing and processing of seafood. (LSG 2017.)

Presently, almost every first meeting with the company start with the web site. LSG web site can be found at <https://www.leroyseafood.com/en/>. For the company that operates not only on domestic markets, it is essential to have an English version. On the web site, all information can be easily accessed on eight different languages, including English. The appearance of the web site impresses

visitors by its interactivity and good colour's selection. The structure of the website allows visitors to intuitively find all necessary sections and pages. A number of media is balanced with an amount of text information that gives a clear picture of the company's data. Some interactive models presented on the website, such as sliders and buttons that add interactivity to the pages. Lastly, it is possible to select the web site version: "Business", "Investor" or "Fjord Trout". Such divisions of information make the interaction of the visitors and the company website more efficient.

As was emphasised earlier, the digital presence cannot be limited by the website. LSG impress potential customers and partners with fully implemented and developed digital presence strategy. Social media presence is not limited by the Facebook page at <https://www.facebook.com/leroy norge/>, but with LinkedIn profile at <https://www.linkedin.com/company/hallvard-leroy-as>, Instagram profile at <https://www.instagram.com/leroyseafood/> and YouTube profile at <https://www.youtube.com/user/VideoLeroy>. The profiles and pages are presented and developed. Information from these channels are updated frequently. YouTube as a marketing channel is underestimated by some companies, however number of viewers and potential infinite auditory claims the opposite. Another digital advantage for the company reached through real world partnership and subsequent referencing from the partner's web resource. An example of such interaction is Tromsø International Filmfestival. LSG group helped in the organization and conduction of the event. As one of the benefits, LSG group was mentioned on the partners' page on the festival webpage at <http://tiff.no/en/partners>.

7.3 Digital Presence for MTF

The following list of necessary activities has been created to launch the process of digital presence improvement of the case company. Following activities must be developed separately; however, implemented under the one strategy.

- Web-site re-design
- Social media pages

- News and discussion forum
- Linking of parts

From above, the website of MTF is not well designed neither functional. The only reason of that is that the web site stayed without renovation for many years. The design decisions are obsolete. Some scripts are not working properly. The mobile version of the website is simply absent, not mentioning responsiveness. However, MTF is one of the companies that is the part of fishery holding Norebo. Norebo web site can be found at <http://norebo.ru/> is well-designed and fully functional. The website is a modern online presentation of the group of the companies. Even English and mobile versions are fully functional and well-made. The idea of renouncement of MTF web site can arise and stay just with Norebo web site. However, MTF is a developed brand with long history, known by many people and trusted. Additional developments should be done to enter into the digital era. In addition, Norebo holding was the first to enter MSC fisheries certification program from Russian fishery companies but the MSC certification is not advertised by the holding and inside companies.

Social media presence need to be created from scratch. The social media pages can be done by cooperation with IT and Marketing departments of MTF. The content collection can be done by the fishermen and the employees that are involved in the fishing process. The content can be edited by the marketing department and published. The content will have relatively low cost and will be everlasting for the company. The main idea of the social media is the union of people with the common interest. The business of MTF can become a reunification topic for many people from different companies or even industries.

To raise the interests to MTF Company and to provide useful tool for news and discussions among specialists of the industry, a news and discussion forum can be created. The forum will present the most valuable news of the fishery industry and provide a space for the news discussion. The forum will be monitored and updated by MTF Company. However, the forum will involve people from other companies as well as usual visitors and potential customers. The forum can be a substitution for resource called Fish Resources that stopped its functioning few years ago. Presently, all the employees receive their newsletter every morning

with the main news. With the forum, the employees will need just to visit the website to see all significant news concerning the company. Moreover, closed chatrooms can be created to discuss with company employees. Currently, employees mostly use several web resources. FishNews web site that can be found at <http://fishnews.ru/>; Federal fishery Agency at <http://fish.gov.ru/> and <http://bbtu.ru/> and B-port the news web site at <http://www.b-port.com/>. Nevertheless, the represented resources do not have possibility of discussion and do not fully match the list of the company's relevant news. Even though, the forum will not perform a marketing function, it will still attract people and complete the social function of the company.

Finally, the linking of all the presented actions must be done to achieve a complex presence of MTF Company. The connection of the pieces can be made by the actual mentioning of the sources and redirection of the users from one to another. In addition, a repetition of the content should be avoided, even though the mentioning or critical news can be repeated. Moreover, since MTF is involved into many social important projects, the company should take care of reporting about projects and raising resonance and importance of such projects, as well as presentation of all partnerships. Integration of the strategy does not need to be done at once. The gradual creation and integration of actions will influence positively on the company's digital presence.

8 CONCLUSION

The speed of the modern world business changes with the speed of technology development influence differently on the companies. Businesses struggle to adjust their business models and processes to achieve the best results and outcomes. However, the only way of achieving the success in such conditions is constant development. The improvements and benefits brought about digitalization are always connected with the challenges for the companies. Ignoring digitalization by the company will slowly drive this company out from the market.

The case company for the study understands the importance of changes and started the digital transformation. The case company is on the very beginning of digitalization journey; a set of additional recommendations and examples have been developed for the case company. The study provided clear reasons and techniques for the company digitalization. Possible solutions have been developed and presented in the study. There are many companies that are on the same stage of digital transformation as the case company. The results of the study can be applied to the other companies as well.

Selected business processes analysis showed the opportunity for improvements in the process flows. The processes still have good performance and will be functional in a close future. However, with the time development will be necessary. New sales process for the case company can increase revenue generation and efficiency of work in the sales department. Re-designed recruiting process is able to bring most talented candidates to the case company. On the other hand, automated activities of redesigned processes will release the time of employees that can be redistributed to other important activities that are not carried out.

The survey that was conducted in the case company revealed the necessity of regulations of mobile device use concerning corporate tasks. The analysis of models of mobile device integration into the working environment exposed possible challenges and necessary measures of overcoming the challenges.

Main threat for the model integration is a security of the corporate and personal data. Nevertheless, an appropriate preparation and intelligent integration will minimise the security risks. On the other hand, BYOD or other model integration will increase an efficiency and wellbeing of the employees.

Digital presence analysis indicated absence of a digital strategy of the case company. Presently, the digital presence of the company in the Internet is a must; however, only gradual development can positively influence on the case company business. Set of recommended actions for the case company was developed, including renovation of web site and social media strategy launch.

The study goals have been achieved; however, there are several boundaries that complicates the research result implication. Firstly, the case company business structure involves many partners and relations with other companies that must be reviewed before any change in the company would be made. Secondly, even though the most of the existing case company's policies and regulations have been considered, there are always extra documents to review. Thirdly, the employees' misunderstanding of digitalization aspects can lead to dissatisfaction in the working life change. Lastly, the study is considered as a development work with recommendations and might be not implemented fully.

The technology development will broaden the study area of the current topic with a time and additional aspects can be researched. Moreover, other research could be done to specify and develop the parts of the thesis work. The actual implementation of the solutions will need to be done by the case company. For the case company, to finish digital transformation, long way of development need to be completed. The business processes' redesign can be executed. By an example of redesign of selected business processes other business processes can be redesigned. Presented digital presence strategy and mobile device model can be integrated.

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APPENDICES

- Appendix 1. Interview transcript with D. Starkov, CEO at MTF
- Appendix 2. Case company mobile device survey
- Appendix 3. Survey results

INTERVIEW TRANSCRIPT WITH D. STARKOV, MTF CEO

Interviewer: What is your opinion on overall increase of technology influence on processes of business performing?

Interviewee: “That’s increase business efficiency and reduce costs.”

Interviewer: Is there any need of technology introducing into MTF Company? (Which?)

Interviewee: “All necessary technology already introduced into the company. Now we concentrate on education of employees to work with new software. “

Interviewer: How would you evaluate equipment and modernity of MTF Company in compartment with other companies of industry?

Interviewee: “In my opinion, MTF Company takes leading position on that topic.”

Interviewer: Are there any processes in the company that need to be improved or changed?

Interviewee: “Currently we are finalizing next software products: Amos and 1C Management”

Interviewer: Do you think that mobile technologies can improve corporate environment of MTF? Increase in productivity, increase of employee comfort and so on.

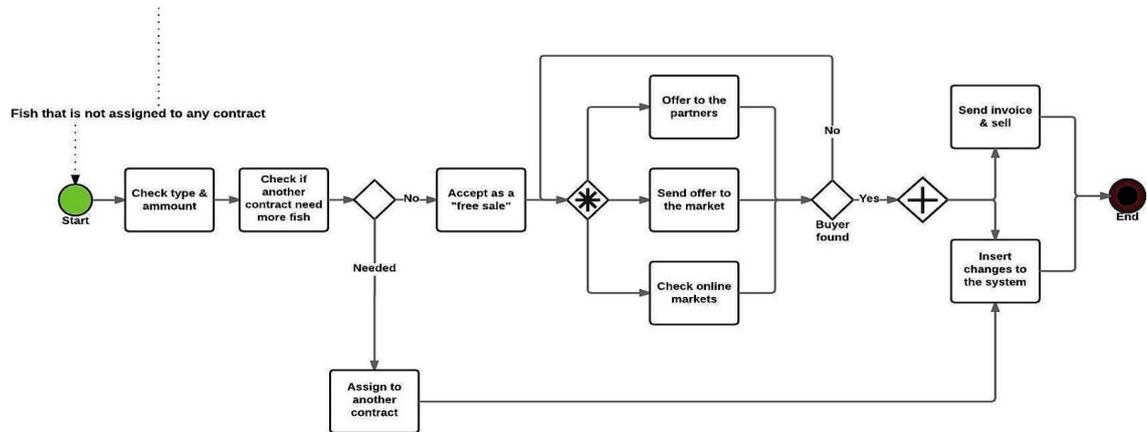
Interviewee: “I am not aware of such technology, yet. Most probably, there are some technologies that can raise the employees’ productivity”

Interviewer: For now, Murmansk Trawl Fleet Company do not acquire enough of digital presence. Do you think that is a disadvantage of the company or it is dos not matter? Can you see possibility of the company improvement in it?

Interviewee: “We are well presented in the internet under our holding -Norebo.”

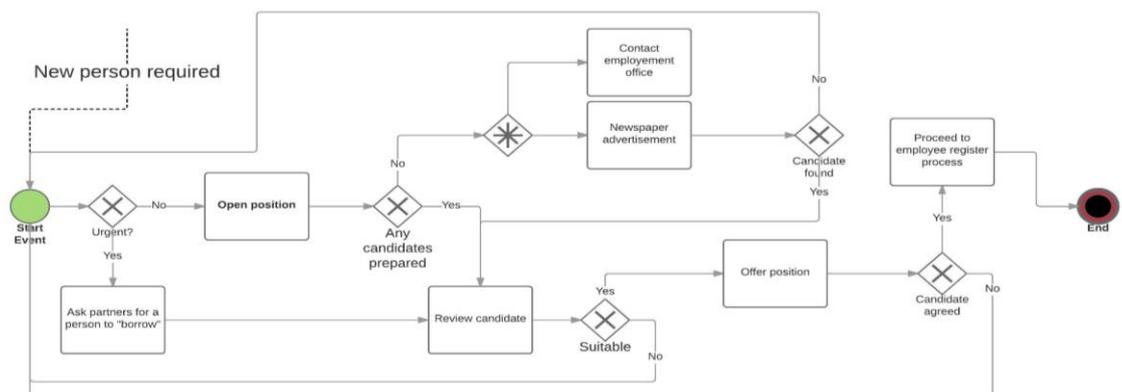
Interviewer: Possible image of sale of the fish that was caught but the sales contract on it was not made process in MTF represented next. Does the image look correct? Are there any changes needed to the image?

Interviewee: “In general, the image corresponds the reality”



Interviewer: Possible image of recruiting process in MTF represented next. Does the image look correct? What kind of changes need to be done to approximate the image to reality?

Interviewee: "In general, the image corresponds the reality. Firstly, we rarely contact employment office (usually newspaper and internet resources). Secondly, before 'Registration of an employee' I would include 'Registration of an employee for 3 months' trial period' and just after that 'Registration of the employee as a permanent worker.'"



Interviewer Shamray R.E.

Interviewee Starkov D.A.

CASE COMPANY MOBILE DEVICE SURVEY

Mobile device usage survey

1. Do you have smartphone or tablet?

Tick all that apply.

- Yes, smartphone
- Yes, tablet
- No

2. What kind of smartphone do you have?

Tick all that apply.

- Samsung, HTC, Asus, Lenovo, LG (Android)
- Apple, Iphone (ios)
- Windows, Lumia, Nokia (Windows)
- Other: _____

3. Do you use mobile internet?

Mark only one oval.

- Yes
- No

4. Do you have mobile access to corporate email?

Mark only one oval.

- Yes
- No

5. Do you use your device for file transfer?

Mark only one oval.

Yes

No

6. Which network provider you use?

Mark only one oval.

Bilain

MTS

Tele2

Megafon

7. Do you have messenger installed (Skype,Viber,Whatsapp,...)?

Mark only one oval.

Yes

No

8. Do you use mobile bank app on the device?

Mark only one oval.

Yes

No

RESULTS OF MOBILE DEVICE SURVEY IN MTF

Do you have smartphone or tablet?	What kind of smartphone do you have?	Do you use mobile internet?	Do you have mobile access to corporate email?	Do you use your device for file transfer?	Which network provider you use?	Do you have mess engers installed(Viber, Whats app, ..)?	Do you use mobile bank app on the device?
Smartphone & Tablet	Android	Yes	Yes	Yes	Bilain	Yes	Yes
Smartphone & Tablet	Android	Yes	No	Yes	MTS	Yes	Yes
	Windows						
Smartphone	Android	Yes	Yes	No	Megafon	Yes	No
Smartphone & Tablet	iOs	Yes	No	Yes	Bilain	Yes	Yes
Smartphone	Android	Yes	Yes	Yes	Tele2	Yes	No
Smartphone	Android	Yes	No	No	Bilain	Yes	No
Smartphone	Android	Yes	Yes	Yes	Megafon	Yes	No
Smartphone	iOs	Yes	No	Yes	Megafon	Yes	Yes
Smartphone & Tablet	Android	Yes	No	Yes	MTS	Yes	No
Smartphone & Tablet	Android	Yes	No	Yes	Megafon	Yes	Yes
Smartphone & Tablet	iOs	Yes	No	Yes	Megafon	Yes	Yes
Tablet	Android	No	No	No	Megafon	Yes	Yes
Smartphone	Android	Yes	No	No	MTS	No	No
Smartphone	Android	Yes	Yes	No	Bilain	Yes	No
Smartphone & Tablet	Android	Yes	Yes	Yes	Tele2	Yes	Yes
	iOs						
Smartphone & Tablet	Android	Yes	Yes	Yes	MTS	Yes	Yes
	iOs						
Smartphone	iOs	Yes	Yes	Yes	MTS	Yes	Yes
Smartphone	Android	No	Yes	No	MTS	Yes	No
No		No	No	No	Megafon	No	Yes

Smartphone	Android	No	No	No	MTS	Yes	Yes
Smartphone	iOs	Yes	Yes	Yes	Tele2	Yes	No
No							
Smartphone & Tablet	Android	Yes	No	Yes	MTS	Yes	Yes
Smartphone	iOs	Yes	No	Yes	MTS	Yes	Yes
No							
Smartphone	iOs	Yes	No	Yes	Megafon	Yes	No
Smartphone	Android	Yes	No	Yes	MTS	Yes	Yes
Smartphone	Android	No	No	No	Tele2	Yes	Yes
Smartphone & Tablet	iOs	Yes	No	Yes	MTS	Yes	Yes
Smartphone	iOs	Yes	Yes	Yes	Megafon	Yes	Yes
No							
Smartphone & Tablet	Android	No	Yes	Yes	Megafon	Yes	No
	iOs						
Smartphone	Android	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone	Android	Yes	No		Megafon	Yes	Yes
Smartphone	Android	Yes	No	Yes	MTS	Yes	Yes
Smartphone & Tablet	Android	Yes	Yes	Yes	MTS	Yes	Yes
Smartphone	Windows	Yes	No	Yes	Megafon	Yes	Yes
Smartphone & Tablet	iOs	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone	Windows	Yes	No	Yes	Tele2	Yes	No
Smartphone	Android	No	No	Yes	Bilain	Yes	No
Smartphone	iOs	No	No	No	Tele2	Yes	Yes
Smartphone & Tablet	Android	Yes	Yes	No	Tele2	Yes	Yes
Smartphone	Android	Yes	No	No	Megafon	Yes	Yes
	iOs						
Smartphone & Tablet	iOs	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone	Android	No	Yes	Yes	Bilain	Yes	Yes
Smartphone & Tablet	Android	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone & Tablet	iOs	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone	Android	Yes	Yes	Yes	MTS	Yes	No

Smartphone & Tablet	Android	Yes	No	Yes	Megafon	Yes	Yes
No							
Smartphone	iOs	Yes	No	Yes	Tele2	Yes	Yes
Smartphone	Android	Yes	Yes	No	Megafon	Yes	Yes
Tablet	Android	Yes	No	No	MTS	Yes	No
Smartphone		Yes	No	No	MTS	Yes	Yes
Smartphone & Tablet	Android	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone	Android	Yes	Yes		Megafon	Yes	Yes
No							
Smartphone	Android	Yes	No	No	Megafon	Yes	Yes
Smartphone	Android	No	Yes	No	MTS	Yes	No
Smartphone	Android	Yes	Yes	Yes	Megafon	Yes	No
Smartphone	iOs	Yes	Yes	No	Bilain	Yes	Yes
Smartphone	Android	No	No	No	MTS	No	No
Smartphone	Windows	No	No	No	Megafon	Yes	No
No							
No							
Smartphone	Android	Yes	No	Yes	Bilain	Yes	No
No							
Smartphone	Android	Yes	No	No	Megafon		No
Smartphone	iOs	Yes	Yes	No	Megafon	Yes	No
Smartphone & Tablet	Android	Yes	No	Yes	Megafon	Yes	Yes
	iOs						
Smartphone	Android	No	No	Yes	Megafon	Yes	No
Smartphone & Tablet	Android	Yes	No	Yes	MTS	Yes	Yes
Smartphone	Windows	Yes	Yes	No	Megafon	Yes	No
No							
Smartphone & Tablet	Android	Yes	Yes	No	Megafon	Yes	No
Smartphone	Android	Yes	No	No	Megafon	No	No
Smartphone & Tablet	iOs	Yes	No	Yes	MTS	Yes	Yes
No							
Smartphone & Tablet	iOs	Yes	Yes	Yes	Megafon	Yes	Yes
Smartphone	Android	Yes	No	Yes	Tele2	Yes	Yes