

**Czech University of Life Sciences Prague**

**Faculty of Economics and Management**

**Department of Information Technologies**



## **Bachelor Thesis**

**Impact of digitalization on the Russian Tourism  
Industry**

**Anastasiia Dogadina**

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# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

## BACHELOR THESIS ASSIGNMENT

Anastasiia Dogadina

Economics Policy and Administration  
Business Administration

Thesis title

**Impact of digitalization on the Russian tourism Industry**

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### Objectives of thesis

The main objective of the thesis is to analyze impacts of digitalization in the tourism sector in Russia.

The partial goals of the thesis are such as following:

- to substantiate current challenges and success factors in the Russian tourism industry;
- to conduct a comparative study of implementation of digitization of tour operators in Russia;
- to formulate recommendations on digitalization for tour operators.

### Methodology

Methodology of the thesis will be based on literature study and a qualitative study. Theoretical part of thesis will be built on secondary data research, such as scientific publications and articles. In the practical part, the author will design and execute interviews with the tour operators in Russia. The results of the interviews will be coded and interpreted. Based on the synthesis of theoretical knowledge and results of the interviews, the recommendations and conclusions of the thesis will be formulated.

**The proposed extent of the thesis**

30-40 pages

**Keywords**

Tourism industry, tour operators, digitalization, Russia, interview.

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- BULGAKOV, A. L. Big data and travel industry. In: Financial and Economic Tools Used in the World Hospitality Industry: Proceedings of the 5th International Conference on Management and Technology in Knowledge, Service, Tourism & Hospitality 2017 (SERVE 2017), 21-22 October 2017 & 30 November 2017, Bali, Indonesia & Moscow, Russia. CRC Press, 2018. p. 265.
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## **Declaration**

I declare that I have worked on my bachelor thesis titled "Impact of digitalization on the Russian tourism Industry" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break any copyrights.

In Prague on 12.03.2022

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# Impact of digitalization on the Russian Tourism Industry

## Abstract

The rise of digital technology in the travel industry is forcing companies in Russia to adapt to new realities. They are trying to gather information about their customers in order to improve their offerings, keep the up-to-date reservations software. However, many experts believe that this process is not yet fully carried out. The study also explores the various advantages and risks of implementing digitalization in the tourism industry. The concept of digitalization is also considered as an important factor in the creation of added value for enterprises. Many surveys reveal that despite the progress of digital technology in the travel industry, the average Russian tourist still prefers to buy tours from companies that offer specialized services. Therefore, the practical part of this paper was conducted to analyze the main challenges of tour operators and the digital measures they take to stay profitably competitive. The results of the study reveal various forms of digital transformation in the tourism industry on the example of tour operators of Russia. Subsequent conclusions and recommendations have been specified.

**Keywords:** tourism industry, tour operators, digitalization, Russia, obstacles, measures, interview.

# Dopad digitalizace na ruský turistický průmysl

## Abstrakt

Vzestup digitálních technologií v cestovním ruchu nutí společnosti v Rusku přizpůsobit se nové realitě. Snaží se shromažďovat informace o svých zákaznících, aby mohli zlepšovat své nabídky, udržovat aktuální rezervační software. Mnoho odborníků se však domnívá, že tento proces ještě není plně proveden. Studie také zkoumá různé výhody a rizika implementace digitalizace v cestovním ruchu. Koncept digitalizace je rovněž považován za důležitý faktor při vytváření přidané hodnoty pro podniky. Mnoho průzkumů ukazuje, že navzdory pokroku digitálních technologií v cestovním ruchu průměrný ruský turista stále upřednostňuje nákup zájezdů od společností, které nabízejí specializované služby. Praktická část tohoto dokumentu byla proto provedena s cílem analyzovat hlavní výzvy cestovních kanceláří a digitálních opatření, která přijímají, aby zůstali ziskově konkurenceschopní. Výsledky studie odhalují různé formy digitální transformace v cestovním ruchu na příkladu touroperatorů v Rusku. Byly upřesněny následné závěry a doporučení.

**Klíčová slova:** cestovní ruch, tour operátoři, digitalizace, Rusko, překážky, opatření, rozhovor.

# Table of content

<b>1</b>	<b>Introduction .....</b>	<b>10</b>
<b>2</b>	<b>Objectives and Methodology .....</b>	<b>12</b>
2.1	Objectives.....	12
2.2	Methodology .....	12
<b>3</b>	<b>Literature Review.....</b>	<b>13</b>
3.1	Current state of tourism in the Russian Federation.....	13
3.1.1	Comparison of potential and challenges for the tourist development among Russian regions.....	15
3.2	Overview of digitalization and its elements.....	17
3.2.1	Communication.....	17
3.2.2	Process optimization .....	18
3.2.3	Data curation.....	18
3.2.4	Key stakeholders.....	19
3.3	Impacts of digitalization on tourism.....	20
3.3.1	Big Data implementation .....	20
3.3.2	Digital performance of tour operators and used platforms .....	25
3.3.3	Customer relationship management.....	27
3.4	Summary of main findings and research questions formulation.....	29
<b>4</b>	<b>Practical Part.....</b>	<b>31</b>
4.1	Method .....	31
4.1.1	Sample of interviewees .....	31
4.1.2	The survey.....	31
4.2	Qualitative data analysis.....	32
4.2.1	Coding.....	32
4.2.1.1	Word Frequency .....	35
4.2.1.2	Word Tree.....	36
4.2.1.3	Qualitative Hypothesis Testing .....	37
<b>5</b>	<b>Results and Discussion.....</b>	<b>39</b>
5.1	NVivo coding results.....	39
5.2	Interview results .....	39
5.3	Discussion .....	46
5.4	Recommendations .....	46
<b>6</b>	<b>Conclusion.....</b>	<b>48</b>
<b>7</b>	<b>References .....</b>	<b>49</b>



<b>8 Appendix .....</b>	<b>52</b>
Open survey questions for tour operators of Russia .....	52

## List of pictures

Figure 1. The number of tour packages sold to the population for 2015 - 2020, in thousands	14
Figure 2. The knowledge destination framework .....	24
Figure 3. Most requested CRM Features in travel management software.....	28
Figure 4. Explore Diagram .....	32
Figure 5. Codes compared by percentage coverage.....	33
Figure 6. Codes compared by number of coding references .....	34
Figure 7. Word frequency .....	35
Figure 8. Word Tree (difficult) .....	36
Figure 9. Word Tree (slow) .....	<b>Error! Bookmark not defined.</b>
Figure 10. Word Tree (slow) .....	<b>Error! Bookmark not defined.</b>
Figure 11. Question 1 .....	39
Figure 12. Question 2.....	40
Figure 13. Question 3.....	41
Figure 14. Question 4.....	42
Figure 15. Question 5.....	43
Figure 16. Question 6.....	43
Figure 17. Question 7.....	44
Figure 18. Question 8.....	45

## List of tables

Table 1. The ways travel businesses generated insights for their customers.....	22
Table 2. Coding matrix .....	37
Table 3. Crosstab query .....	38

# 1 Introduction

In modern conditions of informatization and computerization, the rapid development of the tourism business in Russia requires a new approach to information processing and decision-making. The activity of organizational systems in the tourism business, accompanied by the process of generating a large amount of information and requiring prompt processing for decision-making, which can be complicated by a number of factors, such as the transfer of incomplete, inaccurate or erroneous information, the variability of the characteristics and operating conditions of the systems themselves, the presence of a human factor, i.e., the participation of people with freedom of action (LAVROVA, 2018).

Information technology (IT) is a systematically organized set of methods and means for implementing the operations of collecting, registering, transferring, accumulating, searching, processing and protecting information based on the use of advanced software, telecommunications, hardware (technical) means.

Modern information technologies are based on the use of computers connected in local, regional or global computer networks to generate, collect, exchange and store commercial information. The main problems of introducing information technologies in the Russian tourist industry are a significant number of travel agencies with different levels of automation, the impossibility of instant payment for travel services ordered by the client via the Internet due to the lack of a unified electronic payment system in the country (PODDUBNAYA, 2019).

The main component of a successful CRM system is the storage of all the details related to the interactions with its customers. This ensures that the system can identify the relationships between its users and their data. One of the problems that a relationship system faces is the integrity and security of its data. This is especially true when it comes to the sensitive information that is collected about a client (KARIM, 2021).

Most of the great companies in the world rely on their own unique characteristics to compete in the market. One example of this is the use of new technologies and programs to attract new customers.

Developing a program that will allow the manager to keep track of the client 24 hours a day is an essential step in this process. Currently, most companies rely on paper reminders and phone calls to keep track of their customers. Therefore, it is imperative to understand the current state of tourism in Russia and determine ways in how digitalization can help to enhance the industry.

After the introduction, the paper continues by presenting the objectives and methodology of the thesis. In section three there will be outlined the literature review with an overview of the current state of Russian tourism, the definition of digitalization, including its elements and the role of big data in the tourism sector, as well as ways the industry can benefit from digitalization. Furthermore, the perspective on successful Customer Relationship Management through digitalization will be discussed. In section four there will be presented a survey about the effectiveness of digital performance in a workplace among tour operators in various Russian regions. In section five the results of the questionnaire will be examined and accordingly discussed. Lastly, in the sixth section, the conclusion of the paper will be carried out.

## **2 Objectives and Methodology**

### **2.1 Objectives**

The main objective of the thesis is to analyze the impacts of digitalization on the tourism sector in Russia. There are also partial goals of the thesis. Firstly, it is crucial to substantiate current challenges and success factors in the Russian tourism industry. Secondly, there is a necessity to conduct a comparative study of the implementation of digitalization in the Russian tourism industry. Moreover, it is important to formulate recommendations on digitalization for tour operators in Russia. Finally, the research questions should be formulated and subsequently answered.

### **2.2 Methodology**

The methodology of the thesis will be based on a literature study and qualitative analysis. The theoretical part of the thesis will be built on secondary data research, such as scientific publications and articles. In the practical part, the author will design and execute interviews with the tour operators in various regions of Russia. The results of the interviews will be coded and interpreted. Based on the synthesis of theoretical knowledge and results of the interviews, the recommendations and conclusions of the thesis will be formulated.

## **3 Literature Review**

### **3.1 Current state of tourism in the Russian Federation**

One cannot deny that tourism plays a substantial role in a country's economy, and Russia is no exception. Its tourist business is developing swiftly. Competing with the oil industry, tourism remains one of the top spots in terms of the importance of the contribution to the economy. Additionally, tourism has great input on the regions. It is exceptionally important for those constituent entities, which are distant from industrial centers as it provides an increase in workplaces amount, broadens local citizens' horizons due to cultural exchange and much more. Currently, the vigorous development of electronics and computer technologies all over the world and the introduction of automatization requires the tourism industry to keep up, making it also an area of international information technologies and processes (FROLOVA, 2020).

In spite of Russia's potential as a tourist destination, tourism infrastructure in Russia requires enhancement. Russia was put in 45th place out of 141 countries in the WEF Travel and Tourism Competitiveness Report 2015, however, the quantity of hotel rooms per 100 people is among the lowest. Furthermore, the allocation of hotels throughout the country remains very uneven, as 54 percent of hotel room capability is concentrated in two Russian megapolises: Moscow and Saint Petersburg (BREL, 2019).

Therefore, nowadays, the main problem in the Russian tourism sphere is a lack of infrastructure. There are many other subjects of the Russian Federation that have huge tourist potential and would be fascinating for various types of tourism for both foreigners and its citizens. A further issue is the general shortage of accommodation possibilities which results in a lack of competition. Consequently, it leads to a significant annual rising in prices for hotel services. And here comes another problem, as domestic tourism services are drastically lagging behind in comparison with the foreign ones. No wonder Russian citizens are reluctant to travel across their country. Sadly, but Russia still loses in the international competition for the attraction of tourists (SHERESHEVA, 2018).

In today's Russia, there is a change of focus from "outbound tourism" to "domestic tourism". The existing economic and political situation impacts this process. The 2014-2015 decrease in profits caused by an economic crisis as well as the devaluation of the Russian ruble and Western sanctions downsized the opportunities for Russians to travel abroad so the amount of people preferring domestic destinations is growing (FROLOVA, 2020). Hence, the urgent

need to considerably improve the level of the Russian tourism industry is on the agenda now more than ever before.

The situation has undergone a new twist after 2019, when the worldwide pandemic due to COVID-19 has started and made such a drastic impact on the tourism sector, that even two years later the industry is still far from recovery: “In the previous decade, the Russian tourism industry has shown steady development. But in 2020, due to the consequences of the COVID-19 pandemic, the situation is close to disaster” (SHERESHEVA, 2020). Nevertheless, the pandemic has played a role in boosting Russian domestic tourism, as due to current restrictions a lot of foreign destinations remain closed for most Russian citizens. Consequently, this leads to increased demand on the local tourism sector, as in 2020 first time in 5 years the amount of domestic tourism has outgrown the outbound (see Figure 1).

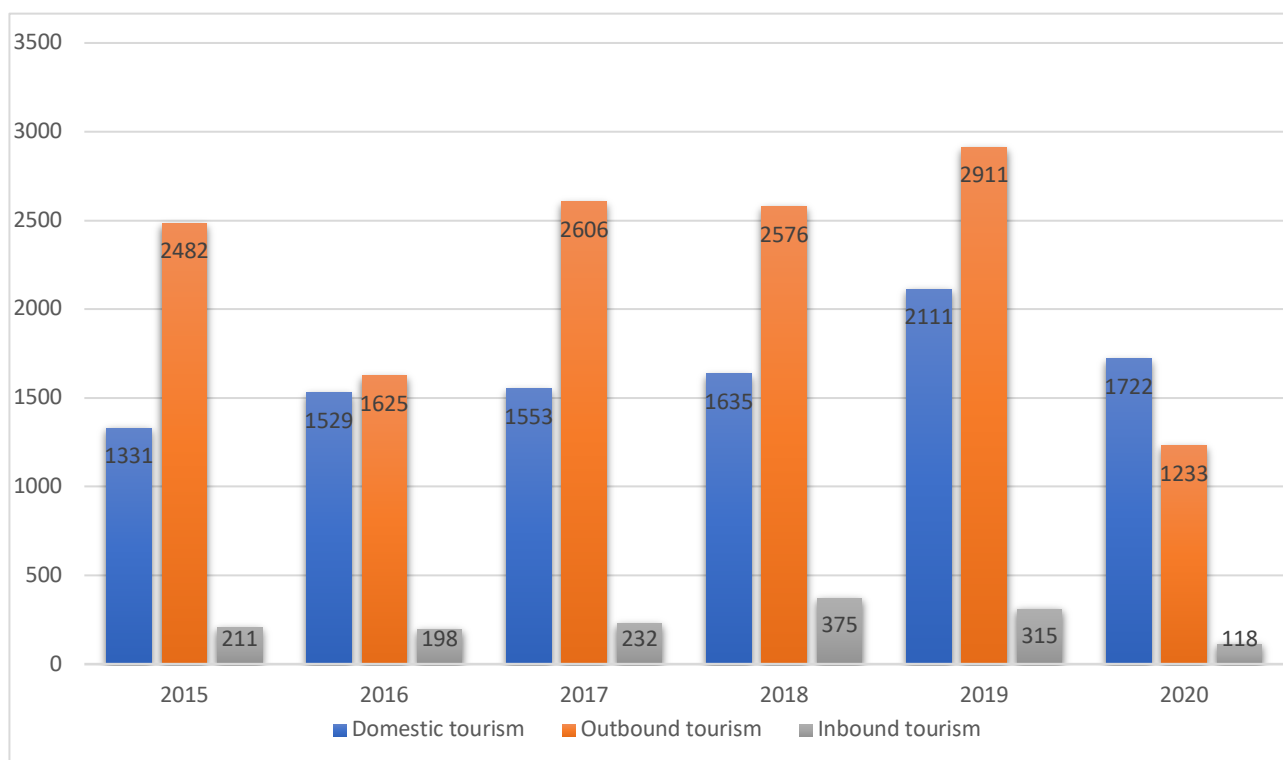


Figure 1. The number of tour packages sold to the population for 2015 - 2020, in thousands

Source: Statista.com, 2022

At the same time, the low ruble rate makes better opportunities for foreigners to visit Russia and stimulates inbound tourism. Therefore, Russia’s attention is now greatly drawn to the aforementioned new tendencies as they give the country a lot of opportunities to boost its advancement. The government encourages the development of domestic tourism through

various state programs and strategies. For instance, a significant rise in the various entrepreneurial activities, competitions and investments in tourist infrastructure become more actively performed (GREGORIC, 2019).

In this regard, there is a need to continue pursuing these active state measures aimed at establishing conditions for the sustainable modernization of the tourism industry in the country. Meanwhile, it is also important to perform a strategy of tourism development in conformity with the principles and trends in the world tourism industry. It is also crucial to provide long-term investments in this area and an appropriate affable investment climate, along with creating new directions in the development of tourism. In addition, there is a necessity to train more competent and skillful personnel at all levels in an essential amount for the industry and to promote Russian tourism in both national and worldwide markets (SHERESHEVA, 2020).

At the present stage, tourism improvement is characterized by the widespread establishment of innovative technologies. They are displayed in the enhancement of all components of the international tourism framework, reinforcing and broadening diversification of tourist activities that stumble upon the growing and intractable needs of modern humans in a diversity of recreation and leisure activities. Therefore, effective measures need to be taken concerning the issues of qualitative and quantitative increase in the hotel industry in both the capital and in Russia as a whole (BUSHUEVA, 2020).

To conclude, currently, Russia is struggling with many problems, such as a lack of expertise and managerial skills among the hotel owners, lack of qualified labor, territorial imbalances of the tourist infrastructure, the comparatively low level of services quality, unreasonably high prices on some tourist products, complications with advertising Russia as a popular tourist destination, as well as issues with the tourist management and enterprising functioning. Nonetheless, there are still high hopes for Russia to address the shortcomings and make improvements so that it shows the world what its tourist potential (GREGORIC, 2019).

### **3.1.1 Comparison of potential and challenges for the tourist development among Russian regions**

As was mentioned before, there is an inequality in the infrastructural distribution amongst Russian constituent entities. First and foremost, that is due to historical development. Geographically, there are generally three major tourist regions acknowledged in Russia: The West, Siberia and the Pacific.

The West region includes the European part of Russia, where the majority of the tourist attractions and historic heritages are concentrated, which is also the most progressive in terms

of hospitality and information technologies. Evidently, foreign tourists are mostly attracted to the most recognizable Russian cities: Moscow and Saint Petersburg. The area between St. Petersburg and Moscow is the historical core of the Russian state, so it also gets a lot of attention, along with the Black Sea coast. That is so because tourists are attracted by the pleasant climate conditions, sea and well-preserved cultural and historical monuments. Among them, can be mentioned Novgorod, a historic city that played the role of the Russian political cradle in the early Middle Ages. Other cities important for tourism growth are Tver, Rostov, Jaroslav, Kostroma, Suzdal, while Vladimir and Bogolyubovo contain buildings protected by UNESCO. After the Cold War ended, an increasing tourist visit was recorded in Kaliningrad, located on the coast of the Baltic Sea and has no ground contact with the rest of the Russian state. Kazan and Sochi, together with the Crimea peninsula, are other rapidly developing Russian tourist destinations, attracting the rising attention of incoming tourists (SHERESHEVA, 2018). Thus, the majority of infrastructural development and entrepreneurial activities are happening only in Western Russia, leaving the Eastern part with the outdated and needless sphere of tourism and services. Whilst all labor force, including workable, creative and enterprising young people, is likewise seeking to move to the industrial centers.

Nonetheless, there are many international tourists that show interest in the natural attractions of Siberia, Lake Baikal, Altai Republic and the Far East cities, such as Vladivostok and Khabarovsk. Unfortunately, unlike the much more developed European part, Eastern regions are in desperate need of modernization in almost every aspect connected with tourism and hospitality. That is another reason why domestic tourism is developing slowly. There is a number of restraints typical for most Russian regions: the lack of government support or failure to perform its responsibilities and issues with transport infrastructure development. Even if a region has all required TTI objects (an international airport, a railway station, a bus station), it is still unable to provide good quality of services (GUDKOV, et al., 2018)

Furthermore, other existing tourist challenges in Russian regions that need to be addressed include shortage of good-quality hotel and recreational infrastructure, low government expenditures on the sector restricts an overall promotion of tourism facilities and specific regions in the global market. Moreover, the problem of a strong deficit of qualified personnel capable of offering high-quality service to tourists is particularly acute in the regions. Another downside is that there is also no efficient regulatory agenda to attract private investments to the sphere. The majority of entrepreneurial activity again takes place in the west of Russia, therefore lots of regions lack the required environment of entrepreneurship for expanding the



tourism sector. Many Russian regions are hardly attractive to investors or tourists because they either have no strategic concept of tourism development, or their strategies are simply not well-devised and implemented. Regions are given to spontaneously developing areas designated for tourism-related activity. What the regional authorities lack is an understanding of the potential for attracting visitors and their impact on the regional economic development. In many cases, there is no strategy, no feasibility study, nor even a consistent or professionally elaborated plan enabling investors to see just how attractive the region is and the degree of investment risk involved (BREL, 2019).

## **3.2 Overview of digitalization and its elements**

Digitalization refers to the process of transforming various aspects of a business model into more digital ones. This often involves turning physical processes and interactions into digital ones.

Although it involves the digitization of information, it also refers to the process of transforming data into actionable insight. While it's usually focused on systems of record and processes, digitalization also involves the use of digital platforms and methods.

Being able to implement disruptive technologies requires a team of experts and a certain level of expertise. Developing a successful digital transformation strategy involves various components that are necessary to implement it successfully (YILDIRIM, 2021).

### **3.2.1 Communication**

Digital communication refers to the various ways that organizations communicate with their customers and employees. In order to effectively utilize these tools, digital marketing professionals must have the necessary skills and knowledge to create and implement effective strategies.

The rapid emergence and evolution of digital media have changed the way we communicate within organizations. On the one hand, it has given us access to vast amounts of information, which makes it difficult to keep track of important information. Therefore, digitalization can help improve the dissemination of information more efficiently. Unfortunately, it can also lead to over-reliance on technology (CANTONI, 2018)

The traditional method of communication is no longer prevalent. Instead, employees are now using various tools and methods to communicate. This has given rise to the home office culture. The ability to effectively communicate with all of the team members and departments is a must for businesses. Through digital channels, employees can reach out to each other in

real-time to keep up with the latest news. Aside from increasing efficiency, digital channels also play a vital role in attracting and retaining skilled workers.

In many ways, digitalization has changed the way we communicate. On the one hand, it allows us to exchange more information and collaborate more effectively. On the other hand, it can be very challenging to implement and manage the changes brought about by this new environment (KOLUKIRIK, 2021).

### **3.2.2 Process optimization**

To successfully implement digital innovation, companies need to regularly review their processes and make changes to improve them. This process of digitalization involves converting traditional processes into digital ones that are more efficient, productive, and satisfying the needs of their customers.

Digitizing processes means taking the same approach to them as it would be done to an online business. Instead of just documenting them, digital platforms help streamline and improve these processes. Operational processes are those that support a specific product or service, while management processes are those that oversee the overall operations of the company (DENNER, 2018).

Before implementing digital processes, analyze the current situation of the company. This will help to create a strategy that will enable enterprises to start small. Having the right team of experts is also important to get the most out of digital innovation. Aside from being able to understand the various advantages of digital technology, they should also be able to implement it efficiently. A good idea also to analyze the company's current relationships with its various departments and customers to see how digital innovation can help them (SKOTARENKO, 2019).

To sum up, the digital transformation strategy should also take into account the various goals and objectives of the company. It should also ensure that all processes are optimized so that they can support the company's goals. The value of digitizing processes can vary depending on the business model and the start point. To start, organizations should establish a pilot program and then it will allow them to scale rapidly (POLYANIN, 2020).

### **3.2.3 Data curation**

Digitization is a process that involves converting physical records such as text, audio, and video, into digital forms. This is very important when working on projects that require directions and expansion. One of the main reasons why businesses are moving towards digital

transformation is to address their weak spots. By analyzing data, areas of improvement can be identified that a company and customers can use regularly.

According to HBR, consumers are more likely to shop for simple solutions instead of burdensome ones. Hence, it is important for businesses to analyze their data and develop a strategy that will help them improve their offerings. Moreover, modern data centers are now equipped with artificial intelligence systems that can keep up with the increasing amount of data. This technology is also helping minimize downtime and conserve energy (CAMERON, 2021).

To conclude, Data digitization is a full-circle moment for businesses. In just a few decades, the world has changed dramatically due to the amount of data that has been created. The main reason why data centers are being modernized is to increase efficiency. With the endless amount of information at our disposal, doing research has been made easier (RITTER, 2020).

### **3.2.4 Key stakeholders**

The key to making digital maturity a reality is having people who are open to experimenting and taking risks. These individuals can also share their learnings and successes with the rest of the organization. Change agents are individuals who are responsible for driving digital innovation within an organization and they typically work in various roles and functions:

- Brand or marketing teams are internal business stakeholders that are responsible for developing digital initiatives that address their specific business needs.
- Digital Center of Excellence (DCoE) is a place where digital planners or managers can help business stakeholders plan and execute digital initiatives.
- Outside partners, such as agencies or consultancies, which introduce top levels of specific expertise and knowledge to digital initiatives (MAZUR-WIERZBICKA, 2021).

The roles of these three individuals are clearly defined as long as they have a clear brief in place. A digital initiative needs to be able to adapt to the changes brought about by the rapid emergence and evolution of digital platforms.

Having a clear brief and an experienced external partner at the start can help avoid conflicts of interest. Doing so can also help avoid wasting time and resources on a consultation that could be inappropriate. Furthermore, having an external partner can also help avoid getting bogged down in the politics and complexity of the project. It can save time and resources by sharing a draft brief with a trusted external partner. The latter allows for a shorter time horizon and lower investment, while still focusing on measuring the potential outputs (KOLUKIRIK, 2021).

To summarize, change agents can bring together various internal stakeholders and select the right external partners to execute a digital initiative. The process of developing and advancing digital maturity involves carrying out a skill assessment. This can help identify potential gaps and find ways to address them (CAMERON, 2021).

### **3.3 Impacts of digitalization on tourism**

The travel industry is highly complex with multiple players and systems interacting with each other at every given point of time for the smooth functioning of the business. Information technologies have always had a great impact on the tourism industry. Nowadays, it is especially crucial for the travel companies to remain profitable and be customer-oriented, actively using Big Data technology.

#### **3.3.1 Big Data implementation**

Big Data serves different purposes, such as planning corporate travel budgets, prediction of consumer behavior, and procurement. That is so, as it helps to personally connect companies and clients, enabling the base for making personal offers and leading to their mutual benefits. Evidently, such interaction provides an increase in the economical aspect of the tourism industry and thus the country's overall economic growth (KOC, 2019)

It is essential for data from various sources to be fused and analyzed using different parameters to increase sales and marketing effectiveness. Part of the data is already presented in the organizational data store. Nevertheless, when this data is mixed with numerous external sources like information from travel companies, online portals, shippers, and particularly, from social media, its value rises significantly, giving bigger insights into customer behavior patterns. This information helps enterprises analyze and forecast trends and customer preferences – their likes & dislikes and attitudes. Later, this can serve as an effective instrument for creating strategies and exposing hidden sales opportunities with the proper decision-making tactics. And, equally importantly, Big Data gives the possibility to identify unknown risks in the tourism market. What is more, information about clients' perceptions provided by social media can considerably help in predictive analytics. However, this data is flooded with real information hidden within an enormous amount of irrelevant data. Hence, this huge flow of data can be analyzed using big data analytics and leveraging the power of technology (YAYLA, et al., 2021)

As for Russia, it is also significantly important to develop the tourism industry, because it would lead to many positive changes in the economy, such as an increase in GDP and a decrease in the level of unemployment. Moreover, there are various prospects of implementing

Big Data technology, as it lets people to use the information in various ways. For instance, it helps with demand and sales forecasting, inventory management, multi-channel campaign optimization, controls revenue outflow and cancelations, and, finally, estimates customer lifetime value and trustworthiness. Moreover, a lot of experts believe that flexible pricing is one of the most vital advantages of any travel company. Luckily, modern ICTs allow enterprises to compare average market prices and similar companies within the same business model. Therefore, according to surveys among the management of some self-governing hotels in Europe, the most crucial aspect that attracts them to online booking is the opportunity to urgently change prices on their resource. This provides a thorough elaboration of the tariff setting scheme and its mobile changes by taking into account consumer demands (TAJEDDINI, et al., 2019)

Nevertheless, Big Data technology can cause some serious risks, as it deals with large and complex data sets. Even a tiny mistake in planning can result in great losses and expenses. Thus, precise control of use, plus an accurate analysis of it needs to be done. Furthermore, the tourism companies have two kinds of big data on their hands – structured and unstructured. The first can be obtained from blogs, websites, and the hotel's private management software. This data is not difficult to gather, however, it counts for only 25% of the overall data. So, 75% that is left is the unstructured data scattered around the internet. It includes posts on Twitter, Instagram and Facebook, user-generated content on Yelp, TripAdvisor and other forums, photos, videos, emails, and any other content that impacts the reputation of the organization. Integrating this unstructured data and getting meaningful insight from it is an extra challenge that travel companies have to face nowadays. However, once managed properly, Big Data opens a lot of new possibilities both for the enterprise and for the client. It helps by adjusting businesses to the needs and particularities of a modern client. That is why there is a high possibility that in the future Big Data is going to be widely spread, as it completely changes the burden of work in the travel industry (SHERESHEVA, 2018). Furthermore, some researchers (FROLOVA, 2020; POLYANIN, 2020) claim positive outcomes of the implementation of new information and communication technologies in any industry, therefore they suggest to all organizations to start exploiting them as soon as possible.

In the meantime, it is not only the fee of transaction that matters, but also the limitations of services companies can offer and cancellation fines for the bargain that matter as well. Thus, only a comprehensive evaluation of these data can help travel companies to show a competent performance in cost optimization. Even the possibility of planning and value optimization of

extra services directly affects a travel budget. Many enterprises note that the simultaneous offer of basic services and some supplementary services drastically increases their profits (KHURRAMOV, 2020)

In continuation, EyeforTravel (2019) in its report analyzed by which means travel organizations originated with the insights for their customers (see Table 1). It shows the significance of acknowledgement of Big Data usage in the tourism industry.

<b>Types of data</b>	<b>Percentage</b>	<b>Number of respondents</b>
<b>Email data</b>	57.1	224
<b>CRM (customer relationship management)</b>	54.8	215
<b>Search engine</b>	50.8	199
<b>Social media profile</b>	49.0	192
<b>Proprietary transaction</b>	40.3	158
<b>Digital and tracking</b>	39.5	155
<b>Third-party transactional data</b>	36.2	142
<b>Loyalty program</b>	35.5	139
<b>Ratings</b>	34.7	136
<b>Geospatial/location</b>	30.9	121
<b>Mobile app</b>	30.6	120
<b>Cookie and pixel tracking</b>	29.3	115
<b>Free text from chat systems and reviews</b>	15.1	59
<b>Internet of things</b>	14.8	58
<b>Imagery and video analysis</b>	8.4	33
<b>We do not gather data on our Customers</b>	7.4	29
<b>Other</b>	5.4	21

*Table 1. The ways travel businesses generated insights for their customers  
Source: EyeforTravel, 2019*

Taking the information above into consideration, it becomes evident that for the majority of organizations in the travel industry, there are available many ways for generating data on their present and potential customers. This data (Table 1) vividly demonstrates that the travel sector gets almost 57.1% of customers' information through data collection from emails, and 49% through social media. Additionally, only 7% of travel firms do not collect data about their clientele. So, those companies that do collect data, make use of Big Data technology in many ways. For instance, the most common is to increase customer volume, to provide more customer-suave experience, to accomplish a competitive benefit, to create new products, and to reduce several costs. In order to understand what kind of benefits from Big Data technology the travel industry might gain, there is an example of its use for the prediction of flight delays. To predict such matters, it is compulsory to incorporate a twisted number of aspects to the model: information about the airline, flight number, departure and arrival airports, technical characteristics of the airplane, weather information, and other facts. All the relevant data needs to be installed and processed in a special program that can deal with such "big data" (WEAVER, 2021).

Moving forward, a company's value is limited by the amount of knowledge within it. Thus, the sustainable development of every industry, as well as (e.g., tourism) regions and destinations relates to the accessibility of knowledge. That is so, as in order to stay competitive it is obligatory to reconfigure 'resources', especially knowledge-based ones (LI, 2018).

Mariani (2019) claims that it is vital to foster knowledge exchange among different firms and to allow effective learning cycles for the application of a networked infrastructure that would collect data based on customers and implement acquired knowledge. Therefore, it is obvious why information and communication technologies (ICTS) are playing such an incommensurate role in the acknowledgement of the full Big Data. Indeed, knowledge destination competitiveness is influenced by the extent to which knowledge formation and application is maintained by ICT-based infrastructures and services (GÖSSLING, 2020).

According to the framework proposed by Li (2020), knowledge-related activities cope with extracting information from different customer- and supplier-based sources as well as with coming up with appropriate knowledge that can be used in the form of intelligent services for customers or destination stakeholders. Thus, the knowledge destination framework distinguishes between a knowledge generation and a knowledge application layer, which is presented in Figure 2.

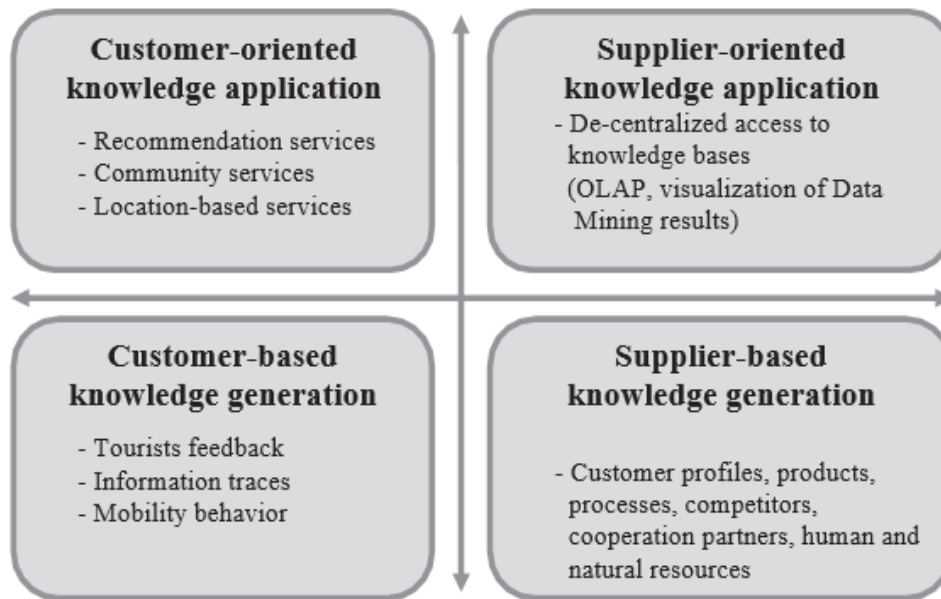


Figure 2. The knowledge destination framework  
 Source: Adapted from Höpken et al., 2014

Returning to the topic concerning the role that ICTs and Big Data plays in the modern tourism industry. Firstly, it is imperative to note that Big Data's emergence is a common trend for all industries, however, particularly for the travel business. The cause for that lies in its strong reliance on Information and Communication Technologies and its general information-intensive base. Secondly, smart tourism also depends on different emerging technologies, such as social media and mobile technologies. In addition, it reflects the requirements of a large group of stakeholders. Subsequently, there is an emerging need to collect and exploit a giant amount of data to develop new qualitative offers. This is very influential to how tourism destinations compete and how this large amount of data and knowledge is processed and transformed into competitive assets (ARDITO, 2019).

What is more, Big Data management arises as a fruitful area for fostering innovative and entrepreneurial businesses and interconnections. It enables to provide a more customer-oriented approach that first and foremost values tourists' needs and desires, preferences, and requirements to improve their experience and achieve better satisfaction (SAMARA, 2020). Tourists are increasingly interested in experiences coming from a variety of goods and services connected to the nature of the region they visit. In this context, tourism operators are called upon to offer "all-inclusive" package solutions able to incorporate a large number of products/services that compose the tourist experience (MARIANI, 2019). Converting



unstructured data into structured numbers is now mandatory to transform the huge amount of data created over the world into organizational value.

Social media and internet tools are instrumental in enabling Smart Tourism Destinations to develop such dynamic connections, as technologies enable them to network. Social media has been considered as a useful and rich source of tourist information. Consisting of gathering online communities of people “to share information, knowledge, and opinions using conversational media”, they constitute an important (GREGORIC, 2019)

To sum the aforementioned up, all this makes Big Data, with its multidimensional perspective, and mainly in terms of value creation, a central subject in the debate on Smart Tourism Destinations. Integral part of Big Data technology development would be such features, as improvement of the decision-making process, enhancement and enrichment of tourists’ experience, new business models and new product/service development and business ecosystem interconnectedness (VECCHIO, 2018).

### **3.3.2 Digital performance of tour operators and used platforms**

Overall, an analysis of existing software for tourism enterprises shows that the vast majority of programs provide the ability to enter, edit and store information about tours, hotels, customers, vehicle schedules and receipt of applications. All of them, without exception, make it possible to print many different documents - from questionnaires, vouchers and lists of tourists to descriptions of hotels, tours, etc. Most software products allow to control payment for tours, print payment documents, keep records of places in a hotel and transport. One of the important functions of such programs is also the automatic calculation of the cost of tours, taking into account individual and group discounts, commissions, exchange rates and other factors. The use of computer technology in the tourism process improves manageability (control cycles are accelerated), ensures the growth of the intellectual capabilities of the entire management system, improves the quality of management through the system of using data banks, expert systems and forecasting decisions (BARASHOK, 2021).

In the West, there is already an electronic attack on the traditional tourism business. In particular, e-commerce is beginning to actively penetrate and take root in the tourism market. There are already electronic travel offices, such as Microsoft's Expedia travel agency, that allow anyone with a credit card to purchase a tour, book a flight or hotel, purchase tickets to entertainment events, and book car rentals anywhere in the world. According to German experts, about 25% of all sales of tourist products can be realized through e-commerce in the nearest future. Computer Reservation Systems CRS (Computer Reservation System), which

appeared in the mid-60s. XX century, allowed to speed up the process of booking air tickets and carry it out in real-time. As a result, the quality of services has improved by reducing the time of customer service, increasing the volume and variety of services offered, etc., as well as opportunities to optimize the loading of airliners, implement a flexible pricing strategy, apply new management methods, etc. The high reliability and convenience of these redundancy systems contributed to their rapid and widespread adoption. The Russian market is mainly represented by global backup systems such as Amadeus, Galileo world's span. The Amadeus computer booking system has been operating on the Russian market since 1993, and at the moment there are more than 600 travel agencies in Russia that use the systems. One of the main areas of application of information technologies in tourism is the introduction of multimedia technologies, in particular directories and catalogs (CHUDNOVSKIY, 2021).

Modern computer technologies have the greatest impact on the promotion of a tourist product (distribution and sales). First of all, this concerns the possibility of forming new marketing channels for the promotion and sale of a tourist product. So, in the field of advertising, direct mailing of tourist information by e-mail (direct mail) has become widespread. In recent years, most tourism enterprises have created their own websites on the Internet (ARTAMONOVA, 2019). Currently, tourist guides and catalogs are published in the forms of books, portable devices or on the Internet. Electronic catalogs allow to virtually travel along the proposed routes, view these routes in an active mode, get information about the country, objects along the route, information about hotels and other accommodation facilities, get acquainted with the system of benefits and discounts, as well as tourism legislation. In addition, these catalogs usually contain information about the rules for issuing tourist documents, tourist formalities, models of tourist behavior in extreme situations, etc. The client can plan the tour program, choose it according to the given optimal parameters (price, benefits system, transport system, season, etc.) (KARPOVA, 2019).

The tourism industry is so many-sided and multifaceted that it requires the use of a wide variety of information technologies, ranging from the development of specialized software tools that automate the work of a separate tourist enterprise or hotel, to the use of global computer networks. To date, tourism uses quite a lot of the latest computer technologies, for example, global computer reservation systems, integrated communication networks, multimedia systems, Smart Cards, management information systems, etc. (CHUDNOVSKIY, 2021)

In the field of management in the tourism business, there have also been dramatic changes. The current level of development of the tourist industry, and fierce competition in this area, attach particular importance to the information systems of travel agencies. The functionality of these systems should ensure the input, editing and storage of information about tours, hotels, clients, the status of applications, provide for the output of information in the form of various documents: questionnaires, vouchers, lists of tourists, descriptions of tours, hotels; calculate the cost of tours taking into account the exchange rate, discounts, control payment for tours, generate financial statements, transfer export-import data to other software products (Word, Excel, accounting programs) and other features. These systems not only speed up the process of calculations and the formation of documents, but can also reduce the cost of services (tour package) by choosing the best option for the price of delivering customers, accommodation, etc. An order for the development of a unique information system for the automation of a tourist office is quite expensive, and at present, there is no particular need for this, since there are several well-proven software products (ARTAMONOVA, 2019).

There are several computer systems on the software market that allow automating the internal activities of a travel company. As a rule, these systems ensure the maintenance of reference databases, data on clients, partners, hotels, transport, embassies, as well as the maintenance of tours and accounting of payments, taking orders and working with clients, generating output documents, etc. Almost all software systems provide the formation of financial statements and often the export-import of data into specialized accounting programs, such as 1C, etc. (BARASHOK, 2021).

### **3.3.3 Customer relationship management**

The task of building interaction with customers becomes one of the main ones with an increase in sales. The intra-office system used by the travel agency should allow companies to save the accumulated client database and the history of relationships with clients. Further, this is important when it is necessary to notify clients about a change in the address of the agency or the release of a special offer that could be of interest to a regular client, based on his previous orders. As in any other business, regular customers of a travel agency are its main wealth, and information about them must be treated accordingly. To manage customer relationships, travel companies use modern integrated CRM systems (Customer relationship Management), allowing them to get maximum information about the client at the time of communication with him (BEZVESILNAYA, 2020).

The main idea of CRM-systems: "Instead of taking care of customers - taking care of the CLIENT". The information collected as big data can be processed more efficiently (e.g., travel history, average budget, needs and preferences) and used to specify the offers more accurately to a particular client, which will ensure meeting of customers' needs and bring the most satisfaction from interacting with a tour operator. Additionally, digital CRM systems are focused on the growing number of customers communicating with companies via the Internet. Successful usage of big data combined with a well-organized CRM system can take the workflow of a travel agency to the next level (KARPOVA, 2019). Modern reality push tour operators to adjust to a digitalized world and to benefit from CRM software so they can increase their profitability and level of competitiveness in the travel market. Moreover, it has been noted by researchers that those programs contribute to process optimization (see Figure 3).

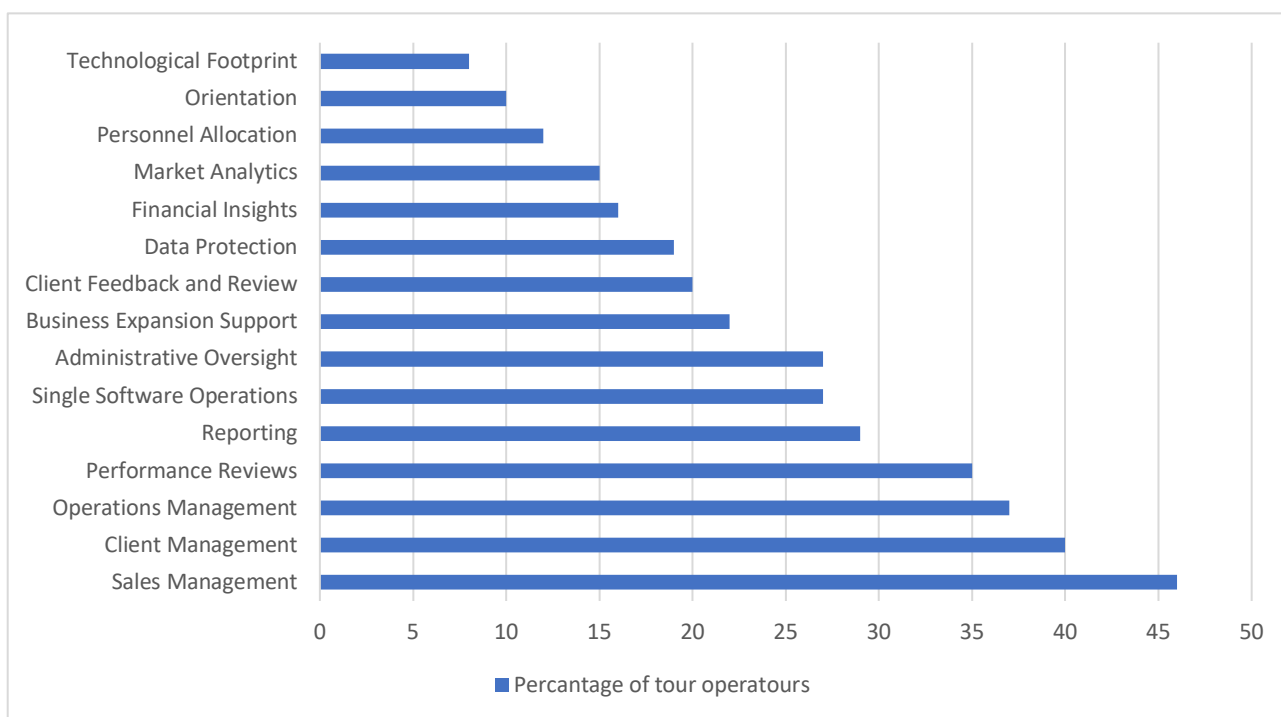


Figure 3. Most requested CRM Features in travel management software

Source: Tutterfly, 2020.

Large CRM systems are aimed at solving the problem of communication with customers in cases where there are a lot of such customers, and the number of calls to the company can be many thousands during the day. The main purpose of the CRM system is to obtain the most complete information about the buyer for the best service. For instance, if a potential client accesses the company's website and dives deep enough into the site's information tree, then such an appeal is regarded by the system as worthy of attention and a message about this client is transmitted to the workplace of an expert working in the office of a travel company.

Furthermore, if this contact comes from a computer that was previously registered on the site, then this message is transmitted to a specific employee of the company who has previously worked with this client (BARASHOK, 2021).

### **3.4 Summary of main findings and research questions formulation**

Currently, Russia is facing various problems that affect the country's tourism industry, such as the lack of skilled labor and managerial skills among hotel owners. These issues, as well as other factors such as the country's lack of promotional activities for its tourist attractions, are expected to be addressed in order to improve the country's image as a tourist destination. Subsequently, one of the ways to boost the Russian tourism industry is Big Data management and digitalization of all processes.

The main activity of a tourism organization is the process of developing and promoting a tourism product on the market. The process of developing a new tourist product is the most responsible, therefore, this stage requires the creation of a software product that provides information support for the decision-making process. The successful operation of an enterprise in the tourism business market is almost unthinkable without the use of modern information technologies. When it comes to the activities of travel agencies, customer service cannot be ignored. Information technology and modern gadgets provide great opportunities to improve the quality of service and attract customers (ARTAMONOVA, 2019).

Modern technology has led to the rise of digital marketing, which is driving the need for more effective and efficient customer relationship management systems. Big Data can help tour operators improve their efficiency and profitability by acquiring valuable information. Along with the automation of tourist firms, a similar development of programs for the automation of the activities of hotels, restaurants and other tourist business enterprises is being carried out. The use of information systems in this area leads to significant changes in management and improves the quality of service. Travel agencies have to develop new destinations in tourism, as well as use various methods to retain their customers, as well as attract new ones. In modern conditions, the creation and promotion of a tourist product require:

- 1) improving the quality of services in order to maximize consumer satisfaction;
- 2) effective sales technologies;
- 3) professional work of employees.

Almost all of the great successes of companies are based on using their own best strengths against the weaknesses of competitors. If we talk about the methods of competition in the

tourism market, it can be singled out one of them: attracting new customers through the use of new programs and technologies in the process of providing information (CHUDNOVSKIY, 2021).

At the moment, digital solutions are a key element in the development of tourism in all elements of the value chain. World experience in the development of regional tourism says about the need to combine several approaches, including the use of digital solutions. This means enterprises should not try to circumvent the dynamic forces that influence the global tourism market. The digital revolution is giving birth to new, previously inaccessible travel destinations, and many traditional tourist destinations are experiencing a rebirth. In turn, an integrated approach to tourism development can reduce overall risks and increase effects. Companies that offer the most customized process of interaction with the traveler will have an advantage in the travel services market. This is the only way to maintain customer loyalty and business profits, increase conversions and increase the level of security (BREL, 2019).

The significant majority of tour operators in Russia are becoming more aware of the urgent need to optimize their processes and make the next step towards digitalization. Nonetheless, a lot of them face challenges adjusting their companies and employees to the new digital workflow. A small part even claims ineffectiveness of measure taken, as they see a lack of changes in the agency's profitability. In the practical part, an empirical questionnaire will be conducted, and two main questions of the paper will be studied:

1. What obstacles do tour operators face with digitalization in the different regions of Russia?
2. What measures do travel agencies of Russia take to maximize profit through digitalization?

## **4 Practical Part**

### **4.1 Method**

Based on executed literature review and formulated research questions, the practical part contains qualitative analysis in the form of a survey, conducted as a series of interviews among tour operators in various regions of Russia. Further, responses were coded in the software NVivo and subsequently qualitatively analyzed.

#### **4.1.1 Sample of interviewees**

There have been chosen 12 tour operators in total, which will remain anonymous, two tour operators in six different regions of Russia. The choice of cities was based on the digital advancement of travel agencies in Russia. The most favorable operators were selected. Therefore, an analysis will be made on the following travel agencies:

1. A, B - Moscow (Central Federal District);
2. C, D - Saint Petersburg (Northwestern Federal District);
3. E, F - Novosibirsk (Siberian Federal District);
4. G, H - Yekaterinburg (Ural Federal District);
5. I, J - Kazan (Volga Federal District)
6. K, L - Sochi (Southern Federal district)
7. M, N - Kaliningrad (Northwestern Federal District)
8. O, P - Khabarovsk (Far Eastern Federal District)

#### **4.1.2 The survey**

The survey has been created in Google Forms and contained 8 open questions divided into two parts. The first part included questions regarding the efficiency of the current workflow, as well as challenges that occur in their day-to-day work. Further, in the second part of the questionnaire tour operators were asked about current digital features and platforms that are being used, as well as the current measures that are being taken to maximize their profits. The questions chosen for the survey were targeted to obtain the most thorough information and get the best perspective on the research questions.

Prior to the questioning, communication with various tour operators was performed, and based on their performance and willingness to cooperate the focus group was selected. The link to the questionnaire was sent directly to the email address of every chosen tour operator with a brief description of the main goals of the research. There was given 1 month to collect answers. This method of analysis has a lot of advantages, as it gives a fuller perspective on the travel

industry in various regions of Russia, involving Western, Central and Eastern districts. Moreover, an interview in the form of open questions conducted the most comprehensive results, and, consequently, more precise answers to the research questions raised in this paper.

## 4.2 Qualitative data analysis

The results obtained from the interview questions were subsequently coded in the software NVivo. NVivo is a qualitative data analysis platform that enables researchers to organize, analyze, and find insights from large, unstructured, and open-ended datasets. With its robust search engine and query functions, the platform allows researchers to identify trends and cross-examine data in a variety of ways. It also allows them to build a case or project based on their findings.

### 4.2.1 Coding

#### Step 1. Import Data

Firstly, after all results have been received, the file with interview transcription has been created. Further, it has been imported to the NVivo software and prepared for coding the information for future analysis.

#### Step 2. Set up a Coding Table

Secondly, there has been created a coding table based on different criteria that were most relevant to the research questions of the paper. Thus, there have been created four categories: challenges, digital advancement, measures & tools with a subcategory named communication and future demand (see Figure 4).

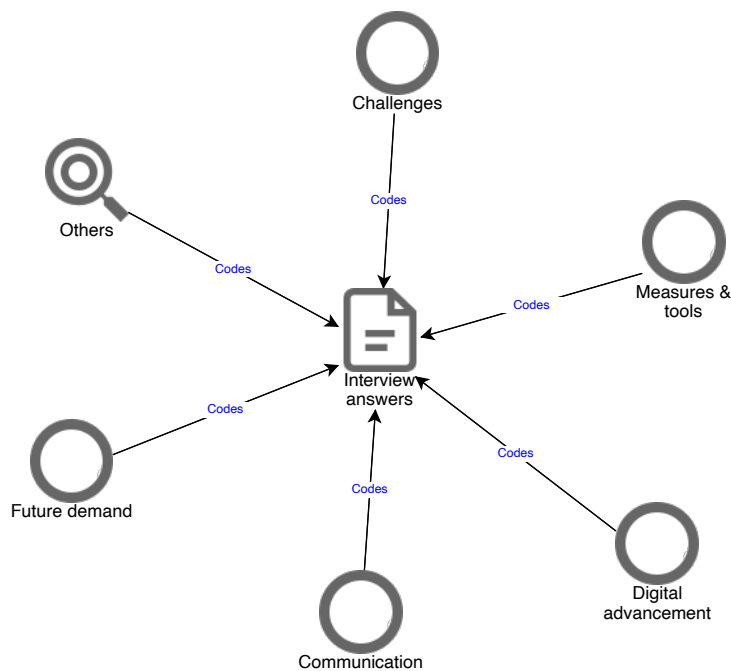


Figure 4. Explore Diagram



Challenges refer to any obstacles in terms of digitalization that tour operators have mentioned in their interview answers. Digital advancement shows the level of current technological development, as well as its effectiveness. Measures & tools including means of communication indicate which kinds of features tour operators already use to benefit from digitalization, stay competitive and profitable. Finally, future demand refers to whether the companies consider themselves relevant and in high demand in the nearest future.

### Step 3. Coding

Further, the coding of information has been performed. All the interview answers have been reviewed one more time and based on the type of data enclosed, every detailed paragraph or text was sorted into different categories of codes.

### Step 4. Analyzing the Data

Lastly, based on the coding table and coding data, data analysis has been executed according to the results obtained. NVivo provides various tools for the qualitative analysis to help comprehend the results and examine common patterns and keywords. Hence, after the interviewing decoding, there has been executed a qualitative analysis based on created codes and the first results were presented in the form of a bar chart (see Figure 5).

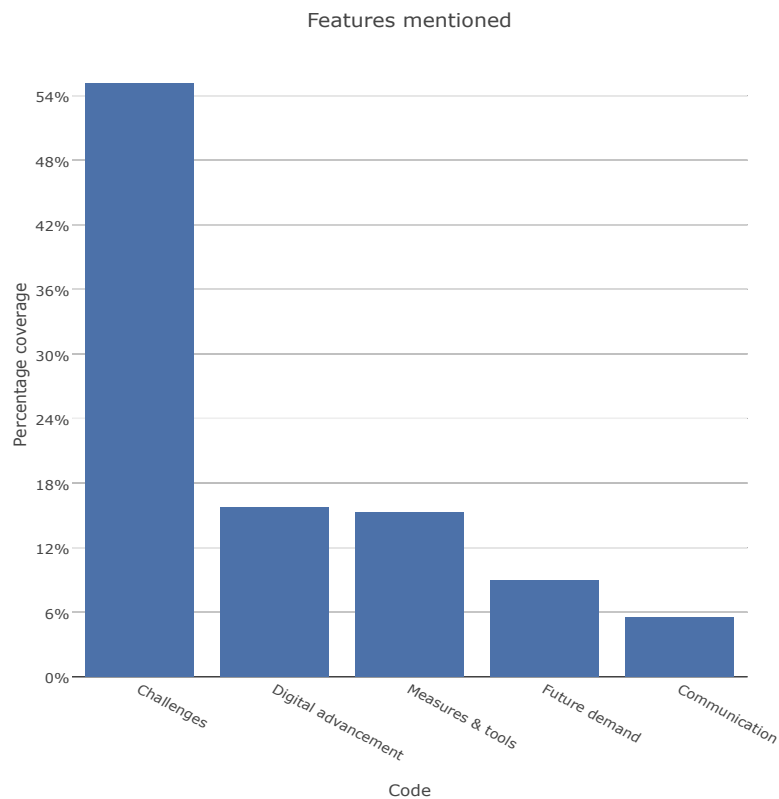
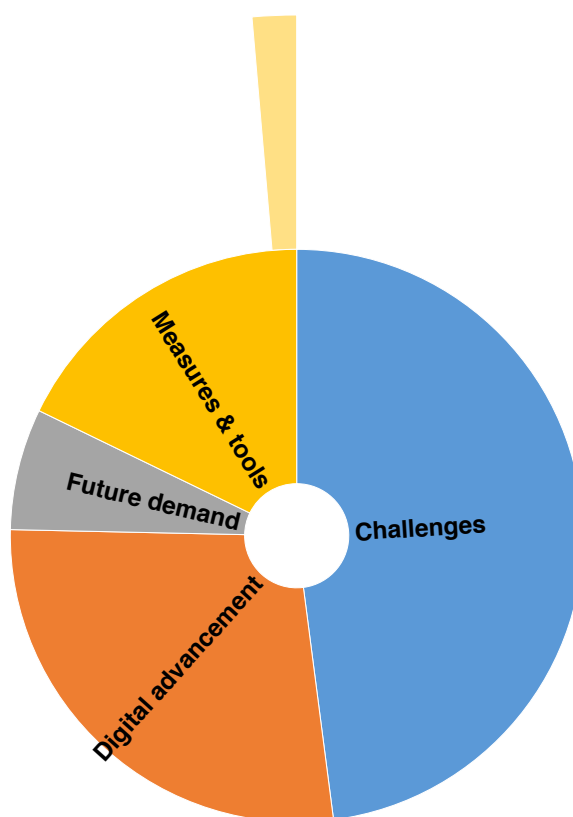


Figure 5. Codes compared by percentage coverage

Further, the same outcome data has been presented and subsequently analyzed in the form of a sunburst data wheel (see Figure 6).



*Figure 6. Codes compared by number of coding references*

From the diagrams, it can be observed that approximately 55% of answers included mentioning obstacles while using digitalization. Further, around 15% of responses involved noting that their agencies have a tendency towards digital advancement. Moreover, 15% of tour operators' answers indicated certain measures and tools that are being used already, and part of them particularly highlighted various means of communication as the primer digital advancements.

Overall, most travel agencies in Russia indeed experience more challenges with the digitalization of their day-to-day work, than profitability from optimization of processes. Nevertheless, there is seen a tendency toward digital advancement, and some of the companies actively use up-to-date reservation systems as well as various means of communication.

#### 4.2.1.1 Word Frequency

To identify what the main subject areas were, there has been run a word frequency test, with criteria of a minimum length of the word – 4 letters and with only 100 frequent words displayed. The result is presented in Figure 7.



Figure 7. Word frequency

Thereby, it can be seen that email was the most frequent word, signifying that the most common digital tool used to communicate with a client among tour operators of Russia is email. That can be seen as a drawback, as currently for the younger generation social media or messenger are more preferred. Moreover, one of the most common words is “pandemic” and “difficult”. That proves that the industry, in general, is still struggling with recovery from the global pandemic and that it also has made an impact on tour operators, pushing them to provide services on digital platforms with minimum personal contact. However, most tour operators are still not there yet, as some of them have a shortage of funding or the absence of such a necessity to improve digitally.

#### 4.2.1.2 Word Tree

Moving forward, on the basis of the word frequency analysis there has been created a word tree, which provided information on which parts of text are coming along with keywords that have been searched. For instance, the word “difficult” was one of the most repeated words related to challenges. Results are exhibited in Figure 8.

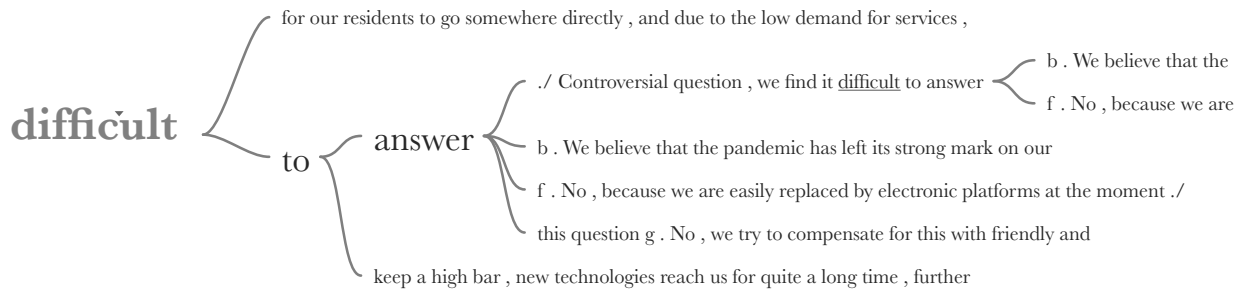


Figure 8. Word Tree (difficult)

Therefore, it can be seen that most of the tour operators experience difficulties with digitalization, as new technologies reach some Russian regions for a longer time, some of the agencies are being afraid to be replaced by online booking services since there is still a shift noticed after the pandemic, as well as about low demand for services and, therefore, lack of need to digitally develop their organizations.

Additionally, from the word frequency, it can be observed that the most popular complaint that travel agencies have regarding their current software and their level of digital performance is the slow operational flow (see Figure 9, 10).

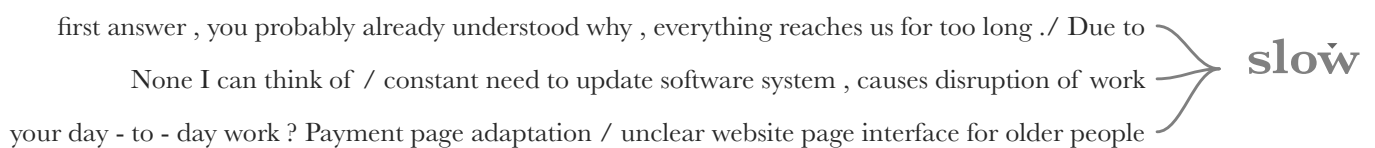


Figure 9. Word Tree (slow)

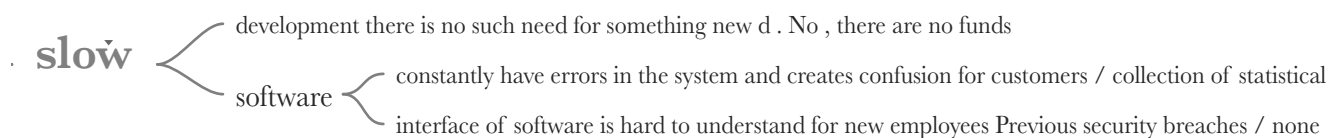


Figure 10. Word Tree (slow)

This signifies that one of the reasons tour operators report challenges with digitalization is an insufficiently efficient and slow operation of various digital technologies used in the offices.

#### 4.2.1.3 Qualitative Hypothesis Testing

Although people claim that the Russian travel industry is far from being digitally developed, some evidence shows that technological advancement differs from region to region, as was previously stated in the Literature review. Thus, on the example of tour operators in various Russian regions, there was performed qualitative hypothesis testing. The helping tool for the test will be Matrix Coding Query and a Crosstab query in NVivo software. The hypothesis was formulated as such: Travel agencies in Western and Central Russia have more digitally advanced technologies at their disposal, therefore they should have fewer challenges and more measures to stay profitable.

To start with, responses of tour agents in different cities of Russia have been conditionally divided into three main categories: Western region, Central region and Eastern region. The next step was to perform a matrix coding query which allows to select a classification of respondents and contrast them with codes previously created in the program. The first results of hypothesis testing are presented in Table 2.

	A : Challenges	B : Digital advancement	C : Future demand	D : Measures & tools
1 : Central	7	9	2	5
2 : East	16	5	1	3
3 : West	12	6	2	4

Table 2. Coding matrix

Judging by the results of the coding matrix, it can be seen that the majority of challenges tour operators experience were reported to be the companies explicitly in the Eastern part of Russia, whereas the most digital progress experience Central and Western regions, as well as most implemented measures towards digitalization of processes, has been done by those 2 regions. However, it can be stated that the prospect for future demand of tour operators is seen evenly low in all Russian regions.

Further, the second crosstab query was executed. Crosstab query created tables with codes in rows and cases in columns. The cells display information about intersecting coding between the relevant codes and cases, e.g., the number of coding references, words coded, or cases coded. The results of the second hypothesis testing are presented in Table 3.

Codes	Central	East	West	Total
<input type="radio"/> Challenges	42.11%	54.55%	48%	47.27%
<input type="radio"/> Digital advancement	36.84%	9.09%	32%	29.09%
<input type="radio"/> Future demand	5.26%	9.09%	8%	7.27%
<input type="radio"/> Measures & tools	10.53%	18.18%	8%	10.91%
<input type="radio"/> Communication	5.26%	9.09%	4%	5.45%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table 3. Crosstab query

From this crosstab query, it can be seen that more precise results were obtained: 54.55% of interviewed tour operators who reported challenges with digitalization are located in the Eastern part of Russia, however, the percentage is also high in Central and Western regions. Further, a huge contrast in digital advancement can be seen between the Central, Western and Eastern parts of Russia. The percentage of development in the East is lower than in the Central region at approximately 27%. Nonetheless, indicators of future demand and communication technologies are slightly higher in Eastern Russia compared with Central at around 4%. Lastly, Eastern regions are taking leading positions in digital measures and tools they have been using, outpacing cities of Central Russia at 7.65% and Western Russia at 10.18%.

Thus, a conclusion can be made that the hypothesis was partially correct. Tour operators in Eastern Russia indeed have more challenges with digital development, however, that does not mean they do not have advanced technologies. On the contrary, they have implemented more measures and tools in their workflow than travel agencies in other districts. Nevertheless, the overall leading position in terms of technological advancement is still taken by Central and Western regions, which means that the main profit also goes to these regions.

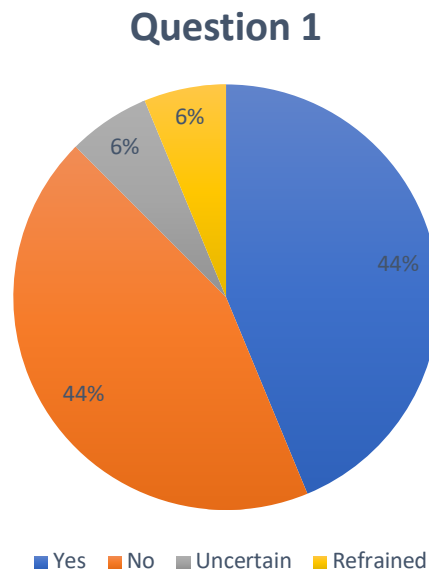
## 5 Results and Discussion

### 5.1 NVivo coding results

All the data and results gathered in the process of multiple performed analyses (e.g., Figure 5, Table 3), indicate that when it comes to digitalization and optimization of processes, most of the tour operators (55%) in fact report challenges and obstacles. Moreover, throughout further research, it was found that the Eastern part of Russia is facing the greatest number of issues. That is mostly due to the fact that it takes more time for the technologies to reach those regions. Despite that, tour operators in the East understand the importance of digital development and, therefore, use the highest amount of measures and tools to attract tourists and stay competitive with other regions of Russia. Nonetheless, they are still lagging behind from already highly developed Moscow and Saint-Petersburg, where digital advancement remains on the highest positions, as it was previously mentioned in the Literature review, Central and Western regions of Russia were more attractive for tourists for both inbound and domestic tourism.

### 5.2 Interview results

1. Do you find the current state of digital workflow efficient? If no, specify why.



*Figure 11. Question 1*

There was a mixed response, where one-half of the respondents consider the digital workflow to be effective, and the other half say that there are problems. Some could not answer unequivocally and others refrained from answering at all.

The following obstacles have been identified:

a) In the Siberian regions, it is difficult to keep the bar high; new technologies reach them for quite a long time.

b) The pandemic has greatly affected work and services and businesses while recovering

c) Residents, looking at regular tourists in the city and want a much higher service, and this is not the main activity of the city, it rather accepts than sends somewhere

d) There is constant turnover in offices and new employees are not trained as quickly to keep the bar.

e) Due to the low demand for services, the digital workflow is not developing

2. In your opinion, are you using enough technological tools and up-to-date software in your agency? If not, what is the reason for that? (e.g., money, no need, lack of skills)

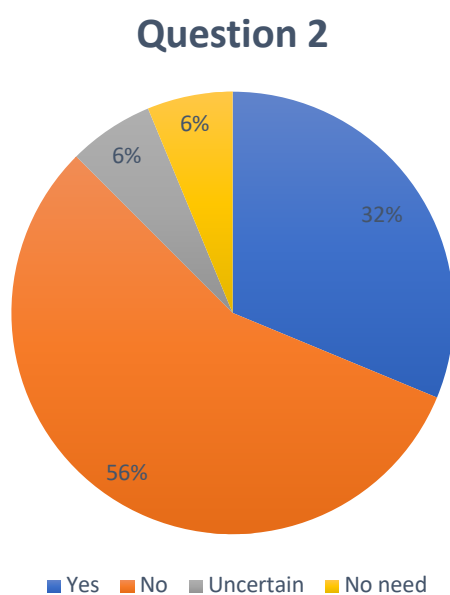


Figure 12. Question 2

Here we see the following picture, the majority of respondents believe that they still do not use enough technology. From the data, the following conclusion can be drawn:

a) Slow development of tourism

b) After the pandemic, there are no funds for the development



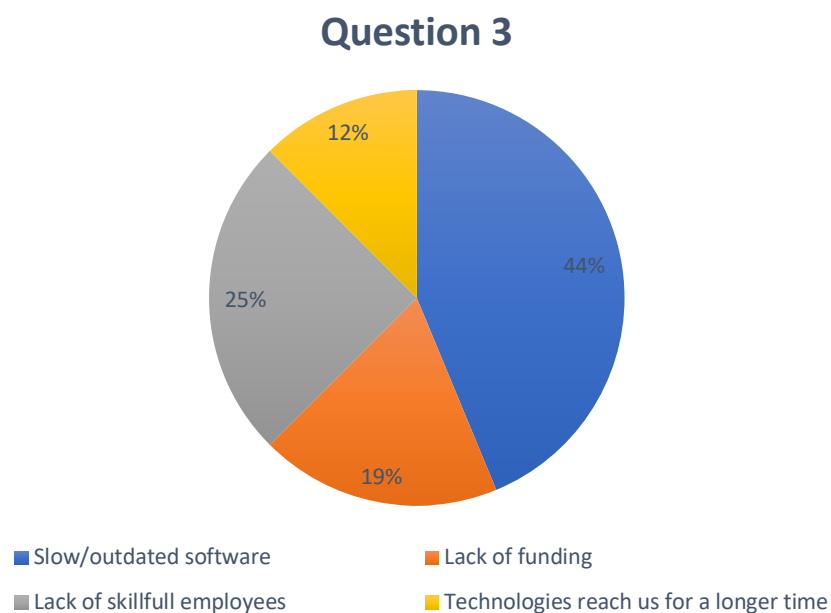
c) Something can already be developed and acquired in a new way, but the conditions of the pandemic are still slowing down

d) Lack of desire to learn something new

e) Constant staff turnover

f) People do a great job with online services themselves, without the help of tour operators.

3. What would you say are the main obstacles you experience with digitalization in your day-to-day work?

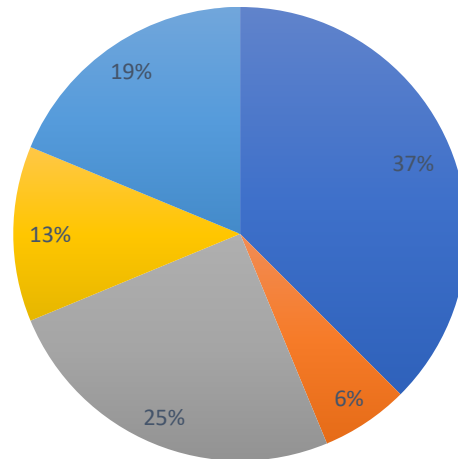


*Figure 13. Question 3*

This question was conducted to see the main weak spots that tour operators experience when it comes to using digitalization. As it can be seen, 44% percent of interviewees do not find their current software efficient, which is very important for the company to have. Judging from this chart, that can be due to lack of funding or lack of people who could update their current software.

4. Do you think the way you present information online is easy for the client to comprehend?

### Question 4



*Figure 14. Question 4*

It is difficult to form any general trend here since the majority cannot specifically answer the question, do not have a website at all, or refrain from answering at all. However, there can be drawn the following conclusions:

- a) If there is a website, then they usually take care of it and try to make it more accessible
- b) There is a trend of abandoning sites in general, companies are transferring everything to instant messengers or to a platform such as Instagram
- c) Bad sites directly depend on the work of IT departments, if there are no good employees in this department, then there are problems with the site

5. How do you think, will the services of tour operators and travel agents be in demand in the context of digitalization in the nearest future? Specify why.

### Question 5

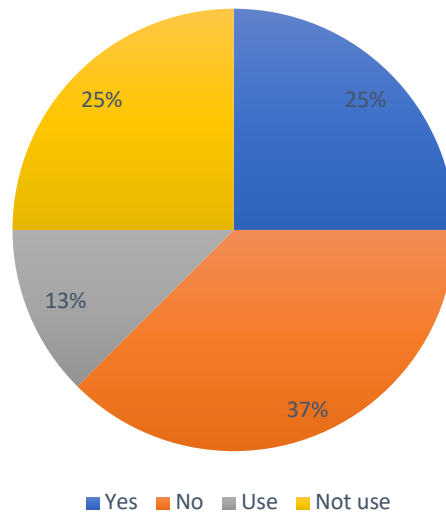


Figure 15. Question 5

A difficult situation has developed here, many cannot answer unequivocally, and someone refuses to answer this question at all. But if you look at specific answers, the majority still says that services will no longer be in demand among consumers for the following reasons:

- a) Electronic platforms will easily replace travel agencies
- b) It's easier for people to do everything themselves than to shift these powers to others.

6. Have you heard of the term “big data”? Does your travel agency use it to analyze tourist traffic and personalize customer requests?

### Question 6

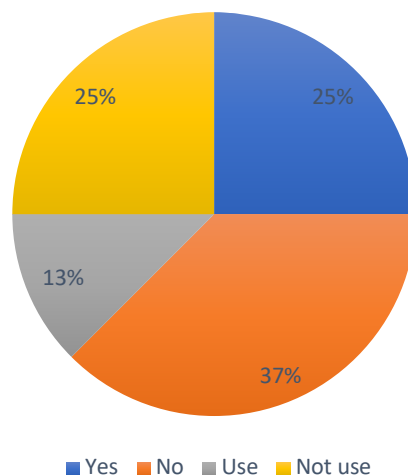


Figure 16. Question 6

The purpose of this question was to analyze the level of digital advancement. As we can see, the majority of tour operators either have never heard of big data or have heard but chose not to use it as they do not see the need.

7. Which methods of communication with a client are you using and why?

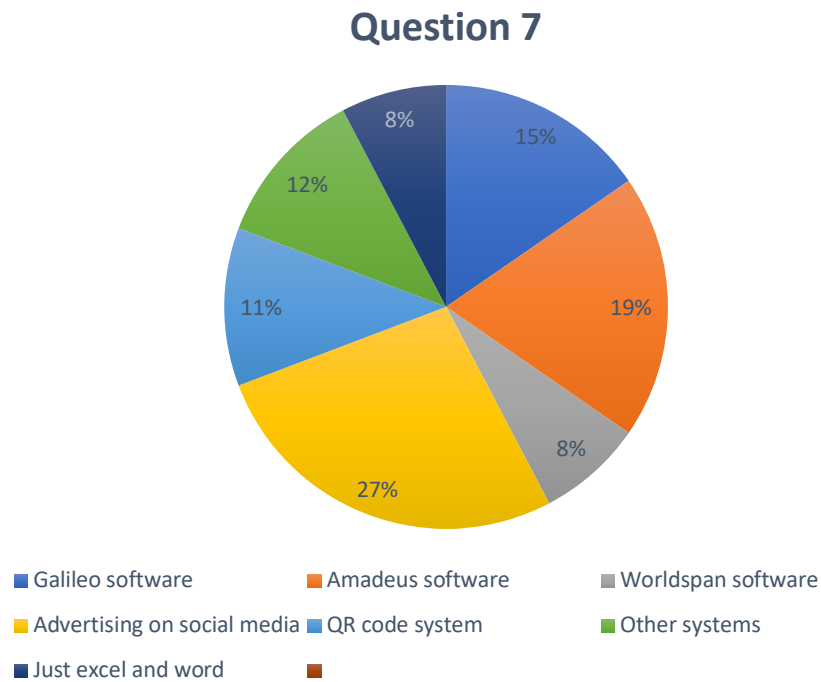


Figure 17. Question 7

Looking at the diagram, we can single out the most relevant way of information exchange is email, most likely because it is easier to send all the documentation for booking tours there. Phone calls took the 2nd place, and all instant messengers took the 3rd place, everything else was distributed almost evenly.

8. What tools does your agency use for creating and booking tours to stay competitive?

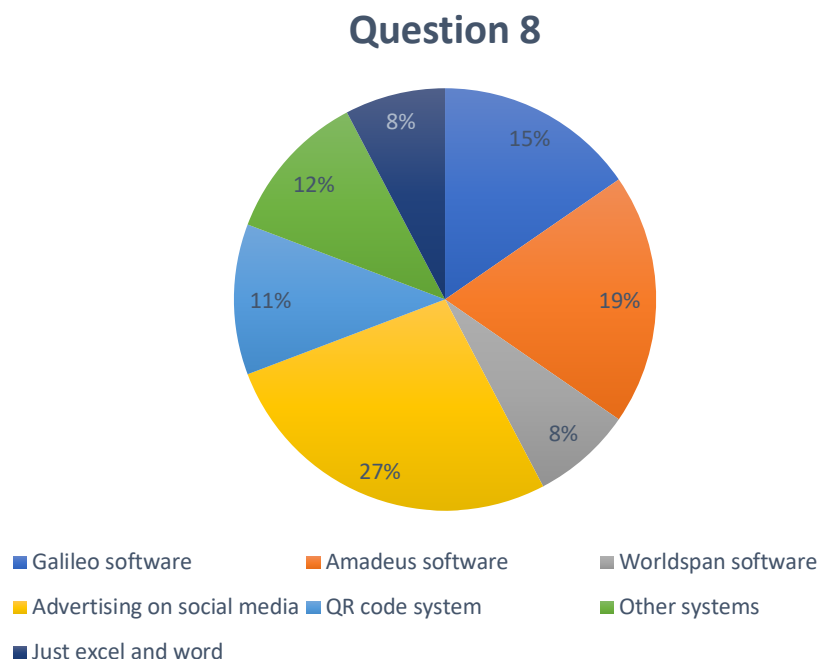


Figure 18. Question 8

This question was conducted in order to identify the main digital features and reservation channels tour operators are already using in order to stay competitive and profitable. Thus, advertisement on social media is taking a leading place among ICT tour operators use with 27%. The most popular provider of travel technologies and reservation system is Amadeus and Galileo.

With that being said, although tour operators in Russia use digitalization and its tools quite often in their practice, the majority of their clients find it to be not enough effective, as well as hard to comprehend. The main obstacles which tour operators face due to digitalization in different regions of Russia still are that approximately every third Russian organize holidays on their own through online booking platforms, and two times fewer Russians turn to travel agents. This is applicable especially to a younger generation. What is more, travel agencies struggle with using digital technologies to their maximum, have weak positions on the Internet, hard to comprehend websites, unclear descriptions of services on the internet, lack of means of online communication with a customer, outdated software.

Regarding the primary measures that travel agencies of Russia take to maximize the profit through digitalization, they are understanding the current trend towards greater use of digitalization products, as many tour operators move from offline offices to online and create their own digital platforms. Further, as of response to the global pandemic, some agencies

implemented the digitization of paper documents and the usage of QR codes. Lastly, more tour operators realize the importance of big data analysis as it allows to offer a client more relevant services based on user preferences.

### **5.3 Discussion**

The objective of the studies was to find out what are the main obstacles tour operators have in terms of the digital development of their agencies, as well as to identify measures that they already take to be digitally competitive. Nevertheless, despite that we have tried to conduct an honest realistic outcome, the findings may vary from the actual points of view. Moreover, the research provided by the author consisted of a limited amount of participants and only of information containing the subjective personal data of each travel agent, thus it cannot represent the full spectrum of the study topic, as, for instance, fuller research with more participants would do.

Furthermore, the practical part was particularly aimed to analyze the behavior of one chosen sector of the tourism industry. Thus, only tour operators and their perspective on digitalization were researched. Additionally, only certain cities and tour operators have been chosen out of thousands existing in Russia, therefore the obtained results are limited by the geographical location of companies and population of the city. The answers of different tour operators in other regions of Russia may vary from those presented in the research. Lastly, due to the complexity of the subject, the data collected by the studies are not always representative of the individuals' actual feelings.

### **5.4 Recommendations**

Based on performed literature review and research, recommendations for the digital future of tour operators can be made. The average Russian traveler is still giving tour operators that turn a blind eye to the progress of digitalization hope for a few years of prosperity. However, the global trend of digitalization of the travel industry indicates an imminent and global change in this market. There are two ways to adapt. The first is available only to large tour operators, who can concentrate hotels or airlines as assets in order to compete by reducing their own costs. The second is smaller. It means going online and integrating into global sales channels. In this case, the obvious advantage is that the dependence of travel service providers on partners is reduced since in the online format they can directly take money from their customers without sharing profits with anyone.

Therefore, there is an urgency to drastically improve their positions on the Internet, make more understandable sites that describe services as much as possible, sites should notify them

of all changes, including via SMS, email, and other channels. Further, tour operators should work out the possibility of a seamless change of devices for the buyer, adapt the payment system and make it easier to use even for an inexperienced audience, and use information about users' transactions to do all the work of designing tours for them. The website should have a clear and user-friendly interface, the most complete information on services, online payment methods, feedback and fast processing of applications. Moreover, travel agencies should take extra care of their outdated and slow software or lack of it. Thus, the whole reservation process will be optimized to the maximum and that will give a company more satisfied clients and consequently, more profit. Additionally, travel agencies may launch virtual assistants so it can become possible to make video calls to their clients to discuss all issues, which is especially important in the nowadays context when more and more people tend to solve everything from home. Companies that offer the most customized process of interaction with the traveler will have an advantage in the travel services market. This is the only way to maintain customer loyalty and business profits, increase conversions and increase the level of security.

Additionally, currently, Russia is experiencing a new turn in her tourism sector, as due to current worldwide events, a new package of sanctions has been imposed on the country. That has a major impact on the whole travel sector, as all the foreign air companies are refusing to work with Russia, closing all international destinations for Russians. Further, the majority of Western online companies will likely disrupt their operation on the Russian territory, which includes major booking and reservation platforms. Consequently, these changes might disrupt even domestic tourism, however, local travel providers can see it as an opportunity for the future development of their own platforms and services that could also become a great substantive for international services and improve domestic tourism.

## **6 Conclusion**

The main objective of the thesis was to explore the current tendency of the tourism industry in terms of digitalization in Russia. To study the impact of digitalization, there has been conducted a literature review. The main findings include, first of all, the fact that Russia's tourism industry is currently experiencing various problems, such as the skills shortage among hotel owners and the lack of promotional activities for tourist attractions. Furthermore, the success of a tourism enterprise is almost impossible without the use of modern technology. Aside from improving the efficiency of their operations, the use of information technology can help them attract more customers. Additionally, the rise of digital marketing has led to the need for more effective customer relationship management software. Big Data technology can help tour operators obtain valuable information about their customers. Finally, most of Russia's tour operators are becoming more aware of the need to improve their processes in order to make the most of the opportunities presented by digital technology. However, many of them face various challenges in implementing and managing the new digital workflow.

Therefore, there have been partial goals of the study, such as to demonstrate the current digital challenges of tour operators and to identify their success factors in the Russian tourism industry. Hence, a comparative study has been conducted in the form of qualitative interview analysis among travel agencies of Russia. Answers were thoroughly analyzed using various coding methods through the NVivo software. Additionally, a qualitative hypothesis has been tested. Results of testing were obtained and were partially justifying the statement that tour operators in Western and Central Russia have more digitally advanced technologies at their disposal, however, it turned out they also experience a lot of issues with digital development.

Further, recommendations have been formulated for tour operators on how to improve the current digital workflow, solving most of the issues they might stumble upon and become more profitable. Despite declining demand, travel agents are still needed and will remain as the main distribution channels.

In conclusion, it can be stated that the research topic of this thesis is quite broad and there is still a lot of question that may arise and topics to be covered. A further possible research question that emerged after this thesis should not be focused on just tour operators but other travel providers, such as accommodational facilities. Nevertheless, in this thesis, we have tried to cover as much sector of interest as we had at our disposal.



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## **8 Appendix**

### **Open survey questions for tour operators of Russia**

1. Do you find the current state of digital workflow efficient? If no, specify why.
2. In your opinion, are you using enough technological tools and up-to-date software in your agency? If not, what is the reason for that? (e.g., money, no need, lack of skills)
3. What would you say are the main obstacles you experience with digitalization in your day-to-day work?
4. Do you think the way you present information online is easy for the client to comprehend?
5. How do you think, will the services of tour operators and travel agents be in demand in the context of digitalization in the nearest future? Specify why.
6. Have you heard of the term “big data”? Does your travel agency use it to analyze tourist traffic and personalize customer requests?
7. Which methods of communication with a client are you using and why?
8. What tools does your agency use for creating and booking tours to stay competitive?