AUTOMATION AND DIGITALIZATION OF PROCESSES IN THE MANAGEMENT OF SERVICE ORGANIZATIONS

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AUTOMATIZACIÓN Y DIGITALIZACIÓN DE PROCESOS EN LA GESTIÓN DE ORGANIZACIONES DE SERVICIOS

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Abstract
The study aims to research the process of digital transformation in service companies and examine current trends in the management of digital transformation processes in service companies, including in the sphere of the co-consumption economy. The study is conducted based on the personal practical experience of the authors in engaging in and organizing the process of digital transformation in Russian companies. The article successively considers current trends in the management of digital transformation processes for service companies, including those in the co-consumption economy. The authors conclude that the digital economy requires service company managers to be able to implement digital transformation projects. It is also argued that successful management of digital transformation demands that the full context and strategic goals of the company are taken into consideration.

Keywords: management, service, digital transformation, co-consumption economy, big data.

Resumo
O estudo tem como objetivo pesquisar o processo de transformação digital em empresas de serviços e examinar as tendências atuais na gestão dos processos de transformação digital em empresas de serviços, inclusive no âmbito da economia do co-consumo. O estudo é realizado com base na experiência prática pessoal dos autores no engajamento e organização do processo de transformação digital em empresas russas. O artigo considera sucessivamente as tendências atuais na gestão dos processos de transformação digital para empresas de serviços, incluindo aquelas da economia do co-consumo. Os autores concluem que a economia digital exige que os gestores das empresas de serviços sejam capazes de implementar projetos de transformação digital. Argumenta-se também que a gestão bem-sucedida da transformação digital exige que todo o contexto e os objetivos estratégicos da empresa sejam levados em consideração.

Palavras-chave: gestão, serviço, transformação digital, economia de co-consumo, big data.

Resumen
El estudio tiene como objetivo investigar el proceso de transformación digital en las empresas de servicios y examinar las tendencias actuales en la gestión de los procesos de transformación digital en las empresas de servicios, incluso en el ámbito de la economía de coconsumo. El estudio se lleva a cabo sobre la base de la experiencia práctica personal de los autores al participar y organizar el proceso de transformación digital en las empresas rusas. El artículo considera sucesivamente las tendencias actuales en la gestión de los procesos de transformación digital para las empresas de servicios, incluidas las de la economía de coconsumo. Los autores concluyen que la economía digital requiere que los directivos de las empresas de servicios puedan implementar proyectos de transformación digital. También se argumenta que la gestión exitosa de la transformación digital exige que se tomen en consideración el contexto completo y los objetivos estratégicos de la empresa.

Palabras clave: gestión, servicio, transformación digital, economía de coconsumo, big data.
1. INTRODUCTION

A critical problem of today’s management is the adaptation of companies to the global digital transformation, including management of the life cycle of organizations’ digital transformation. Digitalization affects companies of different sectors and different types of activity to varying degrees and at different speeds (Attrey et al., 2020). According to up-to-date American cases, aside from IT companies, digital innovations have already become an important component of strategic planning in service organizations – companies that provide various types of services for both businesses and private individuals (Digital Strategy for a Service Organization, n.d.). Service companies around the world are trying to take their digital presence to the next level to not only preserve but develop their business, including from the point of management quality. Since Russia is embedded in the global division of labor and in the global financial system, modern trends of digital transformation are equally important for the management of Russian service organizations, including those operating in the co-consumption economy (CCE). This is no longer a question of management theory, but a practical necessity, since the strategic importance of services in the digital environment is constantly rising (Bendor-Samuel, 2019).

In this paper, we examine the opportunities that can be obtained by service companies through the digital transformation of their business processes, as well as the challenges they may face and the ways to launch such projects.

2. METHODS

A service is a business based primarily on the sale of services rather than physical goods (which can be part of the service) and involves direct interaction with customers (Effective Management Strategies for Service Business, 2021). The diversity of clients and the features of the business structure shape the uniqueness of each company, which means that management (including the introduction of digital innovation) has to account for the context and features of each company. Managerial decisions have to proceed from the context of the organization, which, aside from the known financial indicators, includes the complexity and maturity of the
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business (Bendor-Samuel, 2019), the features of its management (including the personal qualities and relationships of management staff), and more.

The present study uses a number of relevant sources on the topic in question and the general and special scientific research methods of analysis, synthesis, comparison, induction, deduction, abstraction, the method of comparative analysis, and the system-structural method. Methods of scientific search, analysis, and synthesis of information are also employed.

It should be emphasized that when analyzing market information and developing a strategy for successful management of service organizations in the context of digital transformation, it is the full context, including non-financial factors and constraints, that must be fully taken into account. Currently, very well developed and largely automated are the systems of financial indicators, various metrics, etc., which can create the illusion of modernity and manageability of a business. Yet the digital economy is creating new opportunities that require new solutions to take advantage of, demanding a broad, informalized view of the situation. Automation and digitalization of individual processes do not imply the possibility of complete automation, stabilization, and conservation of the entire business. On the contrary, modern technology requires a flexible, creative approach to making and implementing management decisions.

An illustrative example of the above is the active development of the CCE, the so-called sharing companies (for example, the Russian Yandex, which successfully uses modern digital technology to continually grow the business given the current circumstances).

Consideration of the context allows CCE service companies to maximize the benefits of digital business transformation and the implementation of managerial and other innovations. Digital transformation is generally believed to increase the potential for new value creation and typically reduces the cost of customer service, an important metric for service companies (Bendor-Samuel, 2019).

3. RESULTS

3.1 The importance of the CCE
At present, the economic model of the CCE, which implies the collective use of goods or services without compulsory ownership, is actively developing. This phenomenon is also
called the sharing economy, and its essence is reduced to an attempt to mitigate the
disadvantages of classical ownership of a particular property without losing the advantages of
owning it. In other words, “there is a conscious rejection of private property in favor of
collective property” (Blinnikova, Danilina & Dashkov, 2020).

According to RBC, the CCE is leading a broad offensive against traditional businesses.
Moreover, the sharing economy should be viewed as a vector around which a whole set of
global trends are formed and which forms trends itself (Makarenko, 2022). PwC analysts
estimate that the sharing economy will grow from $15 billion to $335 billion between 2015 and
2025 (The Sharing Economy: Consumer Intelligence Series, 2015). Sharing companies already
largely act as the driving force behind digital development, and companies from traditional
sectors are successfully adopting their CCE experience.

Sharing companies can be classified as service organizations because they mostly
provide a variety of services to businesses and individuals. Examples of CCE companies are
Yandex, Uber, and other car-sharing platforms, Amazon Web Services, Airbnb, WeWork,
Avito, YouDo, and many others.

3.2 Adaptation of service organizations in the digital economy

Over the past decade, service companies have pursued different paths to maintain and
improve the efficiency of their business processes:

● the first thing that can be seen with the naked eye is the digitization of business
  interfaces to enable seamless interaction with customers (e.g., creating various
  functional mobile applications that make it easier for customers to order goods
  or services, make financial transactions, etc.), something that sharing companies
  are particularly good at;

● the second most critical area is the digitalization and outsourcing of back-office
  functions.

Interestingly, some service companies have embarked on the path of outsourcing a
number of business processes, and others simply specialize in the provision of these very
outsourcing services. Nevertheless, the digitalization and automation of service delivery is the
most important task of successful management in any model. Beyond that, the company
management processes themselves, which are the objects under consideration, are also being digitized and automated. By introducing automation, virtualization, advanced analytics, and other digital technologies into their operations, service organizations can optimize their processes. These technologies can also enable them to make more informed decisions and improve the quality of interaction with internal and external customers. Research by McKinsey suggests that through digitalization, service companies can achieve significant savings in time and money, for example, increasing the efficiency of some back-office functions by up to 50% (Chandok, Chheda, Edlich, 2016).

Nonetheless, before engaging in the digitalization of certain business areas, it is vital to conduct the so-called digital readiness assessment (Tsenzhariik, Krylova, Steshenko, 2020). This means that the management of a service company should study, discuss, and answer a number of basic questions on the current and desired state of the organization, the existing talent pool, and other resources, as well as the readiness to conduct and support the transformation at the senior management level. The questions to ask may include: what are the available digital opportunities and threats, how will the digital transformation affect the organization’s value proposition, what resources are already available and what will be required, etc.? Answers to these key questions should help service leaders create a business case for digital transformation and form the basis for a long-term digitalization strategy.

We should also note that a major 2016 study (Chandok, Chheda & Edlich, 2016) found that despite the significant strategic promise, about 78% of U.S. service organizations were not yet ready for a full digital transition. In fact, only 22% of companies have started to fully embrace the digital technologies needed to improve internal processes, interact more effectively with customers and partners, and create innovative products and services. The fact is that innovators who want to transform their businesses digitally face pitfalls related to management, people, workflows, and operating models. For instance, there may be concerns about integrating older systems with new digital technologies, or there may be a lack of talent and skills needed to implement a large-scale transformation program, or conflicting strategic priorities within the executive team.
3.3 Opportunities and challenges of digital transformation

At present, the majority of consumers rely on some form of the digital channel to interact with companies (Chandok, Chheda & Edlich, 2016) (e.g., mobile apps from sharing companies). Many say they prefer to shop via mobile devices or laptops because of ease of use, greater choice and control, and timely delivery of products and services, among other benefits. In turn, most companies are testing new applications, products, and digital tools that enable them to collect and analyze data and use the insights from that data to drive advanced business model transformations to improve engagement with customers and partners. These features represent one of the patterns in the development of digital ecosystems (Lipovenko et al., 2022).

Service companies (and especially sharing companies) play an important role in the digital environment. They exist to optimize process management, assistance, consulting, and many other things needed by customers. Their work is growing increasingly crucial for collecting data that customers can use to create even better and more user-friendly products.

Service companies in most industries are considering the opportunities created by digital technology, yet a broad introduction has not happened so far (Chandok, Chheda & Edlich, 2016), aside from some individual examples from the sphere of the CCE. Only 22% of organizations offering services have begun to scale up their automation, freeing up staff to manage the tasks that are critical to providing satisfactory digital customer service, while continuing to perform manual record-keeping tasks. As little as 15% of organizations are building social media skills and integrating data from multiple channels, and nearly 20% of companies have invested in optimizing internal operations with analytics (e.g., with real-time management information systems). Yet when it comes to using analytics for external analysis and business support (e.g., creating predictive analytics to make better product sales decisions or improve customer flow management), only about 10% have systematically developed these capabilities. Similarly, less than 10% of service organizations are found to be contributing to the creation of new services or combining operations with technology, an area that has particular promise. The adoption of digital technologies is lagging because companies face a number of problems that we mentioned earlier, the main one being human resources, i.e. the lack or shortage of data analysts and other employees and managers who understand what digital technologies to use and how they should be implemented and are able to do it. In addition
to the above issues, Russia, which by many indicators lags behind the leading countries in the field of digitalization (Borovskaya, Masych, 2020), faces the problems of the sluggishness of the large state and partially state-owned companies, non-market regulation, and the pressure of sanctions affecting the import of digital technologies and the experience of their implementation.

In addition, the typical growth model for service organizations – the consolidation of operating units – has become much more complex, as IT departments must comprehensively address the challenges of combining legacy systems from different business units and updating all of the organization’s processes as part of its digital transformation. There is a rise in the complexity and speed of information and physical processes, for which many companies are not prepared. Companies need to consider the features of the consumer choice model in the CCE (Gostilovich, Altoukhov, 2021).

Against the background of the overall picture described above, examples of the success of sharing companies look especially striking; therefore, the CCE stands as an important reference point for the path of development for the entire service business.

4. DISCUSSION

4.1 Changes in the goals and priorities of management

Traditional approaches to managing service organizations must change in order to adapt to digitalization. For example, there should be a move toward greater automation of routine tasks and procedures and the implementation of digital maintenance process technologies (Bulavin et al., 2021) so that all levels of management and staff focus less on low-level manual tasks and spend more time developing and launching innovative and efficient options to serve the company’s customers. For this reason, instead of hiring low-cost entry-level employees, one will have to look for specialists in areas such as point robotics, data analysis, and advanced software development. Aside from that, operations and IT departments need to collaborate more closely to quickly create, test, and deliver new services, and organizing effective collaboration is turning into a more important management function than managing processes within a single department.
The leadership of service companies must understand that in the digital environment, the importance of IT departments and IT will continue to grow and reach even higher levels, and this must be taken into account in strategic planning. IT services interact with all other departments to determine how best to automate or otherwise implement a digital transformation of processes by implementing new IT. This refers to both the reorganization of the business of the service company itself and the performance of services for customers. In all instances, the organization of rapid and effective interaction between IT departments and the rest of the company (and the implementation of IT solutions) is becoming an increasing priority management task.

Research in Russia shows that national companies (especially those that pursue ambitious goals and have the necessary resources) are looking for solutions for strategic business development in the sphere of digitalization and IT (Nissen, Lezina, Saltan, 2018).

4.2 The main directions of digital transformation

Elements of digital transformation should be implemented in stages, based on the full context of the organization (Ferreira, Callado & Santos, 2022). Independently of each other, various researchers (Crevani, Palm & Schilling, 2011) commonly propose three possible directions, which reflect the main current trends in the digital transformation of companies:

1) Changes in work processes. The first place to begin a company's digital transformation is to identify specific areas and work processes in which point-to-point or full automation of routine, “manual” operations can be implemented. A typical starting point would be to systematically scan all back-office operations and processes and classify them according to business goals, system interdependencies, and the level of manual intervention required. Then IT services and specific departments will have an idea of which processes and activities can be fully automated, which should not be automated at all, and which would benefit from a hybrid approach. With this information at hand, company management can make justified decisions on investment in IT and on the required system architecture and operational changes.

2) Changes in the management structure and human resources work (Nardes & Brites, 2021). The digital transformation of business places new demands on the knowledge and competencies of management and vital personnel. In addition, the introduction of modern
technologies and rapid response to changes in the external environment often require a
departure from the classical pyramidal structure of the company in favor of the matrix, project,
or network organization of activity. For instance, a number of service companies prefer the
matrix management structure, but rightly note its disadvantages (Babko, 2018). The same can
be said of other individual options. On the other hand, launching the process of digital
transformation and innovation requires a centralized decision on it and subsequent leadership
at least at the level of top management and key executives (Soto Setzke et al., 2021). That is
why we recommend being ready to blend (using rigid management models for some divisions
and flexible ones for others) or to successively switch between different structures. In any case,
the organization of interaction between the IT department and all other departments, and
between different departments, will call for the creation of interdepartmental working groups
with wider powers accountable directly to high-level managers. In this process, IT executives
and managers of other departments involved will need to identify the specialized skills and new
competencies required for their departments (e.g., data analytics, programming, design and
layout of IT systems, etc.) and ensure that the appropriate specialists are hired in a timely
manner.

3) Operational changes. In the long term, it is worth investing in the creation of
opportunities to continuously update the operational model, so that as new IT emerge, the
company can implement them, adapt to them, and ensure consistency in the operations of all
business units. In particular, it is advisable to explore the transition to integrated approaches to
product development and technological platforms. This may mean introducing flexible software
development capabilities (e.g., assimilating the product development team with the IT
department, an approach known as DevOps, so that both teams can jointly and quickly produce
new software applications that will benefit the company or its customers). Whereas before IT
and operations teams were traditionally divided, in the digital world, they need to cooperate
more often and more efficiently through DevOps, agile, and other approaches to development
and the organization of operational business processes.

4) Changes in management accounting. Opportunities to store and process accounting
data have expanded with the advent of new cloud technologies and big data analysis, affecting
not only the work of the management accountant but the company as a whole (Chizhov,
Gostilovich, Ivanov, 2022). Clients value technological power because it affects the unit cost and future price of products. Cloud-based Software as a Service (SaaS) technologies provide individual applications with access to low installation costs and increased deployment speed. The accountant is able to quickly generate this or that report in an end-user-friendly format, including non-financial information.

A number of other authors propose an approach to creating a profitable service business based on four critical elements: product design (goods, services), human resource management, customer management, and a financing mechanism (Frei, 2008). All of these elements are also suitable for becoming objects of digital transformation.

Thus, the range of possible changes as part of digitalization is quite broad. It is advisable for company management to initiate changes in those areas that can bring immediate benefit and help build momentum for future digital initiatives. Successful management of digital transformation presupposes following the current trends (including the growth of the share of the CCE) combined with the ability of management to choose the most appropriate directions for it in view of the company’s context and the strategic goals. It is possible to choose any one of the above directions, or all of them at once, and their association and sequence can be modified in any way desired. The scale of innovation may also differ across service organizations:

- one option is to start with a large-scale automation project, relying on the fact that benefits will accrue over the long term;
- another approach is to launch a relatively small pilot project to test the models of interaction between the management and structural divisions and assess the company’s readiness for a major digital transformation.

In any case, company management must proceed from the context and the strategic goals of the company. In this case, each individual project within the framework of the digital transformation of business can serve as an impetus for further effective transformation. Practice confirms that the growing use of modern digital technology is already a common approach, for example, to reducing the transaction costs of business (Vlasov & Okhlopkov, 2022).
5. CONCLUSION

Today's digital economy requires the management of service companies to be able to implement digital transformation projects, both for their own company and for the benefit of customers (business partners). Successful management of digital transformation requires consideration of the full context and strategic goals of the company for which innovative activities are required.

Service companies (including sharing companies) have taken different ways to maintain and improve the efficiency of business processes but, in general, they face similar problems, among which stand out:

- the need to change approaches to management and implement flexible organizational structures in order to establish fast and effective interaction between departments (divisions, business units) of the company;
- the shortage of personnel with the knowledge and competencies necessary to carry out digital transformation and implement and use modern IT.

On the other hand, digitalization and automation can be carried out in different ways and affect different aspects of a company's business model, so each can start with the project that is most accessible to the leadership, and therefore will naturally have the best effect. The task of management is to develop a strategy for digital transformation based on current trends and opportunities in IT and launch it with the first project, which will create the right impetus for further innovation. By successfully advancing along the path of digitalization, a service organization will also be able to offer the best, most advanced solutions and services to its clients. Therefore, service companies should not just improve their business processes. They should stand (on a par with IT companies) at the forefront of the digital era, mastering the latest technologies and being the first to offer modern solutions to customers, including the expansion of consumer access to the CCE.

Conflicts of interest statement

We, the authors of this article, responsibly declare that we have no actual or potential conflict of interest with any third party that may arise from the publication of this article. This
statement relates to the conduct of the research, the collection and processing of data, the writing and preparation of the article, and the decision to publish the manuscript.

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