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DIRECTIONS OF DEVELOPMENT OF DIGITAL PROJECTS IN THE HOTEL BUSINESS

Since the digital system is a key condition for a new stage of economic relations, it is clear that an effective model of its management in a changing environment is needed. And this model is based on the principles of project management, including flexible methods. In the digital economy, the flow of information is very large, there is a high need for the use of digital technologies in project management, based on the processing of large amounts of information. Long-term, reliable, and secure storage of large amounts of information is becoming increasingly important.

The role of digital transformation in the development of the hotel business is also very high. Especially in today's pandemic, contactless service is not possible without the development of digital technologies.

This study examines the possibilities of using digital systems in the hotel business and the features of digital project management. While the success of the hospitality industry is directly assessed by the high quality of customer service, the study found that quality service is associated with the development of project services for the introduction of modern digital technologies in business. Although the vast majority of services in various sectors of the digital economy are reflected in the work of researchers, the specifics of digital projects in the hotel business have not been studied. This article provides the first steps to analyze the development of digital projects in the hospitality industry. The following studies are intended to determine the impact of the digital system on the effectiveness of the development of project activities in the virtual environment.

Key words: digital economy, digital project management, e-hotel.

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Қонақ үй бизнесіндегі сандық жобалардың даму бағыттары

Сандық жүйе экономикалық қатынастардың жаңа кезеңінің негізгі шарты болып табылғандықтан өзгермелі ортада оны басқарудың тиімді моделі қажет екендігі анық. Ал, бұл модель жобалық басқару ұстанымдарын негізге алады, соның ішінде икемді әдістемелерді басшылыққа алады. Сандық экономикада ақпараттар ағыны өте үлкен, ақпараттың үлкен көлемін өңдеуге негізделген сандық технологияларды жобалық басқаруда қолдану қажеттілігі өте жоғары. Ақпараттардың үлкен көлемін ұзақ мерзімде, сенімді, қауіпсіз сақтау маңыздылыққа ие болуда.

Қонақ үй бизнесінің дамуында да сандық трансформацияның рөлі өте жоғары. Әсіресе, бүгінгі пандемия жағдайында контактісіз қызмет көрсету сандық технологиялардың дамуынсыз мүмкін емес.

Бұл зерттеуде қонақ үй бизнесінде сандық жүйені қолдану мүмкіндіктері мен сандық жобаларды басқару ерекшеліктері қарастырылған. Қонақжайлылық индустриясының табыстылығы тікелей клиентке көрсетілетін қызметтің жоғары сапасымен бағаланатын болса, сапалы қызмет көрсету заманауи сандық технологияларды бизнеске енгізу үшін жобалық қызметтің дамуымен байланысты екендігі зерттеу барысында анықталған. Сандық экономиканың түрлі салаларындағы қызметтердің басым көпшілігі зерттеушілердің еңбектерінде көрініс тапқанымен, қонақ үй бизнесіндегі сандық жобалардың ерекшеліктері зерттелмеген. Осы мақалада авторлармен қонақжайлылық индустриясындағы сандық жобалардың дамуына талдау жасаудың алғашқы қадамдары жасалынған. Келесі зерттеулерде виртуалды ортадағы жобалық қызметтің дамуының тиімділігіне сандық жүйенің ықпалын анықтау көзделген.

Түйін сөздер: сандық экономика, сандық жобаларды басқару, е-қонақ үй.

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Направления развития цифровых проектов в гостиничном бизнесе

Поскольку цифровая система является основным условием нового этапа экономических отношений, то очевидно, что в изменяющейся среде необходима эффективная модель ее управления. Данная модель базируется на принципах проектного управления, в том числе руководствуется гибкими методологиями. В цифровой экономике поток информации очень велик, необходимость использования цифровых технологий в проектном управлении, основанном на обработке больших объемов информации, очень высока. Большое значение приобретает долговременное, надежное, безопасное хранение большого объема информации.

Роль цифровой трансформации также очень высока в развитии гостиничного бизнеса. Особенно в условиях сегодняшней пандемии бесконтактное обслуживание невозможно без развития цифровых технологий.

В данном исследовании рассмотрены возможности применения цифровой системы в гостиничном бизнесе и особенности управления цифровыми проектами. В ходе исследования было установлено, что если успешность индустрии гостеприимства оценивается высоким качеством услуг, предоставляемых непосредственно клиенту, то качественное обслуживание связано с развитием проектной деятельности для внедрения в бизнес современных цифровых технологий. Хотя подавляющее большинство услуг в различных отраслях цифровой экономики нашли отражение в работах исследователей, особенности цифровых проектов в гостиничном бизнесе не изучены. В этой статье авторами сделаны первые шаги по анализу развития цифровых проектов в индустрии гостеприимства. В последующих исследованиях предполагается выявить влияние цифровой системы на эффективность развития проектной деятельности в виртуальной среде.

Ключевые слова: цифровая экономика, управление цифровыми проектами, электронный отель.

Introduction

While the tourism industry is an element of the economic system, the hotel business is an important part of the tourism industry. The development of the hotel business is a key prerequisite for the development of tourism, as it is important to promote hospitality to tourists and provide services following international standards. The issues of effective project management in this area are relevant because a successful project leads to the development of the industry. And the digital economy has a big impact on the success of projects. Today, the importance of virtual updates is special. Many Kazakhstan companies, including the hotel business, are adapting most of their operations to the digital system, and the number of digital projects is growing. Many scientists have identified key issues in the use of virtualization in project management, the most important of which is the creation of an effective results-oriented project team. Projects are always important in shaping the company's corporate strategy. However, the hotel business does not pay much attention to the financing of project activities. To improve project management practices, researchers have developed a complex and universal project management structure and proposed principles and methods of project management. Methods that have been effective for many years are undergoing positive changes due to the development of information technology. The development of information technology has also developed virtual management.

The successful development of hotels is directly related to the introduction of digital services. A system of separation and analysis of guests, a multimedia screen for displaying advertising and information content, Internet sales channels, high-tech devices in the conference hall and conference rooms allow to meet international standards of hospitality, as well as establish regular contact with customers and turn them into regular customers. gives.

Since the digital economy is a new system of economic relations, it is clear that an effective model of its management in a changing environment is needed. And this model is based on the principles of project management. Only project management can give an opportunity to effectively meet the needs of the client.

This study examines the possibilities of using digital systems in the hotel business and the features of digital project management. While the success of the hospitality industry is directly assessed by the high quality of customer service, quality service is associated with the development of project services for the introduction of modern digital technologies in business. The vast majority of services in various sectors of the digital economy are reflected in the work of researchers, but the specifics of digital projects in the hotel business have not been studied.

The purpose of the study is to identify and review the development of digital projects in the hotel business.

Literature review

According to many scientists, the digital age has brought benefits to all areas of management, such as reduced business travel costs, reduced task execution time, greater information flow management, and increased document storage. Besides, several scientists have identified the shortcomings of the digital economy: the reduction of personal relationships, the use of information technology requires in-depth professional knowledge (Bankewitz et al, 2016, Kishnani, 2017).

The main disadvantage of managing digital projects in the virtual space is the inability to establish direct contact with stakeholders, which makes it difficult to allocate resources in the event of a conflict (Blaskovics, 2018).

According to Shaikh (2019), the simplicity of digital services has a positive impact on consumer behavior, i.e. creates a positive experience on the part of consumers.

Many researchers have noted that the project team, including the project manager, is a key factor in the success of virtual project management. (Daim et al, 2012, Blaskovics, 2014).

In Blaskovics' research, he identified how virtualization affects the work of a project team leader, noting that it allows companies to improve project management methods based on its advantages and disadvantages (Blaskovics, 2018).

CI is a finished product release control code that automates the production of SI project products, increases productivity, improves delivery quality, and effectively integrates the codebase (Shivakumar, 2018).

Several scientists have also shown interest in studying the use of digital technologies in the hotel business. The actual interest in the use of digital technology in the hotel business is related to the fact that on their basis it is possible to transfer the digital environment to the usual communication mechanisms that allow the use of traditional quality schemes. (Dzhandzhugazova et al, 2015).

Hua et al (2015) studied the possibilities of using the PMS system in the hotel business, identified the shortcomings of this device, and justified the need for the development of virtual technologies.

Mo Kwon and others noted the advantages of using electronic systems in hotels, noting that these technologies have a significant impact on the development of the hotel brand. (Mo et al, 2013).

The need and possibility of digitalization of the hotel business are reflected in the above research. Effective use of innovative approaches in the field of hospitality will increase the competitiveness and development of the industry in the domestic and foreign markets.

Materials and methods

General research methods were used during the research: methods of generalization, comparison, analysis, synthesis. The materials of the Committee of the Tourism Industry of the Ministry of Culture and Sports of the Republic of Kazakhstan are used in the work.

Results and Discussion

Since digital projects are implemented in the virtual space, it is possible to consider the positive and negative effects of the virtual environment (Table 1).

Table 1 – The impact of the virtual environment on projects

The positive influence of the virtual environment	The negative impact of the virtual environment
Communication speed	Lack of direct communication (face to face)
Effective time management	The occurrence of technical defects
Speed of information and document flow	The difficulty of gaining trust
Creating an effective project team (no territorial restrictions)	Expectations related to team members in other regions due to time differences
	Difficulties in the exchange of knowledge and experience

As can be seen from the table, the impact of the virtual environment on the implementation of projects is both positive and negative. Depending on the specifics of the project, the impact of the digital system on efficiency varies. On the one hand, fully automated service allows you to improve the quality, on the other hand, contrary to the principle of individual attention to each

customer, which is a feature of the hospitality industry, digital project products can lead to failure, as mentioned above.

There are different backgrounds for digital project management.

First of all, digital project management consists of 3 main phases:

Planning
- Project requirements and architectural and design work are carried out

Execution
- Project implementation and testing

Driving (accompanying)
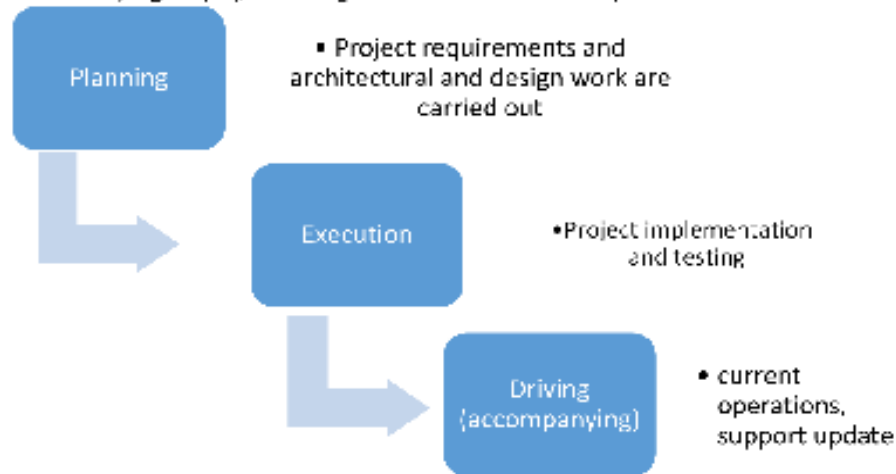- current operations, support update

Figure 1 – Phases of digital project management

A management structure is formed to manage projects, i.e. a team is created to implement the project. The management structure allows for accountability and accountability in the implementation of business strategy.

The management model consists of an operational group that oversees day-to-day operations. There will also be management that will analyze the project and manage the table (graphics). The executive team will determine the direction of the project and make forecasts.

Common issues in the implementation of digital projects include the choice of project implementation methods and skills. Because each project is unique, so the right choice of methodology and approach to the implementation of each of them will contribute to the success of the project. Also, best practices in project management - knowledge management, continuous improvement, stakeholder management, quality assurance process, communication process, continuous integration of project indicators, and automation tools should be implemented.

Project risk management consists of risk identification, mitigation, and monitoring. It is important to identify the risks of any project promptly and prevent risks.

Change management consists of evaluating changes, planning changes, implementing, and improving them. Change management is carried out simultaneously at all stages of project management.

Waterfalls, iterative, and flexible models (Agile) are used in the implementation of digital projects. Traditional project management uses project decomposition, i.e. project work is divided into several parts and performed under the sequence of initiation, planning, implementation, assembly, project completion. However, this approach is not effective in managing digital projects because of its low susceptibility to change. Therefore, flexible approaches are used in the management of such projects, i.e. the project is not divided into sequential phases, but is subdivided into subprojects. If the planning stage is fully applied to the project, product development, testing will be carried out on individual subprojects, the necessary changes will be made promptly, avoiding additional costs as they do not apply to other parts of the project. As human knowledge grows, systems become more complex, especially as technological advances are made. Organizations face more and more complex conditions. One's personal decision can affect the whole organization. The goal of any project should

be value formation, i.e. the interests of all customers of the project must be balanced. Both traditional and flexible methods of project management, as well as the combined model, are determined by the type, purpose, value of the project, the interests of the participants. Thus, in the traditional methods of project management, the categories of quality, time and cost were important, then the complexity – value – resistance, and according to the flexible methodology, the categories of speed, value, efficiency prevailed.

Thus, with the development of the digital system, a new approach to project management was formed, in 2001, the Agile Manifesto was adopted, i.e. a flexible methodology for project management was developed. The main categories in the new project management paradigm are speed – value – efficiency. In this paradigm, not only the duration of the project but also the speed of presentation of valuable results to the customer for testing is important, first of all, the simplest type of product is offered to the customer. After the introduction of flexible methods of project management, the product

began to enter the market faster, the project team became more flexible to change.

Because customer requirements are constantly changing, project managers face big challenges. While everything is changing rapidly, planning is difficult, traditional project management approaches define basic plan requirements, and then apply change management to minimize the impact of change on the project, while Agile flexible project management techniques help address this issue. According to many companies, this method of project management is more effective because it involves the involvement of each employee in achieving the set goal, which means that the actions of each of them are voluntary.

Flexible methodology reduces the negative impact of personal relationships of team members on the project results, strict division of responsibilities between the project team and discipline. In this methodology, the customer and the executor do not make changes together, and even at the initial stage of the project, the customer has the opportunity to make adjustments (Table 2).

Table 2– Characteristics of traditional and flexible approaches to project implementation

Traditional methods of project management	Flexible methods of project management	Criteria for determining the flexibility of the project
Based on the plan	Based on interaction with customers, meeting their requirements	Factor-based
Based on strict regulations	During the project implementation, the content may change, the result will be unknown at the beginning of the project	The strictness of project content
The cost of change is very high, technologically complex	The possibility of change is high and the cost is low	The complexity of change
The project product is sold to the customer only in full	It can be divided into blocks and the product can be sold to the customer in parts	The mechanism of selling the product to the customer
Environmental factors are considered stable	The content of the project will change, taking into account the variability of environmental factors	The impact of environmental factors on the project
Changes in traditional project management are responsive, but corrective or warning.	Changes in flexible project management are monitored through adaptive actions	The nature of the change management process
Traditional project management is top-down control	Flexible project management involves the creation of a self-organized and cross-functional team	Organizational structure and a team of project management
Traditional project management is contract-based	APM is client-oriented	The orientation of project management methods
Stakeholder's opinion is clear, and influence is low	The interests of stakeholders can change, their level of influence is high	Level of influence of stakeholders

Note - Özkan Murat, 2016 Compiled by the authors based on the literature.

As can be seen from Table 2, the flexible approach to project management is fully aligned

with the conditions of the virtual environment, the development of digital systems.

Agile is used only in organizations that can work in a rapidly changing environment, and the level

of thinking of the project team must be flexible. And the digital space is characterized by a high level of flexibility, a large amount of information flow. Therefore, project management based on the Agile methodology, which is prone to digital transformation, will support the development of the economy in the new conditions and will be in demand in the customer-oriented hospitality industry.

These studies show that the degree of maturity of the project team plays a key role in the management of digital projects. Today, in the context of the pandemic, the hospitality industry, along with other industries, is undertaking digital projects. One of the prerequisites for the effective implementation of digital projects is the presence of a project team that ensures the effectiveness of projects.

And now let's describe the development of project activities in the digital economy in the hotel business in Kazakhstan.

The use of PMS technology in hotels is developing, which allows hotel owners to provide quality services to guests. It has the following features:

Figure 2 – Features of PMS technology

It also allows you to analyze and analyze the financial performance of the hotel, not only identifies key indicators such as «hotel occupancy during the period», «average room load», but also automates the use of the services of the Global Booking System (GBS).

The development of digital technologies is facilitated by technological and organizational and economic conditions, deployments require special space for PMS devices, the involvement of additional human resources for the timely implementation of appropriate updates for software. Such difficulties have intensified the search for new technological solutions and led to the development of virtual technologies. Special electronic systems used by large companies in the hospitality industry and individual accommodation facilities allow direct communication with customers, which develops the hotel brand and increases loyalty.

The Committee for Tourism Industry of the Ministry of Culture and Sports of the Republic of Kazakhstan is implementing the E-hotel project.

The main goal of the project is to create a system of registration and accounting of guest accommodation, a list of important information about accommodation, analysis of big data on external and internal tourism (Big Data), modeling and forecasting of tourist flows based on Big Data.

This system allows automatically calculates the «bed tax» tourist list, automatically sends notifications to the authorities about the stops of foreign tourists, as well as uses the system as a means of communication with the location.

The introduction of the E-Hotel system will create a favorable environment for tourists, increase the convenience of accommodation for foreign nationals, as well as the collection, processing, and analysis of information on temporary accommodation of foreigners.

The products of this project will be as follows:
– placement list;
– data on external and internal tourism (Big Data);
– Model of tourist flows created by Big Data;
– automatically calculated tourist «bed tax»;
– information automatically provided to the authorities;
– means of communication with locations.

This project is being implemented in Almaty and Nur-Sultan.

In Kazakhstan, the pandemic has accelerated the transition to a digital system in the hotel industry, changing the attitude of customers to technology. The experience of establishing personal communication with guests with the help of technology was formed. For example, the hotel Doubletree by Hilton Almaty has launched a project that allows choosing a contactless menu on your gadget using a QR code. The purpose of this project is to ensure the trust and safety of customers.

Conclusion

In the digital economy, the flow of information is very large, there is a high need for the use of digital technologies in project management, based on the processing of large amounts of information. It is important to store large amounts of information for a long time, reliably and securely. The development of digital technologies will also have a positive impact on the development of the hotel business. Especially in today's pandemic, contactless service is not possible without the development of digital technologies.

One of the digital technologies that will be important in the future is Big Data (Xiang Z. et al, 2017, Pilkington, M., 2016). The LockChain platform is based on digital blockchain technology, which is a sales platform for accommodation, where there are no intermediaries and no commissions. Also, the blockchain system is used on the BeeToken and Beenest platforms to pay for hotel services. ShoCard & SITA digital blockchain platform was used to manage customer identification. Amadeus is actively implementing digital technologies, modern technologies can determine the mood of the customer and classify (differentiate) the answers according to the tone of voice. The adaptation of such innovative technologies to the conditions of development of the domestic hotel business is one of the most urgent measures to increase the competitiveness of the industry and maintain its position in the market in times of crisis.

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