



Digital Innovations in the Hotel Business: Analysis of Foreign Experience

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ABSTRACT

The purpose of this article is to describe and evaluate new hotel service innovations that deserve to be considered for implementation in hotel businesses. The paper is timely since hotel buildings are becoming increasingly interested in the development and deployment of new technologies, as well as the problems of improving the quality and competitiveness of services at hotel enterprises, the solution of which can be innovation. This article describes digital innovation advances that can be applied to hospitality businesses. The article also provides an aggregated calculation of the income and expenses of a hotel project using innovative technologies. In conclusion, it is said that innovations can and should be used to solve problems of attracting new and retaining existing customers, due to timely response to customer needs.

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At the moment, the hotel business and the entire tourist market are in a "shock" situation. All segments of the industry, all categories of consumers are affected. Globally, the coronavirus pandemic has led to the fact that the crisis of the hospitality industry has affected all countries of the world. This trend will continue even when countries begin to recover from the crisis, since the main priority of potential consumers of tourist services will be the restoration of the economic situation and their own solvency.

The populace is currently undergoing a rapid and mostly forced "digitalization." All nations, with the exception of Uzbekistan, have moved staff to remote operating mode, and the complete service is now available online. Many travel agents who are currently working in the home office format may continue to do so when the crisis is over. In this context, a new sort of tourism has emerged: online tourism. Entire destinations have switched to online platforms. This strategy of behavior, at first glance, contributes to reducing the competitive advantages of organizations and institutions, since it "gives" unique content for general use. On the other hand, such an action program allows you to advertise yourself so that the client has a desire to visit them in the long term. Thus, deferred demand is formed.

In a constantly changing external environment, the generation of new ideas is a prerequisite for the sustainable development of the hospitality industry. With the successful implementation of innovative solutions in the information economy, they can turn into a new service product, become the basis for the formation of long-term competitive advantages, improve the quality of service, automate business processes, become one of the sources of development of the hospitality industry, its driver. In addition, in the context of changes in the structure and dynamics of the tourism market, the need for innovation by hotel enterprises is especially relevant. In order to understand the role and value of innovation in the hotel business, the specifics of innovation are applicable to the hotel industry, as well as the types of digital innovation that exist in the global hotel market.

Literature review

I. Schumpeter's work "Theory of Economic Development" provided the first definition of innovation as an economic word, which is cited by practically all scholars of innovative processes. It was about "novel combinations" of developmental changes. "Each method of production denotes a specific combination," argues I. Schumpeter, "and different methods of production can only differ in the nature and degree to which they are combined." Each specific act of production is a specific combination for us" [1, p. 72]. These "new combinations". According to Schumpeter, they appear due to changes in the development of the sphere of production and market economy.

The term "innovation" he defined as the commercialization of all new combinations based on:

1. the introduction of new goods and services;
2. the use of new materials and components (new sources of raw materials);
3. introduction of a new production method;
4. opening new sales markets;
5. the introduction of new organizational forms.

In other words, according to the given definition, innovation is the simultaneous manifestation of two worlds, namely, technology and business. When a change occurs only at the level of technology, I. Schumpeter calls it an invention. And only when business is involved in changes, they become innovations [2, p. 8].

In the broad sense of the word, innovations in the hotel industry are understood as new services, products, processes or ideas, as well as existing services, processes and ideas that are applied in new conditions [3] (Vila, Enz, Costa, 2012). Researchers agree that innovations can improve the quality of services offered by hotel enterprises, increase labor productivity and customer satisfaction, gain a larger market share and form a competitive advantage [4, 5] (Danilenko, Suranova, 2018; Johannesson, Olsen, Lumpkin, 2001). A review of the literature devoted to the use of innovations in the field of tourist and recreational services allows us to state a wide range of areas of scientific search.

In particular, the theoretical foundations of innovations in the field of hospitality are reflected in the works of Johnson P. [6] (Jones, 1996), Ottenbacher M. [7] (Ottenbacher, 2007), Hjalager A. [8] (Hjalager, 1997). The role of innovations in increasing the competitiveness of hotel enterprises is highlighted in [9-12] (Kondratskaya, 2012; Chistyakova, 2011; Pokhomchikova, Tarkhanova, 2016; Balashova, Popova, 2018).

The specifics of the use of innovations in the hospitality industry are presented in the studies of a number of domestic and foreign authors [13-16] (Ignatev, 2017; Enz, Siguwaw, 2003; Orfila-Sintes, Mattsson, 2009; Rudchenko, 2014).

Results

The introduction of innovations is a key characteristic of modern business. The hotel industry is no exception to this tendency. A potential hotel customer is someone for whom information technology has become an integral part of his life. The adoption of technological advancements in hotels is primarily motivated by this.

Digital innovations in the hotel business can be divided into two categories. The first category includes innovations related to technical equipment for the internal and external operation of the hotel. These technologies allow to optimize and simplify the work of the hotel staff, as well as to facilitate access and use of the hotel services directly to the client himself. Currently, hotels are moving to a new level of booking, and use SaaS technology, better known as "Cloud". This technology allows the systems to receive subscription information, as well as manage the sales and marketing department of the hotel.

In addition to the systems that allow you to manage the work of the hotel and carry out the interaction of employees with customers, there is technical equipment that ensures the comfort and safety of the hotel resident, as well as helps in the work of the service personnel. This equipment is the second category of digital innovations in the hotel business. Today, it is becoming increasingly difficult to attract customers, only with comfortable apartments and a convenient geographical location. It becomes necessary to have such a set of technical services as: satellite TV, free wireless Internet and this is not a complete set.

Over the past decade, the hotel business has undergone a huge upgrade due to the development of digital technologies. Technologies of hotel automation, online booking, gadgetization, electronic menus, cable TV, wireless Internet, environmental distribution and supply of light and energy, online checkin and checkout, digital keys, robotization and much more are being introduced. The hotel industry actively uses digital transformations and makes a profit from this by optimizing costs and improving hotel processes, achieving an increase in the quality of service, an influx of potential customers and an increase in the economic indicators of this industry [17].

In the service, hospitality and tourism industries, technological innovations are becoming an important source of development and growth, and currently survival. In this sense, the development and implementation of technological innovations in the full sense becomes a strategic weapon of hotel chains and independent hotel enterprises [18]. According to experts, at present, business in general and the hotel industry in particular have a high potential for digitalization [19]. Let's consider the popular areas of development of digital technologies in the field of hospitality.

Digital solutions in the field of hospitality optimize the work of hotel enterprises by replacing staff with gadgetized services and devices. There is a digital transformation of the business, which allows hotel companies to develop and introduce personalized and even customized offers to the market.

Even now, hotel applications for guests track the presence of a guest near the hotel, and send notifications about the readiness of the room directly to the guests' mobile phones, chats with hotel employees are relevant if there are unusual requests and questions that the hotel's website or application cannot answer.

Among the consumer trends is the development of voice assistants and virtual companions services designed to help tourists, potential and real customers of the hospitality industry solve current problems in a virtual form. People who are already used to digital assistants and chatbots are interested in virtual assistants who are ready to help in organizing the route, finding a means of accommodation (and, accordingly, booking it), the optimal food option, leisure activities, entertainment, and many others.

Today, digital assistants in hotels can provide check-in support, provide useful information, and perform Guest relation functions.

Augmented reality technologies were highly appreciated by the business in terms of stimulating sales, promoting the brand, attracting the attention of sophisticated customers. The development of virtual and augmented reality can radically change the process of choosing and making purchases of goods and services by customers. Virtual reality is not just a convenient option in the process of searching and obtaining information – it is also an impression, a new experience, a special pleasure that a person who uses such innovative tools gets. It is impossible to exclude the significance of the psychological and social significance of such decisions.

Smart technologies find their application in hotel room management and the process of obtaining additional services. The guest can set up a comfortable temperature regime for him, lighting, its power, use the services of a voice assistant. The system is also capable of recognizing guests by account in the application and managing the number by the saved data. The introduction of such innovations will increase the loyalty of guests and automate the process of preparing a room for arrival, according to possible preliminary wishes [20]. These technologies open up new opportunities for improving the activities of hotel enterprises, acting in their modified forms in the form of intelligent and intellectualized systems.

Intelligent and intellectualized systems in the field of hospitality. As already noted, many areas of human activity are being transformed under the influence of digital technologies, robotics and automation. More and more processes and operations require minimal human intervention, there are "smart" programs and effective gadgets. These changes are also characteristic of the modern hotel industry.

In an effort to make the guest's stay at the hotel comfortable, convenient, and often unforgettable, the management of the hotel enterprise today is helped by various innovative solutions. Very often, the hotel industry uses intelligent and intellectualized systems that have appeared thanks to the latest research on the capabilities of artificial intelligence. The great advantage of these systems is that they can analyze the situation and make decisions independently. Unlike intelligent systems, intellectualized systems require the support of a person (operator) making a decision.

Traditionally, robots that adopt human functionality were designed to perform only dangerous, dirty or monotonous work. However, the trend of recent years is the reorientation of artificial intelligence to perform activities that go beyond the so-called "DDD niche" ("dull– dirty-dangerous"). Today, robots are able to significantly improve the lives of ordinary people, provide technological processes.

The first autonomous robots for hotel enterprises were developed by the company "Savioke". Now they are used, for example, in Singapore at the Jen Hotel, as well as in Japan at the Shinagawa Prince Hotel (Tokyo). These robots deliver orders to guests' rooms, pick up luggage. They are able to bypass obstacles and get up to the charging station when necessary. The reception staff only load the required item into the robot and enter the number of the room to which the delivery is to be made.

Not so long ago, LG demonstrated its line of hotel assistants, robots that were developed specifically for commercial use in hotels, supermarkets and airports. These machines are equipped with a special sliding tray, with which they can bring food and drinks to the guest in the restaurant. There is also a robot carrier in this line. In addition to baggage delivery, the robot can also perform operations of accelerated check-in-check-out to the hotel and accept payment, saving the guest from waiting for his turn.

The Hilton Hotel together with IBM created the first of its kind robot concierge with artificial intelligence, Connie (Connie). The software built into the robot allows it to better recognize human speech. Most often, the robot is located in the lobby next to the reception. Here he helps to serve guests: greets them, answers their questions. The robot can give the necessary information about the hotel, advise sights or places outside it. The technology used in the creation of Connie made it possible to bring his artificial intelligence as close as possible to human. The more Connie interacts with people, the smarter he becomes.

In Japan, in the city of Sasebo (Nagasaki Prefecture), there is a HennaHotel (which literally translates as strange), which is serviced exclusively by robots. At the reception, the guest is met by a humanoid robot and a dinosaur robot. A female robot receives guests who speak Japanese, and a dinosaur communicates with English speakers. When registering, the technology of identification of a person is used, with its help, the number is opened. In this hotel you can meet a robot porter, a cleaner, and a cloakroom attendant. The rooms are equipped with temperature and motion sensors. The guest can configure additional parameters from the tablet that will be in the room. A small toy robot is waiting for the guest in the room, which will provide information about the weather and tell what time it is. You can also ask him to wake you up in the morning. In the future, the founders plan to build another 1000 such robotic hotels in different parts of the world. The only people in the hotel, except for the guests, are security personnel who use cameras to monitor the work of robots.

The use of various sensors (light, motion, temperature) by a hotel enterprise refers to the concept of "ambient intelligence" or Ambient Intelligence, as well as Internet of Things (Internet of Things). Such technologies are now actively used in the creation of smart homes. The first to introduce smart home technology was the Skypark hotel chain. Instead of a room key, here, when registering, guests are given a smartphone with all the settings. A person only needs to set the desired parameters of temperature, lighting, humidity, and the system does everything else itself. As you know, one of the biggest operating expenses of hotels is the cost of electricity. The sensors detect whether there is a person in the room or not, and turn off the light themselves. No more worrying about forgetting to turn something off.

All these innovations help the hotel company to improve the quality of customer service. Automation of some processes reduces the risk of errors caused by the human factor [21]. If robots take over some of the work functions, then ordinary hotel employees have more time to concentrate on individual service, satisfying the wishes of guests. In addition, robots that have not yet become something ordinary are also an element of marketing and attract new guests.

Today, robots still remain exotic in hotels. Despite the fact that the opinion that robots will soon replace people in the workplace is quite common, there is no need to fear this. Now we will need people who create the necessary content, specialists who serve robots.

Making a decision on the digitalization of the human resource management system at a hotel enterprise is a voluntary issue and depends on the capabilities and goals of a particular accommodation facility. Despite the fact that the automation of personnel management processes is associated with a number of difficulties, its advantages over the "classical" methods of organizing personnel records management are obvious. Competent use of digital platforms in the hotel business can not only contribute to improving the quality of service and staff efficiency, but also make a number of progressive changes in the position of the industry in the labor market in the long term.

Conclusion

Changing consumer demands and requirements, changing needs of the manufacturing process (outdated

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equipment, technologies), changes in the structure of the industry or market, and demographic changes are all drivers of innovation in hotel businesses.

New expertise in the fields of management and marketing allows you to implement new, more effective staff management and client acquisition strategies. The presence of a loyal customer base serves as the basis for a stable sales volume even in a crisis, and is also an important strategic competitive advantage.

In order to create a working loyalty program, you must:

1. conduct a preliminary study of the organization, customers and competitors ' personnel. The client becomes loyal to the company and its products gradually, so you need to create loyalty stages and monitor how customers moved from one stage to another.
2. the main goal of working with a client is a high level of service, and consumers should also feel that hotel services are addressed to them personally; if this is not the case, they go to competitors, and the hotel loses potential customers.
3. careful work with customer complaints is required, since the worst is the negative reviews of the hotel company's clients.
4. it is necessary to work responsibly with the client: the speed of service is closely related to consumers ' ideas about good service.
5. a hotel company should know what is valuable for customers, so you need to invest money in customer loyalty research, which will allow you to understand how the work of a hotel company satisfies the needs of customers.
6. it is necessary to organize the return of lost clients: it is 2 times more likely to return the old client than to find and persuade a new one.
7. it will be necessary to use various channels in order to serve the client well: clients often change communication channels, but everywhere they expect good service.
8. the hotel management should organize training of specialists engaged in working with clients.
9. to increase the effectiveness of the loyalty program, it is necessary to cooperate with partners, which gives control of the entire supply chain, it becomes possible to provide a high-quality service to the end consumer, respectively, the company has fewer competitors.

Proper competition management implies that the hotel management should know its strengths and weaknesses in each of the technologies discussed above, as well as similar indicators of the main competitors. Based on these data, it is necessary to prioritize the development and introduction of new products, assessing their economic efficiency. The company's product policy should be based on this information. Thus, it is necessary to attach great importance to innovative technologies. Managing innovative technologies does not require large costs compared to poor management, but it makes a significant contribution to profit. The best way to achieve good results is to plan a strategy for the development of a hotel enterprise based on a systematic analysis of competitors, consumers, and the technological profile of the hotel.

Thus, Innovative technologies allow you to attract new and retain existing customers, provide a quick solution to problems by responding to customer needs in a timely manner.

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