
Innovative E-Services in the Hotel Industry: Exploring Modern Business Practices

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Abstract:

Purpose: The aim of the article is to present the importance of innovation in shaping a new dimension of debt, especially hotel debt, and their conversion into electronic services.

Sedigne/Methodology/Approche: The modern market of tourist services needs new tourist products and new activities that allow us to create a new electronic offer for tourists. The research hypothesis was defined as follows: The wide use of electronic tools in customer service results in the creation of a new offer in the form of electronic hotel services.

Findings: Without a properly developed electronic infrastructure for tourism, it is impossible to talk about its attractiveness and full operational and development functionality of the market. Tourism development based on specific electronic tourist activities is a basic element of contemporary tourism development.

Practical implications: E-services allow hotel business to increase the range of your business and reach increasingly distant target markets. Customers expect an increasingly innovative offer that meets the expectations of remote availability of services, including their reservation. More and more businesses base their operations on the use of electronic platforms for sales.

Oryginal/value: The article has a practical application. The results can be used by people planning the development of electronic tourism and hotel product.

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1. Introduction

The functioning of tourism companies, including hotel companies in a competitive and increasingly globalized market requires these companies to take into account in their operational activities, as well as in the created and implemented marketing strategies, many important conditions and factors that significantly determine their market situation.

One of the most important such significant determinants is now becoming innovation, especially that of a product (service) nature, an example of which in a modern tourism enterprise is the need to develop in the direction of offering e-product and related e-marketing. Modern business entities are increasingly engaged in innovative activities and are looking for all sorts of innovations inside and outside the organization, among others, based on artificial intelligence technologies.

By targeting various types of improvements and innovations, tourism companies, especially hotel companies, can achieve many economic benefits, including, above all, staying in the market, developing their product and geographic offerings, as well as competing with other entities, which is due to the fact that modern customers are looking for more and more effective tools to improve, among other things, the problem of booking services.

Therefore, an important aspect of the issue under consideration is whether hotel services can already be called e-services, which are defined as services provided electronically (mainly referring to the ability to purchase and book them remotely) over a telecommunications network, including a computer network, such as the Internet, using information technology, the provision of which is automated and requires little human involvement, for example, through the use of various booking applications.

2. Types of Innovation

Thus, innovation is understood as, among other things, the implementation of a new or significantly improved product (product, service, or e-product, e-service). A new or significantly improved product can be considered implemented when it is introduced by a given enterprise into the market.

Product innovation is the introduction to the market of a product or service that is new or significantly improved in its characteristics or applications. Product innovation in services, on the other hand, is the introduction of significant improvements in the way services are provided, the addition of new features or functions to existing services, or the introduction of entirely new services (Nowacki and Staniewski, 2010; Do *et al.*, 2022).

The source of innovation in the activities of hotel companies and the implementation of the hotel or e-resort e-product in the broadest sense is to take advantage of the experience of companies that are leaders in innovation and pro-innovation activities. Google's strong innovation potential can be evidenced by the fact that the company launches a new product or feature almost every day.

Google is able to develop its innovation potential by synergistically combining several strategies. At the core of such activities are Google's operational capabilities, which have been generated by developing its own technology effective use of architecture, capable of further expansion, as well as rapid implementation of the entire process of creating new products.

Google's advantage in the field of innovation largely comes from the fact that the company can afford to experiment with new e-product concepts. Its business model, based on displaying ads on search results pages, is profitable enough that it can cover the costs of side ventures that turned out to be a dud without compromising its ongoing operations. Google offers its customers a variety of e-products - primarily software (e.g., Google Chrome, Google Earth, Google Music, Google Video Player, Gmail, Google Maps).

Practice shows that in addition to innovations related to industrial activities and production (production of physical goods), innovations in the sphere of service provision, or in other words, service innovations, are becoming increasingly important today. An area and example of the implementation of innovation in services is tourism activities, including hospitality.

Such a clear distinction is due to the fact that hotel services are characterized by different features from tangible goods, i.e., intangible nature, unity of consumption and production, necessary participation of the consumer in the process of production and provision of hotel service, high gasification of living labor (hotel staff) in the process of providing services of a given accommodation facility, etc.

Therefore, service innovation in the hotel industry is the result of the process of changes introduced in the area of service activities and in the process of providing individual accommodation services in a hotel facility, regardless of its type. Service innovation is characterized by a high degree of immateriality, significant involvement of the human factor (the provider and the recipient), high influence of external and human factors (Adamopoulos and Thalassinou, 2020).

The implementation of the idea of service innovation can include: creating new or improving existing services (e.g., hotel cleaning), applying new or improving methods of service delivery and marketing activities (mainly in the area of application of social media and reservation systems), applying new ways of interacting with customers or suppliers, making changes in the organization of the

process of providing individual services (Niedzielski, Markiewicz, Rychlik, and Rzewuski, 2007).

3. E-Service and E-Business

In today's market, there is a close connection between e-products and e-business. The concept of electronic business (e-business) includes, among other things, exchange of information between producers, distributors and recipients of products and services, conclusion of contracts, transmission of documents, conducting teleconferences, acquiring new contacts, searching for information, etc. E-business is part of the e-economy, the main subjects of which are virtual enterprises. Such enterprises are modern businesses, characterized by extensive use of telecommunications and ICT media and technologies in their business activities.

This is especially true for communicating, exchanging information and knowledge from the environment, as well as carrying out many business operations that result in e-products. The key values of e-enterprises are knowledge and the expectations and needs of virtual communication of customers (Drab-Kurowska, 2008).

The production, distribution, sale and consumption of e-products in a modern company includes all business processes carried out electronically and using all Internet techniques and technologies. A broad approach to defining the concept of e-product in a modern company will refer to any use of information technology in business conducted on the market. Thus, the essence of e-product is based on efficiency, speed, innovation and new ways of creating value in the organization.

E-products (including e-services) are being offered by an increasing number of market players, who, by creating electronic relationships and processes in the eyes of contractors and customers, become modern, making it possible to better and more efficiently meet the needs of modern consumers. The basic and at the same time the most important e-relationships between market players can include:

- B2B (business-to-business) - a business-to-business relationship is a relationship that implements business processes between two companies;
- B2C (business-to-consumer or business-to-client) - the “enterprise-customer” relationship is the relationship that implements transactions between businesses and consumers;
- Intra-business (intranet) - electronic intra-business involves the electronic execution of a company's internal business processes;
- C2C (consumer-to-consumer) - the “consumer-to-consumer” relationship defines the type of business relationships occurring between the end consumers of a good or service (Nojszewski, 2014).

Examples of e-product activities offered by today's modern companies are:

- Electronic website and online store (e-shop) - this is the simplest of the business models presented, it is used to promote the company, its goods or services, sometimes combined with an online store;
 - Electronic procurement (e-procurement) - that is, electronic bidding and procurement of goods and services. In the case of goods, transportation is already done in traditional form;
 - Electronic mall (e-mall) - a variety of online stores, in its simplest form it consists of multiple electronic stores (run by independent entities). Cooperation between them can be extended to common methods of payment, delivery of goods, etc.;
 - Electronic auction (e-auction) - in its basic form offers electronic mechanisms for conducting auctions.
 - Electronic auctions are most often equivalent to auctions conducted in the traditional manner:
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- Virtual community - more of an Internet phenomenon used by some companies in their operations than a business model. It is a group of people (entities) gathered around a specific topic or market sector, communicating through services available on the web (forming a kind of thematic portal, mailing list, etc.);
 - Collaboration platform (collaboration platform) - provides the tools and IT environment for cooperation between companies. Such a platform is most often run by an independent company, which rents it to other businesses;
 - Value-chain integrator and service provider (value-chain integrator) - this business model focuses on integrating the entire value chain in the first case and providing specific value-chain services (e.g., electronic payments) in the second case;
 - Information brokerage (information brokerage) - companies of this type offer the service of finding and providing companies with the data (information) they want. For example, this could include searching for information on the web, or creating customer profiles;
 - Trust services - this is a similar business model to the previous one, providing specific information to guarantee trust in business processes between network parties, most often in the form of issuing or confirming certificates of authenticity;
 - Straight to the customer - in this model, the company delivers products and services directly to the customer, bypassing traditional distribution channels;
 - Full-service provider - in this model, the manufacturer is not limited to selling its own goods and/or services, but builds a thematic service (portal) through which it offers products of other companies. These companies offer related products in the same industry, e.g., a

manufacturer of kitchen knives also offers pots, spices, etc. sold by other companies.

4. Hospitality E-Product

The implementation of service innovations is regarded by hotel service companies as a manifestation of the implementation of a modern style of organizational management and is associated with modernity in action. This is also how the hotel itself as well as market partners (e.g., competitors, customers, suppliers) may perceive the hotel. A hotelary enterprise, regardless of its type, should be able to create or adapt service innovations, otherwise the lack of modernity that comes from innovation will benefit the competition.

In the service business, there is also a need to set specific innovative specific and process goals for implementation and execution as a manifestation of a well-thought-out operating strategy, and a need to “push” as well as “pull” innovations, i.e. to source innovations from the market, as well as through diffusion implement them in other companies. An exemplary typology of service innovations in the hotel industry can be as follows:

- hard innovations - technological innovations, related to the process of operation of the hotel/accommodation facility; hotel services are strongly dependent on the technologies used, which shape their ultra-modernity of provision; a manifestation and effect of hard innovations can be the description of the hotel facility as a “smart building”; they complement the technical quality of the hotel service;
- soft innovations - implemented in the area of organization of hotel facility work, management and marketing; they very often refer to the intangible sphere of hotel service; they complement the functional quality of hotel service (Szostak, 2008)

Thus, the innovation policy of a hotel enterprise is implemented by setting innovative goals for operation and measuring the relative impact and importance of various innovations on the service delivery process. Other examples and manifestations of innovation in the area of hotel service provision can be:

- a new concept of hotel service manifested, for example, through the need to constantly adapt it to changing consumer expectations;
- new levels of cooperation and communication with the hotel customer (individual and corporate);
- application of new technologies, e.g., in the field of hotel building management (BMS - Building Management System), sales and promotion.

Innovation in hotel services can be based on the following technologies:

- supporting communication within the hotel building, e.g. between the various operating and service departments (front office - back office);
- supporting contact between the hotel and its customers, e.g. external reservation systems;
- improving customer service and database management, e.g. internal computer management systems;
- allowing remote control and supervision of the operation of various operating equipment of a hotel facility from outside.

Nowadays, more and more innovations in the hotel industry stem from the application of artificial intelligence, among other things. An example area of application of artificial intelligence in a hotel facility could be cleaning, namely:

- monitoring cleanliness and detecting dirty areas, especially in common areas such as corridors, elevators, lobbies, restaurants or even rooms, and then generate alerts for cleaning staff;
- optimization of cleaning schedules in terms of ongoing analysis of the occupancy of the accommodation facility, guest preferences and other factors that will support cleaning activities, among others, adjust the number of cleaning staff, the time needed for cleaning;
- monitor the consumption of cleaning products;
- automate cleaning through the use of smart devices such as vacuum cleaners and program them to clean, wash floors or disinfect surfaces;
- inventory and equipment management - fault detection, equipment maintenance, energy optimization;
- optimization of cleaning routes;
- use of IOT (Internet of Things) sensors to monitor water consumption, electricity consumption, and to reduce environmental impact, for example;
- personalizing the guest experience and preparing an appropriate cleaning schedule based on analysis of guest preferences based on demographics, lodging history or customer feedback.

Various types of technologies applied in the process of providing hotel services (treated as a market taciturnity) allow:

- rapid communication and improvement of relations (with suppliers, customers, inside and outside the hotel enterprise), including shortening the time distance between production and consumption of the hotel service;
- responding immediately at the moment of emergency, customizing service offerings to meet individual consumer needs, responding to customers' reported needs and quickly incorporating them into actions taken);
- ensuring high operational efficiency;
- increasing the effectiveness of marketing activities, especially in the 5P area;
- gaining a competitive advantage;

- providing above-standard service (e.g., new quality of service, quick response to existing problems, quick resolution of service problems before the customer experiences them, ensuring speed and cheapness);
- implementing new technology and information solutions for day-to-day operations and service (including social media, artificial intelligence, increasingly sophisticated booking systems and sales platforms).

5. Conclusions

The development of many service activities in today's global economy depends on the innovations they introduce. They are most often a response to the ongoing transformations in consumer behavior and differing expectations regarding service offerings.

Modern tourism, and in particular the hotel industry, is an example of a sector in which continuous transformations are visible in various areas of business operations, both in the area of implemented service processes and the use of innovative tools to increase efficiency in sales and marketing. Back in the 1990s, it was hard to imagine that hotel companies operated without the Internet and its modern tools.

Nowadays, all innovations in booking and in the creation of hotel e-services are becoming indispensable for efficient service operations, and the distance between a customer who seeks a hotel service and then books it is not important. In turn, hotel companies themselves can successfully operate geographically disconnected from their target markets. Today's hotel industry bases its operating strategies on the use of the Internet and applications based on it, which make it possible to remotely match the demand for hotel services with their supply.

Marketing plays an important role in driving innovation in tourism, including hospitality. The innovations that are taking place in marketing, as well as the increasing use of various types of mobile technologies, have caused the modern market for booking hospitality services and the creation of e-products in tourism as a result, to change all the time and transform the relationship between customers and the companies serving them into an increasingly remote one, sometimes leading to uncontrolled and not entirely expected transformations.

One such effect is overtourism, which is the result of, among other things, the uncontrolled growth of the accommodation base and, consequently, the number of tourists themselves in a given popular destination, and caused, among other things, by the ease with which gestors post their accommodation offers on booking platforms.

Thanks to such innovations, many new gestors have decided to establish themselves in tourism and start making money from providing accommodation services.

The uncontrolled growth of accommodations promotes the uncontrolled growth of tourists in many places, which results in, with limited spatial possibilities, the possibility of serving tourists in public spaces open to the public is significantly reduced (Sobocińska, 2017). Booking innovations in the hotel industry are now becoming one of the most important tools for selling hotel services and accessing target markets.

Many reasons can be identified as to why customers themselves use such tools. The most important motives include practicality (the booking process itself is very easy and intuitive), economy (the ability to compare offers and choose the one with the best price, free use of the tool), speed (booking usually requires less than 2 minutes), security for payment, and support by other communication tools such as email and telephone (Travaglini, Puerto, and D'Amicom 2017).

Such a booking engine solution is used not only in tourism, but in an increasing number of services and allows you to check in real time the availability of services in a given facility and book them directly, along with the possibility of making a payment and receiving immediate notification.

Tools of this type allow you to move from classic hotel services to e-hotel services. For this to happen, the booking engine system should be fast, stable, practical and easy to use. The latest functions allow to track the conversion of potential customers into actual customers of the hotel facility (tracking the user's journey through the hotel's e-tools).

Of course, such sales systems should be integrated with mobile devices, which are currently the basic tools for acquiring customers and generating greater demand and, consequently, greater sales and profits from operations.

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