СВІТОВЕ ГОСПОДАРСТВО І МІЖНАРОДНІ ЕКОНОМІЧНІ ВІДНОСИНИ

UDC 338.46

DOI: https://doi.org/10.32782/1814-1161/2023-4-4

Bielan Olha

Ph.D. Economics University of Economics, Varna, Republic of Bulgaria ORCID: https://orcid.org/0000-0002-9135-5215

Бєлан О.В.

доктор економічних наук Економічний університет, Варна, Республіка Болгарія

INCREASING THE EFFICIENCY OF THE ORGANISATION
OF HOTEL AND RESTAURANT COMPLEXES
BY USING INTERNATIONAL INFORMATION TECHNOLOGIES
(ON THE EXAMPLE OF VARNA, BULGARIA)

ПІДВИЩЕННЯ ЕФЕКТИВНОСТІ ОРГАНІЗАЦІЇ РОБОТИ ГОТЕЛЬНО-РЕСТОРАННИХ КОМПЛЕКСІВ ЗА РАХУНОК ВИКОРИСТАННЯ МІЖНАРОДНИХ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ (НА ПРИКЛАДІ М. ВАРНА, БОЛГАРІЯ)

The article the essence of international information systems and technologies in the hotel and restaurant sphere. The need to integrate software into the operation of hotel complexes and restaurants as a basis for the formation and strengthening of competitive advantages for business entities in the rapidly growing market of hotel and restaurant services is substantiated. The role and features of the use of individual tools of international information technologies and systems in the hotel and restaurant business are highlighted. Information and communication facilities, components and tools that enable the storage, access, monitoring, processing and transmission of information in digital form are described. The most popular and downloaded programs in the hotel and restaurant industry in the world according to the results are described. The most common trends in information systems and technologies in the hotel and restaurant business have been identified, including mobile technologies (mobile applications, chatbots, virtual queues, QR codes for menus), contactless payments, the Internet of Things, robots, and virtual tours. The use of information and communication technologies in popularity hotels in Varna is analyzed.

Keywords: international information technologies, software, hotel business, restaurant business, Internet of things, strategy, marketing, the resort town.

У статті досліджено сутність міжнародних інформаційних систем та технологій у готельно-ресторанній сфері. Обґрунтовано необхідність інтеграції програмного забезпечення у роботі готельних комплексів та ресторанів як основи формування та посилення конкурентних переваг для суб'єктів господарювання на швидкозростаючому ринку готельно-ресторанних послуг. Висвітлено роль та особливості використання окремих інструментів міжнародних інформаційних технологій та систем у готельно-ресторанному бізнесі. Описано інформаційно-комунікаційні засоби, компоненти та інструменти, що дають змогу збереження, отримання доступу, моніторингу, обробки та передачі інформації у цифровій формі. Розкрито сутність міжнародних інформаційних технологій та систем, їх складових для розвитку готель-

© Bielan Olha, 2023

но-ресторанної сфери; визначено місце та роль інформаційного та програмного забезпечення у діяльності підприємств готельно-ресторанної індустрії; ідентифіковано механізм формування конкурентних переваг суб'єктів господарювання завдяки ефективному впровадженню у їх діяльність системи управління взаємовідносин із клієнтом; подано рекомендації щодо використання передових інструментів, засобів та методів інформаційних систем та технологій у роботу підприємств готельно-ресторанної сфери. Охарактеризовано специфіку застосування інформаційних технологій, які дозволяють оптимізувати управління бізнес процесами у готелях та ресторанах, таких як: інформаційні технології, які дозволяють оптимізувати менеджерську діяльність у готелі та ресторані. Визначено найбільш популярні та завантажувані програми в готельно-ресторанній індустрії у світі за результатами дослідження. Визначено найпоширеніші тенденції розвитку інформаційних систем і технологій у готельно-ресторанному бізнесі, серед яких мобільні технології (мобільні додатки, чат-боти, віртуальні черги, QR-коди для меню), безконтактні платежі, інтернет речей, роботи та віртуальні тури. Проаналізовано використання інформаційно-комунікаційних технологій у популярних готелях Варни.

Ключові слова: міжнародні інформаційні технології, програмне забезпечення, готельний бізнес, ресторанний бізнес, Інтернет речей, стратегія, маркетинг, курортне місто.

Statement of the problem. The hotel and restaurant industry is extremely promising in terms of entrepreneurship due to the fact that this type of business is also important, as the expansion of the hotel and restaurant industry and the intensification of its development can provide not only employment in this area, but also in related activities, such as construction, communications, trade, manufacturing of consumer goods.

Stabilization of the functioning of the hotel and restaurant industry, the need to ensure the operation of hotel and tourism complexes, the increasing commercialization of business in this area is expected to fail application of new principles to management, marketing and development of innovative information technology tools.

Analysis of recent research and publications. The main driver of the economic development of seaside resort places of local, regional and international significance is tourism [3, p. 10] Today there are a number of forecasts for the further development of the tourism sector. The modernization and development of information systems and technologies in the hotel and restaurant industry continues to attract more respect from economists. Among the remaining scientific research in the sphere of hospitality services, it is important to note the direction of Vlaschenko N.M. [8] and Kozlovsky E. [7], who, in their own way, follow the current trends in the development of IT technologies in the hotel and restaurant business, directly the development of information technologies in international tourism in the era of integration processes, and These are also the main areas of stagnation of information systems and technologies in the sphere of the hotel dominion. Prote the rapid development and advancement of information technology and software support requires a detailed understanding of current trends that are affecting the international market of tourism and hotel and restaurant management, sales and sustainable development. Their new products, scientific developments, which are relevant for current and future clients of this market and production promote the efficiency of the functioning of subjects in the hotel and restaurant services market.

Objectives of the article. The method is to identify current trends in international information

technologies and identify their role in increasing the efficiency of the organization of hotel and restaurant complexes (at the resort town of Varna, Bulgaria). To achieve this goal, the following scientific tasks have been identified: to reveal the essence of international information technologies and systems, their components for the development of the hotel and restaurant industry; to determine the place and role of information and software in the activities of enterprises of the hotel and restaurant industry; to study the effective implementation of a customer relationship management system in their activities. To achieve the goals set, modern methods were used: analysis, synthesis, inference, induction, analogy, systematic approach.

Summary of the main results of the study. The effective development of the hotel and tourism business is impossible without the ongoing modernization of tourism infrastructure, which is seamlessly transmitted along with the high-quality everyday life of daily roads, hotels, airports, scale-up of information systems, Internet technologies. All advances and improvements in current tourism activity are entirely related to the development of new information systems and technologies under the hour of creation, proposals and promotion of the tourism product – in fact This technology is one of the main factors in improving the competitiveness of tourism enterprises abroad [3–5].

The features of information technologies are being intensively exploited in the tourism sector and the social and cultural service, which serves as a platform for ensuring successful work in the hotel and restaurant business, is growing efficiency, accuracy, reliability, efficiency of management decisions in the field of management and marketing of enterprises in this region.

The development of the Internet will bring the hotel and restaurant business such advantages as reduced costs, increased efficiency, easy access to employees for small companies [4; 5]. The industry of development of the hotel-restaurant industry of flooring is rich, which relies on a variety of different forms, tools and features of information systems, starting from a wide range of technologies for working with text, electronic tables and databases, to the introduction of specialized software products that

will allow robots to automate hotels and restaurants. An important role is also played by the constant advancement of global computer networks and satellite navigation systems in the activities of the hotel and tourism industry.

The diversity of international information systems and technologies, what is needed in the hotel and tourism business is shown in Figure 1. Analysis of existing hotel technologies has revealed the presence of technological developments (manual and automated technological processes), the need for technological disruptions in direct complex automation and the need to promote technological Innovation through the development of technological standards for various types of placements. Technology transfer is indicated by the availability of material, legal and human resources. The human factor contributes the most to the advancement of technology: psychology and the level of qualifications of person

The hotel and tourism business sees the upcoming areas of stagnation of information systems and technologies:

- 1. Information technologies that allow you to optimize managerial activities in a hotel include: computer systems for centralized hotel management, control systems for internal services that ensure efficient customer service activity, IT notifications for room readiness before guests check-in, room readiness notification technologies, information systems to ensure the processing of food in restaurants.
- 2. Service information systems and technologies include: CRM systems and global reservation systems, which help a potential client choose the

most convenient and optimal accommodation option, including all the most important for tourists, characteristics, features and parameters. The main CRM platform is technology that includes the collection and accumulation of information about clients and the system for managing these client databases. At your own expense, please allow detailed research of the target audience, forecasting the upcoming rise in service, effective marketing policy.

3. Information systems and technologies that support Internet marketing activities. The continuous development of the hospitality and tourism industry, the growth in service and diversity of hotel complexes lead to potential to clients is growing all more important accept decision that perform select to go chi other requirements for accommodation, living and food. In the competitive struggle for their clients, the improvement of their competitive position in the market, it is necessary to become "relevant" for potential guests and being "in trend". The use of information systems and technologies serves to achieve such goals.

Having analyzed the high-tech innovations in the automation of popular hotels in the city of Varna, it is possible to add a few of the main ones that are new and will promote stronger competition (in the example of the hotel "Black Sea", the city of Varna, Bulgaria) [16].

1. Electronic armor systems CRM – (Consumer Relationship Management) – management of transactions with the client – a solution program that implements the principles of client-oriented work and allows for the collection of information about the clients of the above-mentioned hotel,

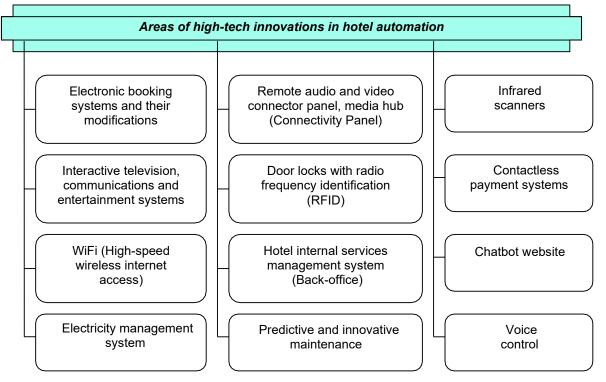


Figure 1. Directly high-tech innovative automation today's hotels

Source: fragmented by the authors on basics [4; 5; 8]

for which purpose There are all kinds of channels (in addition – data on the guests who stayed in the hotel). By presenting these data to potential guests via email addresses, personalized information, information about various visits, and new types of services are provided that may be of interest to the guest. It can be confirmed that the innovative activity of the Black Sea Hotel means greater creativity in satisfying the needs of clients. Based on the results of interviews with hoteliers, we can confirm that the human factor still plays a great role in the selection of hotels from the hotel "Black Sea".

As the investigation showed, there are few reasons why Varna hotels sell specialized software products, and themselves:

- the obvious need for connection with the great locality of enterprises and a wide range of additional services;
- the importance of reconstruction and modernization of accommodation methods in order to transfer the informatization process to the long term:
- high level of personnel training in terms of the use of information systems.
- It is important to promote new information technologies in connection with the satisfactory functioning of hotels, including the Black Sea Hotel.
- 2. Interactive TV systems in the Black Sea Hotel offer several types of interactive systems:
- 24-inch iMac, which includes the "Windows Center" function;
- Internal Pod Community Blog, organized by the hotel, is open to those who have booked a room, and allows guests to exchange information;
- Easy TV is specially created for low-cost hotels that cannot afford to completely replace the TV park with system hotel TVs, which this system does not support;
- IPTV is a new system based on digital technologies.

The system receives a variety of content: movies, satellite channels, music. In addition to the content, the systems consist of services that do not only help guests to know about the proposals of the hotel "Black Sea", but also that the hotel staff know about the guests' experiences, for example, what films the client has written, what he has to say before similarities that appeal to them through room service.

- 3. High-speed drone-free Internet access (WiFi). This communication element is not new today, but it is common in every hotel room. For wealthy guests, and first of all, for business people, the drone-free Internet with the ability to connect to a power laptop is today an invisible service in a hotel [12].
- 4. Energy supply system Management System. Innovative intelligent energy systems can reduce energy costs in hotels and restaurants by up to 20% and ensure the longest savings periods in the countryside (up to 12 months and up to 24 months). Innovative lighting technology allows you to better understand the energy needs of the hotel, automate the changes and adapt to changes in real time. Such illumination systems make it possible to control the

proper hour of illumination, maintain the consistency of deposits and improve the energy generated during illumination by stretching [14; 15]. Wine panel audio, video, media hub (Connectivity panel). A very handy device that allows guests of the Black Sea Hotel to connect their equipment. With the Guest model you can:

- connect a laptop or other device via HDMI / VGA input;
- use Bluetooth, listen to music on your phone through the TV speakers;
- output image and sound from a video camera or camera to a TV set with an HD-capacity;
- for presence in the iPod / iPhone number docking station (device for connecting iPod / iPhone) listen to music and charge the device instantly.
- 5. Door locks with radio frequency identification (RFID Radio Frequency Identification). A door lock with radio frequency identification allows a guest to enter the room or other hotel premises without a key. To access the room, a guest can use a mobile phone of any brand and not waste an hour searching for the key and getting lost.
- 3. System of care by internal services of the hotel (Back office). The system of cleaning by internal services of the hotel will improve the efficiency of work for the hotel staff, speed up the number of favors and make it possible to improve the quality of customer service at the Black Sea Hotel.
- 7. Infrared scanners. Keeping infrared scanners running allows you to minimize interruptions associated with cleaning (which is also a common waste of clients). Thanks to infrared scanners, housekeeping staff know when guests are present and can schedule cleaning later if there are no people in the room. The scanners also help the Chorne More Hotel save energy by automatically switching off the light and climate control when the room is empty [14].
- 8. Contactless payment systems. The COVID-19 pandemic has prevented many people from reserving hotel rooms after mass vaccination. Based on statistical data on hotel stays, contactless payments have identified a list of actions that the hospitality industry can implement to make people feel more comfortable in hotels. Today's payment systems are also leading to more people accepting cryptocurrency as payment. Hotel "Black Sea" is not excluded.

Also, the presence of technical safety features in the current Varna hotel "Black Sea" is a must-have for its successful functioning. This security guarantee is an indicator of the high quality of service, a factor in gaining clients and the ability to win their loyalty in the future.

Conclusions. In this way, the information flows themselves, and not the goods, create connections between suppliers of tourist services, since payments and services are not over-insuranced and are paid directly for the purposes, but only information is transmitted And tribute to them. Therefore, in order to ensure the effective development of the hotel-restaurant sector, it is necessary to promote specific opportunities for the transmission of information and information services in the minds of modern people.

In this case, it is also important to ensure the most efficient speed of data transfer. The authenticity of the information, its vibrancy, relevance and timely presentation to the target audience also play an important role. A high level of productivity will be characterized by only those enterprises that take importance and effective solutions, correctly identify and identify additional capabilities and resources for efficient implementation. current computer systems and technologies in the hotel and restaurant industry.

The prospects for further research lie in the identification and development of these information and software features and components that can be successfully implemented in the work of tourist, hotel, and restaurant complexes, ensuring the safety of osts for optimizing the earnings of the personnel, increasing the productivity of work, increasing the efficiency of the functioning of the company as a whole. mastered and promoted the integration of information systems and technologies.

References:

- Impact of technology on travel and tourism statistics & facts. URL: Impact of technology on travel and tourismstatistics & facts. Available at: https://www.statista.com/ topics/7844/impact-of-technology-on-travel-and-tourism/
- Internet of Things, IoT. Available at: https://www.it.ua/ knowledge-base/technology-innovation/internet-veschejinternet-of-things-iot
- Belan O. (2020) Razvitie primorskogo Kurortny Gorod na osnovy useleniya markitovogo podkhod [Development of a seaside resort town based on the use of a marketing approach]. Gosudarstvennye I oblasts series "Ekonomika i predprinimatelstvo", no. 115, pp. 10–15.
- Humeniuk V., Kaziuka N., Malaniuk T., Vivsiuk I. & Betlej A. (2022) International hotel and tourism business: anticrisis management aspects. *Financial and Credit Activity: Problems of Theory and Practice*, no. 1(42), pp. 493–501. DOI: https://doi.org/10.55643/fcaptp.1.42.2022.3738
- Humeniuk V., Kaziuka N. and Sheketa Y. (2021) Socio-Demographic Factors influencing the Sustainable Development of Carpathian Euroregion: Case of Tourism Development. Grassroots Journal of Natural Resources, no. 4(1), pp. 106–122 DOI: https://doi.org/10.33002/ nr2581.6853.040108
- IoT, or the internet of things what is it? Available at: https://www.hub.kyivstar
- Kozlovsky E. (2020) The main areas of application of information systems and technologies in tourism. *Bulletin* of the Kyiv National University of Culture and Arts. Series: Tourism, no. 3(1), pp. 128–136. DOI: https://doi.org/10.318 66/2616-7603.3.1.2020.207516
- Vlashchenko N. M. (2023) Innovatsiyni technologii u gotelnomu gospodarstvi: navch. posib. Harkiv. nats. un-t misk. state-va im. O.M. Beketova. Harkiv: KHNUMG im. O.M. Beketova, 150 p.
- Official website of AirAsia. Available at: https://www.support.airasia.com/s/article/How-do-l-use-AirAsia-Virtual-Allstar-AVA?language=en GB
- 10. Official website of JetBlue Airways. Available at: https://www.cutt.ly/X9TGtSZ
- Official website of Walt Disney World Resort. Available at: https://www.dvcrequest.com/information/videos-virtualtours
- Official website of the Hilton company. Available at: https://www.hilton.com

- Official website of Southwest Airlines. Available at: https://www.southwest.com
- 14. Official website of the Hotel «Cherno more», Varna, Bulgaria. Available at: https://www.chernomorebg.com
- Official website of ARIA Resort & Casino. Available at: https://www.guestreservations.com/aria-resortcasino/boo king?gclid=CjwKCAiAioifBhAXEiwApzCztil0QjXjDcJIXGn vR_XrbNHdX-XFFYbFMu0l3f98XCWE4mQvX3mBgxoC2 E8QAvD BwE
- 16. The official website of the Harry Potter Store, harrypottershop.com
- 17. Borisov Boris (2023) The Shape of tourism in Information Society. Black Sea Tourism Forum, Varna.

Бібліографічний список:

- Impact of technology on travel and tourism statistics & facts. URL: Impact of technology on travel and tourism-statistics & facts. URL: https://www.statista.com/topics/7844/ impact-of-technology-on-travel-and-tourism/
- Internet of Things, IoT. URL: https://www.it.ua/knowledge-base/technology-innovation/internet-veschej-internet-of-things-iot
- Belan O. Development of a seaside resort town based on the use of a marketing approach. States and Regions Series "Economics and Entrepreneurship". 2020. No. 115. P. 10–15.
- Kaziuka N., Humeniuk V., Semyrga L., Bielan O. Internationalinformation Technologies and their role in improving the efficiency of organization of the hotel and restaurant business: Actual problems of regional economic development. 2023. № 19. P. 29–30.
- Kaziuka N., Humeniuk V., Semyrga L., Bielan O. Internationalinformation Technologies and their role in improving the efficiency of organization of the hotel and restaurant business. Actual problems of regional economic development. 2023. № 19. P. 31–32.
- 6. IoT, або Інтернет речей що це таке? URL: https://hub.kyivstar.ua/news/iot-abo-internet-rechey/
- Козловський Є. Основні сфери застосування інформаційних систем і технологій у туризмі. Вісник Київського національного університету культури і мистецтв. Серія: Туризм. 2020. № 3(1). С. 128–136. DOI: https://doi.org/10.31866/2616-7603.3.1.2020.207516
- 8. Влащенко Н.М. Інноваційні технології у готельному господарстві : навч. посіб. Харків. нац. ун-т міськ. госпва ім. О.М. Бекетова. Харків: ХНУМГ ім. О.М. Бекетова, 2023. 150 с.
- 9. Офіційний сайт авіакомпанії AirAsia. URL: https://support.airasia.com/s/article/How-do-I-use-AirAsia-Virtual-AllstarAVA?language=en GB
- 10. Офіційний сайт авіакомпанії JetBlue Airways. URL: https://cutt.ly/X9TGtSZ
- 11. Офіційний сайт Всесвітнього курорту Уолта Діснея. URL: https://dvcrequest.com/information/videos-virtual-tours
- 12. Офіційний сайт компанії Hilton. URL: https://www.hilton.com
- 13. Офіційний сайт компанії Southwest Airlines. URL: https://www.southwest.com
- 14. Офіційний сайт готелю «Чорне море», місто Варна, Болгарія. URL: https://www.chernomorebg.com
- 15. Офіційний сайт курорту ARIA Resort & Casino. URL: https://www.guestreservations.com/aria-resort-casino/booking?gclid=CjwKCAiAioifBhAXEiwApzCztil0QjXjDc-JIXGnvR_XrbNHdX-XFFYbFMu0l3f98XCWE4mQvX3mB-gxoC2E8QAvD BwE
- Що таке інтернет речей? URL: http://iot.lviv.ua/що-такеінтернет-речей/
- 17. Борисов Борис. Неконвенционални форми на туризъм в информационното общество. Черноморски туристически форум. Варна, 2023. С. 150–157.