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ЗНАЧЕННЯ ЦИФРОВИХ ТЕХНОЛОГІЙ ДЛЯ ФОРМУВАННІ ІНКЛЮЗИВНОГО СЕРЕДОВИЩА В ІНДУСТРІЇ ГОСТИННОСТІ
THE IMPORTANCE OF DIGITAL TECHNOLOGIES IN FORMING AN INCLUSIVE ENVIRONMENT IN THE HOSPITALITY INDUSTRY

Анотація: *У статті йдеться про значення цифрових технологій у створенні інклюзивного середовища в індустрії гостинності. Розглянуто інноваційні рішення, такі як мобільні додатки, AR, VR, голосові асистенти та роботизовані пристрої, що сприяють доступності та підвищенню якості обслуговування для осіб із обмеженими можливостями. Наголошено на важливості універсального дизайну, адаптивних платформ і цифрових симуляцій у створенні безбар'єрного середовища.*

Зазначено, що впровадження інклюзивних технологій покращує туристичний досвід, забезпечує соціальну відповідальність бізнесу та сприяє сталому розвитку галузі в Україні та світі.

Abstract: *The article discusses the importance of digital technologies in creating an inclusive environment in the hospitality industry. It analyzes the key challenges faced by enterprises in the industry, in particular, adapting infrastructure, ensuring accessibility and automating service for all categories of guests, including people with disabilities. It highlights the role of technological innovations, such as mobile applications, online booking platforms, voice assistants, robotic devices, AR and VR, in improving the tourist experience and integrating the principles of universal design.*

The authors emphasize the advantages of using solutions such as virtual tours, adaptive menus, sensory kiosks, 3D design and digital simulations, which allow creating a comfortable environment for low-mobility groups of the population and

people with sensory or cognitive impairments. The importance of educational initiatives to prepare staff for work in an inclusive environment is separately considered.

The article emphasizes the need to implement innovative solutions in combination with compliance with the principles of social responsibility, ratification of international ethical standards and adaptation to the modern challenges of globalization. The results of the study demonstrate that digitalization contributes to increasing the competitiveness of hospitality industry enterprises, forming a positive image of socially responsible business and supporting the sustainable development of the industry.

It is concluded that the integration of digital technologies not only improves the accessibility of services, but also opens up new opportunities for ensuring equality and comfort, contributing to the overall development of the hospitality industry in Ukraine and the world.

Keywords: *hospitality industry, tourism, hotel and restaurant business, digital technologies, digital systems, digital tools, inclusive environment, accessibility*

Ключові слова: *індустрія гостинності, туризм, готельно-ресторанний бізнес, цифрові технології, цифрові системи, цифрові інструменти, інклюзивне середовище, безбар'єрність*

Statement of the problem. The hospitality industry plays an important role in the development of tourism, but creating an accessible environment for all categories of guests, including people with disabilities, remains a challenge. Despite significant progress in the implementation of digital technologies, many establishments still face problems in adapting infrastructure, automating service and ensuring information accessibility. The lack of integrated solutions, such as universal design, adaptive booking systems and support for multilingual platforms, makes it difficult to provide equal service for low-mobility groups and people with sensory or cognitive impairments. This limits the tourist experience and negatively affects the overall reputation of the business. The problem of creating an inclusive environment requires a comprehensive approach that combines technological innovation with compliance with the principles of social responsibility. The lack of a regulatory framework, the lack of widespread use of modern accessibility technologies and insufficient staff training lead to the fact that many enterprises cannot meet the requirements of modern standards. Solving this problem requires the active implementation of innovative technologies, such as AR and VR for virtual tours, robotic assistants for self-service, as well as adapting infrastructure in accordance with global ethical and legal norms to create a comfortable environment for all guests.

Analysis of recent research and publications. The importance of creating an inclusive environment, including in the hospitality industry, is studied by the works of a significant number of researchers, including O. Ivanova, M. Senkiv [1], M. Barna, I. Tuchkovska [2], L. Bezugla, M. Beloborodova, T. Gerasimenko [3, 4], O. Guseva [5], N. Vlashchenko [6]. The importance of digital technologies for creating an inclusive environment in

the hospitality industry is highlighted in the works of such scientists as V. Lyubarets, O. Biryukova [7], O. Trofymenko [8] and others. Despite the significant number of scientific achievements, some issues remain unresolved. First of all, it is worth investigating the essential characteristics of the implementation of digital technologies in creating an inclusive environment in the hospitality industry in the conditions of modern realities in Ukraine and the world.

The purpose of the article is to explore the importance of digital technologies in creating an inclusive environment in the hospitality industry, as well as to determine their role in increasing accessibility, service quality, and competitiveness of enterprises adapting to modern challenges of social responsibility and global digitalization.

To achieve the stated goal, the study provides for the following tasks:

– study of digital technologies, such as mobile applications, online booking platforms, artificial intelligence, AR and VR, in the context of their impact on creating an inclusive environment in the hospitality industry;

– analysis of the capabilities of modern digital solutions to increase accessibility, personalize service and integrate universal design principles;

– identification of the advantages and challenges of implementing technologies to ensure a barrier-free environment, as well as the formulation of recommendations for their effective use for the sustainable development of the hospitality industry.

The object of the study is the application of digital technologies in creating an inclusive environment in the hospitality industry.

The subject of the study is the features of the use of modern digital technologies to ensure accessibility, improve the quality of service and form a barrier-free space in hospitality enterprises in the context of social responsibility and global digitalization. Presentation of the main material of the study.

Presentation of the main research material. Digital technologies have fundamentally changed the hospitality industry, making it more efficient, personalized and convenient for customers. Modern digital tools such as mobile applications, online booking platforms, automated service systems and artificial intelligence have long contributed to improving the quality of services and ensuring continuous communication with customers in the hospitality industry. Digital solutions allow not only to optimize operational processes, but also to meet the expectations of guests who demand speed, convenience and a high level of service.

It is worth emphasizing the role of digital technologies in creating an inclusive environment, which is a requirement of modern society for business, in particular in the hospitality sector, where it is important to ensure comfort and accessibility for all categories of guests, including people with disabilities. The use of adaptive platforms, accessibility tools, virtual tours and robotic assistants can significantly help in creating an environment that takes into account the

diversity of customer needs, demonstrating the responsibility of business to society.

Creating an inclusive environment in the hospitality industry is an important aspect of modern tourism, based on the principles of accessibility and social equality [4]. The implementation of the Global Code of Ethics for Tourism and the ratification of the UN Convention on the Rights of Persons with Disabilities oblige businesses to create services, environments and infrastructure that are accessible to all, regardless of physical abilities. This includes adapting buildings, transport and tourist facilities for people with reduced mobility, ensuring information accessibility, using universal design and implementing modern technologies such as Braille on signs or low-floor transport. Through the introduction of new standards, such as the DSTU on the management of sustainable development of accommodation establishments, Ukraine is gradually creating conditions for inclusive tourism that meets international requirements and allows everyone to enjoy the tourist experience [1, 9-13].

The hospitality industry, which encompasses the hotel and restaurant business, tourist services and other aspects of guest service, plays a key role in the development of inclusive tourism. It provides not only a comfortable vacation, but also creates opportunities for social integration of people with disabilities. One of the main tasks of the hospitality industry is to adapt infrastructure and services to the needs of low-mobility groups. This includes the arrangement of accessible hotel rooms, the installation of elevators, ramps, accessible sanitary facilities, as well as the implementation of information technologies that help customers with visual, hearing or cognitive impairments easily navigate the environment [2, 3, 6]

Innovative solutions such as digital applications for booking services with accessibility, interactive menus with voice and Braille, sensory self-service kiosks and robotic assistants significantly improve the quality of service. All this not only improves the tourism experience of people with disabilities, but also creates a competitive advantage for hospitality businesses. Thus, integrating the principles of inclusion into the hospitality industry not only promotes social equality, but also contributes to the sustainable development of this sector, strengthening its reputation as a socially responsible industry (Table 1).

Table 1 – Digital technologies for creating an inclusive environment in the hospitality industry

Technologies	**Tools**	**Mechanism of use**	**Importance for the hospitality industry**
Digital technologies for accessibility	Screen readers Text scaling High contrast Online accessibility services	Development of adapted websites and applications Informing about the availability of ramps, elevators, equipped rooms	Increasing accessibility for guests with disabilities Increasing the number of potential customers
AR and VR technologies	Virtual Tours VR Simulators for Staff	Demonstrate a user-friendly environment for guests Train staff to effectively interact with guests with diverse needs	Increasing customer trust Improving service quality

Continuation of Table 1

Inclusivity in booking and ordering	Multilingual platforms Interactive menus AI recommendations	Information translation and adaptation Menu with description or voiceover Personalized recommendations	Expanding the target audience Increasing customer satisfaction
Inclusive design through digital modeling	3D Design Digital Customer Flow Simulations	Interior planning for the convenience of guests with limited mobility Optimizing space for comfortable movement	Creating a barrier-free environment Reducing conflict situations
Service automation	Touch Kiosks Voice Assistants Robotic Devices	Providing self-service services Voice support for visually impaired guests Robot food or luggage delivery	Reduce operating costs Improve customer experience
Staff education	Video tutorials Simulations Chatbots	Conducting training courses on inclusion Training staff through simulation of real-life situations	Improving service quality Increasing customer loyalty
Social media and inclusive marketing	Digital content about inclusion Platforms for promotion	Creating Inclusivity Advertising Campaigns Demonstrating Accessibility and Customer Care	Strengthening the image of socially responsible business Attracting attention to institutions

Source: created by the author based on [7, 15-18].

In general, digital technologies play a significant role in creating an inclusive environment in the hospitality industry, ensuring accessibility and comfort for all guests, including people with disabilities. For example, AI-based chatbots provide 24/7 support to guests, responding to queries in real time. They can provide information in a variety of formats, including text, voice, or even sign language via video interfaces, which increases accessibility for guests with different needs. In addition, chatbots can offer personalized recommendations and assist with booking services, taking into account specific customer requirements [15]. It is worth noting that chatbots play a significant role in creating an inclusive environment in the hospitality industry, providing automated solutions that address the needs of different categories of guests, including people with disabilities and low-mobility groups. They are able to provide information in accessible formats, such as text, voice, or sign language via video interfaces. Chatbots can address specific guest needs by offering customized services, such as rooms with necessary amenities, barrier-free routes, or menus with descriptions for the visually impaired. By integrating artificial intelligence technologies, these applications also help to overcome language and communication barriers, contributing to a comfortable stay for guests. In the future, the development of chatbots for inclusive environments will further improve the accessibility of services, creating a level playing field for all without exception [7]. VR and AR technologies allow for the creation of virtual tours of hotels, which helps guests familiarize themselves with the accommodation conditions and accessibility of the premises before booking. This is especially useful for people with limited mobility, as they can assess in advance how comfortable their stay will be [16]. Touch kiosks, voice assistants, and robotic devices provide self-service options, reducing

the need for physical interaction and increasing guest comfort. For example, voice assistants can help visually impaired guests obtain necessary information or control room functions [17]. The use of 3D design and digital simulations allows planning interiors that are convenient for guests with limited mobility, optimizing space for comfortable movement and creating a barrier-free environment [18].

Thus, digital technologies are fundamentally changing the hospitality industry, increasing its efficiency, personalization and accessibility. Mobile applications, automated service systems, AR, VR, AI and adaptive platforms contribute to the creation of an inclusive environment that takes into account the needs of people with disabilities. Virtual tours, sensory kiosks, robotic assistants, chatbots and universal design improve the quality of service, ensure information accessibility and barrier-free. Inclusivity becomes a competitive advantage for business, forming a positive image of a socially responsible industry that meets international standards and contributes to the sustainable development of tourism.

Conclusions. Digital technologies have become a key tool in the transformation of the hospitality industry, providing new opportunities to improve service quality, increase the efficiency of business processes and ensure accessibility for different categories of customers. Thanks to mobile applications, chatbots, online booking systems and interactive solutions, modern hotels and travel services can meet the expectations of guests who seek speed, personalized approach and convenience. Of particular importance is the integration of technologies aimed at creating a barrier-free environment for people with disabilities, which allows to ensure comfort for everyone and expand the target audience. The implementation of inclusive solutions, such as voice assistants, virtual tours and adaptive platforms, not only improves the travel experience of people with special needs, but also helps to strengthen the reputation of the business as socially responsible. Compliance with international accessibility standards and ethical principles of tourism contributes to the sustainable development of the industry, increases competitiveness and supports the principles of equality. Thus, digitalization and inclusion are becoming integral components of the successful development of the modern hospitality industry.

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