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STRATEGY FOR IMPLEMENTING THE METAUNIVERSE AS AN EFFECTIVE TOOL FOR THE DIGITAL TRANSFORMATION OF THE HOTEL AND RESTAURANT BUSINESS	*ZAKHAROVA Tetiana,* *Assistant of the Department of Business and Service,* *Vinnytsia National Agrarian University* *(Vinnytsia)*

The article presents the results of the study on the application of metaverse technologies as a tool for digital transformation of the hotel and restaurant business. The combination of VR/AR solutions, three-dimensional virtual spaces, blockchain technologies and immersive platforms is presented, which ensures the formation of new formats of service, communication and monetization in the hospitality sector. Digital innovations open up opportunities for increasing the competitiveness of the enterprises and provide a new level of interaction with customers. Thanks to the integration of the metaverse, effective tools are created for adapting to the rapidly changing digital environment and developing business in the context of globalization.

The content of the concept of "metaverse" in the context of hotel and restaurant activities is revealed, its role in the digital ecosystem of the enterprise is determined, as well as the functions of creating added value for customers, optimizing internal processes and expanding sales channels.

Modern scientific approaches and practical cases of the application of the metaverse in the hospitality industry are identified, the main models of its use are systematized: virtual showrooms, immersive events, NFT loyalty programs, social metaspaces, VR staff training and digital twins of accommodation facilities.

The author's five-stage model MetaHospitality 5.0 is proposed, within which digital maturity diagnostics, metavision formation, VR/AR customer journey design, MVP solution testing and scaling with integration into operational activities are highlighted. For each stage, key tools, metrics and calculation indicators are identified that provide a quantitative assessment of the effectiveness of metaprojects.

The barriers to implementing the metaverse implementation strategy in the domestic hotel and restaurant business are analyzed, related to financial, personnel, regulatory and security

restrictions. The need for a phased adaptive approach for the successful integration of the metaverse is stated and directions for the further research are identified, in particular, the development of the models for assessing the economic effectiveness of metatechnologies and adapting world experience to the conditions of the national market.

Key words: metaverse; digital transformation; hotel and restaurant business; VR/AR technologies; customer experience; business model; hospitality industry.

Table: 3. Fig.: 1. Ref.: 18.

СТРАТЕГІЯ ЗАПРОВАДЖЕННЯ МЕТАВСЕСВІТУ ЯК ЕФЕКТИВНОГО ІНСТРУМЕНТУ ЦИФРОВОЇ ТРАНСФОРМАЦІЇ ГОТЕЛЬНО-РЕСТОРАННОГО БІЗНЕСУ

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У статті авторка подає результати дослідження того, як технології метавсесвіту як інструменту слугують інструментом цифрової трансформації готельно-ресторанного бізнесу. Дослідження висвітлює поєднання VR/AR-рішень, тривимірних віртуальних просторів, блокчейнтехнологій та імерсивних платформ, що забезпечує формування нових форматів сервісу, комунікації, а також монетизації у сфері гостинності. Цифрові інновації відкривають можливості для підвищення конкурентоспроможності підприємств і забезпечують новий рівень взаємодії з клієнтами. Завдяки інтеграції метавсесвіту бізнес дістає ефективні інструменти для адаптації до швидкозмінних цифрових умов і розвитку в умовах глобалізації.

Стаття розкриває зміст поняття «метавсесвіт» у контексті готельно-ресторанної діяльності, визначено його роль у цифровій екосистемі підприємства, а також функції з формування доданої цінності для клієнтів, оптимізації внутрішніх процесів і розширення каналів збуту.

Авторка аналізує сучасні наукові підходи та практичні приклади застосування метавсесвіту в індустрії гостинності, а також систематизує основні моделі його використання: віртуальні шоуруми, імерсивні події, NFT-програми лояльності, соціальні метапростори, VR-навчання персоналу й цифрові двійники об'єктів розміщення.

У роботі обґрунтовано авторську п'ятиетапну модель MetaHospitality 5.0, у межах якої виокремлено діагностику цифрової зрілості, формування метабачення, проєктування VR/AR клієнтського шляху, тестування MVP-рішень і масштабування з інтеграцією в операційну діяльність. Для кожного етапу визначено ключові інструменти, метрики й розрахункові показники, що забезпечують кількісну оцінку ефективності метапроєктів.

У статті проаналізовано бар'єри реалізації стратегії запровадження метавсесвіту у вітчизняному готельно-ресторанному бізнесі, пов'язані з фінансовими, кадровими, регуляторними та безпековими обмеженнями. Авторка доводить необхідність поетапного адаптивного підходу для успішної інтеграції метавсесвіту й окреслює напрями подальших досліджень, зокрема розроблення моделей оцінювання економічної результативності метатехнологій і адаптації світового досвіду до умов національного ринку.

Ключові слова: метавсесвіт, цифрова трансформація, готельно-ресторанний бізнес, VR/AR-технології, клієнтський досвід, бізнес-модель, індустрія гостинності.

Табл.: 3. Рис.: 1. Літ.: 18.

Formulation of the problem. The hospitality industry is one of the most dynamic sectors of the economy, as it is one of the first to respond to technological innovations and changes in consumer behavior. The modern development of the hotel

and restaurant business is based on digital solutions that include mobile services, automation systems, the Internet of Things and cloud platforms. These tools transform the approaches to customer interaction, optimization of internal processes and increasing the efficiency of operational activities. The emergence of the metaverse as a new space of digital interaction opens up additional opportunities for hospitality enterprises. It is not only about the use of innovative promotion methods, but also about the formation of new service formats, communication channels and revenue generation mechanisms.

One of the current problems is that a significant part of hotel and restaurant companies perceive the metaverse as a separate trend or a one-time marketing initiative that is not integrated into the overall strategy of digital modernization. In the absence of a holistic strategic vision, investments in virtual and immersive technologies do not always provide the expected revenue growth or strengthen consumer loyalty. Moreover, possible technical, financial and reputational risks sometimes exceed potential benefits [15, p. 105]. That is why an important scientific and practical task is to develop a model for implementing the metaverse that is consistent with the business model of the hospitality enterprise, takes into account its resource capabilities and contributes to strengthening competitive positions in the market.

Analysis of recent research and publications. Foreign studies of the last few years of the digital evolution of the hospitality industry consistently emphasize the importance of technological solutions that increase operational efficiency and the level of personalization of service. In their works, D. Buhalis, M. Lin and D. Leung emphasize that digital tools are becoming important elements in the formation of new formats of interaction between the enterprise and the client, contributing to the creation of added value for consumers [1]. In addition, J. Chen, X. Wu and I. Lai emphasize that immersive technologies, in particular VR tours and interactive simulations, open up new opportunities for updating the communication strategy of hotels [5].

A significant amount of work is devoted to the analysis of the metaverse as an innovative environment. For example, D. Gursoy, S. Malodia, and A. Dhir define the metaverse as a promising space for the development of service, marketing, and operational solutions in the hotel and restaurant sector [2]. The works of E. Sánchez-Amboage., V. Crespo-Pereira., M. Membiela-Pollán, and J.P. Jesús Faustino [6] and C. Koo., J. Kwon., N. Chung and J. Kim [7] argue that digital lobbies, VR lobbies, NFT certificates, and other meta products are shaping a new dimension of the tourism experience, making the process of choosing and booking services more emotionally rich.

Some studies focus on the factors influencing the adoption of the metaverse M. Calisto., S. Sarkar [3], S. Chen, I. Chan, S. Xu, R. Law, and M. Zhang [4], S. Monaco, and G. Sacchi [8] identify key drivers (technological readiness, demand for immersiveness) and barriers (cost, cyber risks, skills shortages) of transformational processes in the hospitality industry. A study by Zainal Abidin et al. shows that academic attention to the metaverse is growing rapidly, although some areas remain poorly structured [9].

In the domestic scientific space, there is an increased interest in the digitalization of the hotel and restaurant sector. For example, N. Degtyar explores the metaverse as a promising tool for updating tourism enterprises [10], and M. Boyko

and S. Bondar analyze the role of contactless services and mobile technologies in the transformation of the hotel business [11]. Y. Pukach describes practical directions for implementing digital solutions, including reception automation and VR navigation [12], and T. Lysyuk, O. Tereshchuk and M. Pasichnyk focus on innovations in the restaurant sector [14]. In his own research, N. Tyshchenko demonstrates how digital technologies form long-term competitive advantages of hospitality enterprises [15]. The issue of marketing opportunities of VR and the metaverse is also revealed by T. Yanchuk, analyzing their potential in digital communications [16]. O. Golovnya analyzes the development of sustainable tourism in the context of global environmental challenges, focusing on environmental and socio-economic factors of its provision [17]. Y. Stavska investigates the formation of strategies for the development of hospitality industry establishments in the context of globalization challenges and increased competition [18].

Despite the intensification of the research, a significant number of problems remain unresolved. A review of the works shows that the scientific literature (both domestic and foreign) lacks holistic strategic models that would describe the full life cycle of the introduction of the metaverse into the hotel and restaurant business. A generalization of scientific achievements confirms the relevance of developing an integrated strategy that can combine conceptual principles, technological tools and economic assessments of the effectiveness of the introduction of the metaverse into the activities of hotel and restaurant enterprises. It is these gaps that form the need to build a new MetaHospitality 5.0 model, which synthesizes the approaches of modern researchers and adapts them to the practice of the national hospitality industry.

Formulation of the goals of the article. The purpose of the study is the theoretical and methodological justification and practical content of the strategy for implementing metaverse technologies as a tool for digital transformation of the hotel and restaurant business based on the author's MetaHospitality 5.0 model, taking into account global trends and the specifics of the national market.

Presentation of the main research materials. The modern approach to defining the metaverse is that it is considered as a set of interconnected digital environments in which the user interacts through his own virtual representation, that is, an avatar. In these environments, communication between people, objects and digital interfaces occurs almost instantly and as close as possible to real interaction formats. The technological basis of such spaces is formed by virtual and augmented reality tools, three-dimensional modeling and blockchain systems. This makes it possible to build an infrastructure that radically changes the way customers get acquainted with hotel and restaurant services. This includes preliminary VR reviews of locations, virtual tours and interaction with digital objects that complement the traditional perception of physical space [1, p. 708].

In the classical sense, a hotel is a material infrastructure that includes rooms, recreational areas, restaurants and conference rooms. With the introduction of metaverse technologies, this set of touchpoints is expanding due to new digital spaces that enhance the possibilities of communication and interaction of the guest with the brand [16]. In such spaces, the user can view the interior and characteristics of the rooms, make a reservation, join interactive events or communicate with staff and other

visitors. As a result, the virtual space ceases to perform a purely advertising function and begins to act as a separate service platform that forms and expands customer value, sometimes even faster than the traditional physical experience [2, p. 529].

World practice demonstrates the active implementation of various models of using the metaverse in the hotel and restaurant sector. One of the most common areas is the creation of virtual showrooms, where, using three-dimensional models, future guests can familiarize themselves with the territory, room design and service offer of the establishment [14]. An important direction of development has become loyalty programs based on NFT (Non-Fungible Token) which means "non-fungible token". This is a unique digital asset that confirms ownership of a specific object (art, music, video) in the blockchain, and cannot be replaced by another token. Such digital assets provide their owners with special privileges, access to exclusive offers and the opportunity to use personalized service packages. Virtual events, including culinary presentations, concerts and interactive master classes in digital spaces, are also rapidly spreading, which allows attracting a wider audience regardless of its geographical location [3].

In conditions of military instability and increased security risks, the issues of accessibility and protection of hotel and restaurant customers are of particular importance. Meta-universal technologies allow minimizing physical contacts, providing remote access to services, preliminary familiarization with accommodation facilities and making decisions without the need for personal presence. At the same time, digital interaction requires an appropriate level of cybersecurity, protection of personal data and financial transactions. The use of blockchain solutions, multi-level authentication and secure VR platforms helps to increase customer trust and create a safe digital environment, which is a critical factor for the hospitality industry in crisis conditions.

A promising practical direction for using the metaverse is VR simulations for staff training. Such trainings make it possible to model various communication scenarios, recreate complex service situations and practice standards of interaction with guests in conditions that are safe for both employees and visitors. In this context, the metaverse is gradually turning into a platform that combines innovative training, service management and expansion of the customer experience, going far beyond the boundaries of conventional marketing tools [4, p. 170].

Table 1 presents a comparative description of two approaches to the interaction of hotel and restaurant enterprises with service consumers.

Table 1

Comparison of traditional and meta-world guest interaction models

Criterion	Traditional model	Metaverse Model
Main point of contact	Physical space (room, restaurant, lobby)	Virtual Location, Available 24/7
Ability to meet in advance	Photos, videos, website	Immersive 3D Tour, Interactive Tour
Interaction with staff	Personal communication	Employee Avatars, Chatbots, Voice Assistants
Booking	Through website or reception	Directly from the Virtual Environment
Customer experience	Only during physical stay	Before, During, and After the Visit in Multi-Format
Scalability	Limited by location capabilities	Unlimited Number of the Participants

Source: compiled by the author based on data from [1, p. 703, 2, p. 530, 4, p. 172, 5]

The first approach is based on traditional service, the second combines classical elements with the capabilities of the metaverse. The table systematizes key differences according to several criteria, including the structure and content of customer contact points, the format of preliminary familiarization with the infrastructure of the institution, the use of communication channels with employees, the methods of making reservations, the nature of the received customer experience and the potential for scaling the service.

Such a comparison demonstrates the paradigm shift in service interaction that is taking place in the global hospitality industry. The traditional model assumes a physically limited-service format, while the approach, supplemented by the capabilities of the metaverse, creates a multi-level digital environment capable of ensuring continuous contact with the client both before arrival and after the end of the visit. The presented data indicate that the metaverse does not replace the classical format, but acts as a means of expanding it, supplementing it with new interaction points, enhancing the personalization of the service and contributing to the increase of the competitive advantages of the enterprise [5].

Table 2 presents the main models of application of the metaverse in the practice of hotel and restaurant enterprises, which allows us to systematize the forms of its use and assess their potential in the field of service innovations.

Table 2

Main models of using the metaverse by hotel and restaurant enterprises

Usage Model	Essence	Benefits	Application examples
Virtual Showrooms	3D copies of hotels and restaurants	Realistic presentation, increased booking conversion	Pre-screening of rooms, selection of event halls
NFT Loyalty	Digital tokens with bonuses	Increased engagement, exclusivity of offers	NFT-certificates for accommodation, VIP-access
Immersive Events	Virtual workshops, festivals	Global reach without location restrictions	Culinary shows, music events in VR
VR Learning	Simulations for staff	Safe training, practicing difficult situations	Service standards, crisis scenarios
Social Metaspaces	3D lobbies or lounges	Expanding the brand community	Virtual guest meetings, theme clubs

Source: compiled by the author based on data from [2, p. 530, 4, p. 180, 7, p. 3270]

Table 2 provides a generalized description of the main models of using the metaverse in the hotel and restaurant sector, each of which reflects specific capabilities and expected results for hospitality industry enterprises.

The proposed models are applied in nature and do not provide for a rigid phased structure. Their construction is based on a functional approach, according to which the model is described through the essence of the applied solution, expected benefits for the enterprise and customers, as well as examples of implementation in the hospitality industry. This approach allows us to assess the potential of each model from the point of view of its practical effectiveness.

A comparison of the models shows that the potential of the metaverse in the hospitality sector is much broader than marketing tools. Its capabilities cover operational processes, internal and external communications, personnel training and the development of new commercial formats. Systematization of such areas allows

enterprises to determine which tools best correspond to their strategic vector, resource capabilities and existing level of digital maturity [6].

Thus, the table forms the basis for developing an individual roadmap for implementing metaverse technologies into the business processes of a particular institution, which contributes to a well-founded choice of innovative service solutions.

The phased digital transformation of a hotel and restaurant enterprise based on the metaverse requires a consistent structuring of managerial, technological and economic components [7, p. 3269]. For this purpose, the author's MetaHospitality 5.0 model is proposed, which includes five interconnected stages. These include diagnostics of the digital maturity of the enterprise, formation of a metavision, design of a VR or AR customer journey, pilot testing of MVP products and further scaling of technological solutions (Fig. 1).
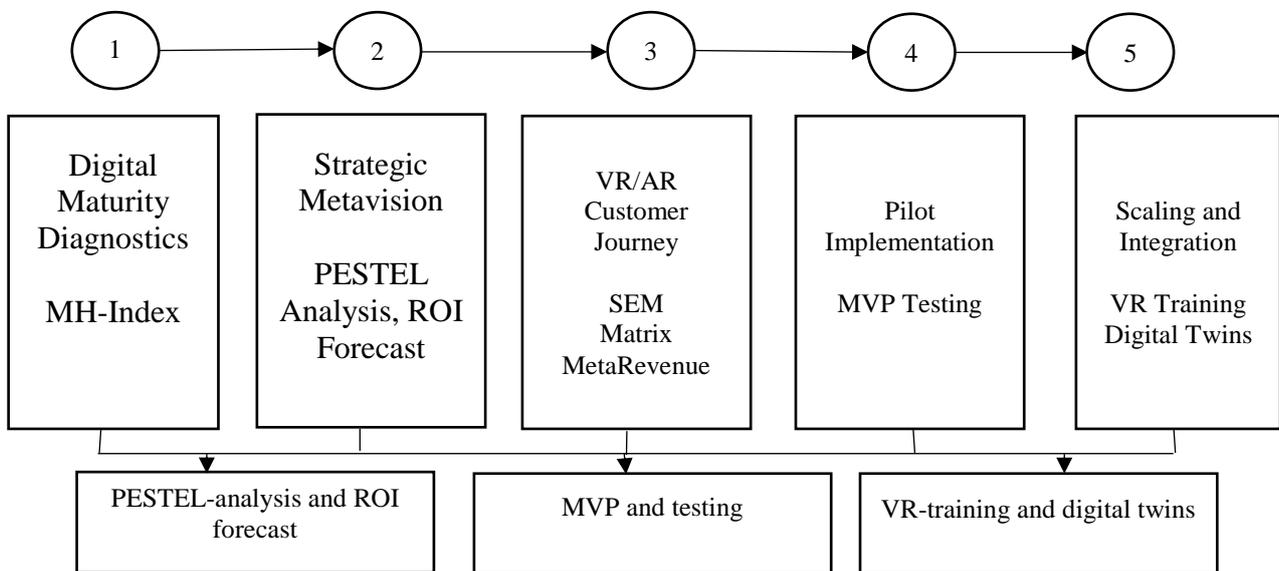
Fig. 1. **MetaHospitality 5.0 Model**
Source: developed by the author

Each stage of the model is based on the use of specific tools, technological solutions and quantitatively measured indicators, which allows assessing the effectiveness of digital innovations and ensuring the manageability of the digital transformation process.

The first stage involves conducting diagnostics of the digital maturity of the enterprise. For this purpose, the MH_Index tool is used, which reflects the integral level of readiness for the implementation of meta-global solutions. The index is defined as the arithmetic mean of three components: technological, organizational and marketing. Formally, this is represented by the equation:

$$MH\_Index = (T + O + M)/3, \qquad (1)$$

where T – characterizes the technological equipment and infrastructure of the enterprise;

O – reflects the level of organizational readiness of management and personnel;

M – determines the company's ability to create, promote and scale VR or AR content.

The obtained result affects the choice of the starting scenario of digital changes. The value of MH_Index below 0.6 signals the feasibility of implementing basic products, in particular panoramic 360-degree tours, AR filters or video excursions. A value of approximately 0.7 means the readiness of the enterprise to integrate VR events, online events and create a virtual lobby. Indicators above 0.7 allow you to move on to the implementation of complex solutions, such as digital twins, VR coworking or tokenized loyalty programs.

The second stage is aimed at forming a strategic vision for the development of meta-universe services. Within the framework of this stage, an analysis of the external environment is carried out using the PESTEL model, scenario models of development are worked out, market opportunities, technological limitations are assessed and the economic feasibility of projects is forecasted. For this, the ROI_forecast tool is used, which determines the expected profitability of the implementation of various meta-universe modules. The model is presented using the formula (2):

$$\text{ROI\_forecast} = \frac{(\text{E\_VR} + \text{E\_NFT} + \text{E\_OPS} - \text{C\_meta})}{\text{C\_meta}}, \qquad (2)$$

Where, E_VR is the expected revenue from the Virtual Reality module;

E_NFT is the expected revenue from the NFT module (non-fungible tokens);

E_OPS is the expected revenue from operations modules;

C_meta is the total cost of implementing the metaverse (costs for all modules).

The model takes into account the forecasted revenues from VR tours and virtual events E_VR, profits from tokenized assets E_NFT, operating cost savings due to VR simulators and digital twins E_OPS, as well as total investments in the metaverse C_meta.

The obtained results help to compare alternative development options and choose the most economically justified direction.

The third stage is dedicated to the design of the VR or AR customer journey. At this stage, the digital interaction of the guest with the enterprise in the virtual space is modeled. SEM maps (Service Experience Maps), VR scenarios for different groups of visitors and interactive touchpoints are used, which enhance the emotionality and depth of the user experience. In order to assess the effectiveness of this format of interaction, the MetaRevenue Matrix is used, which determines the VR sections of the customer journey where the greatest added value is formed. In addition, the conversion coefficient formula (3) is calculated:

$$\text{CVR\_VR} = \left(\frac{\text{B\_VR}}{\text{U\_VR}}\right) * 100\%, \qquad (3)$$

Where, CVR_VR is the conversion rate in the virtual reality module (%);

B_VR is the number of the desired actions or conversions in VR (e.g., purchases, registrations);

U_VR is the total number of the users in the VR module.

For a more complete analysis, immersiveness indicators are calculated, including VR Time Interaction, which determines the average duration of stay in the virtual space, and Immersive Satisfaction Estimate, which assesses the level of user

satisfaction with the experience.

The fourth stage covers the development and testing of MVP solutions, i.e. minimum viable products. Within this stage, the company can test VR rooms, digital menus, meta-storefronts, navigational AR elements, NFT loyalty packages or VR co-working. In order to analyze their effectiveness, A/B testing, User Flow analytics and gaze heat maps in the VR environment are used. An important indicator is CPMI, which denotes the cost of one meta-interaction and is calculated by the formula (4):

$$CPMI = \frac{C\_MVP}{I\_meta}, \qquad (4)$$

Where, CPMI is the cost of attracting a client in the metaverse (Cost per Meta Investment);

C_MVP is the cost of developing a minimum viable product (Minimum Viable Product);

I_meta is the number of attracted investments or users in the metaverse.

The resulting indicator allows you to assess the feasibility of the further scaling a particular solution and compare several prototypes.

The fifth stage of the MetaHospitality 5.0 model involves scaling and integrating metaproducts into the overall digital infrastructure of the enterprise. At this stage, complex systems are implemented, including digital twins, VR simulators for personnel and predictive analytics models for optimizing maintenance.

The social component of digital transformation plays an important role in the implementation of the metaverse in the hospitality industry. The use of VR and AR technologies contributes to the increase of inclusiveness of services for people with disabilities, creates new employment formats and stimulates the development of digital competencies of the staff. In addition, metaverse platforms form new social spaces of communication between guests, staff and the brand, which strengthens the social capital of the enterprise and contributes to the formation of loyal communities around hotel and restaurant establishments.

The economic effect is determined by the equation (5):

$$E\_OPS = E\_energy + E\_training + E\_maintenance, \qquad (5)$$

Where, E_OPS – total operating expenses or revenue from operating modules;

E_energy – energy costs (energy consumption);

E_training – personnel training costs;

E_maintenance – maintenance and support costs.

In order to illustrate the practical application of the proposed indicators, let's consider a conditional example. Let's assume that a hotel invests UAH 1.5 million in creating VR tours, an NFT loyalty program, and VR staff training. The expected additional income from VR services is UAH 900,000, from NFT solutions - UAH 450,000, and operating cost savings are UAH 300,000.

In this case, the forecast ROI_forecast is equal to (900 + 450 + 300 - 1500) / 1500 = 0.1, which indicates a 10% return on investment already at the initial stage. The further scaling of solutions allows you to increase the economic effect and reduce the payback period of the project.

At this stage, the metaverse becomes part of the enterprise's operating system and provides not only economic benefits, but also the emergence of new revenue generation channels thanks to digital services and integrated VR or AR solutions.

Table 3

Stages of implementing the MetaHospitality 5.0 model with tools, formulas and performance indicators

Model Stage	The essence of the stage	Key tools	Key Performance Indicators	Expected result
1. Digital Maturity Diagnostics	Assessing the current state of readiness of the enterprise for the implementation of the metaverse	MH_Index, technology audit, CRM/ERP audit, VR/AR potential audit	MH_Index, Digital Readiness Score, Gap Analytics	The starting level of maturity and necessary areas of modernization were determined
2. Strategic Metavision	Forming a vision of the future digital platform and forecasting economic efficiency	PESTEL analysis, scenario forecasting, ROI_forecast Matrix	ROI_forecast, ΔRevenue (income growth), ΔCost Savings (cost savings)	The feasibility of the digital strategy was substantiated and a roadmap was formed
3. Building the VR/AR Customer Journey	Developing VR/AR scenarios, interaction points and guest meta-journey	SEM (Service Experience Map), VR Storyboards, MetaRevenue Matrix	VR Time Interaction, CVR_VR, Immersive Satisfaction Index	A full-fledged VR/AR client route was formed with the definition of revenue points
4. MVP and Metaproduct Testing	Testing prototypes in real conditions, user behavior analytics	A/B testing, VR User Flow, Heatmaps, CPMI	CPMI, User Flow Efficiency, Engagement Rate	The most effective VR/AR modules were determined, costs were optimized
5. Scaling and Integration	Implementing digital twins, VR training and integration with PMS/CRM systems	Digital Twins, VR training, Predictive Maintenance	OPEX Savings, Energy Efficiency Index, Staff Competence VR-Score	A full-fledged enterprise meta-ecosystem was created and a stable economic effect was achieved

Source: adapted from [1, p. 705, 2, p. 529, 5]

Table 3 systematizes the step-by-step logic of implementing the metauniverse according to the MetaHospitality 5.0 model. Each stage is presented through the appropriate tools and sets of indicators, which makes it possible not only to describe the content of the transformation process, but also to carry out its quantitative measurement. This approach is consistent with the requirements of the digital economy, in which the effectiveness of innovations is determined using profitability models, digital readiness indices and user activity metrics.

The proposed concept of digital transformation MetaHospitality 5.0 forms a new vision of the digital development of hospitality industry enterprises. It combines technological innovation, economic feasibility and customer orientation. A comprehensive system for assessing the effectiveness of metaprojects has been created, including MH_index, ROI_forecast, MetaRevenue Matrix, CPMI and the formula of the integral operating effect. This provides the possibility of transitioning to the metauniverse based on a scientifically sound algorithm with a predicted return on investment [8; 10; 12].

The results of the application of meta-world solutions can be summarized as increasing the value of the customer experience due to the immersive effect, expanding sales channels, strengthening the brand's position in digital environments, optimizing business processes through the use of digital twins and generating new revenue streams, including digital certificates, NFT assets and VR events. Thus, meta-transformation appears not as a short-term marketing practice, but as a well-

thought-out economic model for the development of hospitality enterprises.

The proposed MetaHospitality 5.0 model takes into account the influence of external factors, including investment restrictions, the level of digital competences of the personnel, regulatory uncertainty and security risks, which shape consumer expectations and influence customer choice. In this context, digital trust, service stability and virtual interaction security become key determinants of customer loyalty in times of crisis challenges.

Conclusions. The study confirmed that the metaverse should be considered not as a temporary trend, but as a strategic tool for the digital modernization of the hotel and restaurant sector. The analysis of theoretical concepts and practical experience of the world's leading hotel chains made it possible to systematize the main areas of use of the metaverse and demonstrate their potential in improving the quality of customer experience, expanding sales channels, strengthening the brand, improving business processes and forming new sources of income. The MetaHospitality 5.0 model structures the implementation of the metaverse into five logically related stages from diagnosing digital maturity to scaling integrated solutions and creates a methodological basis for assessing the effectiveness of metaprojects using special indicators and calculation formulas.

Promising areas of the further scientific research are the development of quantitative models for assessing the economic efficiency of metaprojects, the analysis of consumer behavioral reactions in virtual environments and the integration of the metaverse with other Industry 4.0 technologies in order to create intelligent hospitality ecosystems.

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