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DOI: 10.32702/2306-6814.2026.1.67

INNOVATIVE APPROACHES TO MANAGEMENT AND MARKETING IN TOURISM AND HRS CLUSTER STRUCTURES

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ІННОВАЦІЙНІ ПІДХОДИ ДО МЕНЕДЖМЕНТУ ТА МАРКЕТИНГУ У КЛАСТЕРНИХ
СТРУКТУРАХ ТУРИЗМУ І ГОТЕЛЬНО-РЕСТОРАННОЇ СПРАВИ

In the current context of digital transformation, the tourism industry and the hotel and restaurant sector (HRS) are undergoing intensive changes driven by the need to enhance competitiveness and management efficiency. One of the key trends shaping the development of these sectors is the formation of cluster structures. The aim of this article is to identify and highlight the fundamental features that determine the innovativeness of management and marketing approaches in tourism and HRS cluster structures based on cloud ecosystems. Within this study, attention is drawn to the fact that management and marketing approaches in tourism and HRS clusters are gradually transforming from classical to cloud-based methods, facilitated by digital tools that perform coordination, control, analytical, and communication functions. It has been demonstrated that the key innovations in management and marketing within cluster structures manifest in approaches such as cloud-based network management, intelligent network analytics using cloud services, and network marketing based on cloud ecosystems. It is noted that a central conceptual characteristic within these approaches is networked interaction, which does not merely represent information exchange among cluster participants but entails systemic coordination of activities related to personnel and process management, as well as the study, creation, promotion, and sale of joint tourism products within a unified digital space. Networked interaction is manifested through: a unified data exchange infrastructure; interdependent business processes synchronized via digital services and automated regulations; a distributed management model; and the collective creation of consumer value. Thus, the innovativeness of management and marketing approaches in tourism and HRS cluster structures is grounded in networked interaction, which becomes not only a characteristic of structural interaction among participants but also a new logic for organizing managerial and marketing activities, ensuring integration, adaptability, and innovative development based on digital technologies.

В умовах цифрової трансформації підприємства туристичної та готельно-ресторанної сфери (ГРС) переживають інтенсивні зміни, пов'язані з необхідністю підвищення конкурентоспроможності, ефективності управління та просування спільних продуктів та послуг. Однією з ключових тенденцій, що визначає розвиток цих сфер, є формування кластерних структур. При цьому метою статті є виділення та ідентифікація базових особливостей, що зумовлюють інноваційність підходів до менеджменту та маркетингу у кластерних структурах туризму і готельно-

ресторанного сектора сформованих на основі хмарних екосистем. У межах окресленого дослідження звернено увагу на той факт, що підходи менеджменту та маркетингу у окреслених структурах поступово трансформуються від класичних до хмарних, завдяки цифровим інструментам, які виконують функції координації, контролю, аналітики та комунікації. Доведено, що ключові інновації менеджменту та маркетингу у кластерних структурах проявляються у таких підходах, як: хмарне мережеве управління; інтелектуальна мережева аналітика на основі хмарних сервісів; мережевий маркетинг на базі хмарних екосистем. Констатовано, що у межах цих підходів центральною концептуальною характеристикою є мережевість, яка означає не просто інформаційну взаємодію між учасниками кластерної структури, а системну координацію діяльності з управління людьми та процесами та з вивчення, створення, просування та продажу спільних туристичних продуктів у межах єдиного цифрового простору. Доведено, що мережевість проявляється через: єдину інфраструктуру обміну даними; взаємозалежність бізнес-процесів, які синхронізуються та автоматизованих регламентів; розподілену модель управління; колективне створення споживчої цінності. Таким чином, інноваційність підходів до менеджменту та маркетингу у кластерних структурах туризму і ГРС ґрунтується на мережевості, що стає не лише характеристикою структурної взаємодії між їх учасниками, а новою логікою організації управлінської та маркетингової діяльності, що забезпечує їхню інтеграцію, адаптивність та інноваційний розвиток на основі цифрових технологій.

Ключові слова: інноваційність підходів; менеджмент та маркетинг; кластерні структури; туризм; готельно-ресторанний сектор; створення споживчої цінності.

Key words: innovativeness of approaches; management and marketing; cluster structures; tourism; hotel and restaurant sector (HRS); creation of consumer value.

PROBLEM STATEMENT

In the modern context of digital transformation, the tourism industry and the hotel and restaurant sector are undergoing intensive changes driven by the need to enhance competitiveness and management efficiency. One of the key trends shaping the development of these areas is the formation of cluster structures. These structures not only exist today but are actively evolving, as they enable the rapid implementation of innovative technologies and the optimization of communications and resources through participant synergy (the most well-known examples include the "Ternopil Tourism Cluster," "Lviv Tourism Cluster," "Slavutych Tourism Cluster," among others). Moreover, in tourism and the hotel-restaurant sector, they represent one of the key contemporary forms of cooperation among businesses, government authorities, educational institutions, and local communities.

In this regard, innovative management and marketing approaches based on the digitalization of business processes-particularly their transition to cloud ecosystems-are becoming increasingly relevant. This is due to the fact that such approaches are innovative, as they systematically transform mechanisms for managing and promoting tourism services through advanced technologies. In essence, cloud ecosystems are now a strategic tool that enables cluster structures in tourism and the hotel-restaurant sector to influence service quality, automate key processes, implement intelligent management systems, and develop more effective partnership networks.

Therefore, the transition of management and marketing processes of cluster structures to cloud ecosystems creates new opportunities for their development, innovative activity, and competitiveness.

ANALYSIS OF RESEARCH AND PUBLICATIONS

The issues of implementing management and marketing within cluster structures in tourism and the hotel and restaurant sector (HRS) have been examined by scholars such as Maslyhan O.O., Todierishko E.V., Kuznietsova O.V., Shafranov K.V. [3], Kasynets O.V. [4], Humeniuk H.M., Polova L.V., and Humeniuk A.I. [1]. In particular, these researchers have devoted considerable attention to the features of organizational and managerial mechanisms for forming tourism clusters, enhancing the competitiveness of regional tourism systems, interaction among market actors within partnership models, the development of program-based marketing strategies, and the implementation of innovations in the activities of tourism enterprises.

At the same time, an analysis of their works shows that, despite substantial academic contributions to the study of the organization and functioning of tourism clusters, the issue of innovative management and marketing approaches based on cloud ecosystems remains insufficiently explored. Specifically, this concerns the digital integration of cluster participants, network coordination of business processes, the use of cloud analytics, and the development of platform-based

Table 1. Features of tourism and HRS cluster structures creating preconditions for the implementation of innovative management and marketing approaches

Features of cluster structures	Features of the cluster structure and their significance	Impact of cluster structure features on management and marketing systems
Network-based interaction among participants	Each participant in the cluster structure acts as a node in a complex system.*	Interactions are complex, multi-level, and often occur simultaneously among multiple participants, requiring coordination and centralized management.
High dynamism and seasonality	The tourism and HRS sectors depend on demand (including seasonal fluctuations, events, and weather conditions) and changes in consumer behavior.	Traditional management and marketing approaches are unable to quickly adapt to demand fluctuations and changes in consumer behavior.
Multi-level processes and participant roles	Contracting, service promotion, product certification, quality control, and marketing campaigns involve multi-level processes.	The multi-level nature of processes and participant roles in cluster structures necessitates a systematic approach and digital tools for action synchronization.
Heterogeneity of participants	Cluster participants vary in scale and specialization**.	Due to the heterogeneity of participants, there is a need for universal management tools that integrate different forms of activity.
Information complexity and the need for analytics	Data flows are large and heterogeneous, including bookings, reviews, marketing campaigns, and tourism flow statistics.	Effective management and marketing are possible only with modern analytical tools and centralized digital platforms.

Note

* Participants in the cluster structure include hotels, restaurants, tour operators, cultural institutions, transport organizations, and government authorities.

** Cluster participants are represented by entities such as small hotels and large chains, local restaurants, tourism startups, and educational institutions.

Source: created by the authors based on [1; 4—5].

collaborative marketing. These aspects require further theoretical justification and practical clarification.

FORMULATION OF THE ARTICLE'S OBJECTIVES

The purpose of this article is to distinguish and classify the core characteristics that shape the innovativeness of management and marketing approaches in cluster structures of tourism and the hotel and restaurant sector (HRS), developed through and integrated within cloud-based ecosystems.

THE PAPER MAIN BODY

Within the conducted research, special attention is paid to the principles of functioning of cluster structures. It is emphasized that, as a terminological construct, the term "cluster structure" is used instead of the more commonly applied term "cluster," since the latter is often interpreted in a broad and intuitive manner—as a group of companies or organizations that interact [1].

The concept of "cluster structure", instead, allows us to highlight the organizational, managerial, and functional components identified by Maslyhan O.O., Todierishko E.V.,

Kuznietsova O.V., and Shafranov K.V. [3], meaning that a cluster structure represents a systematically organized network of interrelated elements rather than a mere set of enterprises.

Such terminological precision enables a clear identification of the specific characteristics of cluster structures, explaining why the transformation of business entities in the tourism industry and the hotel and restaurant sector necessitates the implementation of innovative management and marketing approaches [1]. These approaches must ensure effective coordination, analytical support, and process integration across the entire cluster, taking into account features such as the network-based nature of participant interactions, pronounced dynamism and seasonality, multi-level processes and roles, participant heterogeneity, informational complexity, and the need for advanced analytics (see Table 1).

These features-networked interactions, dynamism, multi-level processes, heterogeneity, and information complexity-determine the need for the implementation of innovative management and marketing models to ensure the effective development of cluster structures. In particular, both in the management of people and business processes, as well as in the promotion of a joint product, effective are those models aimed at preserving the integrity of the structure and the coordinated development of all its participants. According to contemporary research by leading international consulting and auditing firms—such as Deloitte, PwC, EY, and KPMG—this can be achieved through the application of integrated digital services and platforms that provide shared data access, business process automation, analytical tools, and the ability for synchronized

real-time interaction among all participants in the cluster structure.

Since the early 2000s, management and marketing practices within tourism and HRS cluster structures have gradually evolved from traditional models to cloud-based frameworks, driven by digital tools that support coordination, control, analytics, and communication functions [1; 4—5]. Key innovations are reflected in approaches such as: cloud-based network management; intelligent network analytics through cloud services; network marketing leveraging cloud ecosystems

It should be noted that within these approaches, a central conceptual characteristic is networked interaction, which in this context does not merely refer to information exchange among cluster participants, but to the systemic coordination of their activities within a unified digital space, facilitated by cloud platforms. For example, within the Slavutych Tourism Cluster, a cloud platform synchronizes information on hotel occupancy, availability in restaurant establishments, demand for excursion programs, logistical constraints, and cultural events. The data obtained in real time automatically influences the formation of package offers, price adjustments, service personalization, and marketing campaigns. As a result,

The foundation underlying these features is the integration of actions among participants within cluster structures

Feature 1: Digital integration of all cluster participants

Manifestations of the feature:

Integrates heterogeneous participants into a single platform, providing shared access to data, documentation, bookings, and resources.

Feature 2: Real-time network interaction among participants

Manifestations of the feature:

Enables instantaneous information exchange, facilitates managerial decision-making, and allows quick responses to market changes or shifts in tourist demand.

Systemic features that ensure the innovativeness of the approach when manifested systemically

Feature 3: Automation of management processes

Manifestations of the feature:

Integrated modules automatically manage bookings, resource allocation, personnel processes, and logistics.

Reduces administrative workload and increases the speed and accuracy of operational task execution.

Feature 4: Analytical support for managerial decision-making

Manifestations of the feature:

The cloud system collects and processes large volumes of data on tourist flows, customer behavior, and business process performance. Enables evidence-based decision-making and forecasting for the development of the cluster structure.

The foundation underlying these features is the integration of actions among participants within cluster structures

Fig. 1. Features of the cloud-based network management approach in tourism and HRS cluster structures

Source: created by the authors based on [5—6].

individual cluster participants no longer operate in isolation in terms of management and marketing; their business processes become interdependent and coordinated, providing an integrated competitive advantage for the cluster structure as a whole.

Let us examine the outlined innovative approaches to management and marketing in more detail. To assess their impact on the efficiency of tourism and HRS cluster functioning, as well as to identify opportunities for optimizing managerial and marketing decisions based on cloud ecosystems, these innovative approaches are considered more closely.

The approach of cloud-based network management within tourism and HRS cluster structures involves the integration of participants into a single digital platform. This platform provides centralized coordination of resources, operational planning, control of business processes, and management of information flows in real time. The innovativeness of this approach is characterized by the following systemic features: digital integration of all cluster participants; real-time network interaction among participants; automation of management processes; analytical support for managerial decision-making. These features must exist in combination as a unified system (see Fig. 1).

When these characteristics function as a unified system, they enable personnel and process management that, within a cloud-based network management framework, ensures effective coordination of activities, digital transparency, and integrated actions among all participants in the cluster. This strengthens the system's adaptability and analytical capacity, which is particularly important for the highly dynamic tourism and HRS sectors [4—5].

The approach to implementing intelligent network analytics based on cloud services within tourism and HRS cluster structures involves the use of integrated data platforms, machine learning algorithms, and artificial

intelligence tools for the collection, processing, modeling, and forecasting of performance indicators of cluster participants [3]. The innovativeness of this approach is characterized by the following systemic features: intelligent processing of large datasets; forecasting demand for joint products and capacity planning; personalization of joint products and marketing strategies; analytical support for managerial and marketing decisions of cluster participants. It should be noted that these features must exist as a unified system (see Fig. 2), as intelligent network analytics is not merely a collection of separate tools but a coherent adaptive system in which each element ensures the functioning of the next.

Intelligent processing of large datasets forms the foundation for demand forecasting and capacity planning, with the latter serving as a prerequisite for the personalization of joint products and marketing strategies. The effectiveness of these strategies, in turn, relies on analytical support for strategic decisions that coordinate the interests of cluster participants [4].

This interdependence creates a closed loop of analytical management-encompassing data collection, interpretation, forecasting, and decision-making-and enables the development of collective analytical capabilities that individual enterprises alone cannot achieve, but which become possible at the cluster level.

The implementation of network marketing within tourism and HRS cluster structures, leveraging cloud ecosystems, entails shifting marketing processes from individual enterprises to a collaborative digital environment among cluster participants. This is achieved through the use of integrated cloud services and platforms. The innovative nature of this approach is reflected in the following systemic characteristics: development and promotion of a joint product; a unified branding strategy for the entire cluster; collaborative personalization of offers; intelligent management of integrated omnichannel communications. It's essential to note that these elements

Expansion of options for collecting, processing, modeling, and forecasting performance indicators of cluster participants

Feature 1: Intelligent processing of large datasets

Manifestations of the feature:

Collection of information from various sources within the cluster structure*

Feature 2: Forecasting demand for joint products and capacity planning

Manifestations of the feature:

Modeling seasonal fluctuations in demand and the impact of various joint activities, external risks, and market changes

Systemic features that ensure the innovativeness of the approach when manifested systemically

Feature 3: Personalization of joint products and marketing strategies

Manifestations of the feature:

Automated creation of personalized offers within the cluster structure

Feature 4: Analytical Support for Managerial and Marketing Decisions

Manifestations of the feature:

Formulating recommendations for the joint strategy of cluster participants

Expansion of options for collecting, processing, modeling, and forecasting performance indicators of cluster participants

Fig. 2. Features of the approach to implementing intelligent network analytics based on cloud services in tourism and HRS cluster structures

Note:

* Among the specified sources are data from CRM systems, booking systems, payment services, transport analytics, and communication platforms.

Source: created by the authors based on [2—3; 5—6].

operate as an interconnected system (see Fig. 2). When each cluster participant conducts marketing independently, the product is perceived in a fragmented manner. Only an integrated approach can create a unified, comprehensive offering. For example, in a city tourism cluster, there might be a hotel promoting only its rooms and services, a restaurant advertising only its menu, or a tour agency marketing trips without considering logistics or hotel discounts. In such cases, the client receives disjointed

offers, making it difficult to imagine the overall travel experience as a single product.

In contrast, an integrated approach via a cloud ecosystem—where all cluster participants operate as a cohesive system—enables the creation of a unified, comprehensive tourism product. Consequently, the tourist is offered a "package tour" that combines accommodation, meals, entertainment, and transfers at a single price, while personalized recommendations during booking are

Shifting marketing processes to the level of collective digital interaction among cluster participants

Feature 1: Creation and promotion of a joint product

Manifestations of the feature:

Development and promotion of a product formed by combining services from hotels, restaurants, transport companies, tour operators, cultural institutions, and other participants. *

Feature 2: Unified branding system for the cluster structure

Manifestations of the feature:

Creation of a single brand identity platform. Standardization of style, value orientations, visual elements, and communication standards applied by all participants.

Systemic features that ensure the innovativeness of the approach when manifested systemically

Feature 3: Collaborative personalization of offers

Manifestations of the feature:

Integration of data on consumer behavior, enabling the personalization of offers at the level of the entire cluster.**

Feature 4: Intelligent management of joint omnichannel communications

Manifestations of the feature:

Centralized management of the communication activities of all cluster participants within a unified information environment.***

Shifting marketing processes to the level of collective digital interaction among cluster participants

Fig. 3. Features of the approach to implementing network marketing based on cloud services in tourism and HRS cluster structures

Notes:

* Digital platforms enable the coordination of offers, synchronization of services, and optimization of product chains, providing competitive advantages across the entire cluster.

** This refers to the creation of personalized itineraries, tourist packages, and service offers that take into account individual customer preferences while integrating offerings from different network participants.

*** This refers to the synchronization of content strategies, advertising campaigns, and digital channel operations (social media, marketplaces, CRM systems, mobile applications), using automation, AI tools, and analytical modules to enhance the effectiveness of engagement with target audiences.

Source: created by the authors based on [2—3; 5—6].

generated based on shared data from all participants [5]. As a result, the product is experienced as a holistic travel journey rather than a collection of separate services, significantly enhancing the cluster's competitive appeal.

Only in this integrated format do they create a synchronized digital marketing network, where the primary competitive advantage lies not merely in an individual tourism product but in the collective value and uniqueness of the cluster's joint offering, strengthened by shared data, services, and communication channels.

In conclusion, the digitalization of tourism and HRS clusters is not only a tool for process optimization but also a driver for new business models, based on shared cloud infrastructure, integrated data, and collaborative marketing practices.

CONCLUSIONS

Within the scope of this study, attention is drawn to the fact that management and marketing approaches in tourism and HRS cluster structures are gradually transforming from classical to cloud-based methods, facilitated by digital tools that perform coordination, control, analytical, and communication functions.

The author demonstrates that the key innovations in management and marketing within cluster structures manifest in approaches such as cloud-based network management, intelligent network analytics using cloud services, and network marketing based on cloud ecosystems. It is noted that a central conceptual characteristic within these approaches is networked interaction, which does not merely represent information exchange among cluster participants but entails systemic coordination of activities related to personnel and process management, as well as the study, creation, promotion, and sale of joint tourism products within a unified digital space. It has been demonstrated that networked interaction is manifested through:

- A unified data exchange infrastructure, enabling all cluster participants to access up-to-date information in real time;
- Interdependent business processes, synchronized through digital services and automated regulations;
- A distributed management model, where planning, control, and analytical functions are shifted from the level of individual enterprises to a shared platform;
- Collective creation of consumer value, based on the joint participation of various actors in the development of tourism products, service packages, and marketing strategies.

Thus, the innovativeness of management and marketing approaches in tourism and HRS cluster structures is grounded in networked interaction, which becomes not only a characteristic of structural interaction among participants but also a new logic for organizing managerial and marketing activities, ensuring their integration, adaptability, and innovative development based on digital technologies.

Future research should focus on examining the effectiveness and adaptation of cloud-based network management and marketing models within tourism and HRS cluster structures, considering their influence on competitiveness, participant integration, and the creation of collective digital value.

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- Стаття надійшла до редакції 09.12.2025 р.*