

Електронний журнал «Ефективна економіка» включено до переліку наукових фахових видань України з питань економіки (Категорія «Б», Наказ Міністерства освіти і науки України № 975 від 11.07.2019). Спеціальності – 051, 071, 072, 073, 075, 076, 292.
Ефективна економіка. 2022. № 11.

DOI: <http://doi.org/10.32702/2307-2105.2022.11.6>

УДК 338.48:338.486.1

O. Maslyhan,
Doctor of Economic Sciences, Professor of the Department of Management,
Management of Economic Processes and Tourism, Mukachevo State University
ORCID ID: <https://orcid.org/0000-0002-8465-548X>
E. Todierishko,
Postgraduate student of the Department of Economics and Finance,
Mukachevo State University
ORCID ID: <https://orcid.org/0000-0002-3055-0244>
V. Tserklevych,
PhD in Pedagogical Sciences, Associate Professor, Associate Professor
of the Department of Hotel-Restaurant and Tourist Business,
Khmelnytskyi Cooperative Trade and Economic Institute
ORCID ID: <https://orcid.org/0000-0001-7925-780X>
M. Buhaiova,
Senior Lecturer of the Department of organization and safety of traffic,
Kharkov National Automobile and Highway University
ORCID ID: <https://orcid.org/0000-0002-9101-9959>

CONCEPT OF ORGANIZATIONAL REGULATION AND ROUTING OF DEVELOPMENT OF TOURIST AND HOTEL-RESTAURANT CLUSTERS

O. O. Маслиган,
д. е. н., професор кафедри менеджменту, управління економічними процесами та
туризму, Мукачівський державний університет
Е. В. Тодьєрішко,
аспірант кафедри економіки та фінансів, Мукачівський державний університет
В. С. Церклевич,
к. пед. н., доцент, доцент кафедри готельно-ресторанного і туристичного
бізнесу, Хмельницький кооперативний торговельно-економічний інститут
М. О. Бугайова,
старший викладач, Харківський національний Автомобільно-дорожній
університет, кафедра організації та безпеки дорожнього руху

КОНЦЕПЦІЯ ОРГАНІЗАЦІЙНОЇ РЕГЛАМЕНТАЦІЇ ТА МАРШРУТИЗАЦІЇ РОЗВИТКУ КЛАСТЕРІВ ТУРИЗМУ І ГОТЕЛЬНО- РЕСТОРАННОГО БІЗНЕСУ

To ensure a rational structure of responsibility of organizational regulation and routing of development of cluster participants and for the sake of the tourism and hotel-restaurant business cluster itself, it is expedient to apply systems: internal organizational regulations, or documents that organize the process and procedure of work within and at the level of each particular participant, determine their main goals, tasks, rights, and obligations; systems of regulatory influence transmission in the "cloud" structure of responsibility. To minimize the costs of such systems, the participants of the tourism and hotel-restaurant clusters should simultaneously develop a network of organizational regulations or documents in large-scale cloud services or create their clouds with routers. The concept of efficiency, in the restated sphere, can be considered as a property of sub-systems-administrators of clusters to organize the process and procedure of work to the level of each concrete participant, at the minimum expenses for organization and realization of development regulation. The purpose of the research describes the concept of organizational regulation and routing of the development of tourism and hotel-restaurant clusters. According to the study results, the focus should be on the peculiarities of deployment of the appropriate infrastructure in cloud services for businesses with database systems, and the possibilities of balancing computing capacities and throughput, designed for a large number of users and functions. Attention is drawn to the fact that there is an opportunity to model processes of gradual migration into the cloud of the cluster of each of its participants, which provides information about possible metamorphosis in the access system, possible balance of computing capacity; the volume of a storage or carrying capacity of clouds, a maximum number of participants. It is noted that for effective translation of rules of regulation of activity through the cloud service within the tourist and hotel-restaurant cluster it is expedient to develop routers, the basis of which is the unified plan of migration of its participants to the cloud, which should contain: 1) conditions of transfer of applications from the participant's data-center to the cloud; 2) conditions and measures of regulation of participants' activity.

Для забезпечення раціональної структури організаційної регламентації та маршрутизації розвитку учасників кластерів та Ради кластеру туризму і готельно-ресторанного бізнесу, доцільно застосовувати систем: внутрішніх організаційних регламентів, або документів, що організують процес і порядок роботи всередині утворень та на рівні кожного конкретного учасника, визначають їх основні цілі, завдання, права та обов'язки; транслявання регуляторного впливу у «хмарній» структури відповідальності. З метою мінімізації витрат на такі системи учасники кластерів туризму і готельно-ресторанного бізнесу мають паралельно розгортати мережу організаційних регламентів або документів у масштабованих хмарних сервісах чи створювати власні хмари з маршрутизаторами. Саме поняття ефективності, в окресленій сфері, можна розглядати як властивість підсистем-адміністраторів кластерів чітко організувати процес і порядок роботи до рівня кожного конкретного учасника, за мінімальних витрат на організацію та здійснення регулювання розвитку. Метою дослідження є опис концепції організаційного регулювання та маршрутизації розвитку кластерів туризму та готельно-ресторанного бізнесу. За результатами дослідження зроблено висновок, що при розробці системи передачі управлінського впливу в «хмарній» структурі відповідальності здатній масштабуватися, фокус має бути зроблений на особливостях розгортання відповідної інфраструктури в хмарних сервісах для бізнесу (з системами баз даних, можливостями балансування обчислювальних потужностей та пропускну здатністю, розрахованою на значну кількість користувачів і функцій). Звернено увагу на той факт, що існує можливість змодельовати процеси поступової міграції в хмару кластера кожного його учасника, що забезпечує інформацію про можливу метаморфозу в системі доступу, можливий баланс обчислювальної потужності; обсяг сховища або пропускну здатності хмари, максимальну кількість учасників. Зазначено, що для ефективної трансляції правил регулювання діяльності через хмарний сервіс в межах туристичного та готельно-ресторанного кластера доцільно розробити маршрутизатори, основою яких є єдиний план міграції його учасників до хмари,

який повинен містити: 1) умови перенесення додатків з дата-центру учасника в хмару; 2) умови та заходи регулювання діяльності учасників.

Ключові слова: кластер; хмарний сервіс; маршрутизація; учасник кластера; організаційний регламент.

Key words: cluster; cloud service; routing; cluster member; organizational regulations.

Problem-setting and its relation to important scientific or practical objectives. To ensure a rational structure of responsibility of organizational regulation and routing of development of cluster participants and for the sake of the tourism and hotel and restaurant business cluster itself, it is expedient to apply systems: internal organizational regulations, or documents that organize the process and procedure of work within and at the level of each particular participant, determine their main goals, tasks, rights, and obligations; systems of regulatory influence transmission in the "cloud" structure of responsibility. To minimize the costs of such systems, the participants of the tourism and hotel and restaurant business clusters should simultaneously develop a network of organizational regulations or documents in large-scale cloud services or create their clouds with routers. The concept of efficiency, in the restated sphere, can be considered as a property of sub-systems-administrators of clusters to organize the process and procedure of work to the level of each concrete participant, at the minimum expenses for organization and realization of development regulation.

Analysis of recent studies and publications. Today the issue in the sphere of organizational regulation of activity of tourism and hotel-restaurant clusters and their participants is devoted not enough scientific works. Some issues in the rearranged area are discussed in the works Muzychenko-Kozlovs'ka O.V., Muzychenko-Kozlovs'kyj A.V., Melnyk, T.A. and Lobach, K.V. and others. Also, some issues related to transition to the regulation of cluster development are highlighted by Paturel R. [3], which is highlighted, also the mechanism and forms of this process and outlined the

specifics of rethinking the target guidelines of regulation. At the same time, it is the fundamental research of organizational regulation and routing of tourism and hotel-restaurant cluster uncovered enough.

Formulation of the objectives. The purpose of the research is to describe the concept of organizational regulation and development routing tourism and hotel-restaurant clusters.

Presentation of the material of the study, supporting the scientific results obtained. The balanced scorecard (or BS) and the system of regulatory influence transfer through it (as a router) define as the basic research of organizational regulation and routing of tourism and hotel-restaurant clusters. The results of BS application form a specific structure of organizational regulations and communication networks, which in simplex should be investigated as a combination: 1) functional component as a logical scheme of the organizational structure of regulation and definition of its characteristics; 2) the hierarchical component, as a composition of the hierarchical levels of the cluster and internal subdivisions of its independent participants (should be considered as participants), defining the main routing links between them and the regulatory procedures.

Each component can be duplicated in a cloud environment with a "cloud designer" and open-source programs that are easily scaled across the network and provide high availability of routing networks and organizational regulations for participants. Outlined components, it is advisable to structure in terms of needs, as to: 1) the division of functions at the local (cluster participants), corporate level, and the level of management influence transmission in the cloud structure (should be oriented on the cross-section of spheres of responsibility and authority); 2) creation organizational structure capable of providing integration regulation of development within the cluster and delegating cloud operations account the managerial hierarchy and organizational cluster structure. This can present in categories of virtual teams provide a formalization of the persons who entrust with the necessary tasks; 3) ensure the adoption and implementation of regulatory decisions in the network with organizational development regulation in the cloud. At the same time, there is a need for a clear description of the expected technical

teams to make regulatory decisions and to create a "road map of migration" of the cluster participants in the cloud service.

The measures outlined allow us to consider the process of organization resources and marshal networks in the course of several basic blocks, namely [4, c. 284-286]: 1) organizational structure of regulation of the participant development (or OSRP) of tourism and hotel-restaurant cluster determines subordination of tasks, positions, powers, and responsibilities, based on the such unit (enterprise) carries out its independent management activity in the middle of the cluster; 2) organizational structure of cluster regulation (OSRC) considered as a block defines the system of powers and responsibilities, connections and relations arising in the process of cluster activity, among its participants, according to the strategy of development.

As for OSRP the typology and specificity of their formation depending on the participant's size.

The types of structures can be adaptive (linear, linear-functional, or divisional) or adaptive (linear, matrix, or network).

Adaptive organizational structures are the most suitable for the modern reality of tourism and hotel-restaurant clusters, in connection with considerable flexibility and universality. These structures can use the basic, baseline level of cloud-based solutions for network connectivity with organizational regulation of cluster development containing everything: server infrastructure, communications, and storage, all necessary for software operation.

Through a virtual interface, this organizational structure easily interacts with IaaS configuration, adds installed software, and includes additional services, extending resources depending on the functional load on subdivisions and internal responsibility system.

The use of any type of organizational structure by the participants of the tourism and hotel-restaurant business forms both advantages and disadvantages and account that the environment of the action is not only the tourist market but also the cluster, some disadvantages are not compatible with effective regulation of the region development. It leads to the formation of networks with complex architecture.

The use of a network with organizational regulation of cluster development may require additional use of software implemented for control of activity, and compliance with security policies and rules in the cloud infrastructure.

It is expedient to apply adaptive types of organizational structures of regulation of activity of participants of tourism and hotel-restaurant cluster, in connection with the following: outlined systems are flexible; outlined systems are oriented on the model of system description of activity and cloud service use; outlined systems using decomposition and cascading of goals form a network of route communications.

OSRC - the integration of the cluster, the elements of which are its participants, makes use of the network as the only possible alternative, in connection the fact that the organizational unity of such association is ensured by the unity of regulation of the system of networks of its participants.

The differences in the cloud environment depend on the infrastructure owner and who manages it. If the cloud owner allows all participants who paid for the service to get a virtual server, this environment is a public cloud. If the cluster participants use cloud technologies and built a cloud environment for their needs - it is a private cloud. In any case, the use of the cloud environment may lead to the formation of several organizational subtypes of networks and their routing networks [3, p. 26–31]: 1) the central structure; 2) the organic network. The centralized structure of the cluster of the region is based on the fact that unites around the core of the company of a smaller size, giving them the performance of various specific tasks.

In this case, networks with organizational regulation of the development of tourism and hotel and restaurant cluster should be formed on public, private, or hybrid cloud technologies, using powerful servers, storage systems, virtual switchboards, routers, service communication as a service, etc. In this hardware part (hp), significant throughput is caused by the working load the service segment needs its subdivisions necessary for the production of the cluster product. Note that such a structure is hierarchical, as large firms occupy a minimal position in business operations shown in the following [4; 3, p. 26–31]): 1) large firms are the main producer allows them to influence the owners through the market mechanism; 2) corporate cluster management

bodies act as internal coordinator; 3) large firms choose service partners according to the parameters of flexibility, adaptability to changes in the environment and creative potential.

These clusters require CaaS, namely, different tools for forming routing networks to transmit information in clouds. It can be telephony, express messaging, or video call services. All necessary software should be located in the provider cloud. An organic cluster network is a combination of close-sized producers that support the stability of one another while the bankruptcy of one of these participants will inevitably affect the other.

At that, networks with organizational regulation of development of tourism and hotel-restaurant business cluster in regions, to form on cloud technologies should provide opportunities for participants not just to connect to databases in cluster clouds, but to expand in its detailed database to control the current state of cluster participants [5].

The network element is DBaaS. The cluster participants will have a lease fee, depending on the number of users and the volume of the base itself.

In the central and organic networks, temporary virtual structures of units and units group formed within the business cooperation framework. The following temporary structures:

- 1) are rapidly combined within a cluster to solve urgent development problems or to use the latest opportunities;
- 2) coordinated using modern information technologies and means of telecommunication.

In any case, network structures can function only based on the leading core or the drawing of "clear program goals, ways of their achievement and characteristics of the structure itself, change in time, only based on an open, well-defined and understandable procedure for all participants.

We consider it expedient to allocate the structure of organizational regulations of the tourism and hotel-restaurant cluster. This structure includes standard organizational regulations (cluster regulation model, description of the existing organizational cluster

structure and main tasks, description of principles, building approaches to the organizational cluster structure and program principles of activity; distribution of functions, rights, and duties of the cluster participants; relationships between cluster members and their structural composition, provisions on cluster units, cluster statute, description of algorithms, rules, procedures for working of self-managed profile cluster working groups, etc.). However, the standard regulations are different for the cluster and its participants, illustrated in Figure. 1.

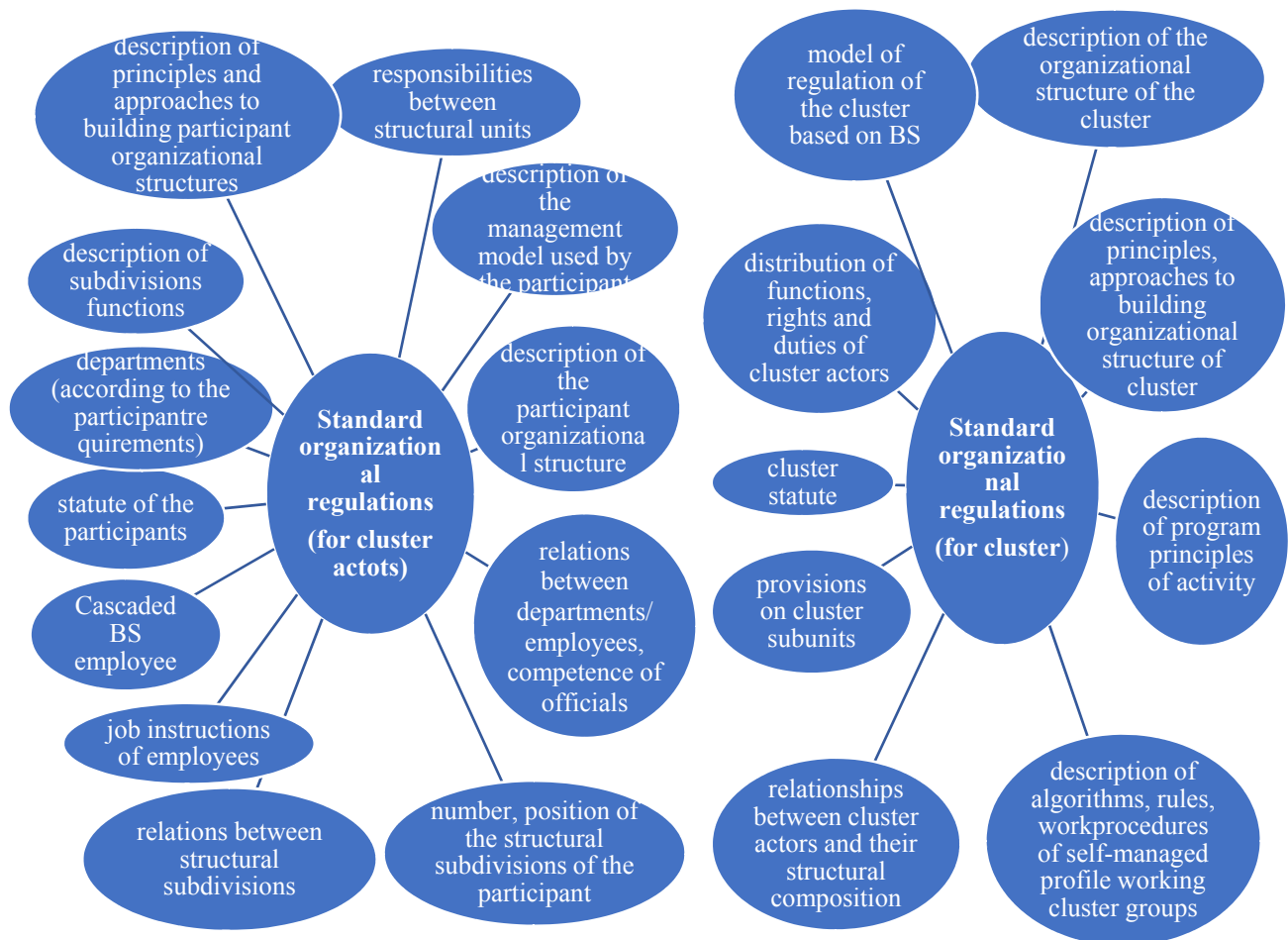


Figure 1. List of standard organizational regulations for the tourism and hotel-restaurant cluster and its participants

Source: Developed based on [5; 6])

Also, the structure of organizational regulations of the tourism and hotel-restaurant business cluster includes specific organizational regulations (provisions on cluster divisions, cluster charter, description of algorithms, rules, procedures for self-managing

profile working groups in the cluster, etc.). However, the outlined regulations are shown in Fig. 2.

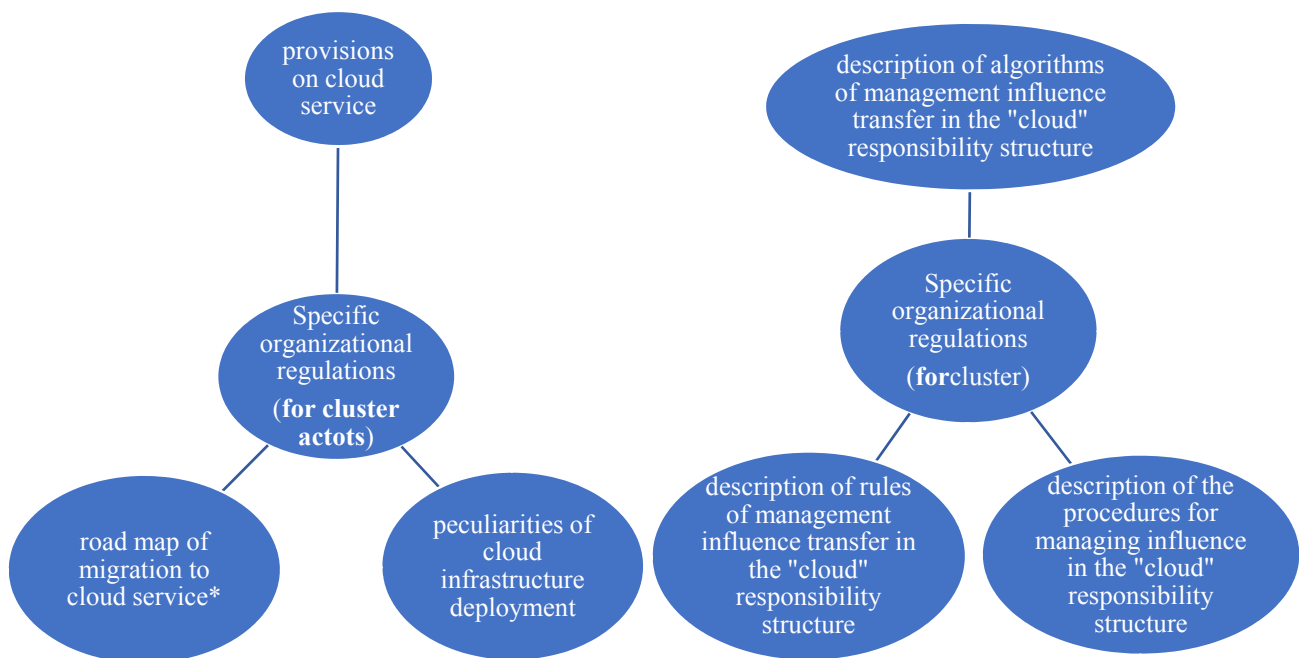


Figure 2. List of specific organizational regulations for the tourism and hotel-restaurant cluster and its participants

Note:

*When formulating a migration plan in the cloud should take into account cases: re-allocation; rearrangement; re-arrangement (when there is an opportunity to upgrade the cloud cluster in hybrid architecture (combines private and publicly available cloud services); redevelopment from scratch (change of cloud infrastructure).

Source: Developed based on [5; 6])

It is proved that in forming a system of transmission of managerial influence in the "cloud" structure of responsibility able to scale based on attention should be given to peculiarities of their deployment in the infrastructure that unites cloud services for business within the framework of the system of databases with flexible resources, possibilities of balancing of computing capacities, throughput, number of users and cost features.

This will allow the tasks to be performed within the organizational network of the cluster. Based on the received data, it stated that the main tasks of the organizational network of tourism and hotel-restaurant cluster should lie in the following [4:

- 1) to understand the general public interests, to formulate them in the form of program principles, to establish moral principles, and ideals of work;
- 2) evaluate the external environment;

- 3) to identify the current activity rules, and establish to whose interests they direct;
- 4) to identify the impact on the society of other players who are intended to realize their interests;
- 5) systematically analyze received information, and forecast possible variants of events;
- 6) to develop strategies and tactics for counteracting destructive players, by declaring goals, basic moral principles, and ideals;
- 7) to form and implement their rules, which will ensure the realization of the well-informed structure of the general public interests;
- 8) to provide periodic assessment and self-assessment of its activity and properties;
- 9) provide mechanisms for adjusting the course of structure, and building reliable feedback within the organization and with the external environment.

Program principles of cluster activity should be functioning according to clearly defined program goals and ways of their achievement changed only by an open procedure defined by the participants.

Rather specific for organizational structure regulation of development of tourism and hotel-restaurant clusters is the formation of provisions on cluster Council subdivisions. Mandatory, some protect against failures. So, this is maybe [4]:

- 1) the subdivision of the organization of the structure of regulation of cluster development, which has to determine the division of functions in the areas of: accounting of structure members; coordination of structural subdivisions that provide the life capacity of the cluster; specificity of forming primary groups of different types to ensure the cluster objectives;
- 2) the cluster structure stabilization division includes coaches, and consultants to train cluster members on the cooperation specifics. Within the limits of such a provision function from: organization of training and conducting training; identification of sources of internal conflicts in the cluster and their regulation; stabilization of working groups can be established.

Note that within the framework of the cluster subdivision provision functions can be assigned to: organization of training and conducting trainings (to form effective working teams); identification of sources of internal conflicts in the cluster (on the basis of monitoring of work) and their regulation; stabilization of working groups (creation of working atmosphere); formation of the cluster charter (to ensure flexibility and efficiency, its structure should be based on the principle of mutual teaching of several scenarios of corporate work). At the same time, it is expedient to outline algorithms, rules, procedures of work:

- in the mode: collective intelligence of corporate hierarchical structure; groups for realization of objects; groups of response to external factors revealed;

- in the composition of self-managed profile working groups, cross-analytical groups, forecasting groups and strategic planning.

To maintain a stable cluster structure, each member of the cluster must have a clear set of:

- *rights*. At the same time, the main of which should be:

- 1) access to the cluster's information base (or the right of unimpeded access to information);

- 2) participation in decision-making at the level of the whole cluster, by means of personal voting or participation in the discussion, participation in the work of profile, cross-dress, executive groups of the cluster;

- 3) making ideas and proposals from any profile and participating in their discussion (or right to self-realization);

- 4) assessment of the status of realization of the main goals of the cluster and ways of their realization.

- *duties*. At the same time, the main of which should be:

- 1) the presence of a clearly defined segment of the mandatory work (in equal part of the total work);

- 2) the need to adhere to the existing internal rules, algorithms and procedures of cooperation in the cluster;

- 3) the need to perform the selected and clearly defined segment of work.

According to the above mentioned, we believe that by means of regulation and routing: equal access to information, realization of functions of the authorities; possibility of self-realization and independent control, minimization of sources of internal conflicts of the cluster participants; clear division of responsibilities will promote creation of working atmosphere in cluster.

Each participant of the tourism and hotel-restaurant business cluster in case of failure to take into account domestic obligations and rules, risks of degradation and collapse of the cluster in the region. Given that all enterprises in cluster, are in mutual relation and mutual dependence, then the systemic crisis or bankruptcy in one of them can domino effect trigger. There is a need to develop a qualitatively new conceptual model of management of artificial associations (tourism and hotel-restaurant business).

It is advisable to do this by means of a systematic approach to its formation. From our point of view, this should provide for its multifaceted, integral description as a system formed by synthesis of different conceptual schemes, with the next allocation of mutual relations between the parts of whole.

The BS will perform the basic function of organizational regulation of development of participants of tourism and hotel-restaurant cluster, through broadcasting of the unified rules regulating activity uses cloud service within the cluster, on all its hierarchical levels.

Description of the specifics of organizational regulation of development of tourism and hotel-restaurant cluster participants is a means of ensuring rational structure of responsibility, provided that: internal organizational regulations; systems of management influence transfer in the "cloud" structure of responsibility.

It has been proved that the concept of efficiency is a property to organize the process and procedure of work in the cluster to the participant level.

Conclusions and prospects for further research. The results of the study proved that:

1. When developing a management impact transmission system in a "cloud" responsibility structure capable of scaling up, the focus should be placed on the peculiarities of their deployment in the infrastructure that integrates cloud services for

business within the framework of database systems with flexible resources, capabilities to balance computing capacities, bandwidth, number of users and functions;

2. There is a possibility to model the processes of gradual migration into the cloud cluster of its member based on linear programming by the graphical method, which provides information about the possibilities of metamorphosis in the access system, the possible balance of computing capacity; the volume of a storage or bandwidth capacity of the cloud, the maximum number of participants.

3. For effective broadcasting of rules regulating activity through the cloud service within the tourism and hotel-restaurant cluster it is expedient to develop routers, the basis of which is the unified plan of migration of its participants to the cloud should contain: 1) the terms of transfer of applications from the data center of the participant to the cloud; 2) the terms and measures of the annex developed for the wide-scale uniform rules regulating the participants activities.

Prospects for further research. Formation of network structure of functioning of tourist and hotel-restaurant clusters in regions.

Література

1. Мельник Т.А., Лобач К.В. Методи визначення платоспроможності підприємства, *Наукові записки*, 2017. Вип. 21. С. 3-15.
2. Музиченко-Козловська О.В., Музиченко-Козловський А.В. Розвиток системи управління туристичними кластерами в Україні / О.В.Музиченко-Козловська 2011. URL: http://www.nbu.gov.ua/portal/natural/Vnulp/Logistyka/2011_706/16.pdf
3. Патюрель Р. Создание сетевых организационных структур. *Проблемы теории и практики управления*. 1997. № 3. С. 26–31.
4. Шелудько В.М. Фінансовий ринок 2-е вид., 2008 URL: http://pidruchniki.ws/1584072039365/finansi/finansoviy_rinok_-_sheludko_vm
5. Storper M., Walker R. The capitalist imperative. Territory technology and industrial growth. N.Y.: Basil Blackwell, 1989, 3, с. 92.

6. Tourist Clusters, Destinations and Competitiveness, Theoretical issues and empirical evidence, edited by Francesco Capone, Routledge Taylor and Francis Group, London, New York, 2016

References

2. Mel'nyk, T.A. and Lobach, K.V. (2017), "Methods of determining the company's solvency", *Naukovi zapysky*, Vol. 21, pp. 3-15.

3. Muzychenko-Kozlovs'ka, O.V. and Muzychenko-Kozlovs'kyj, A.V. (2011), "Development of the management system of tourist clusters in Ukraine", available at: http://www.nbu.gov.ua/portal/natural/Vnulp/Logistyka/2011_706/16.pdf (Accessed 01 March 2021).

4. Paturel, R. (1997), "Creation of network organizational structures", *Problemy teorii i praktiki upravleniya*, Vol. 3, pp. 26–31.

5. Shelud'ko, V.M. (2008), "Financial market", available at: http://pidruchniki.ws/1584072039365/finansi/finansoviy_rinok_-_sheludko_vm (Accessed 01 March 2021).

6. Storper, M. and Walker, R. (1989), *The capitalist imperative. Territory technology and industrial growth*, Basil Blackwell, N.Y, Vol. 3, p. 92.

7. Capone, F. (2016), *Tourist Clusters, Destinations and Competitiveness, Theoretical issues and empirical evidence*, Routledge Taylor and Francis Group, London, New York.

Стаття надійшла до редакції 02.11.2022 р.