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Regional management paradigm of the integrated effort of development elements of recreation and tourism cluster

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Abstract*. The purpose of the research*. It was noted that management of integrated effort of clusters elements based on a targeted approach. This approach has the following features: it orients production activities, to the needs of target consumers; it's characterized by structural flexibility of dynamic states of the external environment; it provides a strong orientation of integrative development of cluster actors for the future (through the system description model that defines development goals and translates them across a cluster network). These processes integrate changes in the components of the production and management systems of the cluster actors. The purpose of the research lies in systematic description of the management model of integrated efforts of tourism and recreation cluster, adopted in the scientific space. *Methodology*. By the study process the following general scientific and concrete methods have been used: comparative, structural (used for determining the factors that determine the competitive advantage of the cluster) and secondary data analysis (used for methodical algorithms of strategic evaluation of "Human capital training» determining; used for methodical algorithms of strategic evaluation of possibilities for the preservation of the best personnel determining; used for methodical algorithms of liquidity position of cluster actors determining), sifting and interpreting, the data and reaching logic techniques (used for matrix of market segmentation of cluster actors formation). *Results*. The proposed design model of the management cycle is based on the balanced scorecard introduction. With the formation of a target management cycle of integrated efforts for cluster elements this design is implemented in parallel. Thus, it is proposed to use balanced scorecard as the basis for the formation of a corporate strategy of integrative development of clusters and a strategy for the development of its cluster in all levels of their decomposition. In fact, the strategy of development of actors, according to the project, should contain rank strategies. Rank strategies are linked to the cluster strategy of integrated development and from the main provisions of the strategy of development of such cluster actors. *Practical meaning*. It had been shown that regional management paradigm of integrated effort of development elements of a recreation and tourism cluster contains: 1) generalized analysis and diagnostic cluster

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portrait; 2) Mission and Vision for the future of cluster integrative development; 3) analysis of competitive advantages (macro- and micro-) and future limitations for integrated development of the external and internal environment of clusters; 4) strategic directions of action or set of strategic objectives and predicted actions for achievement of objectives are outlined. In accordance with existing specificity of cluster strategy decomposition, the strategy of integrating development fits in the highest level of its hierarchy. *Prospects for further research.* The prospects of further research are the development of the concept of management of clusters in the Ukraine regions.

Парадигма регіонального управління інтегрованими зусиллями розвитку елементів кластеру туризму та рекреації

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Анотація. Мета статті. Виявлено, що управління інтегрованими зусиллями елементів кластеру ґрунтується, на цільовому підході до управління, яке: орієнтує виробничу діяльність, на потреби цільових споживачів; характеризується структурною гнучкістю, щодо динамічних станів зовнішнього середовища; забезпечує жорстку орієнтацію інтегративного розвитку учасників на перспективу, завдяки моделі системного опису діяльності, що окреслює цілі розвитку та транслює їх по кластерній мережі. Процеси інтегрують зміни необхідних компонентів виробниче-управлінських систем учасників кластеру. Мета роботи полягає у системному опису прийнятої у науковому просторі моделі управління інтегрованими зусиллями розвитку елементів кластеру туризму та рекреації. *Методологія.* У процесі проведення дослідження використані такі загальнонаукові та конкретні методи: порівняльний, структурний (при визначенні факторів, що визначають конкурентні переваги кластеру), методи системного аналізу та аналізу вторинних даних (при визначенні методичних алгоритмів стратегічної оцінки «навчання людського капіталу»; методичних алгоритмів стратегічної оцінки можливостей збереження найкращих кадрів, методичних алгоритмів оцінки ліквідності балансу автономного учасника кластеру), узагальнення та інтерпретації, логічний (при побудові матриці сегментації ринку автономного учасника кластеру). *Результати.* Запропонована проектна модель циклу управління на основі впровадження Збалансованої системі показників (ЗСП). Проектування реалізоване паралельно із формуванням циклу цільового управління інтегрованими зусиллями розвитку елементів кластеру. Запропоновано використання ЗСП, як основи формування корпоративної стратегії інтегративного розвитку та стратегії розвитку його автономних одиниць, які окреслені за всіма рівнями їх декомпозиції. Фактично, це означає, що за проектним задумом стратегії розвитку автономних учасників мають, містити рангові стратегії, котрі знаходяться у взаємозв'язку із кластерною стратегією інтегративного розвитку та формують основні положення стратегії розвитку такого учасника.

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Практичне значення. Доведено, що парадигма регіонального управління інтегрованими зусиллями розвитку елементами кластеру туризму та рекреації має, містити: 1) узагальнений аналіз та діагностичний портрет кластеру; 2) місію та баченням майбутнього, що окреслюють перспективи інтегративного розвитку кластеру; 3) макро- та мікроаналізи конкурентних переваг та обмежень майбутнього інтегративного розвитку зовнішнього і внутрішнього кластерів; 4) намічені стратегічні напрями дій, викладені як сукупність стратегічних цілей та прогнозних дій, щодо досягнення цілей. Стратегія інтегративного розвитку займає в ієрархії найвищий рівень, відповідно до існуючої специфіки декомпозиції. *Перспективи подальших досліджень*. Перспективи подальших досліджень полягають у розробці концепції управління розвитком кластерів у регіонах України.

Ключові слова: кластер; конкурентні переваги кластеру; система планування; Збалансована система показників, учасник кластеру.

Кількість джерел: **15**; *кількість таблиць:* **6**; *кількість рисунків:* **0**; *кількість формул:* **2**.

1. Introduction.

The cluster of recreation and tourism is sensitive to the impact of exterior contact. This is due to the tourist product specifics as a complex of mandatory tourist services in a cluster according to individual or group plan (or tourist package).

Thus, the inseparability of tourist product consumption and production process makes it dependent on the state of the macro environment. The non-material nature of services, which are part of the tourist package, makes it impossible to accumulate them. As a consequence, late submission supplies and materials needed to produce and present tourism services generate a loss of income of the cluster actors.

Within the cluster are formed the specific characteristics of the management implementation. It is used as a cluster administrative subsystem on the leading node of the artificial system. However, additionally, there are administrative subsystems of each cluster element (namely cluster actors or enterprises), which are the management unit of integrated development efforts.

Management of integrated effort of the cluster element is based on a focused approach. Focused approach management orients production activities to the needs of consumers. Such management characterized by structural flexibility (concerning dynamic external environment conditions) and provides forward-looking orientation of integrative development of cluster actors. These benefits of management as the result of a system activity description focusing on the formulation of the long-term development objectives and passes them in a cluster network. New processes integrate changes in the basic components of the production and management systems of the cluster members.

2. Literature review.

The management features of clusters, in different spheres of the economy, described in such scientific works Yu. Deminska and T. Nadtoka (*2011*), Yu. Koroliuk (*2010*), H. Samiilenko (*2019*), G. Bronshpak and S. Chernyshov (*2009*). These scientists, studying the advantages of implementation of cluster model in functioning and development of the region drew attention to the lack of methodological foundations, to manage the integrated efforts of the development of cluster elements. At the same time, scientific breakthroughs of G. Bronshpak and S. Chernyshov (*2009*) deserves particular attention. These authors carry out basic research on the development of the modern directions of strategic management on the example of a production cross-border cluster (*Bronshpak and Chernyshov, 2009*).

Development Management of elements of the tourism and recreation cluster reflected in the scientific works Ya. Hryhorieva (*2012*), A. Dubodielova, I. Kulyniak, Yu. Bondarenko (*2014*). These scientists systematized and summarized the basic approaches of foreign scientists on the definition of tasks and methods of clusters management, as well as to the

formation of the structure of management of these clusters. Ya. Hryhorieva (*2012*) drew attention to the need for targeted management measures of support of the tourist product, its marketing, provision of related services and other processes. At the same time, this scientific works contained no reference, to the importance of managing process the integrated efforts to develop its elements. As for the very specifics of managing the integrated development efforts of cluster elements in the regional economy, there were almost no publications.

3. Methods.

By the study process the following general scientific and concrete methods have been used: comparative, structural (used for determining the factors that determine the competitive advantage of the cluster) and secondary data analysis (used for methodical algorithms of strategic evaluation of "Human capital training" determining; used for methodical algorithms of strategic evaluation of possibilities for the preservation of the best personnel determining; used for methodical algorithms of liquidity position of cluster actors determining), sifting and interpreting, the data and reaching logic techniques (used for matrix of market segmentation of cluster actors formation).

4. Research objectives.

The purpose of the research lies in systematic description of the management model of integrated efforts of tourism and recreation cluster, adopted in the scientific space.

5. Results and discussions.

The proposed design model of the management cycle is based on the balanced scorecard introduction (BS). With the formation of a target management cycle of integrated efforts for cluster elements, this design is implemented in parallel. Thus, it is proposed to use the BS as the basis for the formation of a corporate strategy of integrative development of clusters and a strategy for the development of its cluster in all levels of their decomposition. In fact, the strategy of development of actors, according to the project, should contain rank strategies. Rank strategies are linked to the cluster strategy of integrated development and from the main provisions of the strategy of development of such cluster actors.

Regional management paradigm of integrated effort of development elements of a recreation and tourism cluster contains:

1) Generalized analysis and diagnostic cluster portrait;

2) Mission and Vision for the future of cluster integrative development;

3) Analysis of competitive advantages (macro- and micro-) and future limitations for integrated development of the external and internal environment of clusters;

4) Strategic directions of action or set of strategic objectives and predicted actions for achievement of objectives are outlined.

These elements are the basis:

- For the Strategy of integrative development. This strategy fits in the highest level of its hierarchy.

- For the ranking strategies.

On the basis of the integrative development strategy are formed: 1) business strategy for each organizational entity of cluster actors which establish measures of gaining competitive advantage in the market; 2) functional strategies which concretize corporate and business strategy for all functional services of cluster actors); 3) operational strategies which determine at the lowest rank level course of action for organizational units cluster actors, which are not independent). Each of the rank strategies contributes to the formation of the strategic environment of the cluster and limits the corporate development strategy. During such limitations, they are mutually agreed by cluster actors, defining strategic roles and formation of the strategic indicators system that ensure the translation of the strategy into a regular process. These restrictions can be defined based on multi-level Strategic Map of the Balanced Scorecard.

Therefore, the strategy of integrated cluster development and its actors should be based on a multi-level strategic map of the Balanced Scorecard. This is as cascades (by cluster network), holistic description of the strategy (by

the components of the Balanced Scorecard). This is will be useful using causality defined by each cluster actors. The main instruments for implementing of the Strategy are plans systems and their interconnection in the process of strategy formalizing of integrated cluster development and its actors, within the framework of Balanced Scorecard structural idea. According to the City consulting company it fits with the fact that formalization provides a multi-stage dialog between all stakeholders (*Marchenko, 2016, p. 63–66*).

The planning system should be developed taking into account various integrating options of strategic maps into the management framework of integrated efforts to develop the enterprises of the tourism and recreation cluster (*Markuzen, 1997, p. 56*). However, the number and limit of detail should be determined for such maps.

These documents should help the corporate management of the cluster. These documents useful for cluster actors because in the dynamic environment this is a tool for managing the cascade of the Balanced Scorecard.

The cascade management process provides a tool-time slice of the plan and is implemented through the drafting of long-term plans, projects, programs at the cluster level (*Peleshchak, 2008*). At the same time, the instrumental component is transformed when the Balanced Scorecard applied to the cascading toolkit. This cascading toolkit needed for forwarding plans implementation and their passing across all cluster networks, based on tactical and operational plans.

The key is the tool-time slice of the cascade management based on the perspective plan system. It provides opportunities for flexible network coordination of integrated cluster development, self-managed or cross-group and cluster members (using forwarding plans). This process takes into account: 1) the needs of the cluster's target clients and the integrated needs of cluster actors in training, development, crashes protection, success factors use; 2) the cluster's available resources, based on

domestic support of Banking institutions, credit unions, investment funds. However, the Balanced Scorecard introduction minimizes the possibility to apply the methods of forward planning.

In fact, became unacceptable to draw up long-term plans based on extrapolation, namely the use of the results of prior period. This is based on the formulation of optimistic goals and interrelated targets for several indicators for the next period (*Markuzen, 1997*). All highlighted above, to do with the fact that the basis for planning can *no longer be* considered only optimistic expectations. Require a complex scientific basis for the problems that may arise during implementing the course of integrated development of enterprises in the tourism and recreation cluster. Thus, might use to manage the process of the cascade the Balanced Scorecard exclusively within the strategic plans, whose goals identified in the strategic map and implemented within the framework of differentiated (by cluster actors units) documentary complexes. These documentary complexes include:

1) Flexible strategic action programs and flexible current budget. They form the basis for the sustained operation of the cluster. In doing so, strategic action programs require the creation of an integrated compliance system;

2) Terms of incomes, which have been guiding cluster actors to a particularly profitable specific algorithm that can ensure the sustained operation in a cluster.

The transposition of the content of forwarding plans п into more differentiated budgets or plans highlights the significance of the study of the instrumental-time slice of the cascade management at this level. This slice makes it possible to achieve the closure of the cascading process.

The cascade management, besides the instrumental-time slice, creating additional:

1) The functional slice. It defines the direction and pace development of functional subsystems at all levels of cascade cluster actors;

2) The resource slice that identifies, at all levels of the cascade, basic needs and opportunities, providing scarce resources for the operator of strategic actions;

3) The operator slice, that indicates the circle of cluster actors, self-governing profile (or cross-sectional) groups involved in the fulfillment of strategic interventions.

It should be noted that focused management of the integrated effort to develop the cluster enterprises provides a primary formal description of the tourism and recreation cluster. In doing so, the strategic analysis functions are descriptive, explanatory and forecast.

Within the tourism and recreation cluster there is a multi-business environment. Therefore, the strategic analysis should be an integrated multilevel transformation of the databases that is formed by analysis of the external (or macro-) and internal (or meso-) environments of the cluster and the internal (or micro-) environments of its actors. This analysis is the basis for the strategic map and identification of success factors.

The main method of strategic analysis can be transformed into SNW-analysis. It should be implemented according to a set of rules:

1) The evaluation of the cluster environment using the following algorithms:

- Segmentation of the environment of direct impact, by segment section: S (Strength or strong sides), N (Neutral or neutral sides) and W (Weakness or weak sides). At the same time, as influencing factors on cluster actors, be useful to define external direct impact subjects (that are not cooperation actors of the cluster);

- Segmentation of the environment of indirectly impact, through PESTplus system (by factors: by political, economic, social, technological, environmental and geographical factors);

2) Evaluation of the internal cluster environment. This is the formation where active actors consolidation with companies and partners, that complement activity the initiator of an investment project. This is done by using the segmentation algorithms of the cluster environment (based on the average value of the strategic evaluation indicators). The strategic assessment indicator determined by the degree of integration of the efforts of the cluster actors on algorithms and main directions is highlighted in *Table 1*.

According to the table data, the areas of strategic analysis include marketing and information support of activities in cluster network, training, and staff development; logistics. The parties *also* can identify the distribution and purchasing logistics and financial support for innovative tourism projects. These factors and the degree of integration of efforts, in certain spheres, form the competitive advantages of the cluster in the tourist market. These competitive advantages of the cluster defined as the aggregate opportunity of its actors co-produce are exactly the tourist product or services that meet the requirements of the target clients, at the same time supporting the sustainability of operation in the cluster;

3) Evaluation of the internal environment of the cluster actors, based on the transformed structural idea of the Balanced Scorecard, relevant quantitative and qualitative parameters of evaluation and factors graduation in the sections of the segments S – Strength, N –Neutral, W – Weakness.

1) $\varphi 1$ – quality of human capital, for which "skills and abilities" are important. They are necessary for the implementation of the enterprise development strategy or for the following reasons:

($\varphi 1.1$). The professional knowledge and qualifications, as a degree of their compliance with the set of normative qualified characteristics;

($\varphi 1.2$). Methodological knowledge (for Administrators), as a degree of conformity of skills to the following requirements: abstract thinking; easy learning and adapting to change; communicative competence;

($\varphi 1.3$). Behavioral skills as a degree of compliance with the reference level, which includes: commitment, non-conflict, logical thinking; tolerance; mindfulness;

(φ1.4). Quality work or a set of properties of labor activity, which are motivated to labor tasks, in accordance with requirements;

(φ1.5). The productive work practices. It defined by overall results or production. Producing (B) is determined by the "productivity pyramid" or by the number of services produced by one worker per unit of work time.

Table 1. **Factors that determine the competitive advantage of the cluster**

Factors / Strategic assessment indicators	integrator	
	individual	total
marketing (M): 1) co-study, analysis and assessment of the needs of real and potential consumers of tourist products or services in cluster cooperation areas (M1); 2) co-marketing support for the development of new tourist products or services (M2); 3) overall analysis, assessment and prediction of the state and development of the tourist market (M3); 4) co- formation of cluster assortment policy: identifying of a combination of tourism services and products (M4.1); identifying of the relationship between basic models of services or products (M4.2) and their modifications (M4.3); 5) co-developing the strategy and tactics of cluster actors market behavior, including co-formation of price policy (M5); 6) co-formation of sales policy for the product or services of cluster actors (M5); 7) co-development and co-management of marketing communications, in the following areas: advertising (information about tourist product or service, image forming, and others) (M7.1); branding (with cluster brand) (M7.2); public relations (M7.3); loyalty program (M7.4); direct – marketing or development of direct personal communications with target clients (M7.5).	$\overline{M}_4 = \frac{M4.1 + M4.2 + M4.3}{3}$ $\overline{M}_7 = \frac{M7.1 + \cdots + M7.5}{5}$	$M = \frac{M1 + \cdots + \overline{M}_7}{7}$, in so doing $M1 \ldots \overline{M}_7$ – Strategic assessment indicators
Information support of activities in cluster network (IS): 1) joint information support of cluster actors based on the integration of their information systems (IS1); 2) joint transformation of mass product and information space for the transition to cluster solutions (IS2); 3) joint selection of forms of communication, technology, information technologies, characteristics of information resources (IS3); 4) support for coordinated organizational and information actions (IS4)	–	$IS = \frac{IS1 + \cdots + IS4}{4}$, in so doing $IS_1 \ldots IS_4$ – indicators
Training and staff development (H): 1) ensure the joint implementation of new tasks (H1); 2) joint improvement of management flexibility and suitability for the introduction of innovations in tourism (H2); 3) uniform policy move up the career ladder (H3);4) uniform policy adaptation of human capital to new technology (H4). Innovation (I): 1) joint planning, organization and evaluation of innovation (I1); 2) joint motivation of human capital to innovation activity (I2)	–	$H = \frac{H1 + \cdots + H4}{4}$, in so doing $H_1 \ldots H_4$ – indicators $I = \frac{I1 + I2}{2}$, in so doing $I_1 \ldots I_2$ – indicators
Logistics (L): 1) procurement practices (L1): integration of efforts to meet the needs of cluster actors for the provision of services with maximum cost-effectiveness. In resource-intensive production the cluster environment element is transport logistics (L3); 2) Distribution component (P2): (L2): distribution of brokering transaction, travel vouchers between various tourist operators and agents operating in the cluster;	–	$L = \frac{L1 + \cdots + L3}{3}$, in so doing $L_1 \ldots L_4$ – indicators

* The degree of integration of efforts in each component is determined by the system of segment – score evaluation: full conformity S – 3 points; partial conformity N – 2 points; totally disrespect W – 1 points.

Source: formed by the author based on (*Donets, 2004; Shchutska, 2010*).

In order to exclude the possibility of generating the values of the positive dynamics, through non-rhythmic productivity at the lower level of the productivity pyramid, the indicators B should deviate in the direction of increasing;

2) Training of human capital. Here are important indicators: training opportunities of human capital ($\overline{\varphi 2}$), which are determined by separate parameters, and create opportunities for professional development; the effectiveness of training of human capital ($\varphi 3$).

Methodological algorithms of strategic evaluation of the component of Learning and Development staff – "training of human capital", are highlighted in the *Table 2*.

Table. 2. **Methodological algorithms of strategic evaluation of "training of human capital"**

Indicator / assessment criteria*	indicators of results*	
	indicator for the group of criteria (calculation)	integrative indicator
training opportunities of human capital ($\bar{\varphi}_2$); education leave ($\varphi2.1$); professional and material growth ($\varphi2.2$); opportunities of exchange experiences ($\varphi2.3$); opportunities of free participation in symposiums, roundtables, exhibitions, seminars ($\varphi2.4$); organization of training, business and role-playing games "tourist-manager" ($\varphi2.4$); the ability of staff to participate in training projects and programs ($\varphi2.5$)	$\bar{\varphi}_2 = \frac{\sum \varphi i}{n}$; in so doing:$\varphi i$- components of numeric rating of human capital training opportunities of a cluster actors; n the number of φi;	$\bar{\varphi}_{2\text{-}3} = \frac{\overline{\varphi_2} + \overline{\varphi_3}}{2}$ In so doing: $\bar{\varphi}_2$ – opportunities of human capital training; $\bar{\varphi}_3$ – effectiveness of human capital training (based on the results of the appraisal of staff).
effectiveness of human capital training based on the results of the appraisal of staff ($\bar{\varphi}_3$) basic criteria: evaluation of output, as the number of services provided or the cost created by labor ($\varphi3.1$); identification of suitability for the appointment – ($\varphi3.2$); identification of shortcomings in the level of professional training reserves of further professional development ($\varphi3.3$); extra criteria; compatibility with the team (a unique sense of teamwork – willingness to shoulder responsibility; a penchant for risk-taking, openness to dialogue; responsibility and operational discipline) – ($\varphi3.4$); psychological state and grace under pressure – ($\varphi3.5$); motivation to work in the position ($\varphi3.6$);	$\bar{\varphi}_3 = \frac{\sum \varphi i}{n}$; in so doing:$\varphi i$- components of numeric rating of training of human capital effectiveness of a cluster actors; n the number of φi;	

* the segmentation scale of the values is the following: S – the values meet the evaluation criteria; N- the values do not meet the evaluation criteria, but tends to improve; W – the values do not meet the evaluation criteria.

Source: formed by the author.

3) Possibility to retain the best professionals ($\bar{\varphi}_4$). The main factors contributing to retain the best professionals with great ambitions and outstanding entrepreneurship those are: "favorable psychological atmosphere in a team", "the possibility of rising wages and career development"; "unique social package".

At the same time, the methodical algorithms of strategic evaluation of the component of training and development of staff ($\bar{\varphi}_4$) are highlighted in the *Table 3*. The need for identification components of target customers of cluster actors is due to the fact that the benefits of certain travel products or services are attracted to only certain customer groups.

Therefore, strategic analysis in this field is useful to implement by segmentation of the market of the cluster actors. This is needed to ensure (*Byrkovych, 2008*): allocating a basic group of clients of the cluster actor with identical demands identifying target markets of the cluster actor; identifying advantages and weaknesses of the cluster actor in the struggle for market development. Market segmentation of the cluster actor allows selecting the target client and defining the marketing strategy.

In the strategic analysis of clusters should be allocated to the sustained operation component because cluster actors should ensure the continuity of functioning. The sustained operation of the cluster actors can be interpreted in different ways.

Table 3. **Methodical algorithms of strategic evaluation of the component of "contributing to the retain the best professionals with great ambitions and outstanding entrepreneurship"**

Assessment criteria *	Indicators of results	
	indicator for the group of criteria (calculation)	integrative indicator
Favorable psychological atmosphere in a team (φ4.1)[1]	The favorable psychological atmosphere in a team, is defined by the following parameters: sanguine mood; goodwill in relations, mutual affection and solidarity; mutual respect and understanding; respect for each other's opinion; team activity and emotional unity; the desire to work collectively;	$\overline{\varphi_4} = \frac{\sum \varphi_i}{3}$, 4 In so doing: :$\varphi_i$ the components of t numeric rating φ5.1, φ5.2, φ5.3; n the number of $\varphi_i = 3$
The possibility of rising wages and career development (φ4.2)[2]	The possibility of rising wages and career development depends on the pace of development of the cluster actors and needs for increases in staffing.	
Unique social package (φ4.3)[3]	the unique social package is defined by the following parameters: annual paid leave, compensation of hospital, provision of office space, health insurance at the expense of the enterprise; event planning	

[1] The average assessment of the psychological climate, with the proviso that the team meets the criteria is estimated at 1 point. Maximum total values (S) are 6-4 points. The average total values (N) are 3, 9-2 points. The minimum total values (W) are 2 point and lower.

[2] Pace of development for Enterprise. The pace of development (S) – 6-4 points (points depends on pace of development – fast, middle and lower). Development is missing, the staff is not expanding (N) – 3-2 points. The enterprise is unprofitable and reduces staff (W) – 1 point.

[3] The average value for criteria are met is estimated at 1 point (if the criteria aren't met – 0 points). Maximum total values (S) are 6-4 points. Average total values (N) are 3.9-2 points. The minimum total values (W) are 2 points and lower.

[4] The segmentation scale of values is as follows: S- the result meets the evaluation criteria; N – the result does not meet the evaluation criteria, but tends to improve; W – the result does not meet the evaluation criteria.

Source: formed by the author.

According to research sources, it is concluded that it is expedient to interpret this concept as cluster actors' ability to maintain competitiveness and high values of financial and economic indicators in the long term. This is appropriate on the basis of regulation of financial, organizational and technological components.

It is possible to provide the following characteristics, components highlighted above. Namely:

1) The organizational component. It provides managed and ongoing process provision of tourism services of cluster actors. It is necessary to define the rhythm of the process provision of tourism services of the cluster actors.

This analysis should be differentiated by actor's structural units;

2) The technology component. It provides ongoing, sustained increase technical level of cluster actors, based on technological manufacture preparation and innovative activity, that enhances the quality of the tourism product or services, provided by them. This component defines all economic indicators since it provides growth in the "productivity pyramid" and overall profit. It is necessary to define effectiveness of technological training for the provision of tourism services.

It is a necessary strategic assessment of the objects of innovation activity. Specifically, what is needed is an assessment of the

technical level from the perspective effectiveness, which manifested in:

- Profit increase and customer numbers or increase sales (based on integrative indicator (Ip)).

– New technology benefits, new product benefits, benefit developing and enhancing the quality of the tourism product or services. Technical level evaluation is possible by the SERVQUAL method.

This assessment is based on questionnaires that are divided into basic types of service quality. These questionnaires identify customer satisfaction with the complex of services by the cluster actors before and after new technologies, types of services and processes implementation (with the introduction of quality integrative indicator (Iq)). Thus, the following matrix of estimation of innovation activity is proposed (*Table 4*).

Table 4. **Matrix of estimation of innovation activity of the cluster actors**

Indicators of profit increase and customer numbers or increase sales	Point scale (1-3 p).	Service quality basic groups [1] (based on questionnaires)	Point scale (1-3 p)
intangible assets growth (x1)	↓ – the value – 1 point, fixed value – 2 point, ↑ — 3 point. "…", provided that value greater than 0, in other case the result estimated at 1 p.	quality of material elements (x6)	↓ – point – 1 point., fixed value – 2 point, ↑ — 3 point.
net profit growth (x2)		staff reliability (x7)	
sale proceeds growth (x3):		staff reactivity (x8)	
customer numbers growth or increase sales (x4):		staff completeness (x9)	
innovation effectiveness (x5)		staff empathy (x10)	
profit integrative indicator or numbers or increase sales integrative indicator Ip	(A scoring x1-x5) $Ip=\frac{\sum x1...x5}{5}$	integrative indicator of service quality Isq	(A scoring x6-x10) $\frac{\sum x6...x10}{5}$

[1] Indicators x6-x10 are average scores of basic groups of service quality, from the perspective: material elements (the availability of state-of-the-art equipment, the interior of an office or other premises, staff appearance of "contact zones", availability of information materials); reliability (implementing commitments under to provide services; staff tidiness of "contact zones"; solution of problems of the client; reputations for staff reliability; free of any errors during operations); staff reactivity (discipline, responsiveness, willingness to assist, speed of response to customer requests); staff completeness (qualitative client consulting; effective customer service and support; politeness and goodwill to clients; creation of an atmosphere of trust and mutual understanding by "contact zones" staff); staff empathy (individual approach to the client; focus customer problems; knowledge of customer's needs; direct participation of staff in solving customer problems; information support of clients by staff).

Source: formed by the author.

The advantages of such evaluation are the difficulties of transforming reason about the quality, about the quality of a tourist product or the services of cluster actors into quality indicators.

Financial component this is the ability of cluster actors profitably conduct business, liquidate obligations on time and to practice financial discipline. Therefore, this component functioning of cluster actors should be evaluated in perspective:

Profitability. It is used as indicator effectiveness of the cluster actors' activity. It determines the rational use of capital goods and scarce resources;

Solvency. This is a characteristic of the ability of the cluster actors' to meet their obligations in the long term and to continue their activities;

Creditworthiness. This is a complex character of the cluster actors' as a borrower. It determines the potential for an early and full liquidation of obligations towards the creditor and the degree of risk of the bank in its lending.

Thus, the profitability indicators of the cluster actors' are standard and equally informative. It is the cost-effectiveness of services; profitability of operating activity;

profitability of own funds. The values of the indicators, less than 0 (≤0), are interpreted as W. The values from 0 to average percentage are interpreted as N. The values of indicators that are more than the return on deposits offered by the Bank interpreted as S.

The assessment of solvency and creditworthiness is related to certain difficulties that require a solution. Thus, the assessment of solvency cannot be carried out based on commonly used liquidity ratios. This is related to the general properties of liquidity ratios. They provide only characteristics capacities of the cluster actors' full liquidation of obligations through current assets in the short term.

However, functioning in the cluster requires the actor to have funds for repayment of obligations and liquid reserves to continue his activity. That was why it was a necessary assessment of the solvency in terms of quality characteristics. The basic role in this assessment is assigned to the analysis of liquidity of the balance sheet of the cluster actors', which is to compare funds (by assets grouped by the degree of liquidity) with short-term liabilities.

In fact, the results of the evaluation should identify the extent of coverage of the cluster actors' liabilities by its assets (by an algorithm in *Table 5*). This data is useful for calculating the total liquidity ratio (TLR).

Table 5. **Methodological assessment algorithms the liquidity of the balance of the cluster actors'**

Asset	Liability	Total liquidity ratio, in order to absorb uneven transformation of asset in cash	Primary conditions of solvency
by the degree of liquidity of asset	**On terms of payment of obligations**		
- the most liquid asset (MLA) = C + CFI; - the fast-selling asset (FSA) = CR < 1 + CA; - the slowest-selling asset (SSA) = CR > 1 + S – – DC + LTF; - hard to selling asset (HSA) = A1 – LTF – R > 1	– immediate obligations (IO) = L5; – short-term liabilities (LST) = S; – long-term liability (LLT) = L4; - Standing liability (SL) = L3- DR.	(MLA + 0,5 FSA + + 0,3 SSA) / (IO + + 0,5 LST + 0,3 LLT)	MLA ≥ IO (1) FSA ≥ LST (2) (1) and (2) conditions of solvency SSA ≥ LLT (3) HSA ≤ SL (4) (3) and (4) conditions of potential solvency

*C – cash and cash equivalents; CFI – current financial investment; CR<1 – various current receivable, for a year; CA – other current assets (amounts of current asset, that cannot be included in the cited above articles of "current assets"); S – stocks of raw materials, finished products, measurement of work-in-progress, for transformation of which into cash is required long period; R>1– non-current receivables due after 12 months ; LTF – long-term financial investments; A1 – Amount at balance sheet section 1 (asset); L5 – current credits and liabilities (current advances, with budget, extra-budgetary payments, insurance, on wages, current participants liabilities); KCO – medium-term debts due after 12 months; DR- deferred revenue; L4 – Amount at balance sheet section 4 (liabilities); L3 – Amount at balance sheet section 3 (liabilities); DC – Deferred charges.

Source: formed by the author based on (Sölvell, Lindquist and Ketels, 2003, pp. 27–28, 36).

If the total liquidity ratio more than 1 cluster actor has liquidity support to continue the activity. However, the absolute value of such liquidity support is not determined, especially since the factor of uneven transformation of assets of cluster actors into funds should be taken into account. This factor partly taken into account TLR in calculating (with

using of weighting for liquidity: 1 – importance value of liquidity; 0,5 – average importance value for liquidity; 0,3 – value does not affect liquidity). Therefore, the TLR does not show real liquidity support (namely, a liquid surplus) or lack of them (a liquid deficit).

Thus, should be useful clarifying assessment the liquidity of the cluster actors' basis of

the method of normative discounts. This method (based on regroupment of the items of the liquidity balance) takes into account the uneven transformation assets in cash and timing differences liquidation of obligations. It is proposed to use the following algorithm for estimating the liquidity of the balance of the cluster actors (*Table 6*).

Table 6. **Algorithm for estimating the liquidity of the cluster actor's basis of the method of normative discounts basis of the method of normative discounts**

Asset (based on the regrouping method)		Liability (based on the regrouping method)		Conditions of solvency
by the degree of liquidity *	regrouping rule	On terms of payment *	regrouping rule	
According to the specifics of the uneven transformation assets in cash: - the most liquid asset (MLA) = = C× 1 + 0,7 × ×CFI + 0,1×CR < 1, - the fast-selling asset (FSA) = 0,3 × × CFI + 0,8 × CR < < 1+0,7× CA; - the slowest-selling asset (SSA) =0,8×CR>1+0,3× ×CA +0,1× R <1+ +0,6+S+0,9× LTF; hard to selling asset (HSA)= 0,2×R>1+0,4×CA+ +(A1-(0,9 × LTF))+ +DC	In group MLA includes 100% C, 70% CFI and 10% CR <1 In group FSA includes 30% CFI; 80% CR <1 and 70% CA In group SSA includes 80% CR>1, 10% R<1, 10% - CA, 60% S, 90% LTF In group HSA includes 20% - R >1; 40% - S; capital assets minus 90% LTF +100% DC.	According terms of liquidation of obligations and cash inflows: – immediate obligations (IO) = L51+ 0,2× OCC ; – short-term liabilities (LST) = 0,8 ×CP+0,2× – × OCC+0,6× *SLL* – long-term liability (LLT) = 0,2×CP+0,9×L3; – Standing liability (SL) = 0,6×OCC+0,1× ×L3+ L1+DC	In group IO includes 100% - L5 та 20% - OCC; In group LST includes 80% - CP; 20% - OCC*; 60% - SLL; In group LLT includes 20% - CP; 90%- L3 In group SL includes 60% - OCC, 10% - L3, 100% L1 and 100% - DC	MLA ≥ IO (1) FSA ≥ LST (2) (1) and (2) conditions of solvency SSA ≥ LLT (3) HSA ≤ ≤ SL (4) (3) and (4) conditions of potential solvency The presence liquid deficit or liquid surplus is determined the K values (the ratio of liquidity support). the K-values can become larger than 1 or (K > 1 − S ; K=1 − N; K < 1 − W)

OCC – others current commitments; L5 – Current commitments in the charges; SLL– short-term loans; CP – accounts payable for goods, works, services; L3 – long-term liability; L1 – own capital.
Source: formed by the author based on (Sölvell, Lindquist and Ketels, 2003, pp. 27–28, 36).

The data provided above take into account the uneven transformation assets in cash and timing differences liquidation of obligations, so the TLR calculation is not appropriate. At the same time, it is possible to determine a liquid surplus/deficit of cluster actors, based on the ratio of liquidity support. In assessing the creditworthiness of cluster actors it is important to identify the strategic direction of integrative development and identify the ability return of the borrowed fund and manage them. This cannot be reflected in a comprehensive manner (based on the ratio analysis), it is necessary to the probability of bankruptcy forecasting. This characteristic is an integrated reflection of the ability of a cluster member not

only to repay borrowed funds but also to manage the debt capital effectively.

Most of current models probability of bankruptcy forecasting base on normative value of financial ratio or created for large companies whose shares are are listed at the market. This leads to their conventionality and low degree of adaptability to the specifics of the tourism and recreation sphere.

It is appropriate to evaluate the creditworthiness of cluster actors, based on the identification of the probability of failure forecasting in the provision of short-term commitment by money and material current assets.

To minimize the risk of bankruptcy, inequality must be enforced for cluster actors:

$$CL \leqslant C + CFI + S, \qquad (1)$$

where C – cash and cash equivalents;
CFI – current financial investment;
S – liquid stocks;
CL – current liabilities.

Thus, the probabilities of bankruptcy (Z) can calculate according to the algorithm:

$$Z = \frac{C + CFI + S}{CL} \rightarrow \begin{cases} \geq 100\% - \min Z\,(S) \\ < 100\% \left(\text{provided that } \frac{CL}{R} \leq 1\right) - \text{average value of } Z(N) \\ < 100\% \left(\text{provided that } \frac{CL}{R} > 1\right) - \max Z(W), \end{cases} \qquad (2)$$

where $\frac{CL}{R}$ – an indicator of self-financing current operational activities, which is defined based on the ratio of current liabilities to current receivable.

The value of $\frac{CL}{R} > 1$ is an indicator of withdrawals of funds from з productive use and the need for short-term credit to finance current operating activities. If the surplus has a steady tendency, this is evidence of the deficit of the most liquid assets and the inefficient management of debt funds.

6. Conclusions.

The proposed design model of the management cycle is based on the balanced scorecard introduction will be highly informative.

Thus, using the balanced scorecard as the basis of the formation of the corporate strategy of cluster integrative development and the strategy of the development of its actors will allow forming a formalized model of the cluster environment and the model of the activity of caster actors. These models can be used to form the SNW-portrait of the cluster, the portrait of sustainability of the cluster member and to choose the direction of strategic integrative development.

According to the strategic analysis, it is possible to identify the states of the members of the tourism and recreation cluster (based on the strategies of integrated development).

The last segments:

4S – cluster actors can realize any integrated development strategy;

4N – cluster actors must target on integrative restructuring (in any of its possible areas);

4W – cluster actors can realize only the liquidation strategy).

The average segments: – SNS$\bar{S}$ and NNS$\bar{S}$ – is possible to realize the diversified growth strategies, through the synergy of cluster actors.
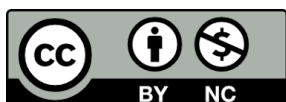
The weaker segments: WNN$\bar{N}$, WWN$\bar{N}$, and WWN$\bar{W}$. In effect, the WNN$\bar{N}$- needs an integrated modification of the tourist product or services of the cluster actors (within integrative stabilization of the actors). This is due to weakened synergistic interaction in the cluster. For WWN$\bar{N}$ and WWN$\bar{W}$– it is advisable to implement an integrated reduction, within the "harvesting" areas or integrative reduction of activities. This is due to increased synergistic interaction in the cluster.

The prospects of further research are the development of the concept of management of clusters in the Ukraine regions.

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