# The role of innovative creative collectives in anticipatory management of enterprises

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Abstract. In the article the actuality of anticipatory management as an objectively necessary element of the enterprise's management process in today's rapidly changing and uncertain business environment is grounded. The role and functional assignment of innovative creative collectives in the implementation, forming and using the anticipatory management mechanisms at the enterprises are developed.

Key words: anticipatory management, innovative creative collectives, functions, weak signals, enterprises.

### INTRODUCTION

The modern functioning conditions, which are characterized by a high level of dynamism, unpredictability and uncertainty, determine the new requirements for a management as the mechanism of ensuring the sustainable goal-oriented development of enterprises. It concerns a critical growing deficit of time and information resources for a decision-making process that strengthens a threat of the retarded or inadequate response to the changes of enterprises' operation conditions. The forced development of the modern globalized business environment requires managers of all levels to make decisions in maximally short time period due its intense changes and transformations. In addition, in the current functioning conditions managers and professionals are increasingly faced with not clear, understandable or incomplete by content data that require its accurate analyzing and interpretation. In management science, scholars interpret these informational messages as weak signals of the potential events in the business environment.

The situation described above causes a peculiar management dissonance because the necessary condition to ensure the maximum effectiveness of management

activity is the implementation of a completed management technology that is based on the adequate information support and requires the appropriate time costs for its realization. One of the perspective directions to solve this problem is to use the anticipatory management as the actual addition to the enterprise's management system from the position of improving its interaction with the internal and external environment on the basis of increasing the level of enterprise's preparation to any potential changes in the operating conditions. Anticipatory management is aimed at identifying and analyzing the weak signals of possible changes, as well as predicting their future development to different potential events in the business environment. It forms an enough time reserve for preventive decision-making process of exploiting opportunities or eliminating threats in the internal and external environment.

A key problem in the supporting of anticipatory management at the enterprises is to select and engage the high-quality employees with a logical and creative approach to perform the anticipatory tasks. Today at many foreign enterprises there are creative teams which are specialized on the effective implementation and realization of progressive management technologies, instruments, mechanisms, in particular, the anticipatory management mechanism. Everything mentioned above causes a need to characterize the role and functional assignment of innovative creative collectives in the supporting of anticipatory management at the enterprises.

### ANALYSIS OF THE LITERATURE ON THE PROBLEM

Although the experience with anticipatory management have not accumulated yet at Ukrainian

enterprises, but abroad this type of management activity is a successful innovation of such leading international companies, as "Toyota", "Nokia", "Mary Kay" and others. At the theoretical level, a significant contribution into the development of anticipatory management concept was made by such Ukrainian and foreign scientists, as [1–15] and others. In their scientific works authors have thoroughly investigated the different aspects of anticipatory management peculiarities and problems at the macro and micro level.

Concerning the staff support of anticipatory management, the authors in their scientific works with one accord emphasize on the importance of strategic thinking in anticipatory management process. As noted by William Ashley and James Morrison, there are no specific persons or structural divisions, which are specialized on performing the anticipatory management tasks at the enterprises, as well as the anticipatory functions are scattered among different specialists within the organizational structure of the enterprise. Given the importance of anticipatory management in current conditions, scientists claim the necessity to create the post of an anticipatory manager or to form special committees of anticipatory orientation [13].

Despite the importance of innovative creative teams for anticipatory management, any literature source is not disclosed the role and tasks of such collectives in the complex support of anticipatory management that concerns to implementation and development its mechanisms at the enterprises.

### THE PURPOSE OF THE PAPER

The main purpose of the article is to ground the role and functional assignment of innovative creative collectives in supporting the anticipatory management process at the enterprises.

## THE PRESENTATION OF THE MAIN RESEARCH MATERIAL

In today's complicated functioning conditions anticipatory management is an integral part of the enterprise's management process that provides its development in the direction of improving its interaction with the internal and external business environment. The rapid spread of current trends of increasing the uncertainty and unpredictability of operating conditions complicates the problem of timely and adequate response to any change in the business environment. It is caused by the growing deficit of resource support (especially time and information) of management processes at the enterprises, especially the decision making. In response to everything above mentioned anticipatory management provides a mechanism of anticipation the future events in the business environment that is based on the recognition of weak

signals and interpretation of their further development to specific opportunities or threats of enterprise's operating conditions for timely respond to those changes in the business environment.

The key tasks, which are directly related to the performance of a specific anticipatory management assignment, are recognition, analyzing and selection of weak signals, predicting of their future development, as well as identifying all opportunities and threats that may arise from the proper signals for preventive decision making. Despite the qualitative and quantitative character of the implementation the specific anticipatory management assignment, it largely requires the logical and creative approach to perform the anticipatory tasks. Obviously, during anticipatory management process there is a necessity to involve the employees who have strategic vision and creative potential; are able to generate the ideas and suggestions for improving the management process at the enterprise, to identify the most perspective and dangerous functioning areas, form polyvariant scenarios of potential events' development, make preventive decisions of exploiting the opportunities or eliminating the threats in the business environment.

Unfortunately, today anticipatory management is at the starting stage of its development in the domestic business environment. It indicates a lack of the practical experience in its using by Ukrainian enterprises. That's why it is necessary to have a clear understanding of the role and advantages of this type of management in providing effective enterprise's development that will strengthen the anticipatory management position in its implementation and realization at the domestic enterprises.

Therefore, there is an objective necessity of proper staff support, which is characterized by an innovative creative position for the successful implementation of anticipatory management mechanisms at the enterprises. One of the ways to resolve this problem is to form the innovation creative collectives that will be focused on the implementation and realization of the anticipatory management process at the enterprises. Innovative creative collectives are aimed at finding the new methods, tools, models and mechanisms of improving the efficiency of enterprise's activity. At the enterprises these groups exist in the form of teams of individuals which were united to develop proposals and mechanisms of enterprise's innovative development, as well as to solve the problems of enterprise's operation.

The necessity to involve the innovative creative collectives into realization of anticipatory management at the enterprises is caused by such reasons, as:

1) a lack of practical experience in the implementation and realization of anticipatory management at the domestic enterprises;

- 2) the unreasonable partiality of managers and employees to the realization of anticipatory management at the enterprises because of unawareness of its role in providing the targeted enterprise's development, avoiding crises, increasing the competitiveness and investment attractiveness in modern functioning conditions:
- 3) the need to solve unusual and non-standard situations within anticipatory management process by individuals with creative suggestions, ideas and strategic polyvariant vision of the future situation;
- 4) the lack of experience with using the results of anticipatory management in other functional areas of the enterprise, etc.

In order to justify the appointment of innovative creative collectives in anticipatory management process it has been developed the technology of their functioning in supporting of anticipatory management at the enterprises (Fig. 1). This technology reflects a complex sequence of steps of the implementation, formation and realization the anticipatory management mechanisms at the enterprises.

Having studied the literature on the problem [4; 7; 13; 16-20] it has been distinguished the list of innovative creative collectives' functions which are associated with the implementation, formation and realization the anticipatory management mechanisms at the enterprises (Fig. 2).

- 1. An information function. Executing this function, innovative creative collectives perform targeted search and selection of relevant information about all areas of business environment, as well as its systematization, sorting, analyzing and priority identification according to the anticipatory management goals.
- 2. An identification function. Within this function, innovative creative collectives are aimed at identifying the most perspective and dangerous areas of enterprises' functioning, establishment the list of possible objects and goals of anticipatory management, conducting their review, determining the most optimal and adequate to functioning conditions object and goals of anticipatory management.
- 3. A cognitive function. Implementing this function, innovative creative collectives monitor the business environment to find weak signals of the potential events; recognize the weak signals with the highest priority of future appearance on the base of implementation the intuitive and logical operations; form a consolidated list of weak signals of the potential events according to the object and goals of anticipatory management.
- 4. A prognostic function. In carrying out this function, innovative creative collectives make the polyvariant trajectories of weak signals' development to the specific potential events in the business environment. In particular, the creative teams develop the characterization of weak signals of the potential

- events by the significant signs (for example, the source of a weak signal, the presence of weak signals' analogues and the trajectories of their development in the past periods of enterprise functioning, competitors, other enterprises, etc.); form alternative hypotheses of weak signals' development to the strong signals of potential events on the basis of establishing the logical causal relationships between events; review and ground the pre-formed hypotheses of variant weak signals' development to the strong signals of potential events in the business environment; finally make the alternative trajectories of weak signals' development to the strong signals that clearly indicate the future appearance of potential events in the business environment; identify all possible opportunities, threats, states that may occur by the identified signals in the business environment, etc.
- 5. A directive function. Within this function, innovative creative collectives are focused identifying the directions and making decisions of exploiting the identified opportunities or eliminating threats in the business environment considering the probability of their occurrence and impact. In particular, the creative teams develop and offer the appropriate responses to the potential changes in the business environment, which are identified by the relevant weak signals, considering the probability of their future occurrence and impact on the enterprise's effectiveness; evaluate those responses by the list of criteria (for example, priority and deadline measures of responses, the level of their effectiveness, coherence with the general objectives of the enterprise, etc.); finally form a set of the most effective responses to identified by weak signals potential events in the business environment.
- 6. An advisory function. Performing this function, innovative creative collectives develop the proposals of using the results, which are formed within anticipatory management, in other functional areas of enterprise's functioning to ensure its innovative development. For example, creative teams may recommend applying the results of anticipatory management during the developing of strategy and plans of the enterprise's activity, as well as in the decision making in the various functional areas of the enterprise, etc.
- 7. Generating function. Within this function, innovative creative collectives form the anticipatory scenarios which are based on the generalized and combined information about the different variants of the weak signal's development to specific potential events in the business environment and a list of adequate responses.
- 8. An advisory function. The implementation of this function is to generate the proposals of the anticipatory management implementation at the enterprises, to ground the importance, benefits and results of the realization of anticipatory management at the enterprises, as well as to bring the developed proposals to the managers of the high level and other employees.

An innovative creative collective (ICC) of anticipatory direction is a group of individuals which are united to create ideas, proposals, mechanisms of implementation and realization of anticipatory management within the enterprise's innovative development, as well as to solve the problems of enterprise's functioning

# THE TECHNOLOGY OF ICC FUNCTIONING IN SUPPORTING THE ANTICIPATORY MANAGEMENT AT THE ENTERPRISES

### 1. The implementation of anticipatory management at the enterprises

ICC form proposals of anticipatory management implementation at the enterprises; ground the importance, benefits and expected results from the realization of anticipatory management at the enterprises; bring these proposals to the managers of high level and other employees

# 2. Forming of the innovative mechanisms of anticipatory management realization at the enterprises

In the conditions of dynamic business environment, which are characterized by the emergence of unexpected and unpredictable events, ICC constantly improve and adapt the typical anticipatory management mechanism, its methods and procedures to the functioning conditions on the basis of formation the innovative ideas to solve the arising problems

# 3. Performing the specific anticipatory management tasks that require logical and creative approach to their executing

During the anticipatory management process ICC are aimed at performing the different tasks and operations with logical and creative character. In particular, ICC identify the most promising and dangerous areas of business environment, detect the weak signals of the potential changes in operating conditions, form the polyvariant scenarios of their development, make decisions of exploiting opportunities or eliminating threats in the internal and external environment, etc.

# 4. Defining the directions and areas of using the anticipatory management results

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ICC form suggestions and ideas of using the anticipatory management results, as well as identify directions, areas and mechanisms for their application at the enterprise. In particular, ICC may propose to apply the information base, that is concerning to the potential emergence of opportunities and threats in the business environment, during forming the strategy and plans of the enterprise, as well as in decision making in the various functional areas of the enterprise, etc.

Fig. 1. The technology of ICC functioning in supporting the anticipatory management at the enterprises

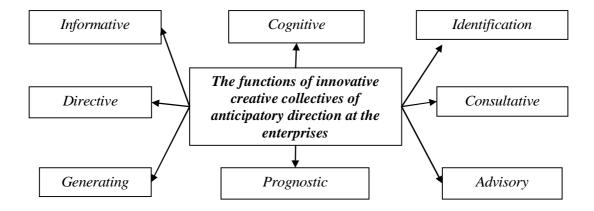


Fig. 2. The functions of innovative creative collectives in supporting of anticipatory management at the enterprises

At the enterprises there are such organizational formats of innovative creative collectives, as temporary functioning committee, standing committee, separate division, external agency group [12, p. 25]. Each format of innovative creative collectives may include professionals which are specialized on performance of anticipatory functions within anticipatory management process. Typically, innovative creative collectives with anticipatory orientation, which were organized in the format of standing committees, are aimed at performing the anticipatory tasks and operations.

Anticipatory innovative creative collectives in the format of standing committees are the elements of the enterprise's organizational structure. Although these innovative creative collectives are characterized by their stability, but the structure of team members may be periodically modified under the influence of the changing nature of anticipatory tasks. Typically, the composition of the teams in this format includes the managers of all levels and the employees of prognostic orientation, which are stimulated on the basis of payment of bonuses and allowances. To assist in solving the complex, non-standard tasks managers may invite the external experts on the commercial basis [12, p. 25].

#### **CONCLUSIONS**

The modern dynamic business environment, that is characterized by intense and at the same time unpredictable changes and transformations, requires from managers to change its position from traditions to innovations. It means to use progressive management instruments and mechanisms which are specialized on anticipating the potential changes of enterprises' operating conditions. Anticipatory management is aimed at increasing the level of enterprise's preparation to possible changes in the internal and external business environment on the basis of their early identification and consideration in the enterprise's future activity. The specificity of anticipatory management requires the

involvement of creative groups, which are characterized by a strategic vision, creativity, innovative approaches to solving the problems of anticipatory management, etc. Anticipatory innovative creative collectives are aimed at forming the ideas and proposals on the implementation, development and realization of anticipatory management mechanisms at the enterprises. To ensure the anticipatory management process at the enterprises innovative creative collectives implement informative, cognitive, identification, prognostic, directive, consultative, generating and advisory functions.

### **REFERENCES**

- Baklan I. V, Poplavska Zh. V. and Tsmots O. I. 2011.
   Detecting and assessing weak signals within a machine-building enterprise // Actual problems of economics. № 5(119). 257-271.
- Bohonikolos N. D. 2005. Models of anticipatory management in factory financial activity: summary of dissertation for the scientific degree of candidate of economic sciences: specialty 08.03.02 "Economic and mathematical modeling"; Kharkov National Economic University. Kh., 18.
- 3. **Guryanova L. S. and Klebanova T. S. 2005.** Models of anticipatory management of enterprise's financial security // Thesis of Intern. scient.-pract. conference ["The theory of active systems"], (Moscow, 16-18 November, 2005). M.: IPU RAN,– 186-188.
- The methods of anticrisis management by the weak signals: [monograph] / [Yu. G. Lysenko, R. A. Rudensky, L. I. Yehorova and oth.]. 2009. – Donetsk: South-West,– 195 – (Ser.: Sustainable Systems in Economics).
- Moroz O. V. and Smetaniuk O. A. 2006. The financial diagnostic in the anticrisis management system of the enterprises: [monograph]. – Vinnitsa: UNIVERSUM – Vinnitsa, – 167.
- Rogovych A. T. 2007. Models of threats' anticipation in financial activity of enterprises [Electronic Source]. – Access regime: http://www.rusnauka.com/7.\_DN\_2007/Economics/ 17600.doc.htm

- Rudensky R. A. 2009. Anticipatory management of complex economic systems: models, methods, tools: [monograph] / [scient. ed. prof. Yu. G. Lysenko]. Donetsk: South-West, 257 (Ser.: Sustainable Systems in Economics).
- 8. **Hiltunen Elina. 2008.** Good sources of weak signals: a global study of where futurists look for weak signals [Electronic Source] // Journal of future studies. №12 (4). 21-44. Access regime: http://www.jfs.tku.edu.tw/12-4/A03.pdf
- Fonseca Fernando. 2011. The decision making process and weak signal treatment // Future Studies Research Journal. – Jul./Dec. - V. 3, n. 2. – 32-56.
- Kuokkanen Pertti. 2009. Communicative and Anticipatory Decision-Making Supported by Bayesian Networks: a dissertation [Electronic Source]. Finnish National Defence University. Department of Leadership and Military Pedagogy. Helsinki. Publication Series 1: No 2/2009. 131 Access regime: https://oa.doria.fi/handle/10024/43917.
- 11. **Potocan V. 2002.** Business systems: sustainable development and anticipatory system [Electronic Source] // Management. Vol. 7, No. 1. 67-79. Access regime: www.efst.hr/management/Vol7No1-2002/5-potocan.doc
- 12. **William C. Ashley and James L. Morrison. 1997.** Anticipatory Management: Tools for Better Decision Making // The Futurist, September/October № 31(5). 47-50.
- 13. **Kuzmin O. Ye. and Goryachka O. O. 2011.** Essence and typology of creative collectives on industrial enterprises // Management and entrepreneurship in Ukraine: starting stages and development problems. Journal of National University "Lviv Polytechnic". Lviv: Publication of Lviv Polytechnic, № 714. 22-28.
- 14. Goryachka O. O. 2012. The role of innovative creative collectives in the increase of investment attractiveness of enterprise // The social and economic problems of modern

- period of Ukraine. Investment activity in region and tools of increasing its effectiveness: [dig. of scient. works] / NAS of Ukraine. Institute of regional researches (ed. V. S. Kravtsiv). Lviv, 2012. N 5 (97). 240-246.
- 15. Kuzmin O. Ye., Melnyk O. H., Shpak N. O. and Mukan O. V. 2012. The concept of creation and use of the polycriterial diagnostics systems of enterprise activity // ECONTECHMOD. An International quarterly journal on economics of technology and modeling processes. — Vol. 1. No 4. – 23-29.
- 16. Kuzmin O. Ye., Melnyk O. H. and Mukan O. V. 2012. Polycriterial diagnostics of enterprise development // ECONTECHMOD. An International quarterly journal on economics of technology and modeling processes. — Vol. 1. No 3. – 55-65.
- 17. Tsmots O. I. 2010. Features and stages of strategic management of machine-building enterprise with using weak signals // Problems of economics and management. Journal of National University "Lviv Polytechnic". Lviv: Publication of Lviv Polytechnic, № 668. 462-468
- 18. Business resilience anticipation as the key to sustainable business success [Electronic source]: a seminar / VNO Management Centre 'De Baak' in Noordwijk, the Netherlands, 2-3 June 2004. Access regime: http://www.eurofound.europa.eu/emcc/content/source/eu0 4021a.htm?p1=ef\_publication&p2=null
- 19. Stephen C. Harper and David J. Glew. 2008. Anticipatory management cannot be compromised. (CARPE FUTURUM!) [Electronic source] // Industrial Engineer. - Institute of Industrial Engineers, Inc., August 1 – Access regime: http://www.entrepreneur.com/ tradejournals/article/182930117\_2.html
- 20. **Gareth R. Jones and Jennifer M. George. 2007.**Essentials of contemporary management [2<sup>nd</sup> ed.] // Published by McGraw-Hill/Irwin, 594.