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CONCEPTUAL BASIS OF MANAGEMENT ACTIVITIES DIAGNOSTICS IN THE SYSTEM OF PROCESS-STRUCTURED MANAGEMENT

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Abstract. The role and place of diagnostics in management systems of enterprises and peculiarities of management activities diagnostics are considered. The essence and characteristics of process-structured management as the most effective integrated approach to management in current operation conditions are described. The conceptual basis of management activities diagnostics in the system of process-structured management is worked out, it foreseeing distinguishing and specifying principles, types, objects, subjects, methods, methodologies, indicators of management activities diagnostics. The sequence of management activities diagnostics and all its essential constituent elements are characterized.

Key words: diagnostics, management activities, process-structured management, types of diagnostics, methods of diagnostics, diagnostic indicators and criteria.

Problem statement. Diagnostics is an integral constituent of management system of any enterprise as it creates information base for management decision-making at all levels, enables identification of problems and perspectives of operation, prevents emergence and development of adverse events at the enterprise etc. The recent crisis in the world financial and economic system, permanent stagnation processes in the world largest economies, increasing competition at the world market have shifted priorities in management systems of the leading enterprises to human factor as the key organization resource allowing to keep and strengthen the enterprises positions in the

market. According to K. Rise [1, p. 24], in the 21st century everything depends on human potential, creativity and innovations. Thus, what can be observed is the change of management paradigm, its reorientation from technological and organizational maintenance of the enterprise activities to the human potential. These new trends are most vividly reflected in modern process-structured approach to management [2–4] that maximally combines the advantages of system, situational, functional, process, dynamic, adaptive, anticipative approaches. The process-structured management is based on providing purposeful influence of the organization's managing system on its managed system with the account of operating factors and operating conditions on the basis of organic combination of all structural elements within the limits of successive implementation of logically grounded stages with explicit prioritization of the human factor. With the account of the above said, it may be concluded that diagnostics of management activities in the system of process-structured management becomes extremely important and leads to the need to justify the conceptual basis of its conducting.

Analysis of recent research and publications. Initially the term “diagnostics” appeared in medicine reflecting the process of identifying, distinguishing characteristic features of diseases, and later it became widely used in the fields of

technology, chemistry, economics, and management. The existing publications show a great diversity of opinions of both scholars and applied scientists on the essence, content, types, characteristics, principles and technology of conducting diagnostics of various activities, though none of them sufficiently identifies the position of diagnostics in the system of process-structured management or specific features of diagnostics of management activities.

Both theoretical and practical studies state the fact of existing close interrelation between diagnostic systems and enterprise performance. William Schemann and John Lingle are of the opinion that there is a directly proportional relationship between the level of diagnostic systems development and profitability of the enterprise, the fact having been justified by the comparative performance analysis of 58 enterprises with well-developed diagnostic systems and 64 enterprises using no justified diagnostics (Table 1) [5, p. 10].

Table 1

Results of analyzing the effect of developed diagnostic systems on enterprise performance [5, p. 10]

Parameters of comparison	Enterprises with diagnostic systems	Enterprises without diagnostic systems
Being the leader in the field during the last three years	74 %	44 %
Being one of three leaders in the field by financial performance	83 %	52 %
Investments pay off in less than three years	80 %	45 %
Successful cultural and/or organizational changes	97 %	55 %

As it can be seen from Table 1, the enterprises with developed diagnostic systems are characterized by much higher level of efficiency and effectiveness, the fact allowing them to take leading positions in the market.

As to the position of diagnostics in the enterprise management system, T.O. Zahorna emphasizes that diagnostics is the function that, by way of providing information, connects researchers with all the elements of operating environment [6, p. 10]. At the same time the author notes that diagnostics can be looked at as a set of methods for both qualitative and quantitative analysis, methods of forecasting and evaluating efficiency of using enterprise resources for achieving the goals of business development with the account of external limitations within the strategic economic zone [6, p. 14]. At this, the aim of diagnostics is identified as revealing the state of the object under investigation, and the objective of diagnostics is stated as defining management procedures and decisions [6, p. 22]. Thus, in the above presented statements, diagnostics is viewed simultaneously as the function, method and procedure of management decision making, and this is the evidence of the absence of sufficient justification in understanding the essence of diagnostics in the context of management.

In the collective monograph “Diagnostics of Enterprise: Theory and Practice” it is noted that the management instrument capable of providing feedback in management is the diagnostics of enterprise operation. It is for this reason that we observe the increasing role of diagnostics, the major objective of diagnostics being identification of strengths and weaknesses of enterprise operation, search and involvement of resources into its productive and economic activities [7, p. 9]. At the same time, in this scientific publication, diagnostics is characterized as a type of management activities aimed at identifying and studying features, evaluating the internal state of enterprise management and detecting problems preventing the enterprise’s effective performance and management system development as well as at finding the ways to solve these problems [7, p. 43]. According to this approach, diagnostics is simultaneously considered as a management instrument and as a type of management activities, i.e. both as a method and as a function of management, this being impossible because management methods are the result of implementing management functions. It is worth noting, that within the frames of management diagnostics the authors consider only the specific features of evaluating corporate management and management of enterprise’s culture.

O.O. Hetman and V.M. Shapoval use the notion of “management diagnostics” without providing any interpretation of the term, without determining the place of management diagnostics in the system of management functions, without identifying objects and peculiarities of such diagnostics [8, p. 140–141]. It is worth noting that in the context of management diagnostics the authors consider only the enterprise’s anti-crisis management diagnostics.

L.A. Kostyrko states that at present there exist four concepts of diagnostics, they being analytic, informational, anti-crisis and advisory. Within the first concept diagnostics is considered to be an analytical function being realized while studying the state and behavior of the management object. According to the second concept, diagnostics is associated with identifying problem situations and bottlenecks in the enterprise’s management system with the aim of taking decisions. The anti-crisis concept is connected with detecting crisis aspects in the operation of the enterprise. The advisory concept equates diagnostics with the corresponding economy-oriented information systems that provide information support of management decision-making [9, p. 12–18]. Thus, diagnostics is treated as an analytical function, an information system, an element of anti-crisis support.

More profound understanding of the role of diagnostics in the enterprise’s management system is provided in the work of H.O. Shvydanenko, A.I. Dmytrenko, O.I. Oleksiuk [10, p. 286–312] which, in particular, provides specifics of justifying and taking strategic and operative management decisions on the basis of diagnostics, describes principles of diagnostics of information and management field of the company.

Analysis of the publications on the problem [4–10] allows to come to certain conclusions, they being as follows: definition of the role and place of diagnostics in the enterprise’s management system is controversial as diagnostics is treated simultaneously as a management instrument, a management function, a management method, a system of information support etc.; there is no certainty as to the stage of management process at which diagnostics should be conducted; understanding of the purpose of diagnostics in the enterprise’s management system is complicated as the result of equating diagnostics with monitoring, economic analysis, information support system; actually the

existing publications do not consider the specifics or conceptual basis of management activities diagnostics in the enterprise’s management system.

Research objective. With the account of the results of analyzing the existing publications, the research objective is defined as development of conceptual basis of management activities diagnostics in the enterprise’s system of process-structured management.

Research materials. The research done allows to state that process-structured management is based on simultaneous combination of system, situational, functional, process, dynamic, adaptive and anticipative approaches to management by forming a certain integrated, poly-vector, logical and consequential model of management activities at the enterprise. Thus, process-structured management ensures, within the interaction of managing and managed subsystems of the organization’s management system, fulfillment of the following successive stages of the management process:

- carrying on specific management functions through general ones (planning, organizing, motivating, controlling, regulating);
- creating management methods as the potential way of influence of the managing system of an organization on its managed system;
- transforming management methods into management decisions;
- ensuring the influence of the managing system of the enterprise on its managed system on the basis of management mechanisms.

All the above presented stages of management process are directly related to carrying out management activities by the managing system, at this there are options of involving representatives of the system being managed to the process of management.

Conceptual principles of management activities diagnostics in the system of process-structured management embrace a system of views on the peculiarities the course, characteristics, methodical and criteria instruments of such diagnostics.

Diagnostics of management activities envisages evaluation and identification of the state, course, effectiveness and efficiency of management activities at the enterprise. Thus, the objects of management activities diagnostics in the process-structured management system are:

- managers of different management levels as performers of management activities;
- state and course of implementing the stages of the management process;
- effectiveness and efficiency of the management activities.

Diagnostics of management activities should be conducted with the account of certain initial statements, principles, they being as follows:

1. The principle of purposefulness. It means that the determined purposes of diagnostics in the field of management activities further determine its character and peculiarities of the applied methods, methodologies, indicators, criteria etc.

2. The principle of object-orientation. Depending on the determined object of diagnostics, its scope, complexity, dynamics, measurability it is necessary to choose the appropriate type and parameters of diagnostics.

3. The principle of objectivity. It ensures conducting diagnostics on the basis of accurate, realistic information with the use of scientifically-grounded instruments, without involving any subjective factors.

4. Principle of economic feasibility. Economic results and positive effects of the diagnostics conducted must exceed the costs of its realization.

5. The principle of dynamics. As management activities are very dynamic and their characteristics depend on both the internal and external factors, changes in parameters should be accounted while carrying out their diagnostics.

6. Principle of effectiveness. It means that the results of diagnostics should become the basis for taking management decisions, introducing corrections into the management activities etc.

On the basis of the above principles, the subjects of the management activities diagnostics (managers, owners, potential investors, competitors, counterparties) specify purposes of evaluation and determine the type of diagnostics.

Evaluation of management activities can be done with various types of diagnostics. The research performed allows systematizing of the types of management activities diagnostics according to a set of essential and independent features (Fig. 1).

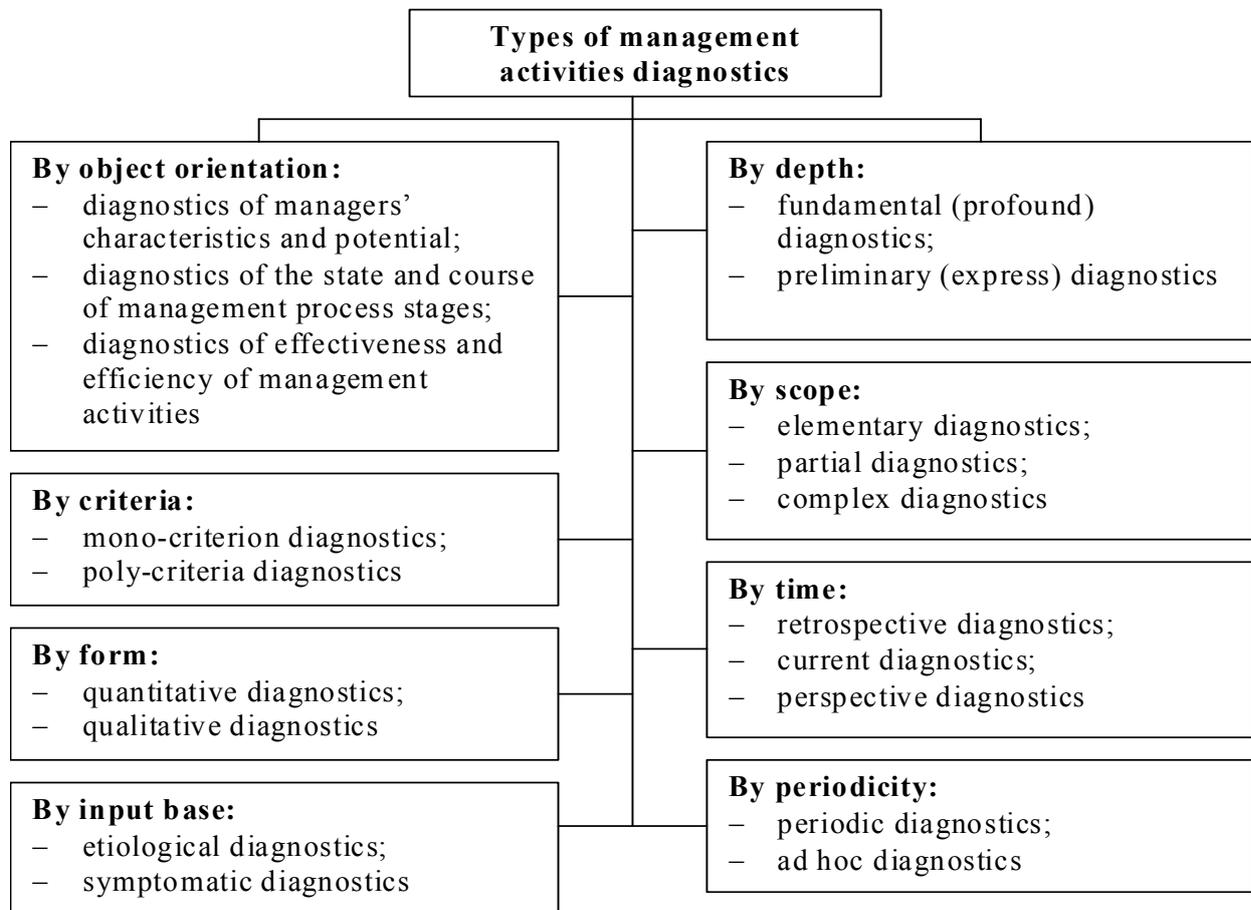


Fig. 1. Systematization of the types of management activities diagnostics

By its object orientation, diagnostics is divided into types on the basis of its above presented selected objects. By the criteria base, there should be distinguished mono-criterion diagnostics (providing evaluation of certain fragments of management activities by a single criterion) and poly-criteria diagnostics (carrying on diagnostics of management activities by a system of well-grounded criteria) [11, p. 20; 12]. By the depth of application, diagnostics is divided into fundamental (implying deep, comprehensive study of the management activities parameters) and express diagnostics (foreseeing formation of the preliminary idea about characteristics of management activities on the basis of the limited information support). By the scope, it is worth distinguishing elementary diagnostics (is directed towards evaluating a particular indicator, fragment, operation), partial diagnostics (implies evaluation of the components of process-structured management: functions, methods, management decisions), complex diagnostics (provides identification of parameters of the whole system of process-structured management). By the time, it is necessary to consider retrospective diagnostics (in the past periods), current diagnostics (in the present period) and perspective diagnostics (in the future periods). Diagnostics of management activities may be accomplished periodically on the basis of certain justified time periods and ad hoc (when it is necessary due to the emergence of non-standard situations: conflicts, disagreements, thefts etc.). Due to specifics of management activities, both qualitative (expert) and quantitative (based on indicators) diagnostics can be applied. The input base also affects characteristics of diagnostics and this allows to single out etiological diagnostics (from causes to effects) and symptomatic diagnostics (from effects to causes).

The goals of and types of diagnostics chosen by the subjects of diagnostics determine the selection of the most effective evaluation and identification methods in this field. On the basis of the publications analysis we suggest classifying diagnostic methods by the following features [11–13]:

– by the form of evaluation: quantitative methods (imply the use of mathematical, statistical procedures), qualitative methods (are based on

experience, knowledge, intuition, competences of the subjects of diagnostics etc);

– by the form of reflection: facts-related (time-taking, stocktaking, expertise, experiment), calculation and analytical (feasibility calculations, analytical estimation, arithmetic verification, economic and mathematical simulation etc.), document-related (logical checking, counter-checking of documents, checking the correct reflection of all the operations in documentation, data consolidation schemes etc.);

– by reasoning (abstraction, idealization, axiomatics, induction, deduction, generalization, synthesis), empirical (experiment, expertise, calculations, measurements, tests);

– by the number of criteria: mono-criterion (are grounded on studying the object by one criterion), poly-criteria (imply studying the object by a system of criteria);

– by the character of relations being studied: linear (simplex method, method of transportation problem); non-linear (dispersion analysis, dynamic and statistic analysis, correlation-regression simulation, matrix method);

– by the level of research: analysis (dynamic(trend), comparative, structural (vertical), index, coefficient, factor), synthesis (direct, element-theoretical, structural-genetic);

– by the degree of formalization: non-formalized (methods of expert estimates, scenarios, psychological, morphological, comparative, tabular, graphical); formalized (statistical, accounting, economic and mathematical) etc.

Management activities diagnostics can be performed by simultaneously using several of the above presented methods which, after being aggregated, form diagnostics methodology, i.e. a particular algorithm, a list of actions in the sphere of estimation and identification of management activities parameters. Diagnostic techniques contain diagnostic indicators and criteria of their optimality.

It is necessary to draw attention to the fact that diagnostic indicators are a grounded limited list of indicators (up to 25) that allow to most representatively and completely evaluate parameters of management activities in accordance with the established goals and objects. Diagnostic indicators are directly connected with the characteristics of the objects being estimated, they

being managers, stages of management process as well as efficiency of management activities.

To diagnose management activities of managers at different levels of management it is possible to use such a universal list of quantitative and qualitative indicators: age, work experience, intellect level, profession-oriented competences, communication skills, coefficient of successful problem solutions, creativity and innovation, internality, flexibility, stress resistance, honesty, integrity, ability to finish the started, success orientation, partner reliability etc.

While performing diagnostics of the state and course of the management process stages there are used particular indicators representing just the area under study. Thus, while diagnosing fulfillment of particular management functions through general ones, it is necessary to separately consider the course of every major function (planning, organizing, motivating, controlling and regulating). While identifying characteristics of planning in a particular area (production, finances, logistics, innovations etc.) it is necessary to estimate periodicity, accuracy, completeness, rhythm, planning horizon, risks, coordination of plans with other functional areas, level of plans attainability and fulfillment. Organizing as a management function is directed towards designing management organizational structures, distribution of functional responsibilities, rights and duties among employees. Thus, diagnostics of organizing enterprise operation is directed towards estimating the quality and effectiveness of created organizational management structures by determining the coefficient of responsibilities scope according to a particular management function, coefficient of management works duplication, coefficient of management works concentration, coefficient of management functions centralization, adherence to management span, indicators of managerial load per manager etc. While diagnosing the state of motivation of different categories of employees (managers, specialists, officials, basic and support personnel) the key diagnostic indicators are as follows: basic and additional wages, average level of wages for a particular category of employees, special rewards for particularly valued employees, level of satisfaction of workers of different categories with material incentives, coefficient of correlation

between the average level of wages at the enterprise and that in the field, coefficient of differentiating managers' and employees' wages etc. Diagnostics of controlling characteristics in an organization foresees estimation of the level of centralization, integrity, periodicity, accuracy, representation of controlling procedures. Estimation of the state and course of regulating at the first stage of management process is based on determining efficiency, targeting, effectiveness, adequacy of the means being regulated.

Diagnostics of the state and course of the second stage of management, that of creating management methods, is based on estimating quantitative and qualitative characteristics of the created management tools. At this, it is reasonable to use such diagnostic indicators: level of documental, instructional, technological, organizational and administrative support of management activities.

The third stage of management process implies decision making on alternative basis. Thus, at this stage there arises the necessity in estimating the efficiency of management decisions on the basis of such indicators as the level of economic feasibility, riskiness, efficiency, optimality, efficiency, thrift, achievability of management decisions.

At the next stage of the management process according to process-structured approach there takes place bringing decisions to their executors. So, at this stage the following is being diagnosed: speed of bringing decisions to their executors, speed of implementing management decisions, effectiveness and timeliness of implementing decisions, level of deviations etc.

While diagnosing effectiveness and efficiency of management activities one should be guided by the functional indicators associated with the corresponding functional areas of managers. For example, effectiveness of management activity of a deputy director of finances and economic affairs may be estimated by such indicators as profitability, liquidity, financial independence, solvency, business activity of the enterprise. The effectiveness of management activities of a deputy director of production may be diagnosed using such indicators as rhythm of production, production capacities, shortage of production, implementation of the plan of production program etc.

When performing complex diagnostics of process-structured management it is necessary to emphasize estimation of management efficiency as a social and economic phenomenon. Management efficiency is a complex multi-aspect concept that is characterized by a system of indicators reflecting all areas of enterprise's activities (production, marketing, finances, staff, innovations etc.). Management efficiency can be divided conventionally into economic, organizational and social [13, p. 356–357].

Economic efficiency of management reflects economic results that characterize organization's performance with a particular management system. On one hand, economic efficiency is characterized by indicators that reflect design and performance of management systems. Among such indicators are: computerization of the managers' workplaces, instructional and regulatory material development, general scope of management, technical equipment of managers etc. On the other hand, management systems efficiency is characterized by indicators that reflect results of production and business activities. Such indicators are: the value of profits, cost, total output, sales volume, profitability of products, capital ratio, level of liquidity, level of risks, coefficient of autonomy, financial stability, maneuvering, turnover etc.

Organizational efficiency of management characterizes the quality of organizational design, its system of management, management decisions taking, management system response to stresses, conflicts, organizational changes etc. Organizational efficiency is characterized by indicators that reflect the quality of organizational design and its system of management, namely: level of centralization of management functions, correlation of the number of managing employees between different levels of management, proportion of managers in the total number of administrative personnel, coefficient of linkage of management structure, speed of management decisions taking etc.

Social efficiency of management reflects the effect of management on the processes of forming professional features of employees, including managers, forming corporate spirit, appropriate psychological climate among employees, atmosphere of safety and involvement into accomp-

lishing organizational goals, perspectives of developing social institutions etc. Social efficiency of management can be also diagnosed from two perspectives. On one hand, it can be estimated by the indicators that reflect social and cultural sphere of organization's operation, these indicators being: discipline at work, personnel stability, social and productive situation at the enterprise, working conditions etc. On the other hand, social efficiency of management can be estimated by indicators reflecting its effect on achieving productive and economic results and satisfying market demands. These indicators are: labor productivity, return on wages, level of consumers' satisfaction, development of social infrastructure etc.

Generalization of indicators for diagnosing management activities in the system of process-structured management is presented in Fig. 2.

So, for diagnosing management activities in the system of process-structured management there arises a necessity to build a pyramid of diagnostic indicators that would allow to identify the state, course and efficiency of such activities. The values of calculated indicators should be compared with optimal criteria that essentially depend on the kind of activities, specifics of technological processes, the scope of activities etc.

Conclusions and perspectives for further research. Management activities are a specific type of activities directed towards taking management decisions and affecting the enterprise's managed subsystem. Process-structured approach to management creates prerequisites for the most effective course of management activities under current conditions. At this, there arises the necessity of diagnosing management activities for the purpose of identifying and estimating their state, course and efficiency that will form information base for improving enterprise's management system and its operation in general. The performed research and the analysis of the publications allowed to develop conceptual basis for diagnosing management activities in the system of process-structured management which formed theoretical and methodological as well as methodical and practical bases for performing diagnostic procedures in this field.

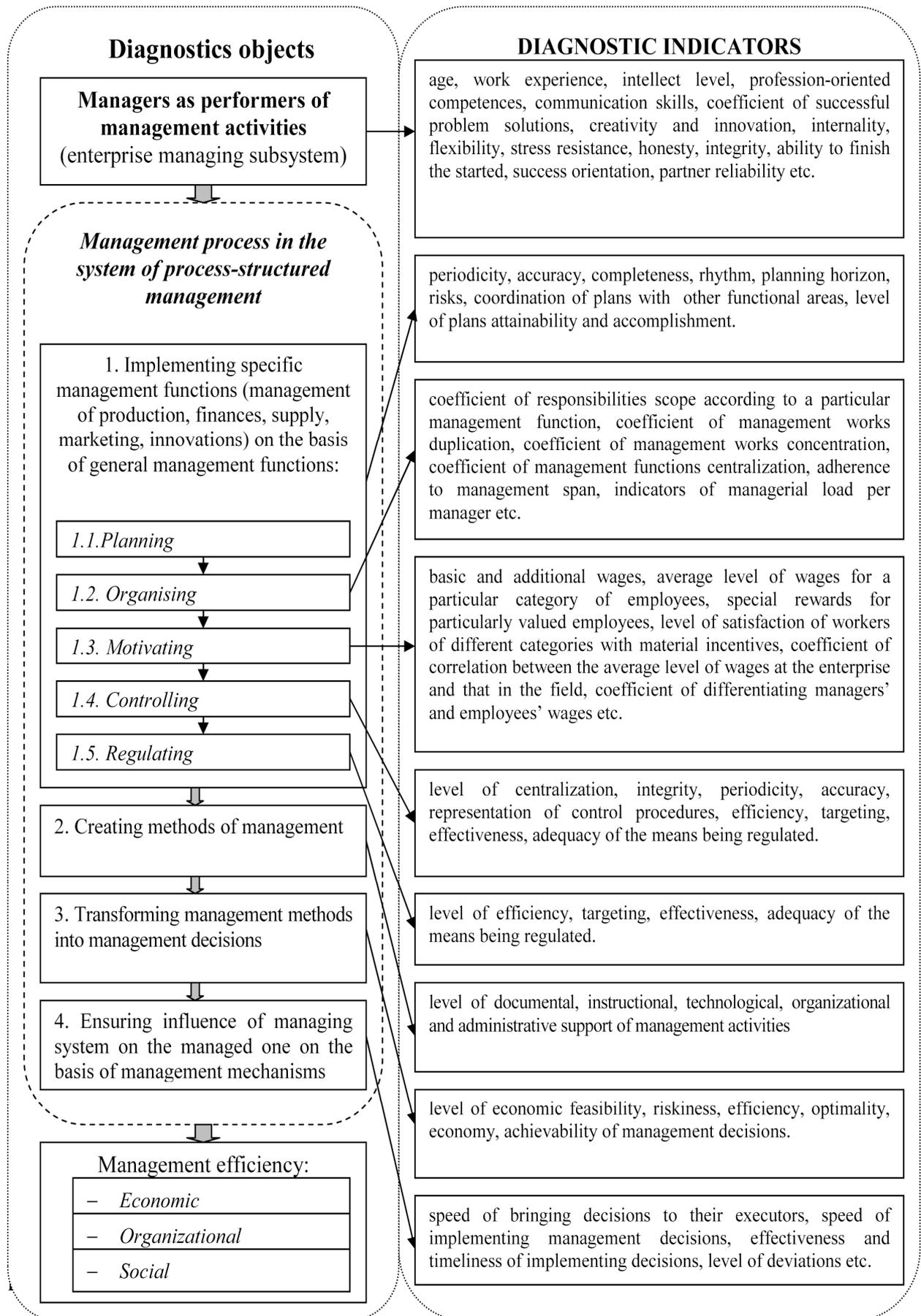


Fig. 2. Indicators of management activities diagnostics in the system of process-structured management

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