Evaluation of the Efficiency of the Management Organization at Industrial Enterprises

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Abstract

The purpose is to analyze the organizational management of large business entities; the results of improving the corporate quality of the work of structural divisions on the practical management principles. Based on the scientific literature review there were used methods of sampling, observation, systemic and economic analysis, and questionnaires to identify «gaps» in the management system. The scientific, methodological, and information base were the work of foreign and domestic scientists and economists in studying problems of the practical organization of management in the activities of industrial enterprises, which should be characterized with the sufficient level of innovative mechanisms implementation strategic management. The financial and economic activities of the enterprise were analyzed, based on a system analysis, an assessment of the internal environment and the PEST method was carried out, and an evaluation of the external environment was given, which allowed the authors to develop practical measures for the effective organization of project management. The key indicators are based on the estimated indicators to ensure the organization’s leadership in the production and industrial enterprise’s economic potential. The calculation of four integral indicators that contribute to vertical and horizontal interaction development is necessary for effective enterprise management. This methodology for assessing the management organization effectiveness in industrial enterprises helps small, large businesses to use rational mechanisms for effective management and develop targeted strategies for the enterprise’s development in the long term.

Keywords: Economics, Management Efficiency, Strategy, Environment of Enterprises, Industrial Enterprises, Organizational Structure

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Түйін
Мыналықтың мәқâyеті кәсіпорындардың кезеңінде менеджментті ұйымдастыруды талдау. Талдау нәтижелері менеджмент қағидаттарында өнеркәсіптік кәсіпорындардың құрылымдық болмешерлерінің жұмысының ұйымдастыруына қатысты болып табылады. Мыналықтың жауап құрылымы, жұмбай, ұйымдастыру құрылымы, ақпарат мен экономикалық талдау әдістері, сондай-ақ басқару жүйесінде «олқылықтарды» анықтау үшін сауалнама қолданылды. Ғылыми-әдістемелік және ақпараттық база шетелді және отандық ғалымдар мен экономистердин стратегиялық басқаруға қызмет еткізетін тәжірибелік жеткілікті дәстүрлі анықтауға мүмкіндік береді. Бұл әдістеме кәсіпорындардың құрылымын болмешерлері болып, ол құрылымдық құрылымға арналған ұйымдастыру көрсеткіштері құрылымдық көрсеткіштерге болып табылады. Ресурстардың құрылымын болмешерлерге болып, ол құрылымдық құрылымға арналған ұйымдастыру көрсеткіштері құрылымдық көрсеткіштерге болып табылады.

Мыналықтың мәқâyеті менеджмент қағидаттарында өнеркәсіптік кәсіпорындардың құрылымдық болмешерлерінің жұмысының ұйымдастыруына қатысты болып табылады. Мыналықтың жауап құрылымы, жұмбай, ұйымдастыру құрылымы, ақпарат мен экономикалық талдау әдістері, сондай-ақ басқару жүйесінде «олқылықтарды» анықтау үшін сауалнама қолданылды. Ғылыми-әдістемелік және ақпараттық база шетелді және отандық ғалымдар мен экономистердин стратегиялық басқаруға қызмет еткізетін тәжірибелік жеткілікті дәстүрлі анықтауға мүмкіндік береді. Бұл әдістеме кәсіпорындардың құрылымын болмешерлері болып, ол құрылымдық құрылымға арналған ұйымдастыру көрсеткіштері құрылымдық көрсеткіштерге болып табылады. Ресурстардың құрылымын болмешерлерге болып, ол құрылымдық құрылымға арналған ұйымдастыру көрсеткіштері құрылымдық көрсеткіштерге болып табылады.

Түйін сөздер: экономика, басқару тиімділігі, стратегиясы, кәсіпорындардың ортасы, өндірістік кәсіпорындар, ұйымдық құрылым.

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Мүдделер қақтығысы: авторлар мүдделер қақтығысын мәлімдейді. Бұл, авторлардың басқару ұйымының тиімділігін бағалау үшін қаржылық ресурстарына негізделген. Бұл, авторлардың басқару ұйымының тиімділігін бағалау үшін қаржылық ресурстарына негізделген.
Оценка эффективности организации менеджмента на промышленных предприятиях

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Аннотация
Целью данной статьи является анализ организационного управления субъектов крупного предпринимательства, результаты которого направлены на повышение качества организации работы структурных подразделений промышленных предприятий на принципах эффективного менеджмента. Для написания статьи использовались методы обзора научной литературы, метод выборки, наблюдения, системного и экономического анализа, а также анкетирования для выявления «пробелов» в системе управления. Научно-методической и информационной базой послужили работы зарубежных и отечественных ученых и экономистов по изучению проблем практической организации управления в деятельности промышленных предприятий, которые должны характеризоваться достаточным уровнем внедрения инновационных механизмов стратегического управления. Была проанализирована финансово-хозяйственная деятельность предприятия, проведена оценка внутренней среды на основе системного анализа и методики PEST, а также дана оценка внешней среды, что позволило авторам разработать практические меры по эффективной организации управления проектами. Ключевые показатели основаны на оценочных показателях, направленных на обеспечение лидерства организации в производстве и экономического потенциала промышленного предприятия. Проведен расчет четырех интегральных показателей, способствующих развитию вертикального и горизонтального взаимодействия, необходимых для эффективного управления предприятием. Данная методология оценки эффективности организации управления на промышленных предприятиях помогает малому и крупному бизнесу использовать рациональные механизмы эффективного управления и разрабатывать целенаправленные стратегии развития предприятия в долгосрочной перспективе.

Ключевые слова: экономика, эффективность менеджмента, стратегия, среда предприятий, промышленные предприятия, организационная структура

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**Introduction**

Industrial enterprises as subjects of significant business function in the conditions of the development of the sixth technological order, based on the introduction of new digital technologies into production. The management organization ensures the process of continuous management of the economic activity. It is impossible to provide research evaluation mechanisms and opportunities to develop effective strategies without choosing alternative management system directions. The study of practical management issues is carried out in the daily activities of top managers middle and lower managers who perform the functions of planning, control, monitoring, and communication by the goals and objectives of structural divisions of industrial enterprises.

The evaluation indicators of the effectiveness of the management organization are based on a systematic approach to assessing the implementation of the strategic mission of the enterprise, which ensures the rationality of the life cycle of economic entities in terms of manageability and interdependence of individual elements of the organizational structure, increasing the level of business activity and efficiency of the management organization. Consequently, the problem of reliable assessment and rational management of business efficiency has become dominant in management practice in the context of the development of market globalization [1].

The improvement of the organizational management system (its subsystems or elements) affects individual relationships and the organizational structure of management as a whole. Consequently, this process requires the establishment and provision of new business processes, the elimination of «gaps” and adjusting changes in management functions and methods of making managerial decisions. The development and improvement of the enterprise are based on a thorough and in-depth knowledge of the activities of industrial enterprises [2], which requires research in the field of effective management organization systems. Thus, the study aims to substantiate the assessment of the effectiveness of management based on the estimated performance indicators of the enterprise and their impact on the process of the point of the organization of management in industrial enterprises.

**Literature review**

Evaluation of the effectiveness of the management organization at industrial enterprises is the object of research by many management scientists; the choice of optimal innovative management methods is a rather complicated procedure in conditions of intense competition, while small, medium and large enterprises in a broader sense are equally creative [3].

According to scientists, the “effectiveness of the management system” should be understood as the result of its functioning, which ensures that the enterprise achieves its goals in a competitive environment with the lowest management costs [4]. The assessment of management effectiveness aims to increase staff productivity, strengthen competitive positions, and increase the organization’s social importance [5-6]. HR technologies, representing the range that any personnel management system includes [7], are an object of management research. At the same time, it should be noted that the formation of an effective management system at domestic enterprises relies more on experience, analogy, standard solutions, and intuition than on a strict methodology and methodology based on scientific methods and principles of management and marketing [8-9]. This approach leads to negative business processes that negatively affect the assessment of the effectiveness of the management organization at industrial enterprises; when assessing the effectiveness of management, many researchers use a targeted approach [10].

Having studied the generally accepted structure and methods of evaluating the effectiveness of the management organization in domestic and foreign companies, we considered possible features of the formation of an evaluation culture in the management structure of industrial enterprises [11].

The JSC “Ukaz” analysis results are that financial and economic activities show positive dynamics of economic activity and the establishment of specific management system standards. The practice has been demonstrated that the use of effective methods of managerial decision-making at the level of middle and lower managers ensures an increase in labor productivity and positive dynamics of the company’s financial statements, and Lalu F. called such companies turquoise, or companies of the future [12]. Therefore, the expediency of using project management tools to make effective management decisions is a prerequisite for middle management.

In the conditions of the digital economy, management transformation is necessary [13]. Management changes occur under the influence of the external environment and properties appear in management: flexibility of response, transparency of information and communication, reduction of the number of levels in the hierarchy in the organization and transition to flat organizational management structures, recognition...
of the value of the so-called “new income”: the meaningfulness of work, labor relations, pleasure and happiness from work [14]. The application of a targeted approach to assessing the effectiveness of the management organization was carried out based on an analysis of the activities of JSC “Ukaz” and conducting a survey among managers of various levels, which allowed us to demonstrate the results of the study to develop certain strategic decisions at the level of top managers of the object under investigation.

**Methodology**

During the preparation of materials for the article, the content of scientific methods and their applicability to this problem were studied. To form the scientific results of the study, the process of reviewing the scientific literature on the theory of management effectiveness was used, which allowed revealing the essence of the application of various theories and methods for evaluating the effectiveness of the management organization in multiple configurations of the activity of the object of research based on the analysis of a large information flow [15]. Accordingly, the information material used in the article is obtained/ from official sources on statistical data on the economic activity of the enterprise scientific periodicals, including near and far abroad.

Sampling as a research method includes a large business entity to analyze the effectiveness of the management organization based on evaluation indicators and their evaluation criteria, which is reflected in the calculations of indicators of strategic development, financial condition, personnel management, and labor potential of industrial enterprises. These estimated indicators affect the economic effect and effectiveness of the management organization at industrial enterprises when using the system method in management. The use of strategies methods helps identify the lack of interrelation between the management process elements.

The method of economic analysis for determining financial stability based on annual reports on the production and financial activities of the enterprise for the period 2018-2020 was published by the object under study in open access, which made it possible to achieve the goal of the study, to determine the impact of financial indicators of the enterprise on the overall strategy of enterprise management. It is noteworthy that the selected three-year period for the analysis of economic activity shows a trend in the development of the management system during the COVID-19 period. The enterprise successfully functioned thanks to an established management system with potential customers.

The economy of industrial enterprises, including global challenges, requires the use of flexible and effective methods [13] of management organization, taking into account the specifics of production and economic activity, contributing to the understanding of the importance of practice management to ensure the sustainable development of financial entities engaged in entrepreneurial activity on a large scale.

To assess the effectiveness of the management organization at an industrial enterprise, the formula (1) was applied based on the data of the weight of the evaluation indicators and the total points according to the results of the examination in the general methodology for assessing the effectiveness of management and a rating assessment of the level of management efficiency was calculated:

\[
S = 0.275 \times Z_1 + 0.375 \times Z_2 + 0.225 \times Z_3 + 0.175 \times Z_4 \quad (1)
\]

where:

- \( S \) - total score of groups of indicators;
- \( Z_1 \) - the sum of the points of the indicator “Strategic development”;
- \( Z_2 \) - the sum of the points of the indicator “Financial condition”;
- \( Z_3 \) - the sum of the points of the indicator “Personnel Management”;
- \( Z_4 \) - the sum of the points of the indicator “Conditions for the development of labor potential”.

Thus, at the study’s completion stage, a questionnaire method was applied, which focuses on identifying gaps in the system of strategic capacity management and personnel policy of industrial enterprises. This method is used to analyze content on a rating scale. The results of the questionnaire data show whether the quality of information disclosure affects the effectiveness of the management organization in production.

The evaluation of the effectiveness of the management organization in industrial enterprises was carried out using a system analysis, which includes the calculation and reflects the dynamics of the leading coefficients of economic and financial activity, which in turn determines the competitive position of the object under study.

**Results and Discussions**

The efficiency of management of an industrial enterprise is aimed at optimizing production and economic activities through the rational use of production potential. However, in general, management using the production potential does not guarantee one hundred percent efficiency of the management organization at enterprises. Consequently, efficiency arises when
resources give the best result and if management’s resources and impact are commensurate [16]. It was more expedient to consider the solution of this issue on the example of enterprises of the machine-building industry of Kazakhstan, which is the object of the study.

To assess the effectiveness of the management of industrial enterprises, the analysis of various indicators characterizing the practical applicability of mechanisms in control is used. The estimated indicators of management effectiveness in their structure and content are parameters for measuring economic activity labor productivity, reflect the intensive and extensive growth of the production potential of industrial enterprises, and ultimately determine the compliance of the mission with strategic goals and objectives from the position of the optimality of the organizational structure of industrial enterprises.

The results of the financial and economic activity of the research object for 2018-2020 show that, despite the global crisis (COVID-2019), the company managed to maintain the stability of the leading indicators, moreover, significantly increased the profit from the sale of finished products in 2020 compared to 2018 by 461.1 million tenge. However, despite the positive growth trends of this indicator, it was revealed that the business profit of the object under study after deducting total expenses and dividends in 2020 decreased by 24% (profit is 73.5 million TENGE) compared to 2019 (profit is 94.6 million tenge). The decrease in net profit is due to an increase in the cost of updating the fixed capital structure by increasing the automation of the management process. The automation process includes the costs of purchasing equipment and implementing technologies that contribute to ensuring the quality of the product management organization.

An industrial enterprise reflects financial stability at a value when the expected business income is higher than the planned expenses. At the same time, profit is formed in continuous management of the production and economic activity of the object under study, which determines the sustainability of its development.

The enterprise’s total liquidity indicators tend to increase, but the “critical assessment” coefficient has a deviation of -0.68 in 2020 compared to 2019 (Table 1).

The analysis of the maneuverability coefficient shows a systematic increase from 0.265 (2018) to 0.318 (2020), indicating that for the analyzed period, the enterprise has financial potential at the expense of its capital in case of unforeseen situations to maintain the level of working capital and replenishment of working capital.

| Indicator                                | 2018 | 2019 | 2020 | Deviation (+, -) (2020 to 2019) |
|------------------------------------------|------|------|------|-------------------------------|
| General liquidity indicator              | 0.3  | 0.35 | 1.07 | 0.72                          |
| Absolute liquidity ratio                 | 0.01 | 0.01 | 0.02 | 0.01                          |
| The coefficient of «critical evaluation»| 0.09 | 1.02 | 0.34 | -0.68                         |
| Current liquidity ratio                  | 0.3  | 0.29 | 0.7  | 0.41                          |
| Coefficient of maneuverability of functioning capital | 0.265 | 0.323 | 0.318 | 0.05                     |
| Share of working capital in assets       | 0.311 | 0.355 | 0.305 | -0.01                     |
| The coefficient of provision with own funds | 3.776 | 3.094 | 3.143 | -0.63                     |
|                                           | 0.546 | 0.573 | 0.573 | 0.03                   |

Note - Compiled by the authors according to the source [17]

The coefficient of provision with own funds decreased by 0.01 and amounted to 0.305 in 2020; these statistics describe the enterprise’s economic activity as a stable level of development. Still, the downward trend of this coefficient may lead to a reduction in the cash working capital of the enterprise. Thus, the financial and economic activity analysis indicates possible “gaps” in the management process. The object under study should accelerate the automation of the management system of production and economic activities, taking into account the analysis of the internal and external environment of the enterprise.

The internal environment analysis made it possible to determine the system of potential management of industrial enterprises, which aims to achieve strategic goals and identify development indicators. The internal environment of the enterprise under study is presented in the general organizational structure as a mechanism for managing production, human resources,
Assessment of the internal environment will allow top managers of the object under study to determine the efficiency level of resource management to develop mechanisms to strengthen competitive advantages based on the principles of effective management organization and, accordingly, to manage possible risks.

### Table 2 - Internal environment of JSC «Ukaz»

| Indicator                                | Performance                                                                                                    |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Financial statements by IFRS for 2018-2020 | Gross profit in 2019 increased by 13% compared to 2018. According to management reports, gross profit in 2019 amounted to 123.2 million tenge, compared to 2018 (112.3 million tenge) increased by 13%. |
| Human resources                          | The labor potential of an industrial enterprise in 2018 - 982 people, 2019 - 1032 people, 2020 - 807 people. In 2020, the reduction of labor potential by 225 people. We compared to 2019 and by 50 people from 2028. At the same time, the decline occurred in the composition of the primary and auxiliary personnel of the enterprise, which is associated with an increase in finished products in the warehouse. |
| Reputation and motivational policy       | Corporate culture determines the organization’s strategy of effective management of human resources of the research object. |
| Production potential                    | The fixed-assets structure shows that the largest share in its design is occupied by machinery and equipment - 53.31%, buildings, and structures - 25.62%, which is typical for industrial enterprises. The object under study has a relatively large production base. The largest share is land resources - 15.13%, vehicles - 0.45%, other fixed assets - 5.49%. Production has an imperfect structure of fixed assets and may entail negative consequences since the main management efficiency indicators depend on the structure of fixed assets. |
| Information logistics                   | This indicator is represented by an automated enterprise activity management system and 17 employees, whose functionality covers 27 areas of activity within the framework of the main functions of effective management - organization, planning, control, and communication, which ensures the efficiency of the register of suppliers and potential customers of the enterprise through the prism of logistics. |
| Information resources                   | The company’s IT strategy aims to ensure high service quality standards and effective management of IT resources. The company was among the first ones who built a corporate multiservice telecommunications network that provides high-speed access to information resources regardless of the geographical location of potential customers. The electronic document management portal (DataInterchangePortal 7K, DIP7K) provides interaction with suppliers at the level of information systems. Special attention is paid to the issues of information security, the competence of IT personnel, and the quality management of IT services. |
| Competitiveness analysis                | The level of competitiveness of the enterprise shows a reasonably high level since the activity of the object under study is considered in the market of monopolistic competition. At the same time, it has sufficient potential to introduce innovative technologies. The probability of new competitors appearing at the level of average data, pressure from suppliers is characterized by a low level, and competitive pressure from potential customers is high. Competitive pressure from substitute products is moderate. |

Note - compiled by the authors
The results of the analysis of the internal environment of an industrial enterprise allow us to determine its competitive advantages and competitive disadvantages; the latter is expressed by the lack of an effective horizontal management organization system at the level of structural divisions. This consequence was revealed due to the lack of established interaction of practical management tools at the level of middle managers and between departments and the “time lag” for making managerial decisions.

Environmental factors have been studied to a large extent, taking into account the impact of changes on the current strategy of an industrial enterprise, and were analyzed based on PEST analysis (Table 3).

### Table 3 - PEST-analysis of JSC “Ukaz”

| P-political factors | E-economic factors |
|---------------------|--------------------|
| Political stability, both in the domestic and foreign markets, ensures the effectiveness of the management organization, providing its competitive advantages; for the enterprise, this factor is characterized by a positive trend in its development. | The global challenges of the world economy and the economic crisis have negatively affected the activities of the industrial enterprise. In this regard, there was a decrease in the income level of potential customers and an increase in the price of economic resources, which attracted a reduction in the gross profit of the enterprise. |

| S-social factors | T-technological factors |
|------------------|------------------------|
| A complex indicator – suppliers, potential customers, consumers, and labor resources are defined as objects of social policy of an effective management organization. In general, industrial enterprises implement a targeted pricing policy concerning meeting the needs of society. | Technological innovations have had a substantial impact on the automation of the control system. The introduction of an Internet acquiring system helps the company to effectively manage costs (time management and reduction of labor resources). |

Note - Compiled by the authors

The external environment strongly influenced the process of managing the activities of industrial enterprises, primarily due to the economic crisis (export restrictions and the transition to digitalization), which prompted the management of the object under study to develop new approaches to effective governance based on the principles of digital competence development among managers. Management should focus on the strengths of the management tool used, the scale of which depends on the number of weaknesses and their level, as well as the opportunities and threats presented by the external environment. Thus, the assessment of the internal and external environment of the object under study determined the significance of the management potential, which involves not only the study of the organizational structure but also, along with the overall assessment of the activity, the need to determine the correspondence of the management potential to the mission, vision and development strategy, as well as to analyze its impact on the management of the competitive advantages of the object of study.

Analyses of the management organization effectiveness is based on an assessment of the internal environment, which is possible when simultaneously calculating the estimated management indicators. The evaluation was carried out based on the questionnaire and statistical data of the enterprise, with relevant questions that were evaluated on a 10-point scale. The maximum score for assessing the effectiveness of management is 50, which reflects the structure and content of the questionnaire survey. The results of the questionnaire data were processed, taking into account possible deviations, and calculations were made according to the weighted average. The evaluation scale for all evaluation indicators is represented by a general evaluation methodology and includes four levels of efficiency of the management organization at industrial enterprises (Tables 4).

As respondents (more than 800 people were interviewed), the following category of personnel of the enterprise under study was determined:
- top managers (general director and deputies in supervised areas of activity);
- middle managers (department directors and their deputies, production, IT, finance, personnel and infrastructure management, heads of production workshops and design bureau);
- lower-level managers (auxiliary and primary workers);
- potential customers.

The first group of assessments is related to the indicator “Strategic development,” namely assessing the availability and compliance of an industrial enterprise with its mission (Table 5).
Table 4 - Evaluation scale of management performance indicators

| No. | Management efficiency level | Evaluation scale «Strategic development» | Evaluation scale «Financial condition» | Evaluation scale «Personnel Management» | Evaluation scale «Development of labor potential» |
|-----|-----------------------------|------------------------------------------|----------------------------------------|------------------------------------------|------------------------------------------------|
| 1   | Inefficient                 | 0-3                                      | 0-1                                    | 0-3                                      | 0-3                                            |
| 2   | Ineffective                 | 4-5                                      | -                                      | -                                       | -                                              |
| 3   | Effective                   | 6-8                                      | 2-3                                    | 4-5                                      | 4-5                                            |
| 4   | Highly efficient            | 9-10                                     | 4                                      | 6                                        | 6                                              |

Note - Compiled by the authors according to the source [8]

Table 5 – An estimated indicator of «Strategic development»

| No. | Evaluation criteria | The average amount of points |
|-----|---------------------|-----------------------------|
| 1   | Mission and strategic vision | 9                          |
| 2   | The degree of compliance of the organization with its mission | 9                          |
| 3   | The degree of achievement of short-term goals | 8                          |
| 4   | Degree of achievement of strategic goals | 4,5                        |
| 5   | Implementation of the Code of Corporate Ethics | 5,0                        |
|     | Average points      | 7,1                          |

Note - Compiled by the authors according to the source [17]

The average value of the indicator “Strategic development” in total is 7.1, which characterizes the level of management organization in this object under study as practical, the essence of which is reduced to positive trends in the strategic development of production activities and reflects the content of the implementation of the mission of an industrial enterprise.

Table 6 – An estimated indicator of «Financial condition»

| No. | Indicator                      | 2018   | 2019   | 2020   | Absolute change | Growth rate |
|-----|--------------------------------|--------|--------|--------|-----------------|-------------|
| 1   | Gross profit                   | 331,2  | 339,6  | 461    | 121,4           | -           |
| 2   | Net profit (loss), million tenge | 79,1   | 84,4   | 92,3   | 7,9             | 9,3%        |
| 3   | Cost of production, million tenge | 165,2  | 174    | 267,8  | 93,8            | -           |
| 3   | Profitability of production, in % | 1,5    | 1,9    | 1,7    | -0,2            | -           |

Note - Compiled by the authors according to the source [17]

Based on the data in Table 6, an assessment of the indicators of the “Financial condition” of the enterprise was given, and the results show the advantages of using effective management mechanisms. The total amount of points equals two according to six evaluation criteria. In comparison, according to two evaluation criteria: cost reduction and profitability growth - the experts did not evaluate. The number of points is zero; this trend imposes the necessary measures in the management of costs and financial resources of the enterprise, taking into account the mechanisms of financial management and IFRS.

The next object of the effectiveness of the management organization at enterprises is personnel management; therefore, when evaluating the indicator “Personnel management,” the leading indicator “Personnel management” and the results of the questionnaire (survey) data were considered in Table 7.

According to the calculation results of the evaluation criteria for the indicator “Personnel Management” the sum of points is 5. This indicator characterizes the enterprise’s personnel’s management effectiveness and functional characteristics. Still, gaps in management tools were identified by 1 criterion, which indicates the lack of primary education for managers in strategic management and project management.
The assessment of the indicator of “Development of labor potential” is one of the determining factors for ensuring the efficiency of the production potential of the enterprise. Therefore, this assessment is based on the observation method. For the reliability of the information, the content of the personnel policy and the policy in the enterprise’s social responsibility field is analyzed. The evaluation results of this indicator indicate that the creation of working conditions is expressed in the formation of practical strategic management tools based on the object under study (Table 8).

For the application of system analysis to determine the effectiveness of the management organization, the specific weight of each evaluation indicator is determined (set out above) and the significance of these indicators in the overall management potential system of an industrial enterprise. To rank the evaluation indicators, the places and weight of each evaluation indicator were determined (Table 9).

### Table 7 - Estimated indicators of «Personnel management»

| No. | Evaluation criteria                                                                 | +(1 point), – (0 points) |
|-----|--------------------------------------------------------------------------------------|--------------------------|
| 1   | Effectiveness of the organizational structure of management                           | 1                        |
| 2   | Availability of primary education for managers of the higher, middle, and lower levels| 0                        |
| 3   | The efficiency of the Personnel Management Department                                  | 1                        |
| 4   | Increasing the profitability of labor potential management                           | 1                        |
| 5   | Reduction of the specific weight of management for the maintenance of one employee in the overall structure | 1                        |
| 6   | Lack of staff turnover at the enterprise                                               | 1                        |
|     | Total point                                                                          | 5                        |

### Table 8 - Estimated indicators of «Development of labor potential»

| No. | Evaluation criteria                                                                 | +(1 point), – (0 points) |
|-----|--------------------------------------------------------------------------------------|--------------------------|
| 1   | Rationing of labor (three shifts at a rate of 8 hours per day)                       | 1                        |
| 2   | Average salary level (at the regional level)                                         | 1                        |
| 3   | Motivational policy                                                                  | 1                        |
| 4   | Sanitary and epidemiological norms                                                   | 1                        |
| 5   | Working conditions and compliance with safety regulations                             | 1                        |
| 6   | Psychological climate in the team                                                    | 1                        |
|     | Total points                                                                          | 6                        |

### Table 9 - The result of the estimated indicators of JSC «Ukaz»

| No. | Estimated indicators                                                                 | Place of the estimated indicator | Weight of the estimated indicator |
|-----|--------------------------------------------------------------------------------------|----------------------------------|----------------------------------|
| 1   | The result of calculating the indicator «Strategic development»                      | 1                                | 0,315                            |
| 2   | The result of calculating the indicator «Financial condition»                         | 2                                | 0,235                            |
| 3   | The result of calculating the indicator «Development of labor potential»              | 3                                | 0,195                            |
| 4   | The result of calculating the indicator «Personnel management»                        | 4                                | 0,155                            |

The resulting score of indicators is 5.99, which corresponds to the standard for evaluating management effectiveness in the range of 4.4-6.0. Accordingly, the final score characterizes the organization of management in the management system of the potential of an industrial enterprise from the position of effective leadership. It should be noted that despite the high weight of the estimated indicator “Strategic development” of the object under study - a consequence of 0.315, while compared with the indicators “Development of labor potential” and “Personnel management” more by 0.1-0.2 positions, there are gaps in the management system. The reasons for this phenomenon are explained by the insufficient level of development of the competence of labor potential and the lack of a mechanism for increasing labor potential in the personnel policy of the enterprise.
The survey results revealed the lack of consistency at the middle management level to use project management tools to make management decisions, considering their functionality. Three managers were interviewed, including heads of workshops and brigades, who stressed the lack of interaction between managers at the auxiliary structural units, which hinders the rapid response to changes in the production cycle. In this regard, it is recommended to strengthen the position of project management in the organizational and managerial activities of the machine-building enterprise.

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Thus, the assessment of management effectiveness in JSC “Ukaz,” based on which the corresponding category of the point of the management organization is determined - practical. However, the identified “gaps” in all four evaluation indicators require justification of a full-fledged strategy for the development of effective management, taking into account the strategic vision in JSC “Ukaz”. The object under study is recommended to choose the option of building optimal strategies for an effective management organization to optimize costs and the effectiveness of business processes. The enterprise management efficiency indicator equal to 5.99 - requires, first of all, to eliminate duplicate management functions at the middle management level and managers of auxiliary production workshops. This process will determine the degree of the interrelation of horizontal and vertical management functions between the enterprise’s main and additional structural divisions, ensuring the maximum efficiency of industrial enterprises [18]. The management organization system is presented as a complex organizational and management system.

Innovations in the organizational structure create new conditions for the sustainable development of JSC “Ukaz,” which has a linear management structure, which is revealed based on the analysis of evaluation indicators, and senior managers are so far removed from production processes that they are separated from actual production and control of the parameters of the production process [19]. Therefore, it is necessary to create a transition model from vertical hierarchical management to horizontal management by introducing project management at the middle managers’ level, which helps reduce the degree of formal control and monitoring by top managers of the object under study. At the same time, the tools of flexible and horizontal management organization (which are also called “flattened” organizations) generate much more ambiguity and uncertainty than the typical “comb” pyramid structure.” This may be because in JSC “Ukaz,” it is essential to share the labor potential informally by the organization’s values. But in practice, this is not always achieved; employees are forced to demonstrate loyalty to the organization formally [20]. Therefore, the transition from classical management methods to project management methods will allow the development of professional competence of managers, as it was revealed (Table 7) in the evaluation indicator “Personnel Management” of JSC “DECREE” - the lack of primary education in strategic and project management in most middle managers.

Developing an effective management system based on a horizontal organizational structure with project management mechanisms allows you to flexibly and quickly respond to changes in the internal and external environment, thereby creating a significant competitive advantage for industrial enterprises.

Conclusions

The study results allow us to determine the effectiveness of the management organization at industrial enterprises, taking into account the business processes carried out in them and the management systems used. In turn, all of the above is reflected in the results of the strategic development of the industrial enterprise. At the same time, it is advisable to use project management tools at the level of middle managers.

The effectiveness of the management organization affects the effectiveness of the company’s activities and is manifested in the degree of optimal use of production, financial, and labor resources.

The management mechanism of the system of evaluation indicators of the management organization affects the life cycle of industrial enterprises (duration and stability of functioning), taking into account the factors of the internal and external environment, and this is reflected in the effectiveness of the implementation of forms and tools of effective management.

The tools used to ensure the economic efficiency of production and economic activities
of industrial enterprises help to assess the impact of the effectiveness of the management organization on the management of production capacity, including fixed and revolving funds, labor resources, infrastructure, communication, and information technologies, taking into account the analysis of the internal environment.

Summarizing the methods of evaluating the effectiveness of the management organization, it should be noted that each evaluation indicator is characterized by general principles of assessing effective management, which determines their purposefulness in evaluating all levels of management of industrial enterprises, taking into account the analysis of the internal and external environment, and the use of PEST analysis.

The proposed method of evaluating the effectiveness of the management system of an industrial enterprise will make it possible to rationally use and apply the mechanism of effective management organization in the activities of large business entities based on project management.

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