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ЗБІРНИК ПРАЦЬ МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ КОНФЕРЕНЦІЇ

«ІНТЕЛЕКТУАЛЬНІ ІНФОРМАЦІЙНІ СИСТЕМИ В УПРАВЛІННІ ПРОЄКТАМИ ТА ПРОГРАМАМИ»

Харків–Коблево, 2023

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УДК 658.012.32

Міжнародна науково-практична конференція «Інтелектуальні інформаційні системи в управлінні проєктами та програмами», Коблево, 12–15 вересня 2023 р. Збірник праць. – Харків: ХНУРЕ, 2023. – 224 с.

Подано матеріали пленарних та секційних докладів міжнародної науково-практичної конференції «Інтелектуальні інформаційні системи в управлінні проєктами та програмами». Протягом виступів було обговорено основні напрями та перспективи науково-технічних дослідів, досвіду впровадження сучасних методів економіко-математичного моделювання та інформаційних технологій в управління бізнесом, проектами та програмами. Висвітлено сучасний рівень розвитку теорії та практики інноваційного менеджменту, управління проектами і економічної безпеки.

Для спеціалістів, викладачів, аспірантів і студентів.

Статті відтворені з авторських оригіналів, поданих оргкомітету, в авторській редакції.

Рекомендовано до друку вченою радою Харківського національного університету радіоелектроніки (протокол № 10 від 06.10.2023 р.).

УДК 658.012.32

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ЗМІСТ

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ASPECTS OF DECISION-MAKING IN THE MANAGEMENT OF HUMAN RESOURCES IN IT PROJECTS OF ORGANIZATIONS

Human resources management in IT projects management involves a comprehensive approach to managing the human aspect of projects. It encompasses activities that range from team composition and recruitment to performance management and risk mitigation. Collaborative efforts between project managers and HR professionals are essential for creating a skilled and motivated project team that can successfully deliver IT projects on time and within scope.

The characteristic features of the projects implemented by modern IT companies are the multiplicity, complexity and variety of the used design tools. The complexity of the functional structure of projects determines the presence of organizational problems of project management at all stages of their life cycle. The development, testing and technical support of the project is far from a complete list of implemented functions, each of which imposes specific requirements on the competencies of the executors.

In practice, the readiness of employees for dynamic organizational changes caused by both the influence of the external environment and internal organizational reasons, including the level of professional training of personnel, are important conditions for the effective functioning of the organization. The reason for the subjectivity of the assessment of this level is due to the complexity of the manager's decision-making about the degree of productivity and competence of the employee in relation to the project as a whole and the partiality of the assessment of his motivation.

Human Resources Management (HRM) is a critical component of IT Project Management. It involves the strategic planning, coordination, and oversight of human resources to ensure the successful execution of IT projects. HRM in IT project management encompasses various activities and considerations (Table 1).

The distribution of work between contractors is a complex task that occurs at enterprises and organizations in a wide variety of industries. Incorrectly made decisions when assigning tasks to employees can have long-term consequences, such as disruption of project deadlines, loss of company profits and business reputation, decrease in personnel efficiency, job dissatisfaction and low motivation

of employees, deteriorating labor relations. Thus, one of the largest corporations for the production of software «Microsoft» [1] struggled with an incorrectly chosen strategy for distributing work between performers for several years in the early 2000s. Employees of IT companies with a high level of competence, despite their motivation, perceive themselves as overloaded.

Table 1 – Activities and considerations HRM in IT project management encompasses

Activities and considerations	Characteristic
1	2
Team Composition	HRM begins with assembling a project team with the right blend of technical skills, domain knowledge, and experience. Project managers work closely with HR professionals to identify the roles and responsibilities required for the project and select team members accordingly.
Recruitment and Onboarding	HRM assists in recruiting and hiring IT professionals who possess the necessary expertise for the project. This involves creating job descriptions, conducting interviews, and ensuring a smooth onboarding process for new team members.
Skill Assessment and Development	HRM identifies the existing skills within the project team and assesses any skill gaps. Training plans, workshops, and professional development opportunities are organized to enhance the skills of team members and keep them up-to-date with the latest technologies.
Resource Allocation	HRM plays a role in allocating human resources to various project tasks. This includes managing team availability, workload distribution, and resource leveling to ensure efficient resource utilization.
Performance Management	HRM establishes performance metrics and evaluation processes to assess the performance of team members. Regular feedback and performance appraisals help identify areas for improvement and recognize top performers.
Conflict Resolution	HRM assists in managing conflicts and resolving issues that may arise within the project team. Effective communication and conflict resolution strategies help maintain a positive team dynamic.
Communication and Collaboration	HRM fosters open communication and collaboration among team members, stakeholders, and project managers. Clear communication channels and tools are established to facilitate information sharing and decision-making.

End of the table 1

1	2
Motivation and Engagement	HRM strategies, such as recognizing achievements, providing growth opportunities, and maintaining a positive work environment, contribute to team motivation and engagement.
Change Management	In the dynamic IT field, projects often involve changes in technology, processes, or organizational structure. HRM helps manage these changes by providing training, support, and communication to ensure a smooth transition.
Risk Management	HRM identifies and mitigates risks related to human resources, such as turnover, resource shortages, and skill gaps. Contingency plans are developed to address potential challenges that could impact the project team.
Legal and Ethical Considerations	HRM ensures compliance with labor laws, regulations, and ethical standards when managing the IT project team. This includes addressing issues related to confidentiality, data security, and intellectual property.
Knowledge Management	HRM supports the capture and dissemination of knowledge gained during the project. This includes creating documentation, sharing best practices, and facilitating knowledge transfer among team members.

IT organizations that, when solving the task of distributing work between performers, not only emphasize the structural approach, but also take into account the personnel approach, can focus on the level of commitment that employees demonstrate to their employer, which reflects their desire to work for the IT organizations [2].

For IT organizations working in the field of IT development, labor resources are «critical», generating a significant degree of uncertainty in the strategic planning of the project implementation process and leading to risks. This is, first of all, the risk of uncertainty in the composition of the working group at the project planning stage, the possibility of changing the composition of the group in the process of its implementation, changing the functional requirements of the customer, the unavailability of members of the working group. In addition, the disadvantage of the work distribution model according to the rule «the task is assigned to the performer who can perform it quickly and efficiently» is that in practice a new problem often arises: a set of certain tasks is performed by only one performer, and this performer becomes the carrier of the most valuable for the company experience, and with a long period of work – indispensable. The risk of business dependence [3] on a single employee in modern realities is a big IT organizational and financial problem.

It is important to have an approach to improve the performance of the human resources of an organization's IT project. Increasing the productivity of human resources in an IT organization's projects is a key challenge to achieving success and efficiency. Some of the ways that can be used to achieve this goal are shown in Figure 1 and Table 2.

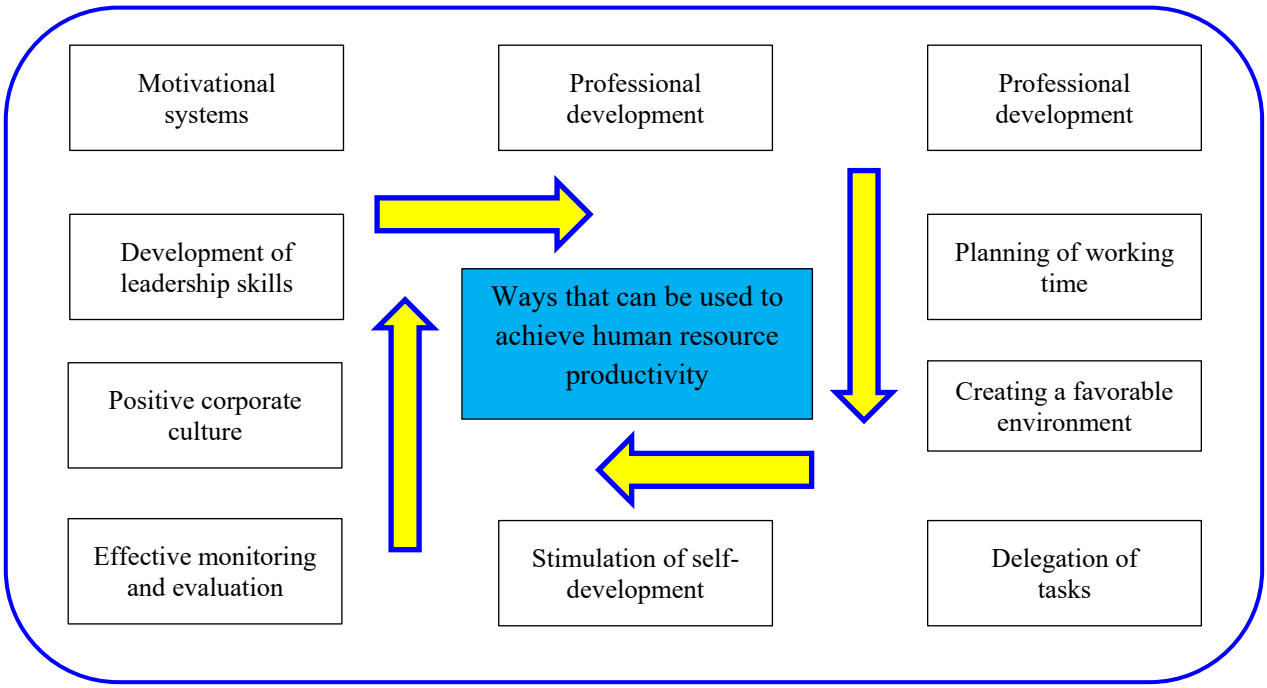

Fig. 1. Ways that can be used to achieve human resource productivity

Table 2 –Ways that can be used to achieve human resource productivity

№	Naming the way	Characteristic
1	2	3
1	Motivational systems	Development of motivational systems that stimulate and reward high productivity and successful contribution. This may include bonuses, premiums, promotion based on results and other forms of recognition.
2	Professional development	Providing opportunities for training and professional development of employees. The organization of trainings, seminars, online courses and other training initiatives can improve the technical and professional skills of the team.
3	Effective communication	Ensuring open and effective information exchange between team members, project managers and other stakeholders. Quality communication helps to avoid misunderstandings and ensures correct understanding of tasks and goals.

End of the table 2

1	2	3
4	Planning of working time	Setting a clear work schedule and planning tasks helps to avoid overload and ensures rational use of time.
5	Creating a favorable environment	Creating a working environment in which employees can feel comfortable and inspired. This may include the installation of comfortable equipment, spaces for recreation, opportunities for creativity, etc.
6	Delegation of tasks	Effective delegation of tasks based on the skills and expertise of employees allows you to distribute responsibility and ensure optimal use of resources.
7	Stimulation of self-development	Support for independent training and development of employees, including independent research of new technologies and methods.
8	Effective monitoring and evaluation	Installation of a performance monitoring system that allows timely identification of problems and shortcomings and makes corrections.
9	Positive corporate culture	Creating a culture that supports the values of employees, supports openness, innovation and cooperation.
10	Development of leadership skills	Support for the development of leadership skills of employees, which contributes to the improvement of work IT organization and team cooperation.

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