



Менеджмент

УДК 331.101.262

DOI <https://doi.org/10.5281/zenodo.17242579>

**Аналітичні основи використання інформаційних технологій в управлінні
проектами підприємств**

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Прийнято: 15.09.2025 | Опубліковано: 30.09.2025



Анотація: Управління проектами є ключовим елементом успішної діяльності будь-якої організації, оскільки воно охоплює планування, організацію, контроль та аналіз виконання завдань. Використання сучасних інструментів управління проектами дає можливість команді підвищити свою ефективність, оптимізувати процеси, забезпечити досягнення стратегічних цілей у визначені терміни. **Метою** статті є систематизація та узагальнення сучасних інформаційних технологій для проектного управління, аналіз їх ролі у підвищенні ефективності роботи організацій, та окреслення їх переваг для підвищення результативності командної роботи підприємства. **Методи.** У процесі написання роботи застосовувались такі методи: теоретичні (синтез, аналіз, пояснення, узагальнення, класифікація) для систематизації інформаційних технологій управління проектами, емпіричні (опис і спостереження) для обґрунтування напрямів застосування інформаційних технологій управління проектами. **Результати.** Систематизовано інструменти проектного управління. Запропоновано практичні рішення використання інформаційних технологій різними організаціями. Інформаційні технології Microsoft Project, Asana, Trello, Jira забезпечують планування, моніторинг і контроль ресурсів, тоді як методології Agile, Scrum та Lean створюють гнучке середовище для управління змінами та постійного вдосконалення. Не менш важливими є інструменти для комунікації й колаборації, зокрема Slack, Microsoft Teams і Zoom, які підтримують командну взаємодію, а також платформи Miro та Parabol, що сприяють продуктивному проведенню зустрічей і ретроспектив. Ефективне управління знаннями забезпечують Google Workspace і SharePoint, які надають можливість централізованого зберігання документів, організації спільної роботи та створення внутрішніх порталів. Для контролю завдань активно застосовуються Notion, Asana, Monday і Trello, які дозволяють



структурувати робочі процеси та встановлювати пріоритети. Завершальною складовою є аналітичні та звітні системи Power BI і Tableau, що забезпечують візуалізацію даних і підтримку управлінських рішень. У комплексі ці інструменти формують цифрове середовище, здатне автоматизувати рутинні процеси, сприяти прозорості роботи та створювати умови для гнучкого та ефективного управління проектами. **Висновки.** Представлені програмні продукти та методології дають змогу командам працювати злагоджено, швидко реагувати на зміни, оптимально розподіляти ресурси та уникати перевантажень. Це дає змогу не тільки підвищити продуктивність і якість виконання завдань, але і створює умови для прозорості процесів, гнучкого ухвалення рішень і досягнення стратегічних цілей підприємства.

Ключові слова: управління проектами, інструменти, інформаційні технології, ефективність роботи, команда, стратегічні цілі, підприємство.

Analytical basis of the use of information technologies in project management of enterprises

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Abstract: Project management is a key element of any organization's successful operations, as it covers planning, organization, control and analysis of task performance. The **purpose of an article** is to systematize and generalize modern information technologies for project management, to analyze their role in enhancing organizational efficiency, and to outline their advantages for improving teamwork effectiveness of enterprises. **Methods.** In the process of writing the work, the following methods were used: theoretical (synthesis, analysis, explanation, generalization, classification) for the systematization of project management information technologies, empirical (description and observation) for substantiating the directions of application of project management information technologies. **Results.** Project management tools are systematized. Practical solutions for the use of information technologies by various organizations are proposed. Microsoft Project, Asana, Trello, Jira information technologies provide planning, monitoring and control of resources, while Agile, Scrum and Lean methodologies create a flexible environment for change management and continuous improvement. Equally important are communication and collaboration tools, including Slack, Microsoft Teams, and Zoom, which support team interaction, as well as Miro and Parabol platforms that promote productive meetings and retrospectives. Effective knowledge management is provided by Google



Workspace and SharePoint, which provide the ability to store documents centrally, organize joint work and create internal portals. Notion, Asana, Monday and Trello are actively used to control tasks, which allow you to structure work processes and set priorities. **Conclusions.** The final component is the analytical and reporting systems Power BI and Tableau, which provide data visualization and support for management decisions. In the complex, these tools form a digital environment capable of automating routine processes, promoting transparency of work and creating conditions for flexible and effective project management.

Keywords: project management, tools, information technologies, work efficiency, team, strategic goals, enterprise.

Statement of the problem. Effective project management makes it possible to effectively plan, organize and monitor project work. The basic principles of project management cover the definition of project objectives and requirements, plan development and task allocation, risk and communication management, and work performance control and outcome evaluation. Project management programs allow you to set tasks, plan a budget, maintain constant communication with colleagues and customers, ensure risk management, keep time records and properly allocate resources.

Therefore, many project management tools try to provide users with wide functionality, a convenient and intuitive interface [1, с. 247-249]. The organization needs to use special project management tools to structure and track tasks, set deadlines and monitor progress. Such tools and technologies will help automate routine tasks, optimize development processes and increase activity efficiency, set priorities, take into account deadlines to avoid task overload and learn how to effectively allocate time between different tasks.

Analysis of recent research and publications. Kylymenchuk Yu. [2], Vasylenko M. [3] justify the introduction of information technologies in the process of enterprise project management. Aleksieienko I. [4], Leliuk S. [4], Poltinina O. [4]



study information support of project management processes at enterprises. Bronitskyi A. [5], Rudyk V. [5] investigate the use of information technologies to increase the efficiency of business analysis. Kockum F. [6], Dacre N. [6] conduct an overview of project management practices and their impact on achieving the value of information technologies at enterprises. Nelson R. [7] substantiates the process of complex digital transformation, which includes the integration of digital and information technologies into all aspects of product and project management.

Yordanova Z. [8] conducts research on the problem of digitalization of project management, automation of management processes, application of information systems and technologies. Rincon-Guio C. [9], Hernández-Ramírez J. [9], Olguin C. M. [9], Pibaque-Ponce M. S. [9], Baque-Cantos M. A. [9], Santistevan-Villacreses K. L. [9] investigate the impact of information technologies on planning processes, risk management and sustainable development of projects at enterprises. Winasis S. [10], Harlis K. [10], Pradana J. [10] devoted their research to considering critical success factors for IT-oriented project management. Gemino A. [11], Horner Reich B. [11], Serrador P. M. [11] consider different approaches (flexible, traditional and hybrid) leading to success in project management. Gemino A. [12], Reich B. H. [12] analyze program management within the framework of information technology development and digital transformation, consider the new importance of technological architecture, product management and human capital transformation. Kudyba S. [13], Cruz A. D. [13] justify the success of projects related to analytical decision support in the digital era, emphasize information technology and flexible project management. Cooper M. [16] unravels various types of information technologies. Fedorova H. [23] analyzes the impact of information technologies on the level of sales of enterprises.

However, rapid changes, the need to stimulate development, competitiveness, the ability of enterprises to adapt to new problems require applied research in the direction of the development of information technologies in the management of enterprise projects.



Identification of previously unresolved aspects of the general problem.

Despite numerous studies of the features of modern information technologies for project management, a deeper study of the systematization of such information technologies is required. The role of information technologies in increasing the efficiency of enterprises has not been sufficiently analyzed. It is also worth further outlining the advantages of various information technologies for increasing the effectiveness of the company's teamwork.

Formulation of the paper's objectives (task statement). The purpose of an article is to systematize and generalize modern information technologies for project management, to analyze their role in enhancing organizational efficiency, and to outline their advantages for improving teamwork effectiveness of enterprises.

Summary of the main research material. The main tools of project management (table 1).

Table 1

Basic tools of project management

Project management tools	Information technologies and software products
Project management software	Microsoft Project Asana Trello Jira Agile Scrum Lean
Tools for collaboration and communication	Slack Microsoft Teams Zoom
Tools to help during meetings	Miro Parabol
Tools for managing documents and knowledge bases	Google Workspace SharePoint
Task management tools	Notion Asana Monday Trello
Analytical and reporting tools	Power BI Tableau

Source: compiled by the authors



The following project management tools should be highlighted:

1. Project management software:

Microsoft Project is a powerful tool for planning, managing resources and tracking project progress. CHESM (Chornomorenergospetsmontazh) – is a Ukrainian company specializing in the construction of energy facilities. In 2020, they signed a contract for the implementation of the MS Project with LEO Consulting and the very next month conducted training for the entire project management methodology team, started the implementation project and creating provisions [2].

Jira is a popular tool for project management, especially in the Agile environment. According to the Atlassian website, approximately 260,000 customers use Jira for project management. These include Coca-Cola, Netflix, Samsung, NASA, Zoom, Spotify, Amazon and Bloomberg. Jira – is a universal solution chosen by both startups and technological giants [3].

Agile is one of the most popular methodologies, which involves dividing the project into iterations, and then working on each iteration separately, while constantly receiving feedback. The project is implemented in stages with clearly defined goals. When the team completes the iteration, part of the project is passed back to the client, the client provides feedback, and the team improves the iteration based on this feedback. The design team regularly presents versions of the product to the customer, receiving a stream of feedback. The methodology assumes that the project must quickly respond to changes, even by returning to previous stages. Breakdown of work into short iterations allows you to eliminate possible errors that are detected and eliminated on a permanent basis. This way of implementing the project gives the team great flexibility and the opportunity to test the solution in advance.

Scrum is another popular methodology. It is based on the idea of small iterations, as in Agile, only with additional steps. It is based on the assumptions of Agile, where the project is divided into short iterations (sprints). Scrum has additional steps, such as



daily meetings with the team to discuss how the project will be implemented. The method involves setting short-term goals that can help achieve very good results. After one stage is completed, the design team presents the client with a working version of the product (for example, a fragment of the program), and then makes changes or moves on to the next iteration. For example, Scrum means that it is worth holding meetings every day for 15 minutes and discussing the progress of the project. Scrum forces you to set short-term goals and keeps you on track so you can achieve great results faster.

According to the Scrumalliance report, 70% of IT companies use scrum. Among them are such giants as Google, Amazon, Salesforce.com, Microsoft, Adobe [14].

Lean is more of a working philosophy than a methodology. The key idea of Lean's philosophy is to work smarter, not harder. After all, the Lean methodology allows you to take a critical look at your workflow. Lean identifies all the things that must be eradicated from their lives to become productive - Muda, Mura and Muri. Muda is everything that has no value in the work process. It can be inventory, excessive traffic, browsing the web and so on. By eliminating mud, there is an opportunity to make your work so valuable that no one can surpass you.

Top 10 global companies operating according to lean principles: Nike, Kimberley-Clark Corporation, Caterpillar Inc., Intel, Illinois Tool Works, Textron, Parker Hannifin, John Deere, Ford, Toyota [15].

2. Collaboration and communication tools [16]:

- Slack – is a powerful platform that has revolutionized the way teams communicate and collaborate. This tool turns chaotic emails and endless meetings into organized channels where each team member can easily find the information they need and quickly solve tasks. Main functions of Slack:

- Channels are a place to discuss specific topics.
- Direct messages - a private conversation with one or more employees.
- Groups - unification of several channels by topic.



- Files - storage and exchange of files of various formats.
- Search - quick search for information throughout the message history.
- Integrations - connection with other tools.

- Microsoft Teams - an integrated platform for teamwork, including chats, video conferencing and document collaboration.

- Zoom - a tool for video conferences and online meetings.

3. Tools to help during meetings. When working on a project, it is very important to meet online regularly or participate in workshops to improve your work. Various tools are used for this. Among the most popular are Miro and Parabol [17].

- Miro is an online collaboration tool that combines virtual whiteboards, drawing tools, diagrams and elements to work together on the same platform. It is designed with creative teamwork in mind. Miro allows users to create interactive whiteboards, add notes, draw and work together on a variety of projects. Advantages offered by Miro:

- Virtual Creative Boards - Miro offers virtual boards where teams can create mental maps, charts and prepare project concepts.

- Real-time collaboration - The tool provides real-time collaboration, allowing teams to work in sync even if they are geographically distributed.

- Visual elements and diagrams - a variety of visual tools, such as diagrams, sketches and shapes, facilitate the expression of ideas and the analysis of projects.

- Parabol is a tool that helps teams organize and conduct effective meetings, especially those related to retrospect. It allows you to collect feedback, identify areas for improvement and monitor the progress of corrective actions. Benefits offered by Parabol:

- Team meetings - Parabol focuses on organizing retrospective meetings and enables teams to reflect on project progress and identify areas for improvement.

- Feedback collection - facilitates the collection of feedback from team members, thus helping to identify strengths and areas for further development.



- Corrective Action Planning - Parabol allows you to create corrective action plans, monitor the progress of actions and monitor the effectiveness of changes made.

4. Tools for managing documents and knowledge bases [18]:

- Google Workspace - a set of tools for creating documents, spreadsheets, presentations and working on them together. The main components of Google Workspace:

- Gmail - e-mail with powerful search, filters and integration with other Google services.

- Google Drive - cloud storage for storing and sharing files.

- Google Docs, Sheets, Slides - tools for creating and editing documents, spreadsheets and presentations in real time.

- Google Meet - a video conference service for holding online meetings.

- Google Calendar - calendar for planning meetings and events.

- Google Chat is a tool for instant messaging and chat collaboration.

- Google Contacts - contact information synchronized with other Google services.

- Google Sites - a platform for creating internal websites and portals.

- SharePoint is a powerful platform from Microsoft, designed for organizing joint work, managing documents, creating intranet portals and automating business processes. It offers a wide range of functionality that helps companies work effectively and exchange information. SharePoint's main features:

- Document management - centralized storage, versioning, search and sharing of documents.

- Creation of intranet portals - development of internal websites for the exchange of information, news and resources.

- Team sites - create spaces for collaboration between teams, including file sharing, discussions and calendars.

- Automation of business processes - creation of workflows to optimize approval, approval and other actions processes.



- Social interaction - support for the exchange of messages, blogs, evaluations and other formats of social interaction.

- Integration with Microsoft 365 - seamless work with other Microsoft products such as Word, Excel, PowerPoint and Outlook.

5. Task management tools. Every employee, working on a project, should know what tasks he should perform and in what order. If you succeed in project management, you should start by identifying and setting priorities. These include:

- Notion is a versatile tool that goes beyond traditional project management tools. It's a combination of a notes app, a knowledge base, a calendar, and collaborative tools. Notion allows users to create personalized databases, project structures, and meaningful notes. Benefits offered by Notion include:

- Versatility - Notion is flexible and adapts to different work styles, so employees can adapt it to their needs.

- Cooperation - the tool provides easy joint work and also allows teams to work on the project in one place.

- Rich content - the application allows you to create content in various formats - from text and tables to multimedia files.

An example for Notion is Atlassian, a software company with an annual turnover of \$3.9 billion (2023), which became a major working tool, initially attracting small user groups in large organizations [19].

- Asana allows you to create tasks, assign them to specific people, schedule deadlines and track project progress. It was designed with simplicity and transparency in mind, making it a popular choice among organizations. Benefits offered by Asana include:

- Intuitive interface - a simple and intuitive interface allows you to quickly understand the system and effectively manage projects.

- Task Planning - Asana offers planning tools, you can easily schedule tasks and additionally track work progress and deadlines.



- Team collaboration - communication functions simplify team collaboration and communication, even for very complex projects.

Companies such as Google, Uber, Deloitte, Vodafone, Spotify, PayPal, SoftServe and Avon rely on Asana to digitally transform the company [20].

- Monday focuses on data visualization and ease of use. It allows you to create project diagrams, track tasks and work processes, and analyze team performance.

Among the advantages offered by Monday, the following can be distinguished:

- Project Visualization - Monday allows you to create colored project boards, which facilitates visual tracking of project progress.

- Easy setup - the tool is easy to set up. Teams can quickly adapt it to their needs.

- Performance Analysis - Monday offers tools for project performance analysis.

Teams will constantly improve their working methods.

The tool is used by companies from various industries and sizes, from startups to large corporations, to solve a wide range of tasks [21].

- Trello is a tool based on the concept of the kanban board that allows users to create task cards, organize them into lists and move between them at different stages of the project. Due to its simplicity and flexibility, Trello is widely used for both business applications and personal projects. Benefits offered by Trello:

- Kanban board - the concept of Kanban board is intuitive and allows you to visually monitor the progress of tasks. Kanban is another technique that can be applied to any area of business. The Kanban board, originating in Japan, is used to visually divide the project into tasks and check the status of each task. The Kanban board usually consists of three segments: «To Do», «In Progress» and «Done», but how the manager organizes and names the segments depends solely on him. It is worth placing tasks in the appropriate segments and moving tasks from one segment to another.

- Ease of use - Trello is very easy to use, which means that it is possible to quickly start using the tool without the need for long training.



- Flexibility - with tabs, lists and boards, users can adapt Trello to different types of projects - from simple to more complex.

Thousands of companies use Trello every day, including Palace Law, Instinct, Scan2Cad, SwagUp, UNICEF, Burgerfi, DoSomething.org, McCorvey [22].

6. Analytical and reporting tools:

- Power BI is a tool for visualizing data and creating interactive reports. With Power BI, Britain's Marks and Spencer controls the supply chain, Romania's Profi network has streamlined staff operations, and Maldivian Sonee Sports is ahead of the competition [23].

- Tableau is a platform for data visualization and business analytics. The ASBIS-Ukraine company together with the Vizutors company (BI division of the ASBIS Group) represent the leader in the market of BI technologies –, the Tableau software platform, which is a modern set of tools for Business Intelligence specialists. Implementation and use of Tableau allows businesses to achieve great results in a short time, see and analyze their data, find new competitive advantages [24].

Conclusion. Effective project management is impossible without the use of modern tools that provide planning, control, communication and analytics at all stages of work. The presented software products and methodologies enable teams to work in a coordinated manner, respond quickly to changes, optimally allocate resources and avoid overload. The use of such systems as Microsoft Project, Jira, Asana, Trello, Notion, Monday, in combination with platforms for communication (Slack, Microsoft Teams, Zoom), organization of meetings (Miro, Parabol), knowledge and document management (Google Workspace, SharePoint), as well as analytical services (Power BI, Tableau) forms a comprehensive environment for project activity support. This allows not only to increase productivity and the quality of tasks, but also creates conditions for transparency of processes, flexible decision-making and achievement of strategic goals of the organization.



References

1. Юринець З. В. Формування інноваційних стратегій: теорія, методологія, практика. Монографія. Львів: СПОЛОМ, 2016. 412 с.
2. Килименчук Ю. Впровадження MS Project та Microsoft 365 для ЧЕСМ. Leo Consulting. 2023. URL: <https://leoconsulting.com.ua/case-chesm>
3. Васильченко М. Що таке Jira і для чого вона потрібна. GOIT. 2024. URL: <https://goit.global/ua/articles/shcho-take-jira-i-dlia-choho-vona-potribna>
4. Aleksieienko I., Leliuk S., Poltinina O. Information and communication support of project management processes and enterprise value. *Development Management*. 2020. Vol.18(3). P. 1-13.
5. Броніцький А., Рудик В. Використання інформаційних технологій для підвищення ефективності аналізу бізнес-діяльності. *Актуальні проблеми економіки*. 2025. Vol. 4 (286). С. 21-30.
6. Kockum F., Dacre N. Project Management Volume, Velocity, Variety: A Big Data Dynamics Approach. *SSRN Electronic Journal*. 2021. Vol. 21. P. 1–6
7. Nelson R.R. Transforming to Digital Product Management. *MIS Quarterly Executive*. 2024. Vol. 23. P. 1–18
8. Yordanova Z. Digitalization of Project Management—A Bibliometric Analysis. In *Marketing and Smart Technologies*; Springer: Berlin/Heidelberg, Germany, 2025, P. 57–68
9. Rincon-Guio C., Hernández-Ramírez J., Olguin, C. M., Pibaque-Ponce M. S., Baque-Cantos M. A., Santistevan-Villacreses K. L., et al. A systematic literature review on advances, trends and challenges in project management and Industry 4.0. *Logforum*. 2023. Vol. 19(2). P. 225-244.



10. Winasis S., Harlis K., Pradana J. Information Technology Based Project Management: Critical Success Factors and Indicators of Success. *Dinasti International Journal of Digital Business Management*. 2024. Vol. 5(6). P. 1157-1162
11. Gemino A., Horner Reich B., Serrador P. M. Agile, traditional, and hybrid approaches to project success: is hybrid a poor second choice? *Project Management Journal*. 2021. Vol. 52(2). P. 161-175.
12. Gemino A., Reich B.H. Program management within digital transformation: the emerging importance of technology architecture. Product management, and human capital transformation. *Project Management Journal*. 2023. Vol. 54. P. 447–457.
13. Kudyba S., Cruz A.D. Understanding project success involving analytic-based decision support in the digital era: A focus on IC and agile project management. *Journal of Intellectual Capital*. 2023. Vol. 24. P. 1429–1446.
14. Scrum чи не-Scrum – який підхід обрати? Worksection. 2017. URL: <https://worksection.com/ua/blog/scrum.html> (дата звернення: 4.08.2025)
15. Топ-10 світових компаній, які працюють за принципами Lean. UFUTURE. 2018. URL: <https://ufuture.com/uk/top-10-svitovih-kompanij-yaki-pratsyuyut-za-printsipami-lean> (дата звернення: 11.08.2025)
16. Cooper M. Team Collaboration Tools: Slack, Microsoft Teams, Zoom, and Google Workspace. Taazaa. 2024. URL: <https://www.taazaa.com/team-collaboration-tools>
17. 10 Best Collaboration Tools for Remote Teams in 2025. Vantage Circle. 2025. URL: <https://www.vantagecircle.com/en/blog/remote-collaboration-tools> (дата звернення: 13.08.2025)
18. Microsoft SharePoint vs. Google Drive. JourneyTeam. 2024. URL: <https://www.journeyteam.com/resources/blog/microsoft-sharepoint-vs-google-drive> (дата звернення: 16.08.2025)



19. Як Іван Чжао веде Notion до перемоги над Google та Microsoft. Sikorsky Challenge. 2024. URL: <https://blog.sikorskychallenge.com/2024/08/Yak-Ivan-Chzhao-vede-Notion-do-peremohy-nad-Google-ta-Microsoft.html> (дата звернення: 21.08.2025)
20. Asana. Cloudfresh. URL: <https://cloudfresh.com/ua/produkty/asana> (дата звернення: 3.08.2025)
21. Asana чи Monday: Детальне Порівняння (2024). Cloudfresh. 2024. URL: <https://cloudfresh.com/ua/cloud-blog/asana-vs-monday-yaka-platforma-upravlinnya-proektamy-pidijde-vam-bilshe> (дата звернення: 1.08.2025)
22. Приклади практичного використання Trello клієнтами. Atlassian Trello. 2023. URL: <https://trello.com/uk/customers> (дата звернення: 2.08.2025)
23. Федорова Х. Три історії про ритейл. Як компанії працюють з Power BI та збільшують продажі. Kyivstar Business Hub. 2023. URL: <https://hub.kyivstar.ua/articles/try-istoriyi-pro-rytejl-yak-kompaniyi-praczuuyut-z-power-bi-ta-zbilshuyut-prodazhi>
24. TABLEAU – передова BI-Технологія в портфелі АСБІС-Україна. ASBIS. 2019. URL: <https://news.asbis.ua/press/tableau-peredova-bi-tehnologiya> (дата звернення: 21.08.2025)