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## DECISION SUPPORT SYSTEMS IN IT PROJECT MANAGEMENT

In the 21st century, IT project management has become one of the most important aspects of business. With the development of technology and the increase in the amount of information, there was a need for systems that help in making informed decisions, in particular, decision support systems (SPPR).

Decision Support Systems are, in fact, powerful tools in the field of IT project management.

They help managers make rational, informed decisions.

After all, these solutions are based on analyzing large volumes of data, modeling scenarios and using algorithms to improve quality in complex environments.

In IT DSS are integral tools that leverage data analytics, machine learning,

The topicality of the topic is due to dynamic changes in the world of technology, the need for rapid adaptation to new conditions, and the complexity of projects. SPPR systems are capable of increasing the effectiveness of management decisions, which is critical for achieving success.

The purpose of the study is to analyze modern decision support systems in the field of IT project management, determine their effectiveness and develop recommendations for their implementation in organizations, IT companies...

The main idea of the work is that SPPR-s can significantly improve the quality of decision-making, reducing the influence of subjective factors and increasing the accuracy of data analysis. Arguments include:

1. Data analysis: SDS allows for in-depth analysis of information, which contributes to the identification of certain logical trends and regularities that can be systematized.

2. Reduction of risks when making decisions.

3. Optimizing the use of resources.

4. Increasing the speed of reaction to changes in the project environment.

5. As a result, - improved cooperation, because the SPPR-s contribute to better communication between project participants, which leads to more coordinated management.

The justification of the topic is based on the need to improve management processes in conditions of dynamic changes. The use of ERP allows organizations to adapt to new challenges and competitive conditions through the introduction of the latest technologies and tools for project management, providing better and faster solutions.

Main theses:

1. System Integration: ERP systems connect with others for better project management.
2. Risk Planning: Modeling helps prepare for risks.
3. Cost reduction by optimizing resources.
4. Data Insights: DRM tools analyze data to find hidden patterns.

The research is based on the analysis of practical cases from companies that use the ERP system, as well as on the literature covering the topics of project management, data analysis and decision-making systems. Sources used include scientific articles, books and studies in the field of IT.

Therefore, decision support systems play a key role in IT project management, increasing their efficiency and reducing risks. The implementation of such systems can be an important step towards the successful implementation of projects in the modern business environment.

**References**

1. Project Management Institute (PMI). (2020). Pulse of the Profession report.

2. Shafique, M., & Khan, F. (2018). "Decision Support Systems: A Review". *Journal of Engineering Science and Technology*, URL: https://jestec.taylors.edu.my/ (Accessed: 15.11.2024).

3. Opara, E., & Eze, S. (2019). "The Role of Decision Support Systems in Project Management". *International Journal of Project Management.*

4. Gremyachev, V. (2019). «Intelligent Decision Support Systems in IT Project Management.» Springer. URL: https://www.researchgate.net/publication/234790029_Intelligent_Decision_Support_Systems (Accessed: 15.11.2024).

5. Ivanov, S. (2022). "Application of Decision Support Systems in IT Project Management". Dissertation, University of Technology.

6. Atlassian. (2024). Jira for project management. URL: https://www.atlassian.com/software/jira (Accessed: 15.11.2024).

7. Trello. (2024). Overview and features. URL: https://trello.com (Accessed: 15.11.2024).