

Areas of application and benefits:

- For researchers and scientists – fast access to structured data and automated analysis of large literature sets.
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- For educators and postgraduate students – help prepare lectures, seminars and academic courses using the latest research.
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- For academic institutions – improving efficiency in working with scientific literature, minimising routine tasks and integrating AI into research processes.
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Conclusion. SciSpace is not just a search tool, but a powerful AI assistant that optimises scientific workflows. Thanks to its "Chat with PDFs" feature, interactive search, automatic summarisation and citation analysis, researchers can process scientific texts much faster and focus on what really matters – data analysis and knowledge creation.

References:

1. Elsevier [Electronic resource] // <https://uk.wikipedia.org/wiki/Elsevier>. — 2025. — Resource access mode: <https://uk.wikipedia.org/wiki/Elsevier>.
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DEVELOPMENT OF RESOURCE MANAGEMENT INFORMATION SYSTEM

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Problem Statement. Project resource management during a crisis requires the usage of modern approaches that can combine flexibility and efficiency of resource management.

Analysis of the existing human resource management information systems proves that most of them support accounting functions, but do not take into account the specifics of project activities and the need for flexible redistribution of resources between elements of a multi-project environment [1-2].

Objectives. The objective of the study is to develop an information system for managing resources for a project-oriented company.

Methods. The information system being developed is based on project, process, and competency approaches, as well as methods for forming a project team, taking into account limitations and assumptions [3-5].

Results. The information system should provide resource management at different stages of the project life cycle and integrate with other systems of a project-oriented company.

If the company has multi-project management, the system should support work with a resource pool and redistribution of resources between projects in the environment. The main modules of the resource management system are listed in Table 1.

Table 1

Resource management information system modules

Modules	Description
Requirements	Determining resource requirements, taking into account limitations and assumptions
Priority	Prioritizing resource allocation between tasks in a project and between projects in a multi-project environment.
Cost	Determining the cost of resources, specific features of financing
Terms	Development of a schedule for attracting resources to the project
Changes	Development of a change management system
Risks	Development of a risk management system
Resource pool	Determining information on available and accessible resources of a project-oriented company
Team	Forming a project team taking into account constraints and assumptions
Critical competencies	Formation of a critical competencies register, definition of a competencies profile

When determining the priority of resources allocation, it is advisable to use the analysis of critical competencies to ensure the stable functioning of a project-oriented company.

Critical competency management involves a set of measures:

- analysis of the hierarchical structure of project work;
- analysis of the hierarchical structure of project resources;
- identification of critical competencies;
- defining the critical competencies parameter;
- forming a profile of critical competencies;
- monitoring qualitative and quantitative changes in the profile of critical competencies;
- updating the profile of critical competencies.

Cost optimization in project resource management can be achieved by creating functionally-reserved teams and distributing resources based on priorities.

Conclusions. The usage of information technologies will reduce the influence of the subjective factor and will allow to increase the efficiency of human resources management of projects. The proposed information system can be adapted to various types and sizes of projects as well as requirements for resource provision.

References:

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3. HR trends report 2024. MCLEAN&COMPANY URL: <https://hr.mcleanco.com/research/ss/hr-trends-report-2024>
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3D PRINTING WITH CONCRETE: ACHIEVEMENTS AND FUTURE CHALLENGES

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The technology of 3D concrete printing has emerged as one of the most promising trends in modern construction. It enables the erection of structures through the sequential layering of a specialized concrete mixture in accordance with a digital model, eliminating the need for traditional formwork. Over the past decade, this technology has evolved from experimental projects to commercial applications, demonstrating significant potential for revolutionary changes within the construction industry.

3D concrete printing is based on the extrusion method. A specialized printer, equipped with a movable head, deposits the concrete mixture layer by layer (Fig. 1) following a computer-generated 3D model. The primary components of such a system include:

- A robotic manipulator or a gantry structure that enables movement along three axes;
- A concrete delivery system comprising pumps, hoses, and nozzles;
- Software for managing the printing process;
- Specialized fast-setting concrete mixtures with additives.