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SCRUM METHOD AND AGILE BUSINESS-PROJECT MANAGEMENT METHODS

With the continuous development of information technology, the frequency of iterations of requirements during software development for IT projects has increased significantly.

Currently, the latest technologies such as big data and cloud computing, which have mature applications in smart transportation and energy management, are accelerating their penetration into the water management industry, stimulating the intelligent modernization of traditional water management facilities [1].

As a high-tech enterprise [2] in Ukraine, OPI uses a matrix organizational structure, where its software development department is the main unit responsible for comprehensive management from requirements analysis to system delivery. Its Technology Management Center includes agile development teams, a data analysis lab, and a quality assurance department, forming a closed-loop «requirements-development-validation» management system.

Guided by national policies and industry requirements, OPI continues to enhance its core competitiveness through agile transformation [4].

Its «business technology two-way iteration» model, developed on the basis of the SCRUM framework, was validated within the framework of the Smart Water project in the Chernivtsi region, improving the speed of response to demand by 50% and reducing the cost of eliminating defects by 35%. In the future, OPI plans to expand its business into advanced industries such as digital twin water conservation centers and AI-based decision-making, helping Ukraine achieve rapid development from «traditional water conservation» to «smart water conservation».

OPI is a high-tech enterprise controlled by a state-owned enterprise specializing in water informatization and intelligent solutions, 70% of whose revenues come from IT projects, faced the problem of low efficiency of IT projects due to changes in external conditions.

The purpose of this study is to promote the successful implementation of agile project management based on the Scrum method from OPI, to solve the problem of low efficiency in the implementation of IT projects, to study the integration of agile methods into the company's management processes to promote the formation of an agile organizational culture at all levels, to check the effectiveness of OPI's agile processes of organization and development in adapting to changes in the external environment and optimizing management processes projects, as well as a generalization of implementation experience for use as a guide for the flexible transformation of other similar enterprises.

The study is devoted to the implementation of agile transformation based on the Scrum method in project management of the OPI software development department and its practical significance, namely the study of the effect of implementing the Scrum agile development method in the project management process of the OPI software development department.

The object of this study is OPI, as well as the IT project management process of its software development department and the practice of agile transformation through the implementation of agile software development methods, in particular, the Scrum method.

It is assumed that the study may use a case-based method that tracks, analyzes, and summarizes

the process of implementing agile project management by implementing the Scrum method in OPI's software department, including the study of internal company data and interviews with management and project team members.

The following key areas for research can be highlighted:

1. Agile Knowledge Domains: deepen research on scope, quality, risk and performance management within SCRUM, integrate the fundamentals of the Project Management Body of Knowledge (PMBOK) to develop agile-specific knowledge areas, which will allow the use of agile practices for large and complex projects;

2. Agile Application Management: for large projects consisting of several sub-projects, multi-team SCRUM collaboration needs to be explored.

Thus, this research lays the foundation for the agile transformation of OPI, but continuous improvement and expansion of agile practices will be essential to support improvements and adapt to changing project requirements.

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