У такий спосіб запропонована гра поєднує динамічний геймплей жанру метроїдванія з глибоким культурним зануренням. Вона не лише розважає, а й формує повагу до національної спадщини, а образ двоєдушника виступає символом тонкого зв'язку між матеріальним і духовним, між реальним і уявним. Цей герой дозволяє розкрити теми потойбіччя, духовності, внутрішньої боротьби та ініціації, які є наскрізними у традиційній українській картині світу.

Сподіваємось, що оригінальна гра в жанрі метроїдванії заснована на української міфології стане привабливою для широкого кола гравців, як в Україні, так і закордоном. І таким чином багатий світ давніх вірувань, обрядів і уявлень, що формували духовний світ українців упродовж століть, не лише отримає популяризацію, а й стане фундаментом для новітнього культурного спадку, який формують, зокрема, комп'ютерні ігри.

СПИСОК ВИКОРИСТАНОЇ ЛІТЕРАТУРИ

1. "The Witcher Universe | Action-Adventure RPGs" [Online]. Available: https://www.thewitcher.com/ua/en/
2. "Assassin's Creed Franchise | Ubisoft" [Online]. Available: https://www.ubisoft.com/en-gb/game/assassins-creed
3. "Metroidvania" [Online]. Available: https://en.wikipedia.org/wiki/Metroidvania
4. "The most powerful real-time 3D creation tool" [Online]. Available: https://www.unrealengine.com/en-US

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IMPLEMENTATION OF FLEXIBLE PROJECT MANAGEMENT METHODS BASED ON THE SCRUM METHOD

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It is emphasized that today requires a significant increase in software efficiencyfor IT projects. The analysis showed that currently agile software development methods have taken a key place in IT projects. Obstacles to agile transformation, which mainly concern small and medium-sized enterprises, are considered. The purpose of the study is determined, namely, to promote the successful implementation of agile project management based on the Scrum method, to study the integration of agile methods into the management processes of OPI to promote the formation of an agile organizational culture at all levels, to verify the effectiveness of agile processes of organization and development of OPI in adapting to changes in the external environment and optimizing project management processes. The experience of implementing agile transformation for other similar enterprises is summarized.

Statement of the problem.

With the continuous development of information technology, the frequency of requirements iterations during software development for IT projects has increased significantly. Agile software development has taken a key place in IT projects of large enterprises, but some small and medium-sized enterprises have encountered obstacles to agile transformation, failing to meet expectations. OPI is a high-tech enterprise controlled by a state-owned enterprise specializing in water management informatization and intelligent solutions, 70% of whose revenue comes from IT projects, and has encountered the problem of low efficiency in implementing IT projects due to changing external conditions. In this regard, senior management was forced to plan the implementation of agile development methodology in the project management process in the software development department.

The purpose of this study is to promote the successful implementation of agile project management based on the Scrum method by OPI, to address the problem of low efficiency during 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 verify the effectiveness of the agile processes of the organization and development of OPI in adapting to changes in the external environment and optimizing project management processes, and to summarize the implementation experience for use as a guide for the agile 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 software development department of OPI and its practical significance, namely, to study the effect of implementing the Scrum agile development method in the project management process of the software development department of OPI.

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 envisaged 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 the software department of OPI, including studying internal company data and interviews with management and project team members.

Presentation of the main material.

It is expected that through this research, OPI will be able to successfully apply the Scrum method to project management in the software development department, solve the problem of inefficient implementation of IT projects, and create an agile organizational culture in the company.

The project management process will be continuously improved, which will allow the company to produce higher-quality software products, provide greater value to customers, and increase customer satisfaction. In addition, the generalized implementation experience can serve as an example for other enterprises undergoing similar agile transformation.

In the context of the accelerated digital transformation and industrial modernization of Ukraine, the deep penetration of information technology is constantly stimulating intellectual demand in the water industry, creating a broad market space for local software enterprises.

The Ukrainian government has clearly identified water management informatization as a priority area of development through policy documents such as the National Strategy for Digital Transformation (2020-2024) and the Vision for Water Management Development (2020-2030), promoting technological modernization in the industry through measures such as tax incentives and special funds.

According to statistics from the Ukrainian Association of Software Developers, the size of the country's software industry market in 2023 exceeded $2.5 billion, with solutions related to water management informatization accounting for 18% of this total, making it one of the fastest growing market segments. The Ministry of Water Resources of Ukraine, in its “Roadmap for the Development of Smart Water Conservation”, emphasizes the need to build a full-chain data-driven digital system covering water resources management, flood control planning and agricultural irrigation.

For example, the Water Conservation Data Center project in Kyiv region has achieved real-time hydrological basin data collection and intelligent analysis through the integration of satellite remote sensing, Internet of Things monitoring and other technologies, which has improved the efficiency of water resource allocation by 30% and set a benchmark for the informatization of water conservation in Ukraine.

At present, new 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 conservation industry, stimulating the intelligent modernization of traditional water conservation 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 laboratory, and a quality assurance department, forming a closed-loop management system of “requirements-development-validation”.

In recent years, OPI has reduced project implementation cycles to 60% of traditional models and increased customer acceptance to 92% by implementing DevOps continuous integration tool chains, establishing itself as a technology leader in the water management informatization sector of Ukraine [3].

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 based on the SCRUM framework, was validated within the "Smart Water" project in Chernivtsi region, improving demand response speed by 50% and reducing defect removal costs by 35%.

In the future, OPI plans to expand its business into cutting-edge areas 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".

Among the various agile approaches, the SCRUM method is the most popular, widely used by large Internet and software companies.

However, it should be noted that there is a significant phenomenon of misuse of agile methods, as many companies misinterpret agility as simply "speed" and do not recognize that, like all standard development processes, its ultimate goal is to make development manageable and ensure project success [5].

The agile organization based on SCRUM effectively solves structural problems in OPI's software projects.

The new agile structure emphasizes continuous improvement, where team capabilities, culture, and overall quality develop throughout the project.

Replacing the cascade lifecycle with an agile process (iterative development, incremental delivery) allows for faster delivery of high-quality products, reduces lead times, and significantly increases customer satisfaction.

Conclusions.

The successful implementation of the OPI flexible model offers the following important conclusions:

1). Pilot Project Selection: Select the first agile project based on four criteria: appropriate importance, sufficient visibility, manageable scale, and measurable results;

2). Transition Management: Create an agile transformation team to support process changes, ensure smooth implementation, and align with organizational goals.

Future research and practical use of the case project are envisaged.

While this case study confirms the effectiveness of agile methodologies (driven by senior management and the Change Committee), further efforts are needed to implement agile as a core management culture.

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 Project Management Body of Knowledge (PMBOK) framework to develop agile-specific knowledge domains that will enable agile practices to be used for large and complex projects;

2) Agile program management: for large projects consisting of multiple subprojects, it is necessary to explore SCRUM multi-team collaboration.

Since agile emphasizes small, focused teams, OPI should explore how to coordinate multiple SCRUM teams to implement complex programs, maximizing the value of agile at scale.

Thus, this research lays the foundation for an agile transformation of OPI, but continued refinement and expansion of agile practices will be essential to sustain improvements and adapt to changing project requirements.

REFERENCES

1. Abrahamsson P. Agile Software Development Methods: Review and Analysis / P. Abrahamsson, O. Salo, J. Ronkainen, et al. // 2017. [Electronic resource]. – Access mode : https://doi.org/10.48550/arXiv.1709.08439.

2. Bardsiri V. K. A Flexible Method to Estimate the Software Development Effort Based on the Classification of Projects and Localization of Comparisons / V. K. Bardsiri, D. N. A. Jawawi, S. Z. M. Hashim, et al. // Empirical Software Engineering 2014 19(4): 857-884. [Electronic resource]. – Access mode : https://doi.org/10.1007/s10664-013-9241-4.