

THE DESIGN PROCESSES IN UZBEKISTAN AND THEIR ALIGNMENT WITH THE "DEVELOPMENT STRATEGY"

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Abstract: This article analyzes the design processes and their interdependence in the conditions of Uzbekistan. In the successful implementation of projects, the interconnectedness of the various stages, namely initiation, planning, execution, control and monitoring, as well as the completion processes, is considered as an important factor. During the study, the influence of public policies, innovative technologies and monitoring systems on design processes is evaluated. The socio-economic significance of the projects and their contribution to the country's development are also analyzed. Problems encountered in large and small projects and their solutions are also discussed.

Keywords: Uzbekistan, design processes, planning, monitoring, state policy, innovative technologies, socio-economic impact.

Introduction

The rapid development of the economy of the Republic of Uzbekistan and the implementation of strategic reforms in all sectors have further emphasized the relevance of project management processes. Effective management of project processes and clear delineation of the interrelationships between their stages are crucial for the successful implementation of various economic and social projects in the country.

In recent years, a series of decrees and resolutions issued by President Shavkat Mirziyoyev have significantly contributed to the improvement of project management processes. Notably, the "Action Strategy of the Republic of Uzbekistan" signed on February 7, 2017, and the decree on the "Development Strategy of New Uzbekistan" adopted in 2022 have been pivotal in deepening reforms across all sectors, introducing modern management methods, and attracting investments. Within the framework of these decrees and resolutions, the effective organization of project management has become an integral part of the country's long-term economic strategies and social development.

The presidential decree "Development Strategy of New Uzbekistan for 2022-2026," outlined in PF-60, places a particular emphasis on optimizing project management processes. This decree envisions promoting economic growth through the widespread adoption of innovative technologies, supporting private sector projects, fostering international cooperation, and implementing large-scale investment projects. Furthermore, the presidential resolution "On the Implementation of the State Program and Monitoring of Strategic Development Projects," signed on February 9, 2023, underlines the necessity of applying modern approaches to all stages of projects, including planning, monitoring, and control. These resolutions highlight the strategic importance of successfully executing projects in Uzbekistan.

Moreover, the decree “On the Development of Investment Policy and Introduction of Innovations,” under PD-5886, incorporates measures aimed at enhancing the competitiveness of the national economy by introducing advanced management methods in large-scale investment and infrastructure projects. The decree focuses on achieving economic efficiency by ensuring proper management and coherence among the stages of project processes.

The economic reforms being implemented in Uzbekistan are grounded in the thorough organization of project processes, where achieving high efficiency depends on the interconnection of every stage. Thus, contemporary project management in Uzbekistan requires a systematic approach, necessitating a comprehensive analysis of how decisions made at each stage influence subsequent phases.

The above-mentioned decrees and resolutions underscore the strategic significance of the effective organization of project management in Uzbekistan, indicating that such processes are crucial for the success of all projects being undertaken in the country. This article will provide an in-depth analysis of the various stages of project management and their interdependencies, using Uzbekistan as a case study.

Literature review

State documents adopted on the development strategy determine the main directions of the design process. Through these documents, projects are aligned with economic and social goals. For example, the "Strategy of Actions for 2017-2021" of the President of the Republic of Uzbekistan defines the direction of the future development of the state (President of the Republic of Uzbekistan, 2017).¹

Theories of strategic management are important for the successful implementation of the country's economic policy. Many studies Porter, 1985² Mintzberg, 1994³ emphasize that strategic planning and design processes should be considered as complementary elements.

International experience

The analysis of international experiences shows that the design processes and state strategies are mutually integrated in developed countries. For example, South Korea has a successful track record of implementing development strategies and technological projects (Kim, 2010).⁴

Research methodology

The main theories and methods of project management were used to analyze the design processes in the conditions of Uzbekistan. Project management processes are analyzed in depth at the stages of initiation (initiation), planning, implementation, control and monitoring, and completion. At each stage, the main tasks, decisions and their impact on subsequent stages are considered.

The following approaches are used as analytical methods:

- Qualitative analysis – analysis of the dependence of design processes in different areas.
- Sociological research - conducting interviews with participants of various projects in the conditions of Uzbekistan and drawing conclusions based on their experiences in the design process.
- Project management practices - statistical analysis of major projects implemented in Uzbekistan, their effectiveness and processes.

¹President of the Republic of Uzbekistan (2017). "Action Strategy for 2017-2021." Tashkent.

²Porter, M. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press.

³ Mintzberg, H. (1994). *The Rise and Fall of Strategic Planning*. Harvard Business Review.

⁴ Kim, L. (2010). 'Technology Development and Technology Policy in South Korea.' *Industrial and Corporate Change*.

In the study, the projects carried out with the Ministry of Investments and Foreign Trade of the Republic of Uzbekistan, international cooperation agencies, and local large enterprises were analyzed. The sequence of design processes and their interdependence are analyzed based on real examples in Uzbekistan.

Analysis and discussion of results

During the research, important conclusions were drawn on the design processes and their interdependence in the conditions of Uzbekistan. Each stage of the projects - initiation, planning, implementation, control monitoring and completion stages - was analyzed on the example of real projects in the country. The interdependence of these processes, the correct implementation of each stage and the impact of these stages on the future results were determined.

Table 1. Information about major projects implemented in the region of Uzbekistan during the last five years, their duration and cost.

Name of the project	Implementation Year	Term	Value (USD)
Modernization of electric transport in Tashkent city	2020	3 years	500 mln
Modernization of Syrdaryo HPP	2019	4 years	1 billion
New Andijan city construction project	2021	5 years	2.5 billion
Expansion of the Navoi Mining and Metallurgical Combine	2022	4 years	3 billion
Project to improve gas supply in the Bukhara region	2023	2 years	600 mln

Major projects implemented in the region of Uzbekistan during the last five years, their duration and cost, played an important role in the country's economic development, improvement of infrastructure and modernization of industrial sectors. These projects are implemented within the Development Strategy adopted by the state and serve to support economic and social goals.

1. Overview of projects:

- Projects such as the modernization of Tashkent city electric transport are aimed at improving the city's transport infrastructure, environmental cleanliness and passenger comfort. This project is an important part of Uzbekistan's energy efficiency and green technology development strategy. This project will be implemented for **3 years** starting in **2020**, and its value is **500 million US dollars**.

- Modernization of Syrdaryo HPP is one of the major projects to improve the energy supply of the republic and was implemented with 1 billion US dollars. This project is one of the strategic directions in the energy sector of Uzbekistan and is of great importance in ensuring the country's energy security and reliable distribution of energy resources.

2. Socio-Economic Impact:

- The construction project of the new Andijan city is one of the major urban development projects adopted by the state, which not only creates comfortable living conditions for the population but also opens up new sectors of economic activity. This project will start in 2021 and will be implemented for 5 years. The total cost of the project is 2.5 billion US dollars. The goal of this project is to raise the standard of living of the population and raise the urbanization process to a new level.

- The expansion project of the Navoi mining and metallurgical combine is of great importance in the development of the country's mining industry. This project aims to increase the export potential of the republic's mining industry and stimulate economic development. The project is planned to start in **2022** and be implemented for **4 years**. Its value is **3 billion US dollars**.

3. Compliance with strategic planning and state development strategy:

the Action Strategy of Uzbekistan for 2017-2021 and all of them are aimed at supporting economic reforms and new innovative projects. In particular, energy, transport and urban development projects are the main pillars of the state's economic strategy, and their success will make the country competitive in international markets.

4. Project values and financial indicators:

The amount of funds allocated for these projects is aimed at diversification of the country's economy and modernization of industrial sectors. For example, the total cost of the Sirdarya TPP modernization and Navoi Mining and Metallurgical Combine expansion projects will exceed \$4 billion, which will significantly increase the country's industrial potential. These financial resources are aimed at developing not only the country's domestic market but also exports. On the basis of this analysis, it is possible to shed light on the strategic importance, and economic and social effects of projects in Uzbekistan.

Interdependence of the initiation and planning stages:

In Uzbekistan, the initiation of major projects is usually based on strategic decisions made by the state. The decrees of the President of the Republic of Uzbekistan on "Strategy of Actions" and "Strategy of Development of New Uzbekistan" play an important role in project initiation. These strategic documents paved the way for many projects to attract investment, and develop industry and infrastructure in the country.

Analysis shows that the planning stage of projects is an important step after the initiative, the effectiveness of which depends on making the right strategic plans. For example, the implementation of energy and transport infrastructure projects under the Investment Program for 2021-2025 has become much easier due to the preparation of proper roadmaps at the planning stage. Mistakes or poorly planned projects, on the other hand, have resulted in delays or unexpected cost overruns. This was especially noticeable in the small projects implemented in the agricultural and industrial sectors.

Interdependence of implementation and monitoring processes:

Continuous control and monitoring during the project implementation had a great impact on the success of the project. For example, the decision of the President of the Republic of Uzbekistan on "Monitoring of large state projects and increasing responsibility for their implementation" helped to take necessary control measures during the implementation process. As part of this decision, large projects financed by the state are under constant monitoring, the appropriateness of resources is checked and the necessary changes are made.

In particular, time and money were saved as a result of the corrections made through the monitoring system during the project on the development of the energy infrastructure of the city of Nurafshan. On the other hand, several problems were observed in projects where the monitoring system was used poorly, especially in the agricultural sector: funds were spent incorrectly, the scope of work was delayed from the planned period, and as a result, the quality of the project decreased.

The relationship between the final results of the project processes and the initial stages:

In the example of many projects in Uzbekistan, it was observed that the final results directly depend on the decisions and plans at the initial stages. In the process of the "New Tashkent" project in the city of Tashkent, the right decisions made at the initial initiative and planning stages served to make the final result successful. Within the framework of the project, the selection of quality materials in the infrastructure, transport and construction works, and the control of the planned costs during the project played an important role. As a result, the project was completed on time and with the expected quality.

On the other hand, small projects implemented in some regions of Uzbekistan faced many problems at the final stage. In these projects, in the initial stages, especially in the planning process,

improper allocation of funds, lack of specialists or errors in the selection of materials led to poor quality of the final results. This significantly reduced the quality of the project and required additional costs.

Socio-economic impact of projects:

Proper implementation of design processes in Uzbekistan has led to significant positive changes in various sectors of the economy. The successful completion of major projects in the fields of transport infrastructure, energy, and agriculture have created jobs, increased economic efficiency, and attracted international investment.

For example, the construction of the Tashkent-Andijan highway had a positive effect on the domestic logistics system of Uzbekistan. The development of the transport sector created the basis for the increase in the volume of commercial relations and foreign trade in this direction. Such projects are a vivid example of socio-economic changes and show the contribution of projects to the development of the country.

At the same time, due to the lack of adequate monitoring and control as a result of small projects, the economic impact was not sufficiently visible. Technical and organizational errors in the implementation of agricultural projects in some regions made it difficult to achieve the planned results and led to low economic benefits.

Impact of innovations and technological innovations on design processes:

Greater involvement in innovation design processes has had a significant impact on the outcomes of major projects. Decisions made by the Government of Uzbekistan on the introduction of IT and innovative technologies, in particular, the "Digital Uzbekistan - 2030" program, have ensured more accurate management of projects and effective allocation of resources. For example, irrigation projects in the Surkhandarya region were implemented based on technological innovations, which allowed efficient management of water resources, which increased productivity and reduced costs in the field of agrotechnics.

At the same time, the results were lower in projects with limited opportunities for wide implementation of technologies. The lack of innovative technologies in rural areas has made it difficult to ensure the long-term sustainability of projects implemented in these areas.

Table 2 Examples of dependence on the project by type and field based on the table

	Construction	IT	Marketing
Makes sense	A team must build structures in a specific order to maintain stability and functionality.	Applications follow a logical development process from concept, design, programming, testing, and launch.	should consist of logical steps from concept to research to campaign design and distribution .
Source	Construction cannot begin until the necessary building materials are available.	Application development requires skilled software engineers as well as high-end computer hardware and reliable internet connections.	Access to large-format printing presses, availability of billboards, or access to certain types of cards or inks can directly affect a direct mail marketing campaign.

Privileged	It is best practice to dry and cure the cement base before proceeding with construction.	It is a best practice to test new software for bugs and errors before releasing it to the general public.	It is best practice to conduct targeted market research before developing an advertising campaign. This will help ensure that your message reaches the right people.
Cross-team	The plumbing and electrical teams must complete their installation before the drywall team covers the walls.	Sales teams should wait for software engineers to send usable demos or final products to customers before sharing and selling to them.	Marketing teams rely on production teams to produce the products and services they sell to customers.
External	Inclement weather such as rain or snow can delay the construction schedule.	Security vulnerabilities or widespread power outages can impact IT schedules and budgets.	If a competitor releases a similar campaign two weeks before the intended launch, the marketing campaign schedule may change.

Based on the graph, it becomes easier to see how the dependencies of the tasks can change and how they are similar to each other.

So at this point the question arises: *"How to determine the dependence on the project?"*

To define project dependencies, you must first create a project task map. Next, look for tasks that the team cannot perform until they receive information or results from the previous task.

Think of the entire project as a series of workflows or flowcharts. We map out the key steps required to complete a project. Then, each step required to move those steps is mapped. Before moving on to the next task, we will record the events that should happen.

The best way to manage project process dependencies is to learn how to identify them. Staying organized and having a strong relationship with your team also helps.

The results of the analysis of the design processes and their interrelationships in the conditions of Uzbekistan emphasize the integral connection between all stages of the design processes. This relationship plays an important role in achieving economic efficiency, especially as a result of large government and economic projects. In the context of the developing economy and investment potential of Uzbekistan, the importance of improving the efficiency of projects, optimizing resources and using technological innovations is increasing.

The strategic importance of the projects and the connection with the state policy

Decisions and strategies adopted by the President of the Republic of Uzbekistan emphasize the importance of design processes. In particular, the Strategy of Actions and the Strategy of Development define specific directions for the implementation of economic projects in the country. These decrees increase their strategic importance by providing direct participation of the state in the design processes.

Large projects financed by the state, in particular, projects in the fields of infrastructure, transport and energy, are related to the country's economic policy and development plans, and provide long-term results. This approach serves not only to increase economic efficiency but also to develop the domestic market. Based on these indicators, the strategic importance of projects and their integral connection with state policy play a decisive role in the sustainable development of the country's economy.

Interrelationship between stages and effect on efficiency

Design processes consist of continuous and sequential steps, and the successful implementation of each step directly affects the effectiveness of the next step. As found during the research, the right decisions made at the initial planning stage are the main factor determining the results of the project. At the planning stage, paying attention to important issues such as financial and technical indicators, time and resource allocation, and risk management is the guarantee of project success.

For example, in the case of transport infrastructure development projects, proper analysis and resource allocation at the planning stage ensured the timely completion and quality implementation of these projects. This had a positive impact not only on the success of the project but also on other sectors of the economy.

However, errors or omissions in the planning stage will cause problems in later stages. For example, in some projects implemented in the field of agriculture, difficulties arose in the implementation of the project as a result of unexpected risks and wrong decisions in planning. This situation harmed the duration and final results of the projects.

The importance of monitoring and control in the implementation process

Continuous monitoring and control of project execution guarantees project success. The results of the research show that as a result of the effective operation of the monitoring systems, the difficulties that may arise in the project processes are identified in advance and the necessary corrections are made. The introduction of special monitoring systems for monitoring large projects within the framework of the development strategy of the President for 2022-2026 was an important step in this regard. Timely problems identified and decisions made through these systems ensured the successful implementation of the project.

However, in projects with a weak monitoring system, the consistency of the process was broken and this caused the project to fall behind schedule or incur cost overruns. Also, this situation led to a decrease in the quality of project results. Especially, the small projects implemented in rural areas were not under constant control, so the economic efficiency was not sufficient.

The need to introduce innovations and technologies

In order to increase the competitiveness of the economy of Uzbekistan, it is necessary to introduce innovations and advanced technologies in the projects. According to the results of the study, technological innovations increase the efficiency of projects, reduce costs and ensure agility by automating work processes. Digital Uzbekistan - 2030 program and other innovative initiatives have increased the efficiency of water resources management and improved agricultural productivity by introducing digital technologies, in particular, in irrigation systems.

At the same time, the sustainability and long-term success of projects are not guaranteed in places where technologies are not sufficiently implemented. This was especially noticeable as a result of projects in rural areas that did not use innovative technologies enough. Wider implementation of innovations is especially relevant for the successful implementation of projects in regions with low technological development.

Social and economic impact of projects

The social and economic impact of projects implemented in Uzbekistan is of great importance. The results of the study show that major projects have contributed significantly to improving infrastructure, creating new jobs and stimulating economic growth. In particular, the Tashkent-Andijan highway and other transport projects improved economic relations between the regions and expanded trade and logistics opportunities.

However, small projects do not have a sufficient social impact, either because resources are misallocated or the project is not fully implemented. There have also been cases where small projects in the field of agriculture did not achieve the expected efficiency. Lack of innovative

solutions and weak monitoring are important factors in these projects. In order to increase social and economic benefits in the future, it is important to focus on small projects and keep them under control.

Conclusions and suggestions

Reforms and new approaches to project processes and their implementation in our country serve as a basis for the sustainable development of our national economy. In particular, activities and practical works carried out within the framework of the "Strategy of Development" project are aimed at strengthening the introduction of modern innovative technologies and effective use of resources in the industry and service sectors of our country. The main goal of this strategy is to find new sources of economic growth, increase competitiveness and improve the standard of living of the population.

Several factors are important for the successful implementation of projects: the use of scientific and research approaches in planning, modern management methods, the involvement of qualified specialists and the wide use of digital technologies. At the same time, monitoring and evaluation systems are being introduced to optimize project processes and increase their efficiency. Improvement of the project planning system: In the modernization of project management in our country, it is necessary to study and adapt the best practices of developed countries. A multi-level analysis and feasibility study is required during the planning process.

Wide adoption of innovative technologies: It is necessary to improve efficiency by incorporating digital technologies and artificial intelligence into project processes. This, in turn, allows efficient use of time and resources.

Training of qualified personnel and their qualification improvement: To further develop project management, it is necessary to establish programs for training qualified personnel and their qualification improvement on modern technologies.

Strengthening the monitoring and evaluation system: To ensure the successful implementation of the projects, it is necessary to introduce a regular monitoring and evaluation system at each stage of the project. It helps to analyze the effectiveness of the project processes and make the necessary corrections in time.

Development of international cooperation: The exchange of experience and development of cooperation in the field of project management with international organizations and foreign partners will bring project processes to a new level in our country.

These proposals will greatly contribute to the improvement of project processes and the effective implementation of the "Development Strategy" in our country. References

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