

Aliya M. Adilova<sup>1</sup>

## DEVELOPMENT OF PROJECT MANAGEMENT SYSTEM IN TELECOMMUNICATIONS SECTOR OF THE REPUBLIC OF KAZAKHSTAN

*Current situation in project management in the Republic of Kazakhstan is described. The description of "Information Kazakhstan-2020" program general structure is provided. Recommendations on successful implementation of telecommunications projects are presented.*

*Keywords: project management; telecommunications; "Information Kazakhstan-2020".*

Алія М. Аділова

## РОЗВИТОК СИСТЕМИ УПРАВЛІННЯ ПРОЕКТАМИ У СФЕРІ ТЕЛЕКОМУНІКАЦІЙ РЕСПУБЛІКИ КАЗАХСТАН

*У статті проаналізовано поточну ситуацію у сфері управління проектами в Республіці Казахстан. Описано загальну структуру програми «Інформаційний Казахстан-2020». Запропоновано рекомендації щодо успішної реалізації проектів у сфері телекомунікацій.*

*Ключові слова: управління проектами; телекомунікації; «Інформаційний Казахстан-2020».*

*Літ. 20.*

Алия М. Адилова

## РАЗВИТИЕ СИСТЕМЫ УПРАВЛЕНИЯ ПРОЕКТАМИ В СФЕРЕ ТЕЛЕКОММУНИКАЦИЙ РЕСПУБЛИКИ КАЗАХСТАН

*В статье сделан анализ текущей ситуации в сфере управления проектами в Республике Казахстан. Описана общая структура программы «Информационный Казахстан-2020». Предложены рекомендации относительно успешной реализации проектов в сфере телекоммуникаций.*

*Ключевые слова: управление проектами; телекоммуникации; «Информационный Казахстан-2020».*

**Problem statement.** Successful development of the ICT sector in the Republic of Kazakhstan demands considerable investments and new competencies. For many years the President of the Republic N.A. Nazarbayev has been setting up the challenges and they are implemented via strategies and programs. Programs in turn are generated from the projects to be implemented by various ministries and departments of the Republic. Application of project management tools and techniques in the course of government programs implementation makes great value for the state, because they help accomplish the state objectives on time and within the budget. But this requires not only knowledge and experience in various industries, but also knowledge and competence in project and program management.

**Recent studies and publications analysis.** Modern companies, different industries, and even entire states today acknowledge themselves as project-oriented, and learn to manage projects competently and effectively. This is reflected in rapid increase in volume of work on various aspects of project management, description of methods and tools for successful implementation of projects, programs and portfolios.

---

<sup>1</sup> Satpayev Kazakhstan National Technical University, Almaty, Kazakhstan.

The evolution of project management system establishment and development has been studied in the context of literary sources study. Historical roots of project management discipline are associated with the works of the management classics H. Gantt (1910), H. Fayol (1916), F. Taylor (1911). Evolutionary development of project management fundamentals can be found in (Shenhar and Dvir, 2004), establishment and development of project management in the USSR and in Russia in particular is described in (Gontareva et al., 2013; Grishina and Duncan, 2011).

The history of project management development in Kazakhstan is very short. Unfortunately, it lacks qualified experts able to analyze general situation in project management area at large. But further enhancement of this area is in process, although it is slow. Among the initiators of the management system for projects implementation in the Republic of Kazakhstan we should mention the President of the project managers union in the Republic of Kazakhstan (PMU RK), General Director of International Informatization Academy (IIA, Almaty), doctor of technical sciences, professor, well-known expert in the field of mining geoinformatics and management of complex systems and projects – A.F. Tzekhovoy, who performed expert activities on state program implementation assessment with regard to "Electronic government" and "Reducing the digital divide" projects. He headed several other projects through the United Nations development Program. This experience gained during the projects implementation is described in more than 250 works (Tzekhovoy et al., 2010).

Methods and tools of project management are broadly described by G. Diethelm (2004), D.Z. Milosevic (2008), N.B. Kultin (2009) and many other Russian and foreign scientists.

Theory and practice of projects programs and portfolio management is described by D.A. Russell (2003), J. Kendall and S. Rollinz (2004), A.C. Kozlov (2011).

Some methods and tools of project management in telecommunications can be found in K.B. Amanzholova (2006), A.A. Lyabin (2013).

And certainly, standards developed by international organizations need to be mentioned here like PMI, APMI, ISO and many other international organizations who have been performing much work in the field of project management, including explanations and clarifications to standards, describing the experience of large companies (Pavlov, 2011; 2012).

**The purpose of the study** is to discuss the key issues related to project management implementation in Kazakhstan and in particular at Kazakhstan telecommunications market.

**Key research findings.** At the first Congress of Kazakhstan engineers in May 1993, Head of the state N.A. Nazarbayev said: "I would like to draw your attention to one important aspect of modern engineering education. I mean that aspect of engineering work organization which is called "project management". Its peculiarity and advantage is continuous monitoring and engineering support of the entire investment cycle – from the idea searching to getting the profit".

Then many Kazakhs could not comprehend what it was about. But today we understand that project management is an integral part of all business processes in today's world.

Over the last 23 years important developments of project management were performed in the world: first, publication of ISO 21500 "Guidance for project management", containing requirements for project management, second, project management American standard update PMI PMBOK Guide (5th edition).

Development of scientific and practical approaches to project management in Kazakhstan took place in several stages:

"Kazakhstan Association for project management" emerged in 2000, its activity was based on APMA standards. "Union of project managers" (UPM RK) working on PMI standards started its activities in 2003.

Since 2007, People's Democratic Party "Nur Otan" included "Projects Management" course in the training program of party managers and members.

Project management as a science began its development in Kazakhstan in 2008. This is evidenced by the "Project Management" master course opened in KazNTU named after K. Satpayev, beginning of PhD training in project management in 2009. Today, master's and doctoral courses in project management exist in KazNTU named after K. I. Satpayev, KazNU named after. al-Farabi, KBTU, MAB.

Along with universities, state consulting companies are also engaged in training of PM specialists.

The greatest demand for PM professionals is observed in the three most popular areas. They are: information technologies, Internet and telecommunications, sales, construction and real estate.

Based on the resolution of the Second international forum "Project Management in Central Asia. Innovative technologies" (May, 2012) UPM RK has developed a certification to be awarded for occupational qualification "Certified Project Manager (CPM) on project management standards for the experts of the Republic of Kazakhstan, CIS and Central Asian region.

On October 30, 2014 project management standard was adopted in Kazakhstan, based on UPM initiative, ISO 21500 "Guidance on project management" as a national standard.

Dynamic development of project management in Kazakhstan is evident. Nomination of the working team at Government to develop "National system of project management in Kazakhstan" is a confirmation for that. Report presented by this team at the coordination board meeting devoted to State program on forced industrial-innovative development (hereinafter SPFIID) in November 2010, has activated the whole process of project management development in Kazakhstan (Managing future, spmrk.kz).

Technology of project management continues to spread in Kazakhstan. The most important factor is the emergence of interest by state authorities. In particular, entrepreneurship development fund (EDF) "Damu" in the frames of government support program "Advisor-2" started free training courses on project management for entrepreneurs since July 2014. Trainings are organized in all 16 regions of the country by EDF "Damu" branches.

Strategy of ICT sector development in the Republic of Kazakhstan is determined considering the main goal set up for the country by its President N.A. Nazarbayev – to bring Kazakhstan to the 50 most competitive countries of the world by 2015.

Telecommunications industry is dynamically developed in the Republic. New information industries are appearing and successfully developing, information component of economic activity is significantly increased as the well as information technology impact on scientific, technical and intellectual potential. Special attention is paid to information resources in the life of the society.

Preparation for Kazakhstan entry to WTO and establishment of market regulation system based on guidelines regulated by this organization, remove barriers to telecommunications services, market transparency for foreign competition. These activities will attract new members in telecommunications services of Kazakhstan, therefore improving competition in at telecommunications market.

Currently serious competition is present for fixed and mobile communications services provision as well as for Internet access. There are about 300 operators at the market, and the total number of licenses issued is more than 600 (Communication, 15.01.2014, [www.stat.gov.kz](http://www.stat.gov.kz)).

According to the Statistics Agency of the Republic of Kazakhstan for January-December 2014, postal and courier services were data provided, for the amount of 25504.8 mln KZT communication services – for the amount of 673363.4 mln KZT. The volume of long-distance and international telephone services in January-December 2014 was 41487.5 mln KZT; local telephone services, network services, Internet and cellular services – 51593.3 mln KZT, 169042.9 mln KZT and 285440.0 mln KZT, respectively.

The major share in the total volume of communication services accounted for mobile services (42.5%), Internet (25.1%), other communication services (12.1%), local telephone communication (7.7%), long-distance and international telephone communications (6.2%) (Communication, 15.01.2014, [www.stat.gov.kz](http://www.stat.gov.kz)).

Telecommunications development is one of the priorities in SPFIID program within the future industries development reflecting its importance for today's Kazakhstan economy. The program is designed for the period until 2020 and its main objective is creation of conditions for Kazakhstan transition to the information society. The program is divided into 4 areas. Each direction has its own objectives, goals and results to be achieved (Decree of the President of the Republic of Kazakhstan, 8.01.2013, #464).

The process of this program implementation provides great opportunity for project management experts to apply their knowledge and competence for information society development. Correct application of tools and techniques of project management will allow implementing projects successfully basing on the "Information Kazakhstan-2020" Program and thus pushing further economic development of the country.

Based on above the following **conclusions** can be made:

1. Development of project management system in the Republic of Kazakhstan is in process, although it is slow.
2. Insufficient number of specialists in project management area may hinder the project management system development in the Republic. Lack of specialists shall be resolved by means of attracting consulting companies and educational institutions of the country.

3. Adoption of ISO 21500-2012 in Kazakhstan is a major step in this field. Many problems associated with Kazakhstan transition to information society can be solved in telecommunications industry by means of this standard methods and tools application.

4. For more successful implementation of the tasks set up by the Head of the state, it is necessary to adopt international standards or to develop local standard for programs management.

#### References:

Государственная программа «Информационный Казахстан-2020»: Указ Президента Республики Казахстан от 8.01.2013 №464 // egov.kz.

*Аманжолова К.Б.* Менеджмент в телекоммуникационном комплексе: Учеб. пособие / М-во образования и науки РК. Алмат. ин-т энергетики и связи. – Алматы: АИЭС, 2006. – 113 с.

*Гонтарева И.В., Нижегородцев Р.М., Новиков Д.А.* Управление проектами. – Либроком, 2013. – 384 с.

*Грашина М.Н., Дункан В.Р.* Основы управления проектами: Монография. - 2-е изд. – М.: Бином. Лаборатория знаний, 2011. – 237 с.

*Дитхелм Г.* Управление проектами: В 2 т. / Пер с нем. – СПб.: Бизнес-пресса, 2004. – Т. 1: Основы. – 400 с.

*Кендалл Дж., Роллинз С.* Современные методы управления портфелями проектов и офис управления проектами: максимизация ROI. – М.: ПМСОФТ, 2004. – 576 с.

*Козлов А.С.* Управление портфелем программ и проектов: процессы и инструментарий: Монография. – 2-е изд., стереотип. – М.: ФЛИНТА, 2011. – 350 с.

*Культин Н.Б.* Инструменты управления проектами: Project Expert и Microsoft Project: Монография. – СПб.: БХВ-Петербург, 2009. – 157 с.

*Лябин А.А.* Эффективное управление бизнес-процессами в организации на рынке телекоммуникаций // Качество. Инновации. Образование.– 2013.– №1. – С. 92–96.

*Милошевич Д.З.* Набор инструментов для управления проектами. – М.: Академия АйТи, 2008. – 729 с.

*Павлов А.Н.* Опыт управления проектами на основе стандарта PMI PMBOK. Изложение методологии и опыт применения. – М.: БИНОМ. Лаборатория знаний, 2011. – 208 с.

*Павлов А.Н.* Управление программами проектов на основе стандарта PMI The Standard for Program Management. Изложение методологии и рекомендации по применению: Монография. – М.: Бином. Лаборатория знаний, 2012. – 304 с.

Связь, 15.01.2014 // www.stat.gov.kz.

Управление проектами: основы теории и практики: Учеб. пособие / А.Ф. Цеховой, М.А. Виницкая, Т.Г. Климова, М.А. Карлинская. – Алматы: Акбар, 2010. – 200 с.

Управляя будущим, 10.06.2014 // spmrk.kz.

*Fayol, H.* (1916). Administration industrielle et geaneareale. Bulletin de la Societe de l'Industrie Minerale, fifth series, 10(3): 5–162.

*Gantt, H.L.* (1910). Work, Wages and Profit. Published by the Engineering Magazine, New York. Republished as Work, Wages and Profits, Easton, Pennsylvania, Hive Publishing Company, 1974.

*Russell, D.A.* (2003). Managing High Technology Programs and Projects. John Wiley & Sons, Inc. 472 p.

*Shenhar, A.J., Dvir, D.* (2004). Project Management Evolution: Past History and Future Research Directions, Innovations. Project Management Research, PMI.

*Taylor, F.W.* (1911). The Principles of Scientific Management. New York, NY, US and London, UK: Harper & Brothers.

Стаття надійшла до редакції 28.01.2015.