Ministry of Education and Science of Ukraine

Ukrainian-American Concordia University

Department of International Economic Relations, Business & Management

Bachelor's Qualification Work

INTERNATIONAL PROJECT MANAGEMENT (ON THE EXAMPLE OF SPECIFIC PROJECT)

(on the basis of Novo Box entering the Moldovan market)

Bachelor's student of

Field of Study 07 – Management and Administration

Specialty 073 – Management

Educ. program – Management

Bogdan Piven

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(signature)

Research supervisor

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Associate Professor of International Economi Relations, Business and Management

(academic degree, full name)

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(signature)

Kyiv – 2022

Abstract:

The purpose of this study is to examine the topic of international project management, using the example of the Novo box postal service provider project.

This research topic was chosen in order to obtain recent data on the ways of managing international projects and to apply them in practice.

The main questions for this study were:

- What is a project and what are the current methods of project management in international markets?

- What are the main tools of project management?

- What is Novo box Company and what are the specifics of project management in this company?

- What is the best project management method for Novo box company?

In the course of the study, a wide range of methods was used. Thus, the abstract-logical method was used to clarify the formulation of the basic concepts, for the disclosure of the project management system essence, and finally for proposing conclusions and recommendations. The constructive method was used to evaluate the projects.

The results achieved in the course of the study are as follows:

- Project definition, international project and project management principles were defined. And an overview of the main project management tools in the first part of the work was given;

- A brief description of Novo box and its international project management practices was provided in the second part of the paper;

- Recommendations on the structure of the company's next international project and other similar projects in the future were formulated in the third part of the paper;

As the result of the work recommendations was developed, including the search for synergy in the multinational team factor, and the implementation of the Large-Scale Scrum methodology. These two solutions will allow the team to be more flexible, creative, and productive, as well as solve the problem of synchronization of two teams in the context of an international project, and solve the problem of division of responsibilities between two teams.

Метою даного дослідження є вивчення теми міжнародного проектного менеджменту на прикладі проекту постачальника поштових послуг Novo box.

Ця тема дослідження була обрана з метою отримання актуальних даних про способи управління міжнародними проектами та їх застосування на практиці.

Основними питаннями для цього дослідження були обрані:

– Що таке проект і які методи управління проектами існують на міжнародних ринках?

– Які основні інструменти управління проектами?

– Що таке компанія Novo box і яка специфіка управління проектами в цій компанії?

- Який метод управління проектами найкращий для компанії Novo box?

У ході дослідження використовувався широкий спектр методів. Таки як, абстрактно-логічний метод був використаний для уточнення формулювання основних понять, для розкриття сутності системи управління проектами, і також для пропонування висновків і рекомендацій. Для оцінки проектів використовувався конструктивний метод.

Результати, досягнуті в ході дослідження, такі:

- Надано визначення проекту та перелічені принципи управління міжнародними проектами. І було надано огляд основних інструментів управління проектом у першій частині роботи;

- Надано короткий опис компанії Novo box та його практики управління міжнародними проектами у другій частині роботи;

- Сформульовано рекомендації щодо підходу до управління наступних міжнародних проектів компанії у третій частині статті;

За результатами роботи були розроблені рекомендації, серед яких пошук синергії у взаемодії багатонаціональної команди та впровадження методології Large-Scale Scrum. Ці два рішення дозволять команді бути більш гнучкою, креативною та продуктивною, а також вирішити проблему синхронізації двох команд у контексті міжнародного проекту та вирішити проблему розподілу обов’язків між двома командами.

Целью данного исследования является исследование темы интернационального проектного менеджмента на примере проекта поставщика почтовых услуг Novo box.

Эта тема исследования была выбрана для получения актуальных данных о способах управления международными проектами и их применении на практике.

Основными вопросами для этого исследования были:

– Что такое проект и какие методы управления проектами существуют на международных рынках?

– Какие основные инструменты управления проектами?

– Что такое компания Novo box и какова специфика управления проектами в этой компании?

– Какой метод управления проектами наилучший для компании Novo box?

В ходе исследования использовался широкий спектр методов. Такой как абстрактно-логический метод был использован для уточнения формулировки основных понятий, для раскрытия сущности системы управления проектами, а также для предложения выводов и рекомендаций. Для оценки проектов употреблялся конструктивный способ.

Результаты, достигнутые в ходе исследования, таковы:

- Даны определения проекта и перечисленные принципы управления международными проектами. И был предоставлен обзор основных инструментов управления проектом в первой части работы;

- предоставлено краткое описание компании Novo box и его практики управления международными проектами во второй части работы;

- сформулированы рекомендации по подходу к управлению следующих международных проектов компании в третьей части статьи;

По результатам работы были разработаны рекомендации, включая поиск синергии во взаимодействии многонациональной команды и внедрение методологии Large-Scale Scrum. Эти два решения позволят команде быть более гибкой, креативной и продуктивной, а также решить проблему синхронизации двух команд в контексте международного проекта и решить проблему разделения обязанностей между двумя командами.

APPROVED
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29 March 2012 № 384

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PHEE-institute «Ukrainian-American Concordia University»

Faculty of management and business
Department of international economic relations, business and management

Educational level: **bachelor degree**
Specialty: 073 "Management"
Educational Program "Management"

APPROVED
Head of Department _____

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"____" _____202___

TASK
FOR BACHELOR'S QUALIFICATION WORK

Bogdan Piven

_____
(Name, Surname)

1. Topic of the work

International project management (on the basis of Novo Box entering the Moldovan market)

Supervisor of the work Bielova Olena, PhD in Economics, Associate professor,
(surname, name, degree, academic rank)

Which approved by Order of University from ***"22" December 2022 №22-12/2022- 1c***

2. Deadline for bachelor's qualification work submission "***19" May 2022***

3. Data-out to the bachelor's qualification work materials from the official reporting of financial and economic activities of the enterprise, including the international aspect, were taken from open access on the Internet.

4. Contents of the explanatory note (list of issues to be developed) There are three main aspects, that need to be developed by a student. First – theoretical aspects of international project management. Second – practical aspects and business analysis of project management activity on the field of international project management. Third – recommendations for improving ways of "novo box" international projects management system enhancement.

5. List of graphic material (with exact indication of any mandatory drawings)

Graphs and figures for analysis of economical and statistical information on the company and its development, characteristic of organizational structure of the company, visualization of mechanism of development etc.

6. Consultants for parts of the work

Part of the project	Surname, name, position	Signature, date	
		Given	Accepted
1	*Bielova Olena*		
2	*Bielova Olena*		
3	*Bielova Olena*		

7. Date of issue of the assignment

Time Schedule

№	The title of the parts of the bachelor's qualification work	Deadlines	Notes
1.	I chapter	*14.02-13.03.2022*	*in time*
2.	II chapter	*14.03-10.04.2022*	*in time*
3.	III chapter	*11.04-24.04.2022*	*in time*
4.	Introduction, conclusions, summary	*25.04 – 01.05.2022*	*in time*
5.	Pre-defense	*07.06.2022*	*in time*

Student _____
(signature)

Supervisor  .
(signature)

Conclusions: *Bachelor graduate work is designed in accordance with the requirements. The paper contains theoretical aspects of the research topic, practical aspects and recommendations for improvement, including the international aspect. In terms of content and design, the work complies with the rules and is recommended for defense* .

Supervisor  .
(signature)

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INTRODUCTION

The relevance of the topic is justified by the fact that international projects are difficult to manage. Even if a company has a strong internal project system when international projects are launched, management becomes much more complicated and there is no universal methodology that could unify their management system for such projects at the moment.

The significance of the study is determined by the fact that nowadays the effectiveness of Ukrainian enterprises is directly related to the development and implementation of international projects, which require an effective system for managing the process of generation and transformation of knowledge into a commercial product to ensure long-term advantages over competitors.

The main form of a company's project activities implementation is a project - a complex management system with a variety of internal and external relationships, a large volume of resources, and regulating documents.

The level of problem development.

A large number of materials and books are devoted to the study of project management issues. Project management issues have been studied by a researcher and professors (Joseph Heagney "Fundamentals of Project Management, 4th Edition", Adrienne Watt "Project management", Manjeet Singh "ProjectMinds' Quick Guide to Project Management").

The purpose of the study is to research international project management and problem-solving methods application on the example of the Novo Box project.

Based on this purpose the following research tasks are set and defined:

- Study the project as an object of management and project management at the present stage of economic development
- Study the basic tools of project management
- Give a brief description of Novo Box Company
- Study international project management practice of Novo Box Company

- Make a recommended framework for the company's next international project and other similar projects in the future.

The object of the study is the project activities of the Ukrainian postal terminals network operator network – Novo Box.

The subject of the study is the system of international project management.

The methodological basis of the study is textbooks and guides of leading managers in the project management field. In the course of the study, a wide range of methods was used. Thus, the abstract-logical method was used to clarify the formulation of the basic concepts, for the disclosure of the project management system essence, and finally for proposing conclusions and recommendations. The constructive method was used to evaluate the projects.

The information base of the research was formed based on the materials collected in the course of practical work in the company Novo Box and direct participation in the analytical and project activities of the company.

CHAPTER 1. THEORETICAL AND METHODICAL BASES OF INTERNATIONAL PROJECT MANAGEMENT

1.1. HISTORICAL PREREQUISITES FOR THE EMERGENCE OF PROJECT MANAGEMENT

Mankind has been using project management since the time of the construction of the Egyptian Pyramids, one of the greatest monuments of architecture. Unfortunately, no documents or mentions of how the systems of project management of that time worked have reached us, and modern methods are based on the ideas of the last century. The modern history of project management is usually conducted from the 50s of the last century. Modern project management was born out of solving two parallel problems of project planning and control in the United States of America.

One of the first such examples is considered to be the Polaris missile project, which was part of the military-industrial complex. As part of this program, two-stage ballistic missiles UGM-27 "Polaris" (UGM-27 "Polaris") designed for nuclear submarines were developed. Research, application development and the production of unique parts were all critical to the success of the project. Due to the significant level of uncertainty in this project, traditional estimation tools could not provide adequate forecast accuracy. Therefore, the creators of the project chose the following strategy. They came up with three possible scenarios (optimistic, most likely, and pessimistic), each with an estimated project time. After that, the estimate of the project time was determined using mathematical calculations. Program (Project) Evaluation and Review Technique or (PERT) is the name of this technique. Initially, this method was used only for estimating duration, but it soon became apparent that it could also be used for estimating the cost of a project. Currently, PERT is considered the most effective method for evaluating projects with a high degree of uncertainty.

4 stages of development of modern project management

Stage 1: before 1958 division of labor and scheduling

Technological advancement has been primarily about improving efficiency and reducing project time throughout this time period. For example, advances in transportation have made it possible to improve resource allocation in terms of logistics, and advances in telecommunications have made it possible to send information quickly. Moreover, the increasing division of labor made it possible to reduce the time for the execution of specific tasks. The breakdown of projects into tasks led to the creation of such a tool as a work breakdown structure (WBS). Projects structured this way are much easier to manage. The most common project planning and management tool for this is the Gantt Chart, created by engineer Henry L. Gantt. During this period, such large-scale and historically important projects were implemented, such as:

- Construction of the Pacific Railroad in the United States (1850s)
- Hoover Dam (1931-1936), which was built by 5,200 workers. So far, this is one of the largest dams in the US, producing 4 billion kWh per year.
- Manhattan Project (1942-1945), during which the first atomic bomb in the history of mankind was created. The project involved 125,000 people and cost $2 billion.

Stage 2: 1958-1979 birth of project management tools

During this time, there has been significant technological progress that has influenced the history of project management. For example, in 1959, Xerox released the first copier, which allowed corporations to significantly speed up and optimize productivity, as well as simplify the transfer of information. The development of computer technology has had a significant impact. PERT and CPM were the first project management tools to debut. Computers began to appear at all significant enterprises and organizations. By the late 1970s and early 1980s there was a move to personal computers and even small businesses could use project management software. In 1975 Bill Gates (Bill Gates) and Paul Allen (Paul Allen) founded Microsoft, which almost immediately began to bring to market solutions

for office and business automation. In the same period, special programs for project management began to appear from software companies such as Artemis (1977), Scitor Corporation (1979) and of course Oracle (1977), which is now one of the leaders in the project management software market with its Primavera. In addition, during this period, other systems appear, such as (Material Requirements Planning, MRP).

The projects that were implemented during this time had a significant impact on the development of project management. Among them are the following:

- Project Polaris (1958) In 1961, the first successful rocket launch took place. The PERT system was created for this project
- The Apollo lunar mission (1960), during which man first set foot on the surface of the moon. The lessons of the lunar mission were outlined in the book "100 rules of the NASA project manager"
- The CPM methodology was developed for the DuPont Plant Construction Project (1958).

Stage 3: 1980 - 1994 publicity

The dramatic decline in the cost of personal computers and their proliferation defined the history of project management in the 1980s and 1990s. Now they have penetrated almost every home, and not just businesses and organizations. In addition, the Internet appears at this time. Now even complex projects can be planned and controlled in a timely, cost-effective and efficient manner. During this time, the price of software dropped dramatically and it became more affordable, making it easier for businesses to use and train staff. Prior to this, software was often created for each firm separately.

Projects of this period that influenced the course of the history of project management:

- Underwater tunnel under the English Channel (1989 - 1991). This project featured a huge number of stakeholders and extremely

complex interactions. Two states participated, as well as several large financial institutions, engineering and construction firms, and many other organizations. In addition, the standards and even units of measurement of the two parties were very different, which made the project extremely difficult to implement.

- Space Shuttle Challenger (1983 - 1986). The Challenger disaster forced NASA to focus on risk management, organizational dynamics and quality management
- The 1988 Winter Olympics in Calgary where project management techniques were successfully applied to event planning. This project has demonstrated that event management is a sector related to project management.

Stage 4: from 1995 to the present - creating a new environment

The Internet has revolutionized business and, as a result, project management. The Internet has made it easy to promote, sell, purchase and track things in the marketplace in a fast, inexpensive and easy way. As a result, the efficiency of companies and their customer orientation have increased. In addition, corporations were able to form full-fledged distributed project teams, which provided them with new opportunities.

One of the most interesting projects was the Year 2000 (Y2K) project associated with the Millennium bug, due to January 1, 2000, many computers could start to work incorrectly due to the new date standard. This was a global phenomenon that could disrupt organizations around the world and create a domino effect in many distributed production chains. Many organizations created special units whose task was to level the consequences of this bug in work with all interested parties. Goals of this virtual project:

- To make a century-old transformation without affecting the activities of organizations
- Track the progress of other organizations in combating these problems

- Coordinate the efforts of many groups
- Develop risk management strategies for this event
- Liaise with key stakeholders

This virtual project, which was carried out simultaneously by several enterprises around the world, demonstrated how interconnected organizations and project teams around the world, and also highlighted the need for risk management in the digital communications industry. [10]

1.2. TERMS AND DEFINITIONS

A project

A project is defined as a new beginning with the goal of reaching and changing so broadly that there are no separate definitions. Here are some of the frequently cited definitions:

A project is a unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time cost and resources. [28]

A temporary endeavor that is undertaken to create a unique product, service, or result. The temporary nature of projects indicates a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists. [29]

Despite the abundance of variants of the definition, all projects predominantly have such common characteristics as:

- Uniqueness.
- Have specific objectives (goals) to achieve.
- Require a specific set of resources.
- Have a specific time frame for completion with a defined beginning and end.
- Involves risk and uncertainty.
- Requires cross-functional teams and an interdisciplinary approach.

Project management

Project management is a separate area of management that helps you manage projects. It has three key features that distinguish it from other forms of management and they include a project manager, a project team, and a project management system. The project management system includes organizational structure, information processing, and decision making, as well as procedures that

facilitate the integration of horizontal and vertical elements of the project organization. The project management system focuses on integrated planning and control.

International project management (IPM)

A management of projects that involve multi-national resources and teams working together to attain the project goals. [8]

Product Owner

The Product Owner is the person who is responsible for making sure that the product delivers as much value as possible. This also means being responsible for the Return on Investment, Budget, Total Cost of Ownership and the defining, maintaining and sharing of the Product vision for example.[16]

Scrum Master

A Scrum Master - accountable for establishing Scrum and the Scrum Team's effectiveness. They do this by enabling the Scrum Team to improve its practices, within the Scrum framework. Scrum Masters are true leaders who serve the Scrum Team and the larger organization. [17]

Work Breakdown Structure, WBS

A deliverable-oriented hierarchical decomposition of the work performed by the project team to achieve the project's objectives and deliverables. With its help, the entire content of the project is structured and defined. Each next level of the hierarchy reflects a more detailed definition of the elements of the project. [18]

Scope

The set of products, services and results that are the subject of a project. [19]

Initiator

A person or organization that has both the ability and authority to initiate a project. [20]

Execution

The phase of project lifecycle when the work gets done. Task owners begin work and the project manager oversees that those tasks are completed in a timely manner, while workflow continues smoothly. [21]

Project team

An interdependent collection of individuals who work together towards a common goal and who share responsibility for specific outcomes of their organizations [22]

Milestone

A specific point within a project's life cycle used to measure the progress toward the ultimate goal. Milestones in project management are used as signal posts for a project's start or end date, external reviews or input, budget checks, submission of a major deliverable, etc. [23]

Critical path

A sequence of dependent tasks that form the longest duration, allowing you to determine the most efficient timeline possible to complete a project. [24]

Methodology

A set of principles and practices that guide you in organizing your projects to ensure their optimum performance. Basically, a framework that helps you to manage your project in the best way possible. [25]

Monitoring

Gathering project performance data, reviewing the project performance plan, and presenting and disseminating information on project performance. [26]

Workflow

A specific, ordered set of tasks that must be completed to execute a process step. To qualify as a workflow, each step in the process must be contingent on completion of the previous step. For example, a simple workflow process might look like this: Hold a meeting. [27]

Validation

Project Validation aims at proving or disproving with limited or no design whether the project team can deliver a project that satisfies the owner's business case and scope within the owner's allowable constraints of cost and schedule and with an acceptable level of risk. [30]

Program

A series of related projects that are managed in a coordinated manner to achieve benefits and a degree of control not available when managed individually. Programs may contain elements of work related to them, but lying outside the content of individual projects of the program. [31]

Decomposition

The process of dividing components of a large project into smaller, more manageable portions, often called deliverables. This process helps managers assign tasks more easily and assists in time management and workflow. [32]

Stakeholder

Stakeholders are those with an interest in your project's outcome. They are typically the members of a project team, project managers, executives, project sponsors, customers, and users. Stakeholders are people who will be affected by

your project at any point in its life cycle, and their input can directly impact the outcome. [33]

Framework

A set of processes, tasks and tools that provide guidance and structure for the execution of a project. The framework helps organizations map out the progression of the individual project steps, from beginning to completion. [34]

Project objective

Project objectives in project management are the specific, tangible outcomes that will be produced and delivered by the project. They identify and describe the concrete actions or deliverables that will work together to achieve the broader, higher-level goals of the project as a whole.[35]

1.3. METHODS OF PROJECT MANAGEMENT

The project management system allows you to:

- Not to miss those things that you forgot or did not take into account completely
- Create, implement and update the project work plan
- Efficiently distribute the material and human resources necessary for the implementation of the project
- Monitor the main indicators of the pace and quality of the project
- Achieve improved production efficiency
- Establish the existence of relationships in the work of various projects
- Take into account the advantages and disadvantages of the work performed when planning a new project.

One of the first modern methods is considered to be the Gantt chart. The Gantt chart was invented in the early 20th century at the same time by Karol Adamecki and Henry Gantt. The Gantt chart is a chart that depicts the start and end dates of a project. With the help of this tool, it is possible to record how much time it will take for each task and note if some tasks need to be completed before others. In this way, you can determine the so-called "critical path" of activities that need to be completed by a certain time, and calculate how much time the project will take in total.

However, there are completely different projects and it is not possible to apply the classical scheme to all of them. Some projects may require more or less structure than traditional project management suggests. For example, if in a project strict deadlines are not as important as a process that includes scheduling individual tasks. Here you will have to manage not time or resources, but a process, applying the same checklist or work scheme to each task. For such projects, Agile and its offshoots such as Lean, Kanban, and others were developed. Some projects involve more dates and a more careful allocation of resources,

which has led to the development of more advanced methods such as Six Sigma and Scrum.

To choose the right project management system for a particular project, you first need to understand what is most important in this project "timing, resources, process, or all three aspects", and then choose a project management system that will effectively cope with the tasks.

After answering this question, we can begin to choose the project management system that is best suited to a particular project.

Traditional project management

Traditional project management is the most obvious way to organize your workflow. This technique is also called a "cascade" because it involves the sequential execution of tasks one at a time.

Traditional project management emphasizes getting things done on time within a limited budget. This system is best suited for projects where tasks need to be completed in turn, or if you need to plan and design a project before it goes live.

The traditional system includes six stages such as: Initiation, Planning and design, Execution and testing, Monitoring and closing.

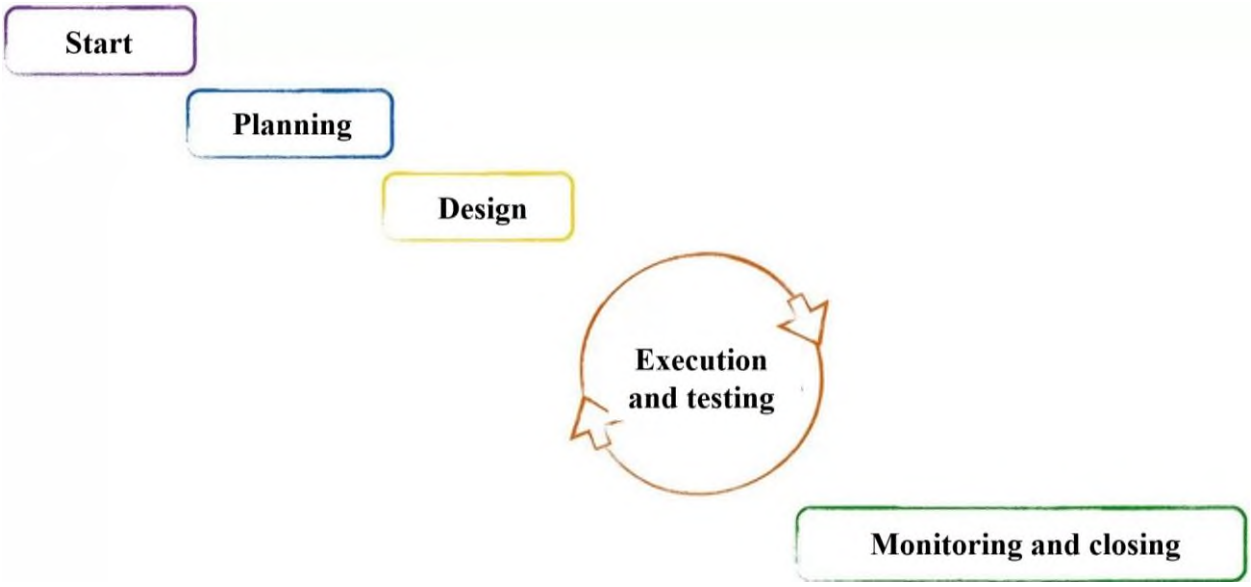


Fig. 1.1. Traditional project management structure

Initiation phase: the project manager and team are identified with the product requirements. This stage is also called the “requirements stage”, but in essence it is just a brainstorming session, in which a list of everything necessary to complete the project goal is made.

Planning and design: this stage can be divided into two categories: basic design and detailed design. At this stage, the team checks the proposed design against the product requirements.

Execution and testing stage: at this stage, the direct development and integration of the product begins. The team creates a product based on a detailed plan and evaluates the development process according to the metrics set in the previous stages. Each stage of implementation consists of sub-stages, and after that it's time for testing. Testing is just as important as the design phase because it allows you to find and fix problems, whether it's code errors in software development or misplaced wiring in a construction project. After testing, everything that needs improvement is returned to the implementation stage, and this cycle is repeated until the project is completed.

Monitoring and closing phase: the work in this phase of the project is essentially never finished. You go the extra mile to keep customers and users happy with your product and find ways to improve it while providing maintenance and operational support.

The basis of this technique is always the division of the project into stages that must be completed in a strict order.

Advantages

Management should clearly define their request by setting the main goal of the project and the sequence of work in the early stages. The emphasis on client feedback and testing is designed to identify and fix problems as early as possible so that they do not affect the project in the future. This approach guarantees careful planning and testing of the product prior to commissioning, which is critical for many real-world projects.

Also, the traditional approach can reduce stress levels and reduce the number of missed deadlines, since each phase includes a margin of time for the full completion of the task and takes into account possible delays, so that the project can even be completed ahead of schedule.

Disadvantages

The main disadvantage of traditional project management is the lack of flexibility and difficulty in adapting to changes.

This approach is great for areas such as construction, where the scope and direction of work barely changes over the course of a project. But if there are no significant time and resource constraints, or if you need more flexibility and the ability to change the project during development, it is better to use a different project management method. [9]

Agile

Instead of breaking a project down into multiple steps that need to be completed one after the other, Agile involves splitting a project into multiple smaller projects that can then be assembled into a final product. First you need to define the general idea of the project, divide it into parts, and then plan, design, implement and test each part of the project separately. This allows you to achieve results faster, as well as adapt the project to new requirements before presenting the result of the work again.

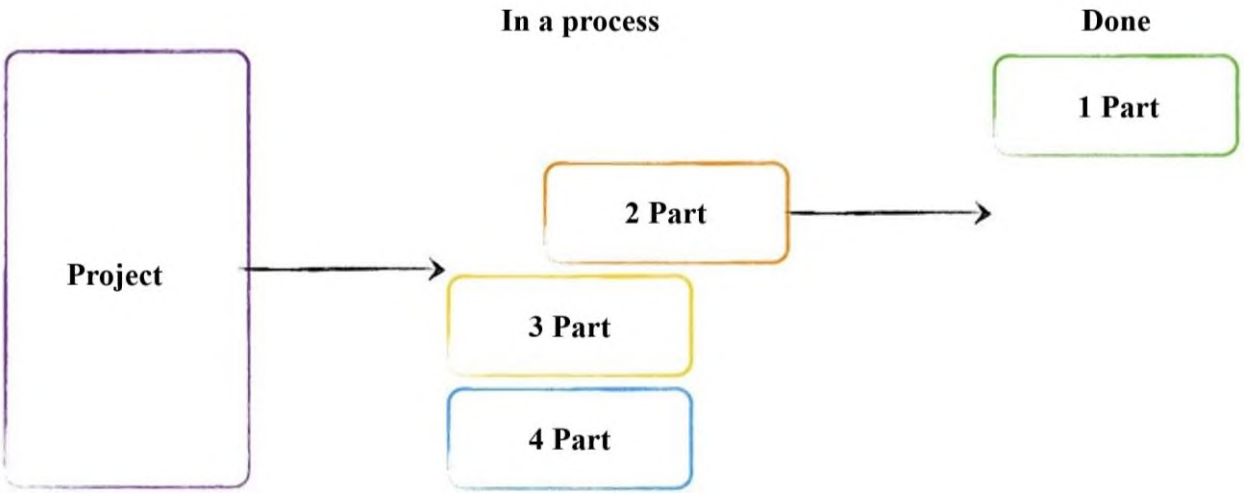


Fig. 1.2. Agile structure

Agile is not a full-fledged project management method by itself, but rather an idea of how projects can be managed. Scrum, Lean, Kanban and other project management methods are based on the ideas of Agile, but are more structured and provide a better basis for work.

Advantages

The core tenet of Agile is that reacting to change is more important than following a plan. Agile deserves attention for its flexibility, which other systems lack, associated with a focus on the implementation of parts of the project. And if the project, in principle, has no endpoint, since work on its new parts is ongoing, Agile will help divide the work into smaller tasks.

Disadvantages

The flexibility of Agile can make it hard to focus on work and hard to see a project through to completion. Everything changes, and there is no single process that guarantees the consistent progress of the project towards completion, which makes it easier to get off course. [9]

Scrum

Scrum is one of the most structured frameworks based on Agile principles. It appeared in 1986 as a way to improve the interaction of several teams working towards a common goal. Scrum combines the ideas of traditional project management and Agile, being both a structured and flexible way to manage projects.

Like Agile, Scrum involves breaking down a project into multiple tasks that can be completed independently. The completion of each task is a sprint "a period of two to four weeks, in which it is necessary to complete this stage of the project." Daily sprints are also held, within which individual sub-stages are implemented. It is with this focus on deadlines that Scrum resembles the traditional project management model and gives structure to the Agile concept.

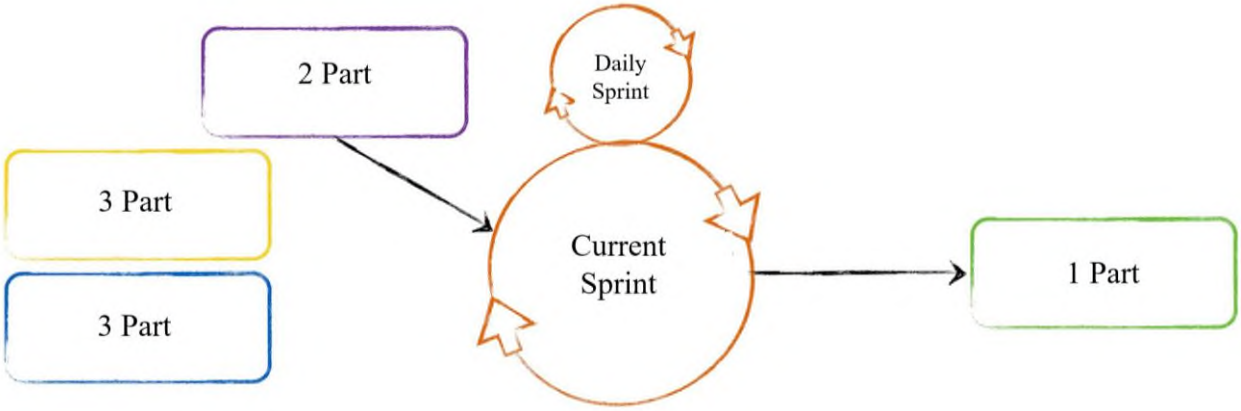


Fig. 1.3. Scrum structure

At the end of each sprint in Scrum, a re-evaluation is carried out and, if necessary, changes are made to the project. This helps ensure that the project stays on track and meets objectives that may have changed in the process. Responsibilities in Scrum are divided among three roles: Product Owner, Scrum Master, and Team.

The product owner is aware of all aspects of development and sees the whole picture, his task is to make sure that the work meets the business goals and requirements of the client.

The Scrum Master is the link between the product owner and the rest of the team. He makes sure the team stays on course during each sprint.

A team is people who work on sprints, share tasks among themselves and provide a finished result.

The Scrum structure places great emphasis on meeting deadlines and is based on five types of meetings:

- Backlog refinement meeting, backlog grooming: The team considers what project tasks are not yet completed and what remains to be done from the previous sprint, and also decides what to pay attention to. The product owner determines the order in which tasks are completed, which directly determines the effectiveness of sprints.

- Sprint planning: This meeting helps the team understand what they need to work on and why, based on the Product Owner's decisions.

- Daily scrum meetings: These are simple meetings that take place daily and last about 15 minutes. On them, team members inform each other about progress in work. Such meetings are not suitable for discussing issues that are sent to the Scrum Master at other times, but are simply needed to exchange information.

- Sprint review: At these meetings, the team shows the stakeholders what they have done. The main task is to make sure that the results of the sprint meet the business goals and user requirements.

- Sprint retrospective: This meeting is held immediately after the Sprint Review and is intended to provide feedback. The team discusses the successes and failures of the sprint and decides what works (what to keep doing) and what doesn't (what to stop doing).

Compared to other project management systems that, at first glance, allow you to simplify project work, Scrum may seem too complicated, but the Scrum framework guarantees the implementation of all tasks.

Advantages

Scrum is suitable for projects where it is important to deliver results quickly and be able to respond to changes in the development process.

It is not scary if someone does not understand the project completely, because there is always a person who sees the whole picture.

Disadvantages

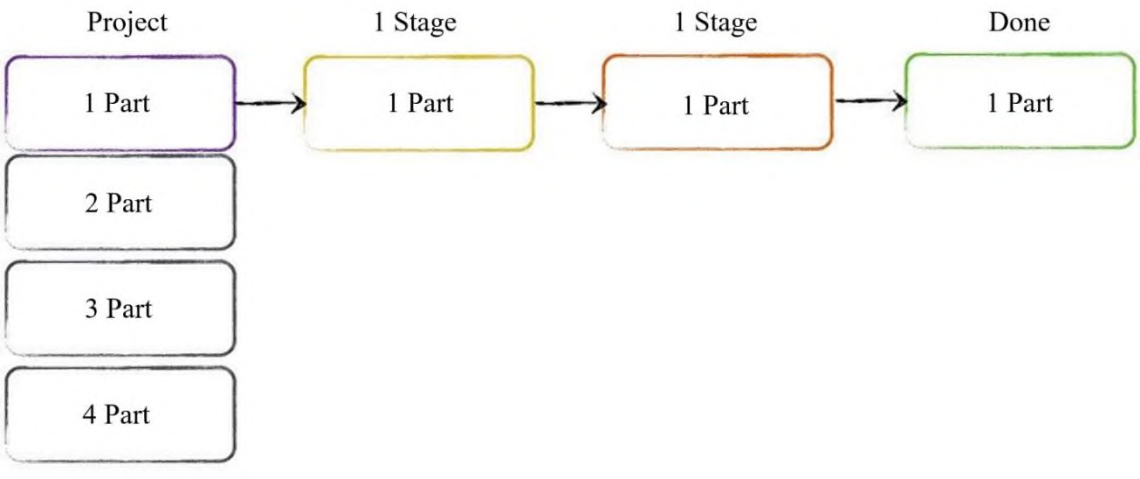
A team accustomed to a long development cycle can find it difficult to readjust. Not in all areas it is necessary to present the results of work so often.

For some projects, multiple meetings and Scrum management practices are overkill, and the team may feel like they're focusing more on sprint planning than on the work itself. [9]

Lean

Lean complements the Agile system with workflows that allow you to ensure the same level of quality of parts of the project.

As part of the Lean approach, the project is still divided into several smaller parts that can be worked on separately. Each task is assigned a workflow. You can highlight the stages of planning, design, implementation, testing and presentation,



or any other according to the task you are working on.

Fig. 1.4. Lean structure

Due to the presence of stages and their flexibility, Lean guarantees good quality of work at each stage of the project. This system does not have the strict deadlines of Scrum and does not force you to work on one task at a time, as in the traditional project management method. Lean allows simultaneous work on several tasks at different stages of development. This approach allows you to create a system that takes into account the individual characteristics of the project team.

Like Agile, Lean is a concept, not a project management system. You can develop a system that meets the requirements of your projects based on the ideas of Lean.

Advantages

Allows you to implement each part of the project with the same level of quality and control. The flexibility of the system allows you to independently determine the stages of work, but the process is organized enough not to go astray.

Disadvantages

Sometimes different parts of a project require different levels of control, and their implementation involves different steps, and in Lean the work process and quality standards are the same for all tasks. This can be a big disadvantage for projects with non-homogeneous parts.

There is also no process in Lean to ensure that a project is completed, which means projects can drag on indefinitely. These problems can be solved with good communication, but it is important not to lose sight of this point. [9]

Kanban

Despite the fact that Lean is a concept and not a dogmatic project management system, it is easy to create your own project management system using Kanban. This approach was invented by a Toyota engineer named Taichi Ono and first applied in 1953. Kanban involves working on some part of the project, and then sending it further down the pipeline to the next stage, where work on it continues.

The Kanban system was partly inspired by the concept of a grocery store: for maximum efficiency, only as many products as necessary should be displayed on the shelves to satisfy the demand of customers. When working with Kanban, it is not necessary to diligently complete each task - it can be left at the current level until it is needed.

This approach is less rigorous than Scrum. It does not include sprints that are strictly limited in time and roles, except for the product owner, it does not need to focus on just one task at a time. You can have meetings on the project as a whole, or you can do without them - it all depends on the needs of the project team.

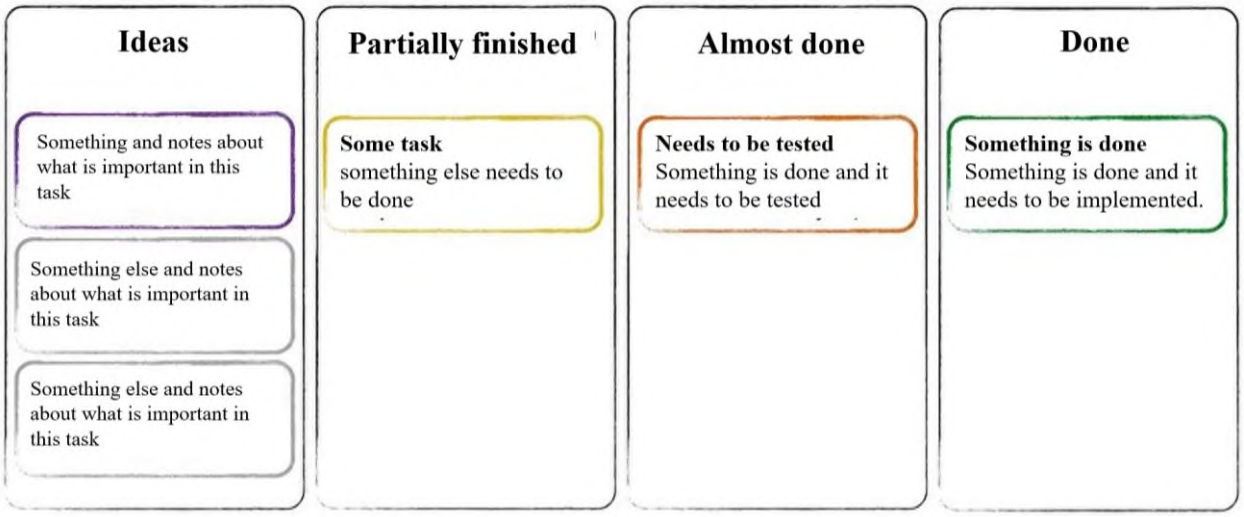


Fig. 1.5. Kanban structure

Using this technique, you need to define the stages of the workflow and decide how the task will move from one stage of the work pipeline to another. For example, you can have an electronic or paper card with information about the task, which you will transfer from one list to another as the task progresses.

The flexibility of this system is determined by the type of project and the personal wishes of the project manager and team, because Kanban, in fact, is just a way to visualize the concept of Agile. However, the Kanban philosophy is based on four aspects that guarantee a focus on results, such as:

- Cards: Each task has its own card with all the important information about it, making it always clear what is needed to complete this task.
- Limit on the number of tasks in processing: Allows you to avoid excessive load on the team.
- Workflow continuity: Tasks are drawn in order of importance and processed in the appropriate order so that the workflow is uninterrupted.
- Continuous Improvement: Reviewing a work process to determine its effectiveness and striving for continuous improvement.

Advantages

Like Scrum, Kanban is best suited to highly cohesive teams that know how to ensure a seamless process. But at the same time, they must be motivated and not need the strict management or deadlines that are characteristic of Scrum.

Allows you to see the whole picture of the project as a whole.

If you carefully follow the rules of Kanban and correctly calculate the workload for the team, projects are unlikely to go beyond deadlines, and employees will not be distracted by unnecessary things.

Kanban's flexibility won't be a problem, as the product owner can change tasks that aren't currently being worked on.

Disadvantages

If only one team member has the required skill, work can stall. Kanban is ideal for teams with similar skills, as everyone can contribute to the work, reducing backlogs to zero.

This system is more suitable for projects that are not limited in time. [9]

Six Sigma

The Six Sigma project management system was developed in 1986 by a Motorola engineer named Bill Smith. This is a version of the Lean system that is more structured than Kanban. Six Sigma includes specific work steps and planning techniques designed to save resources, achieve quality results, and get rid of errors and problems along the way.

The main goal of this approach is to satisfy the client with a quality product. It is achieved through continuous improvement of work based on data analysis. You present the finished parts of the project as you go, while at the same time solving emerging problems.

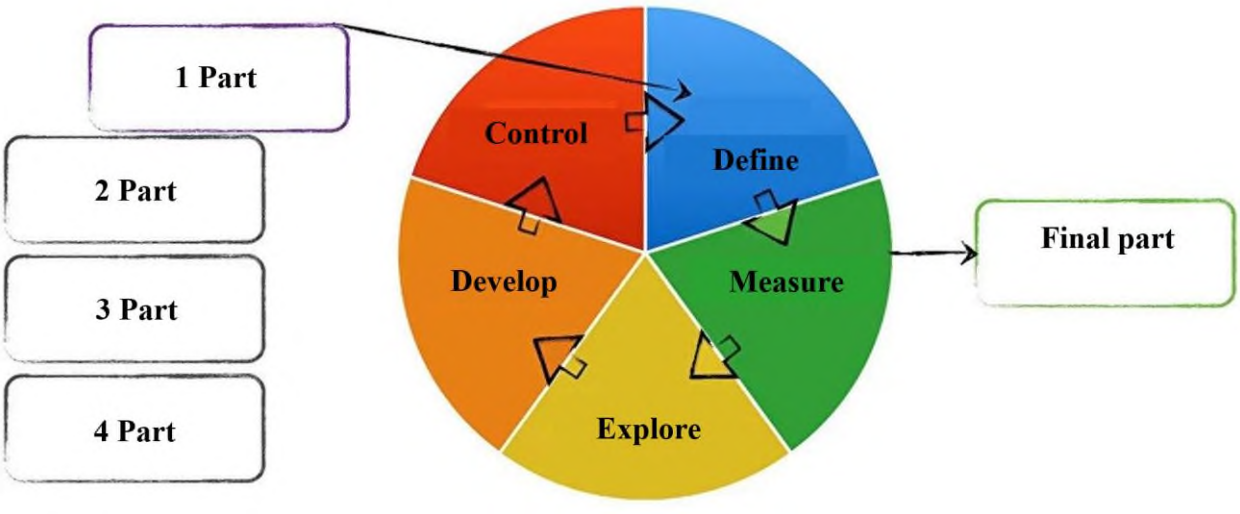


Fig. 1.6. Sigma Six structure

This is made possible thanks to the five stages of work in the Six Sigma system, which are called "DMEDI":

- Define: The people involved in the project together determine the scope of work, collect all possible information and identify business goals.

- Measure: The stage defines the indicators by which the team will measure the success of the work. At the heart of this approach is the idea that the degree of success - that is, the value of the product to the client and to the business - can be measured.
- Explore: The project manager decides how the team will meet the product requirements. This will allow you to work within the budget and not miss deadlines.
- Develop: At this stage, the implementation of the strategic plan takes place. The plan should be detailed and include everything that is needed to bring the project to completion. At this stage, the main work on the project takes place: the implementation of the plan, the development of the next project map and the measurement of the results of the work.
- Control: The last phase focuses on long-term process improvement, which is always the goal of Six Sigma projects. Lessons learned are documented in the form of recommendations and applied to the work of the entire company and future projects.

This approach is similar to Kanban, but it has specific stages of work, each of which includes planning, goal setting, and quality control. This method involves more meetings than Kanban, but it will allow you to have a more organized approach to solving each task. As with Kanban, you can tailor work steps to the needs of the project, leaving only the measurement and control steps to learn from your mistakes and successes and continuously improve project work processes.

Advantages

Six Sigma is a rigorous framework that will allow for continuous improvement in workflows and the creation of ever better products. By setting goals and revising them over time, you can measure the success of a project based on the data you collect.

There are many projects that are never finished, and this is where Six Sigma comes in handy. This system helps to implement tasks, learn from experience and improve.

Disadvantages

Despite the nominal importance of cost reduction, it is not always guaranteed, because customer satisfaction often comes to the fore. If the goals of the design tasks are constantly adjusted, the process can get out of control, no matter how hard you try to work better.

The basic principle of the Six Sigma system can be formulated as “There is no limit to perfection”, which can frustrate employees who are deprived of satisfaction from the work done, because it can always be done better.

Some projects are implemented only once, and then the emphasis on metrics and incremental improvement may be meaningless. [9]

PRINCE2

PRINCE2 was developed by the UK government in 1989. PRINCE2 is an acronym for "Projects IN Controlled Environments version 2". Under this system, the entire project is perceived as one big sprint, and the emphasis is on the quality of the final product, which resembles a mixture of the traditional project management model and Six Sigma. This framework pays special attention to the end result, not the process of work. It is the requirements for the final product that determine the scope of work and the approach to planning.

PRINCE2 takes into account three types of interests:

- Business interest (will it make a profit?)
- User interests (will it bring value to users?)
- Supplier interests (do we have everything we need to implement?)

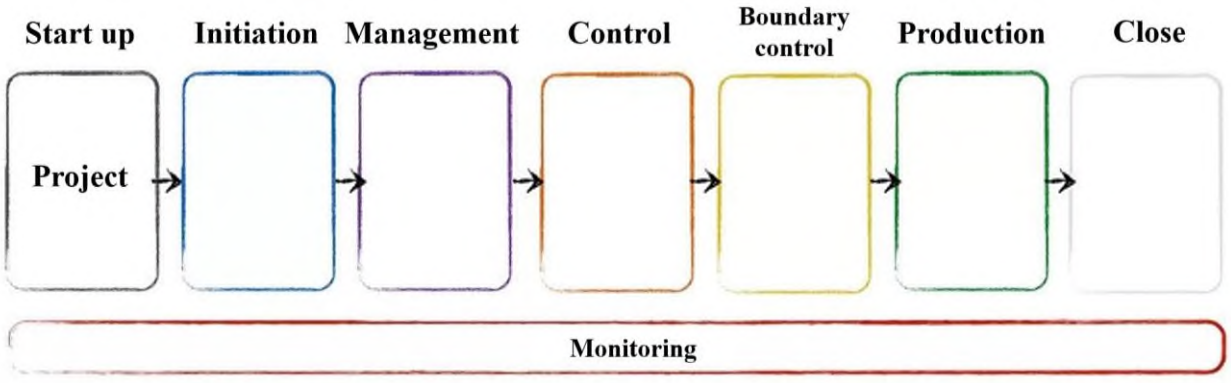


Fig. 1.7. Prince 2 structure

Unlike most other project management systems, PRINCE2 has a clear workforce structure, making it more suited to large scale projects at the level of governments and other large organizations. Each team member receives a specific role that is assigned to him throughout all stages of work:

- Start up: First of all, management appoints a project manager and clearly states their expectations for the product. The main task of the project manager is to pay attention to details. He reports to the project committee, which sets the direction of the work. The project committee ensures that the project stays on course and is responsible for its success. The project team is formed from all other employees.

- Initiation: At this stage, the project manager creates a project implementation plan. It is then approved by the design committee.

- Guidance: This step defines the project management structure, outlines the progress of each milestone, and decides what to do if the process changes.

- Control: In case of changes, the PRINCE2 system has a process for analyzing the results of the stage. The action plan for each subsequent stage

depends on the results of the previous one. Thus, although there is a general plan for the entire project, changes can be made to the work if the analysis of the stage reveals the need.

- Boundary control: At the boundary control stage, the production process is considered "what will be the output, how to get it and whether the product that is obtained meets all the requirements and wishes of the business."

- Production: When product development begins, the manager will have to make sure that everyone works in accordance with the goals of the project, as well as get approval for each completed part of the project.

- Closing: An in-depth analysis of the work done is carried out. A detailed report is drawn up, which must be approved by the project committee.

This organization of the process may be too cumbersome for some projects, so you can modify the steps for yourself, following the basic structure, planning and accountability of PRINCE2. If Scrum is a more structured version of Agile, then PRINCE2 is a more structured version of the traditional project management model, enhanced with the benefits of a Lean approach.

Advantages

PRINCE2 is suitable for large projects of high value that require multiple levels of control at every stage. This model provides feedback and ensures that everything goes according to plan. This model is great for government agencies.

Disadvantages

This model can create bottlenecks and overly politicize the process. Since PRINCE2 requires strict reporting and approvals, it will not be easy to take control, and work can stall, simply because someone did not have time to give the go-

ahead. Moreover, a strict distribution of roles can harm the spirit of sincere interaction and cooperation. [9]

This study showed that the topic of methodological project management is not new and there are a lot of project management systems. The most popular ones are Traditional Project Management, Agile, Scrum, Lean, Kanban, Six Sigma and PRINCE2. However, since project management is not an exact science, there is no universal method that fits all projects. Most often, teams have to create their own ways of managing projects from various elements of other systems, depending on the specifics of the project.

CHAPTER 2. BUSINESS ANALYSIS OF PROJECT MANAGEMENT ACTIVITY ON THE FIELD OF INTERNATIONAL PROJECT MANAGEMENT

2.1. GENERAL CHARACTERISTYCS AND ANALISIS OF BUSINESS ACTIVITY OF "NOVO BOX"

Novo Box is a wholly-owned subsidiary of Nova Poshta (here and later is used brand name "Nova Poshta" for NEW POST LLC). It is part of the Nova Pochta group. The group includes Ukrainian and foreign companies.

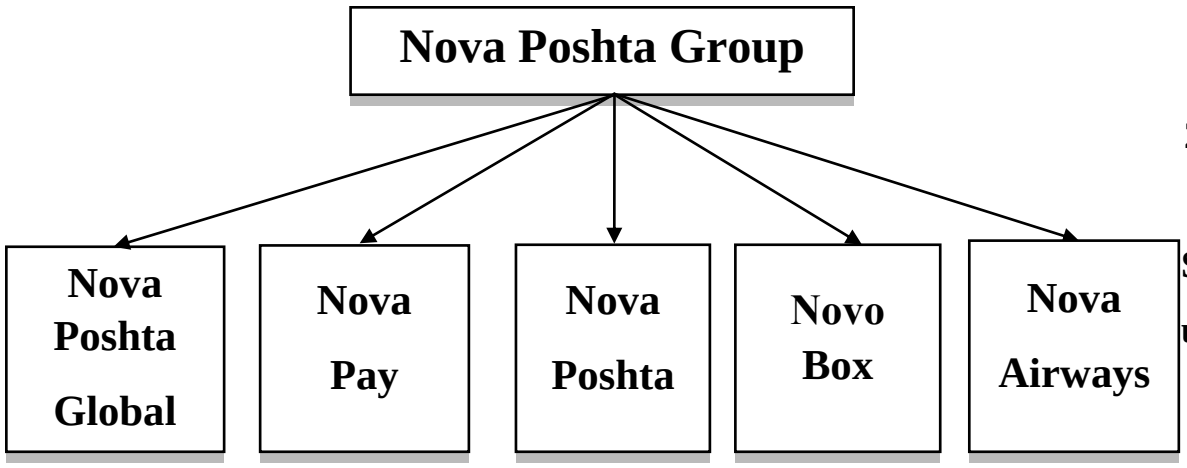


Fig. 2.1. Structure of Nova Poshta Group

- ***Nova Poshta*** *is a leader in the logistics market of Ukraine, which provides easy delivery to every customer - to the branch, post office, at the address - and allows thousands of entrepreneurs to create and develop business not only in Ukraine but also abroad.*
- ***Nova Pay*** *is a non-bank financial institution, developing its own international payment system NovaPay, within which funds are transferred.*
- ***Nova Poshta Global*** *is developing an international partner network to provide customers with express delivery services not only in Ukraine but also abroad.*
- ***Supernova Airlines*** *will be an airline that will deliver international cargo through Boryspil and Lviv airports. It will have its own fleet and will be subordinated to Nova Poshta Global.*

- ***Novo Box*** *is engaged in the development and installation of parcel machines, development of technical solutions for their improvement, their maintenance, as well as marketing issues, assessing the domestic market and creating a plan for entering foreign markets.*

Time of creation*:*

"Novo Box LLC" was founded in November 2019, and its parent company "Nova Poshta" was founded in February 2001.

Form of ownership:

NEW POST LLC (Brand Nova Poshta) is LIMITED LIABILITY COMPANY

NOVO BOX LLC is LIMITED LIABILITY COMPANY

Sphere of activities: Logistics and connected services

The organization carries out activities reflected in the Charter of the founder and defined in accordance with the national classifier of economic activities.

Types of activities

Basic:

- 52.10 Warehousing and storage

Others:

- 53.20 Other postal and delivery activities
- 68.20 Renting and management of own or rented real estate

Organizational and legal form of management:

List of founders of the legal entity:

- LIMITED LIABILITY COMPANY "NOVAYA POSTA-CENTER".

Contribution to the authorized capital: 200 000,00 UAH (Share: 45%)

- LIMITED LIABILITY PARTNERSHIP NOVAYA POSTTA CENTER

Contribution to authorized capital: 244,444.44 UAH (Share: 55%)

- Information on the ultimate beneficial owner (controller):

Vladimir Anatolyevich Popershnyuk,

Klimov Vyacheslav Valeriyovich

Level of independence:

Novo Box is fully subordinate and controlled by the top management of Nova Poshta.

The mission of the business entity:

The Novaya Pochta Group provides clients “both businesses and individuals” with a full range of logistics and related services.

The rights and duties of the enterprise:

The company is entitled to receive professional and financial assistance from the parent company.

Novo Box is committed to managing the allocated funds with maximum efficiency.

Management of cross-border economic activities of an enterprise

The main activity of Novo Box is aimed at the domestic market. The company has a strong position in the domestic market and is developing these opportunities, but the company's activities are not limited to this.

The international activity of Novo Box is closely connected with the strategy of Nova Poshta Global. Nova Poshta Global mainly specializes in cooperation with foreign logistics companies. This cooperation is due not only to the delivery of client packages through foreign logistics companies, but also to the provision of services to these companies.

At the moment, Novo Box is developing a boxed product "boxed solution". This means that the company is preparing its business processes and software to replicate the product in a new market in the form of a franchise. Currently, Novo Box is considering several options for cooperation with foreign franchisees.

For example:

• Collaboration with a logistics company that needs parcel machines to provide its own logistics services.

• Working with a retailer who needs parcel machines to improve logistics.

• Cooperation with any company interested in using parcel machines in the open market "The franchisee provides access to parcel machines to various logistics companies or retailers."

Provision of services to foreign branches or subsidiaries of Nova Poshta.

Enterprise innovative activity management

Novo Box is developing a relatively new product for the market - postal terminals and a new method of postal delivery. Therefore, innovation management is one of the key functions. The company believes that innovation is the main means of ensuring the competitiveness of products and the sustainability of enterprises and organizations in the market as a whole.

The main direction of the company's innovative activity is its own development and production of postal terminals. As well as the creation of a boxed product based on them, that is, the development of a single product for any logistics or trading company (software, device, and network management systems), which involves independent work of users, without the need to configure the product for a specific buyer.

The idea is to provide a "turnkey solution" on terms with standard features for all customers.

2.2. RESEARCH AND ANALISIS OF PRODUCT AND PROJECT MANAGEMENT STRUCTURE OF “NOVO BOX”

Determination of project name

As a project, I chose the recent project of the entry of Novo Box "subsidiary of Nova Poshta Group" into the Moldovan market. I chose this project because I have the opportunity to interview the technical director of this company. It should be noted that by that time Nova Poshta already had a division in Moldova, and I am writing about Novo Box entering the Moldovan market.

Table 2.1.

Project stakeholders

Project manager The head of this project was a project manager from the Moldovan division of Nova Poshta. Also, this project was managed by the technical director of Novo Box from the territory of Ukraine.
Project team Since this is an international project, two different subsidiaries of the same group of companies working on it from two countries. From the Novo Box side, the team consisted of: CTO, business analyst, post office developer, mobile application developer, 1S developer, engineer responsible for installation, firmware, testing, and training of the Moldovan team. From Moldova, the team consisted of: Project Manager, Project Manager, Business Analyst, 1S Developer, System Administrator, and Engineer responsible for maintenance of parcel terminals.
Initiator of the project Board of Directors of Nova Poshta
Customer of the project Division of Nova Poshta in Moldova
Owner of the project Novo Box Director
Investors The parent company of Novo Box, Nova Poshta invested 100% in this project without outside.
Authorities To deploy a network of parcel terminals in the cities of Moldova, it was necessary to obtain such permits as:

Permission to install parcel lockers in shopping centers, shops, and other similar locations had to be taken from each such enterprise separately on different conditions. Permission to install parcel lockers in houses had to be obtained from the housing and communal offices of each house. Permission to install parcel lockers on the streets of the city had to be obtained from the local city authorities.
Licensors Patent for the technology of the controller and the body of parcel lockers.
Contractors / Suppliers Postbox bodies supplier, controller chip supplier, cell lock supplier, cable and wire supplier, battery supplier, power supply supplier, and software development contractor.
Consumers of the final product of the project In the first stage, corporate clients such as resellers and their clients. In the second stage, postal service users of the Nova Poshta division in Moldova.

Determination of project objectives

Project: Launch of postal lockers network in Moldova for Nova Poshta

Project objectives

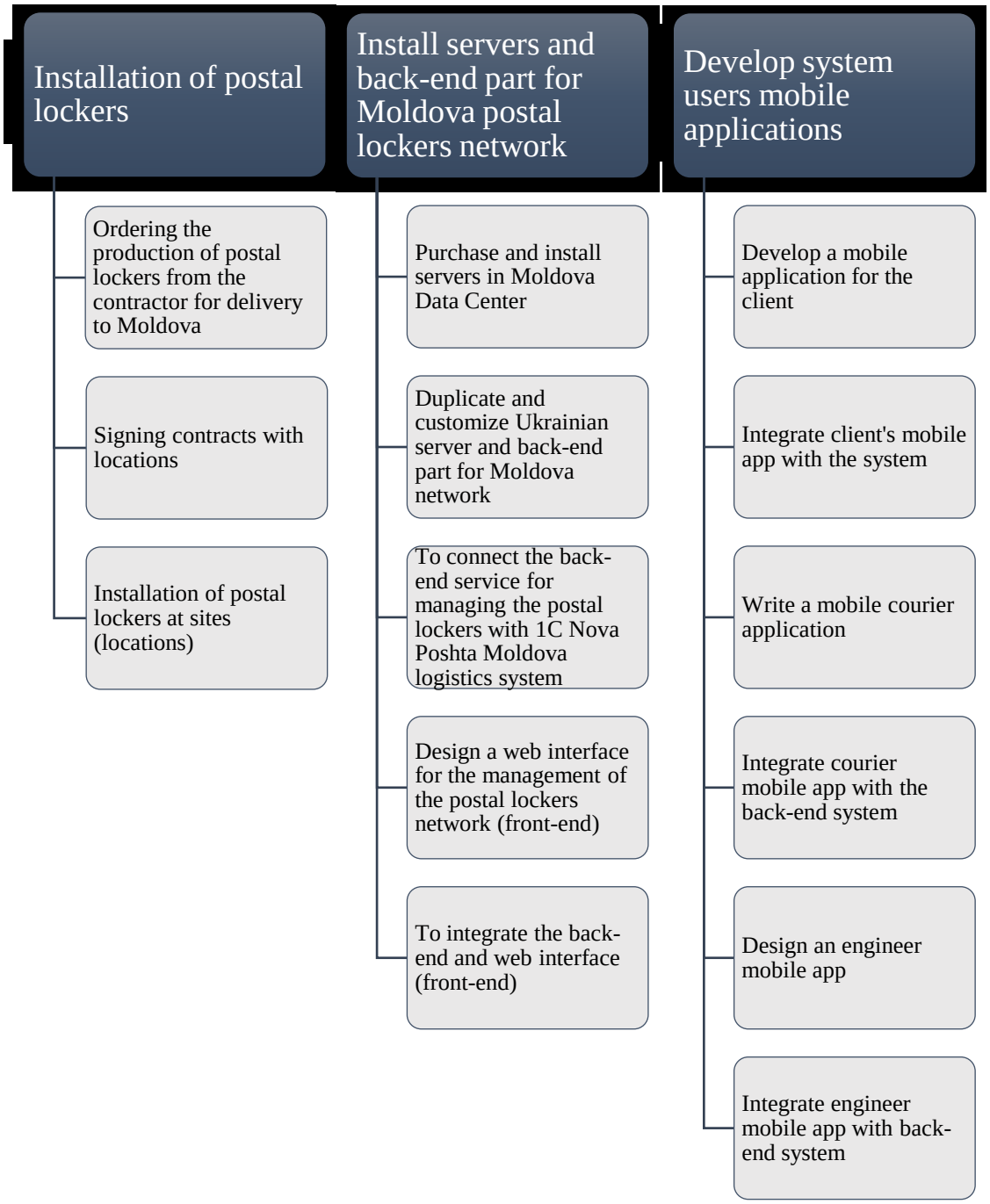


Fig. 2.2. Project objectives

Table 2.2.

Criteria for achieving the project objectives

	Objective	Criteria
1.1	Ordering the production of postal lockers from the contractor for delivery to Moldova	20 postal lockers should be delivered
1.2	Signing contracts with locations	Contracts for 20 locations should be signed
1.3	Installation of postal lockers at sites (locations)	20 postal lockers should be installed
2.1	Purchase and install servers in Moldova Data Center	2 servers of configuration approved in the technical specification should be installed
2.2	Duplicate and customize Ukrainian server and back-end part for Moldova network	Back-end from Ukrainian servers should be copied and installed into new servers with several differences (difference#1, difference#2, difference#3)
2.3	Connect the back-end service for managing the postal lockers with 1C Nova Poshta Moldova logistics system	Middle ware for integration of two systems should be developed in accordance to technical task and tested
2.4	Design a web interface for the management of the postal lockers network (front-end)	Web interface should be developed in accordance to technical task and tested
2.5	To integrate the back-end and web interface (front-end)	Back-end and web interface should be integrated in accordance to technical task
3.1	Develop a mobile application for the client	Mobile application for the client should be developed in accordance to technical task and tested by the contractor of NP Moldova.
3.2	Integrate client's mobile app with the system	Mobile application for the client should be integrated in accordance to technical task
3.3	Write a mobile courier application	Mobile application for the courier should be developed in accordance to technical task and tested by the Novo Box developers.
3.4	Integrate courier mobile app with the back-end system	Mobile application for the courier should be integrated in accordance to technical task
3.5	Write an engineer mobile app	Mobile application for the engineer should be developed in accordance to technical task and tested by the Novo Box developers
3.6	Integrate engineer mobile app with back-end system	Mobile application for the courier should be integrated in accordance to technical task

Project limitations

- **Time limitations:**

Objectives 1 Installation of postal lockers and 2. Install servers and back-end part for Moldova postal lockers network should be processed simultaneously and should be done during 3 months from the beginning of the project.

Objective 3 Develop system users' mobile applications should be done in a time term of 4 months, however, the 4th month of the project should be scheduled for the integration of mobile applications.

Personal limitations: The project is to be carried out by the Novo Box team and the team and 1C and mobile application development contractors of Nova Poshta Moldova.

- **Budget limitations:**

The project should be financed within the development budget of Nova Posta Moldova.

- **Project assumptions:**

Personal assumptions: If the contractor who provides 1C integration does not perform its work on time and in accordance with the terms of reference, Novo Box may transfer part of the project to its contractor in Ukraine.

Time assumptions: in this case the project period will be extended to 5 months.

Budget assumptions: in this case, part of the development work will be financed from the development budget of Novo Box Ukraine.

Determination of project scope

Determination of the final result of the project

The launch of a test network of postal lockers (20 locations) in Chisinau, clients of such a network should be able to receive parcels using a mobile application on their smartphone, couriers, and engineers of Nova Posta Moldova should have a tool for loading and unloading parcels to serve postal lockers.

High-level requirements for the final result of the project

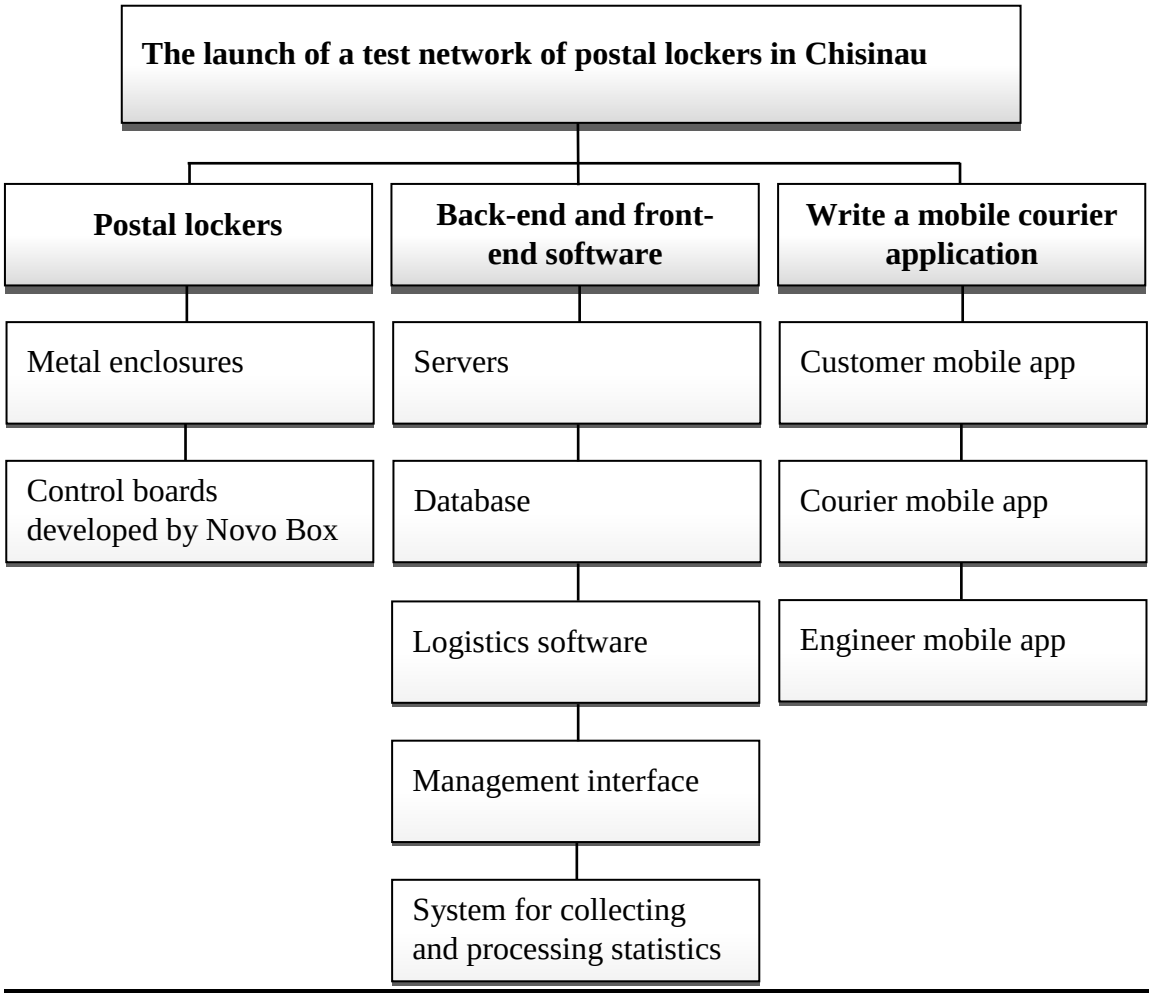


Fig. 2.3. High-level requirements for the final result of the project

Evaluation of project cost

Table 2.3.

Resources cost estimation

№	Resource name	Team code (country)	Resource code	Evaluation of cost $ per hour
1	Senior Project Manager	UA	SPM UA	17
2	Project Manager	MD	PM MD	12
3	Business analysts	UA	BA UA	17
4	Business analysts	MD	BA MD	15
5	System architect/Backend developer	UA	BackEnd UA	22
6	1C-developer (contractor)	UA	1C-D UA	15
7	Senior 1C-developer	MD	S1C-D MD	25
8	1C-developer	MD	1C-D MD	20
9	DevOps/system administrator	UA	DevOps UA	33
10	Web Developer (Front End Developer)	UA	FrontEnd UA	16
11	Tester	UA	Tester UA	12
12	Tester	MD	Tester MD	9
13	Senior Engineer installer	UA	S.installer UA	13
14	Engineer-installers	MD	Installer MD	7
15	Senior User support manager	UA	S.Support UA	9
16	User support manager (3)	MD	Support MD	9
18	Mobile Application Developer	UA	MADev UA	22
19	Mobile Application Developer	MD	MADev MD	22
20	Location managers	MD	LMMD	7

Table 2.4.

Material resources

№	Resource name	Estimating the amount	Cost per unit	Evaluation of cost $
1	Postal lockers	100 pc	900	90 000

2	Server (Rent remote server space)	2 slots 6 months	80 slop per month	960

Table 2.5.

Work Breakdown Structure (WBS) of project

№ of level	**Name of the task**	**Evaluation of duration/complexity**	**Resources ***	**Evaluation of cost****
1	**Installation of postal lockers**			
1.1	**Ordering** of postal lockers			
1.1.1	Postal lockers **configuration coordination** with developers and producers	14 days/ 15 hours	SPM UA	17*15=**255**
1.1.2	**Control of production** of postal lockers	30 days/ 15 hours	SPM UA	17*15=**255**
1.1.3	**Delivery** of postal lockers to Moldova (order management)	14 days/ 100 lockers	Postal lockers	100*900=**9000**
1.2.	**Installation** of postal lockers at locations			
1.2.1	**Training of** postal lockers Installers	5 days/ 40 hours	S.installer UA	13*40=**520**
1.2.2	**Supervision** of postal lockers **installation**	60 days/ 320 hours	S.installer UA	13*320=**4160**
1.2.3	**Locations**:searching, negotiations, constructs	60 days/ 500 hours	LM MD	500*7=**3500**
1.2.4	**Installation of** postal lockers	60 days/ 1600 hours	installers MD	7*1600=**11200**
1.2.5	Management of project: planning and control	60 days/ 20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**
2	**Servers and back-end**			
2.1.	Servers system installation			
2.1.1	Defining **business requirements** and designing a solution	10 days/ 70 hours	BA UA BA MD	(30*17)+(40*15) =**1600**
2.1.2.1	Renting remote server space	5 days/ 10 hours	SPM UA	10*12=**120**
2.1.2.2	Renting remote server space (servers installation)	2 slots/ 6 months	Remote server space	2*6*80=**960**
2.1.3	Installation of server software	10 days/ 30 hours	DevOps UA	30*33=**990**

2.1.4	Management of project: planning and control	10 days/ 20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**
2.2.	Back-end development			
2.2.1	Defining **business requirements** and designing a solution	5 days/ 40 hours	BA UA BA MD	(20*17)+(20*15)=**6 80**
2.2.2	System architecture development	25 days/ 100 hours	BackEnd UA	22*100=**2200**
2.2.3	Revision of 1C database on the side of Novo Box	25 days/ 130 hours	1C-D UA	15*130=**1950**
2.2.4	Improvement of 1C database on the side of Novo Box Moldova	25 days/ 360 hours	S1C-D MD 1C-D MD	(25*180)+(20*180) =**8100**
2.2.5	Back-end **Testing**	14 days/ 45 hours	Tester UA Tester MD	(25*12)+(20*9)=**48 0**
2.2.6	Management of project: planning and control	25 days/ 20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**
2.3	Web interface development			
2.3.1	Defining **business requirements** and designing a solution	5 days/ 40 hours	BA UA BA MD	(20*17)+(20*15)=**6 80**
2.3.2	Web interface development	25 days/ 180 hours	FrontEnd UA	16*180=**2880**
2.3.3	Web interface **Testing**	14 days/ 45 hours	Tester UA Tester MD	(25*12)+**(**20*9)=**48 0**
2.3.4	Management of project: planning and control	60 days/20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**
3	**Mobile applications**			
3.1.	Client mobile application development			
3.1.1	Defining **business requirements** and designing a solution	5 days/ 40 hours	BA UA BA MD	(20*17)+(20*15)=**6 80**
3.1.2	Client mobile application development	10 days/ 300 hours	MADev UA MADev MD	(22*150)+(22*150) =**6600**
3.1.3	Client mobile application **Testing**	14 days/ 45 hours	Tester UA Tester MD	(25*12)+**(**20*9)=**48 0**
3.1.4	Management of project: planning and control	25 days/ 20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**
3.2	Courier mobile application development			
3.2.1	Defining **business requirements** and designing a solution	5 days/ 40 hours	BA UA BA MD	(20*17)+(20*15)=**6 80**
3.2.2	**Courier** mobile	10 days/ 300 hours	MADev UA	(22*150)+(22*150)

	application development		MADev MD	=**6600**
3.2.3	Courier mobile application **Testing**	14 days/ 45 hours	Tester UA Tester MD	(25*12)+**(**20*9)=**48 0**
3.2.4	Management of project: planning and control	25 days/20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**
3.3	Engineer mobile application development			
3.3.1	Defining **business requirements** and designing a solution	5 days/ 40 hours	BA UA BA MD	(20*17)+(20*15)=**6 80**
3.3.2	**Engineer** mobile application development	10 days/ 300 hours	MADev UA MADev MD	(22*150)+(22*150) =**6600**
3.3.3	Engineer mobile application **Testing**	14 days/ 45 hours	Tester UA Tester MD	(25*12)+**(**20*9)=**48 0**
3.3.4	Management of project: planning and control	25 days/ 20 hours	SPM UA PM MD	(17*10)+(12*10)= **290**

2.3. ANALISIS OF “NOVO BOX” MULTINATIONAL TEAM’S MANAGEMENT

An interview with Maxim Tkachenko, technical director of Novo Box, highlighted a number of problems that the team faced during the project. These problems can be divided into two groups, organizational and demographic.

1. *Cross-national project problems:*

1.1. The problem with the search for human resources in Moldova.

This problem derives from the problem of the Moldovan labor market and its difference from the Ukrainian labor market. According to the technical director of Novo Box, in practice, it turned out to be difficult to find specialists with average qualifications to do simple work for a small fee.

1.2. Adapting the box product for the local mentality

This problem is characterized by the difference in mentality and consumer culture in Moldova and Ukraine. In this regard, it was impossible to apply the strategy of a boxed product and simply deploy it in the foreign market without making changes.

2. *Multi-team project organizational problems:*

2.1. Two team’s synchronization problem

Due to the fact that the project is actually conducted by two different companies that belong to the Nova Poshta group, project management is not centralized. Each of these companies has people responsible for the organization of the project and its final result. However, in the final result both parties meant a different outcome, for example, if the goal of Novo Box was to launch the raw product as early as possible to test it in the new market, the Moldovan division of Nova Poshta had the goal to create a ready "not raw" product by ignoring

deadlines. The problem is that due to the decentralized management, it is difficult to synchronize the final goals and work process.

2.2. Two outsourcing teams coordinating in the context of an international project.

The fact is that the Nova Poshta unit in Moldova does not have the same resources and capabilities as Nova Poshta in Ukraine. The solution is outsourcing and contractors (who provide software and materials). While this allows for more efficient small-scale operations, savings on labor, and reduced costs for the HR department, this approach has had a negative impact on this project. The reason for this was that this project already involved a complex management system involving the synchronization of the two companies, and involving additional third parties in the project made project management much more difficult.

2.3. The problem of dividing zones of responsibility between teams

The lack of centralization of project management created a serious problem of responsibility segregation, not only at the executive level but also at the organizational level.

A desk study consisting of the collection of information about the company from public sources as well as the information received from the company's employees allows to create a profile of the Novo Box company.

An empirical study and analysis of product and project management structure allow to make an investigation of the principles of project management in a case study and also allow to identify a number of problems, the solution of which is presented in the next chapter.

CHAPTER 3. WAYS OF "NOVO BOX" INTERNATIONAL PROJECTS MANAGEMENT SYSTEM ENHANCEMENT

This part focuses on solving the following problems that were identified in the course of the Novo Box business analysis: Cross-national project problems and Multi-team project organizational problems:

3.1. CROSS-NATIONAL AND MULTI-TEAM PROJECT ORGANIZATIONAL PROBLEMS:

3.1.1. Searching for synergies to solve cross-national project problems.

Cross-national project problems: The problem with the search for human resources in Moldova and Adapting the box product for the local mentality.

The peculiarities of mentality and human resources often arise in the management of international projects. It is assumed that culture is a problem, but not a resource. And differences lead to problem conflict, but not to synergy.

However, the project manager's challenge is to turn cultural differences into an advantage. Cross-cultural collaboration can be positive and productive. In the history of business, cross-cultural teams have often produced more effective solutions than similar monocultural teams. When different cultural styles are synchronized into a hybrid culture, that culture can be more effective and flexible in solving problems than any single cultural approach.

This more complex approach requires leaders to know key aspects of the local culture in order to make informed decisions about whether to adapt to cultural differences or capitalize on their potential and accelerate the formation of hybrid cultures, where new rules and expectations about work, roles, and communication evolve after culturally diverse team members work together.

While some cultural differences can improve the performance of multinational teams, others can hinder the success of projects.

What types of cultural differences can serve as a starting point for synergy when a project manager adopts a positive approach to managing a multinational team?

To achieve synergy in project work, a leader is helped by the following characteristics: charisma (inspiration, high standards, determination and honesty), autonomy (independence and individualism), and self-protection (saving face, procedures, and concern for the safety of the group).

An example of this principle:

If two more reserved managers can energize a team less, two overly dominant managers can get in each other's way too much. Culturally diverse management teams can achieve complementarity by providing a balanced approach that allows the team to benefit from both a charismatic and a more relaxed leadership style.

The key to effective collaboration is a balanced division of roles between managers from different cultures, as well as between members of multiple teams. While it is difficult for a single leader to flexibly change his or her management style, a culturally diverse management team can find experts and strategically divide labor to fulfill the various roles required.

In our case, teams from Ukraine and Moldova (and later, another country where Novo Box plans to enter) are encouraged to think about the cultural differences of the teams and identify those that could benefit the project. These are areas where differences are beneficial and allow teams to be more creative and productive.

3.1.2. LARGE-SCALE SCRUM (LeSS) PROBLEM SOLVING FOR A MULTINATIONAL PROJECT INVOLVING SEVERAL INTERNATIONAL TEAMS.

In our specific case, two internal teams, Novo Box Ukraine and Nova Posta Moldova are working on the same project, and there are teams of contractors on each side. These teams have the following problems:

- Two teams’ synchronization problem
- Two outsourcing teams coordinating problem in the context of an international project
- Dividing responsibility zones between teams’ problem.

The issue of workability and, in general, the possibility of applying Agile on a large scale is keeping the software development industry busy for the last decade. A large number of approaches appeared such as Scaled Agile Framework, Disciplined Agile Delivery, Nexus, primitive Scrum-of-Scrums, etc. All of them are either complex, so their application is very difficult and often does not give the expected results, or so simple that they solve only particular problems in a limited number of cases.

The Large-Scale Scrum framework, or LeSS for short, was developed to solve this problem. LeSS is a Scrum applied to multiple teams working together on a single product.

Scrum on a large scale is not a special extension framework that works only at the command level. Really large scale Scrum is the same Scrum, but working at a larger scale.

In LeSS, the majority of teams are cross-functional, full competency product teams (feature-team) consisting of 3-9 learning-oriented participants doing all the work to create a complete working product.

These teams work together on one Product Backlog because they have a common goal: to develop a single, complete, ready-to-deliver product based on the results of a common Sprint, and each team is involved in this because they are not a component team, but a product team (feature-team), and are responsible for the end-to-end product, not just a single part of it.

Then let's take a look at what LeSS as a whole consists of and its features and recommendations for our case.

LeSS is an extended version of single-command Scrum, retaining many of the practices and ideas of single-command Scrum.

Scrum on a large scale consists of two frameworks:

- LeSS - 2 to 8 teams
- LeSS Huge - 8+ teams

In our case, the LeSS framework must be applied to manage the four commands.

The principles of the LeSS framework are the following:

- Up to eight teams (eight people in each).
- A single Product Backlog (because it is for the product, not the team)
- A single definition of readiness for all teams
- A single Increment of potentially deliverable product at the end of each Sprint,
- A single product owner
- Many full cross-functional teams (no single specialist teams)
- A single Sprint (In LeSS, all Teams participate in a common Sprint to produce a common deliverable product in each Sprint.)

3.2. RECOMMENDATIONS FOR USE OF LeSS:

- Sprint Planning, Part 1:

In addition to one product owner, include people from all teams. Allow team members to decide how to distribute elements of the product backlog on their own. Team members also discuss finding ways to work together and collaborate, especially on related issues.

- Sprint planning, part 2:

Conducted independently (and usually in parallel) by each Team, although sometimes two or more Teams can conduct it in the same room (in different locations) for easier coordination and training.

- Daily Scrum:

It is also conducted independently by each Team, although members of one Team may observe another Team's Daily Scrum to enhance information sharing.

- Coordination:

Just Talk, Communicate in Code, Travelers, Open Space, and Communities.

- Shared PBR:

There can be an optional and short general meeting to refine outstanding product work (PBR) that involves one product owner and people from all teams. The main goal is to decide which teams are likely to implement which elements, and therefore select those elements for later in-depth PBR for one team. This is also an opportunity to improve communication with the product owner and all the teams.

- Clarification of the product backlog:

The only requirement in LeSS is single-team PBR, the same as single-team Scrum. But a common and useful option is multi-team PBR, where two or more teams are in the same room together to improve learning and coordination.

- Sprint Review:

In addition to the product owner, it includes people from all teams, as well as relevant customers/users and other stakeholders. During the validation phase and the addition of new elements to the product, it is worth considering a "bazaar" or "science fair" style: a large room with several areas, each with team members, where the elements developed by the teams are demonstrated and discussed.

- General Retrospective:

This is an additional meeting that is not available in single-team Scrum. Its purpose is to study the improvement of the whole system, not to focus on a single team. The maximum length of the sprint is 45 minutes per week. It consists of the Product Owner, the Scrum Master, and alternating representatives from each Team.

In the conclusion of the last chapter, a set of recommendations was developed based on the information gathered in the course of this work. These recommendations include searching for synergies in a multinational team factor to be more flexible, creative, and productive, as well as implementing a Large-Scale Scrum methodology to solve the problem of synchronization of two teams in the

context of an international project and to solve the problem of dividing responsibility areas between the two teams.

CONCLUSIONS

In this Bachelor's Qualification Work in order to disclose the topic “International project management on the example of a specific project”.

The topic of researching the specifics of project management in international business does not lose relevance in the current environment because more and more business projects are being developed by cross-national teams and each such team faces its own set of project management challenges. To manage such projects, it is impossible to define a single methodology for each project, it is necessary to analyse the teams and identify a number of problems that arise in their interaction and propose a methodological solution for each specific case.

At the beginning of the study, the aim was set: to make research of international project management and problem-solving methods applied to the example of a specific business. This aim was achieved in the course of writing this bachelor's thesis.

The object of the study was management of international projects in business practice. The subject of the study was the Ukrainian postal terminals network operator network – Novo Box.

Materials collected in the course of practical work in the company Novo Box and direct participation in the analytical and project activities of the company were taken as the information base of the research.

In the first part of the thesis aim was to get acquainted with the project and project management tools. For solving of this aim the history, terminology and methodology of project management is considerd in this part.

The thesis was based on theoretical foundations. First of all, this work considered the historical retrospective of project management from the time of the construction of the Egyptian pyramids to the modern history of project management, which is usually conducted since the 50s of the twentieth century. In this part I have considered four periods of the formation of project management:

(1) Division of labor and scheduling (before 1958), during this phase the focus was on improving efficiency and reducing project execution time, a work breakdown structure (WBS) emerged, which improved the field of logistics in the first place;

(2) Birth of project management tools (1958-1979), computers began to appear in all significant enterprises and organizations and during the same period special project management software from software companies began to appear.

(3) Publicity (1980 - 1994), this is when the Internet appeared and software solutions were significantly upgraded to enable projects with many stakeholders and extremely complex interactions.

(4) Creation of a new environment (1995-present), our time is a period of working in distributed and multinational project teams. It is the peculiarities of managing the work of distributed teams that my thesis is devoted to.

In order to accurately designate the special sphere of project management and to introduce subjects and phenomena peculiar to the sphere of project management in the text of this thesis some terms and definitions are considered. Both terms widely used in management (Project, Project management, international project management) and very specific for project management and even for its separate directions (Product Owner, Scrum Master, Work Breakdown Structure (WBS), Scope, Initiator, Execution, Project team, Milestone, Critical path, Methodology, Monitoring, Workflow) are considered.

At the end of the theoretical part of the thesis, project management methodologies are discussed. Such as: Traditional project management (waterfall), Agile, Scrum, Lean, Kanban, Six Sigma, PRINCE2. Particular attention is paid to the advantages and disadvantages of each methodology. This is necessary in order to highlight and recommend one of these methodologies in the practical third part.

The second part of this paper is an analysis of the Novo Box company, examining its project management practices and identifying problems in this sphere that need to be solved.

For the realization of this task I analyzed the business activity of "Novo Box" company and its place in the structure of Nova Poshta group. In particular, such aspects as management of cross-border business and innovation activities of this company were studied. The product and project management structure of this company was also analyzed.

A desk study was also carried out, consisting of collecting information about the company from open sources, as well as the information received from the company's employees, as a result of which a Novo Box company profile was compiled.

An interesting project for this study is the recent project of Novo Box company to enter the Moldovan market in cooperation with its subsidiary Nova Poshta Moldova and to launch a network of parcel boxes on this market.

My thesis presents the documentation of this project, developed together with the Novo Box team, which reflects the following aspects: Stakeholders of the project,

Criteria for achieving project objectives, Project constraints, Project assumptions, High level requirements for the final result of the project, Project cost estimate, Work Breakdown Structure (WBS) of project.

Analysis of business and practice of project activities of the company "Novo Box" and the multinational project team allowed to identify two groups of problems: (1) the peculiarities of local mentality that appear in the hiring and adaptation of the product for local customers and (2) organizational problems of multi team project (synchronization of two teams, coordination of outsourcing teams in two countries and division of responsibility areas)

Empirical research and analysis of the product and project management structure revealed a number of problems such as cross-national project problems and Multi-team project organizational problems.

In the third part of this paper, recommendations were made to improve the management of international projects and the methodology of work in the following international projects of the company to be implemented in the future.

To solve the cross-cultural problems of cross-national projects, it is suggested to turn cultural differences into advantages and thus find synergies between teams.

A methodological solution for problems arising from two or more teams, such as the problem of synchronization of two teams, the problem of synchronization of two outsourced teams, the problem of division of areas of responsibility between teams are also proposed. This solution is proposed using the LARGE-SCALE SCRUM (LeSS) methodology for a multinational project involving several international projects.

The main requirement of this solution is that the teams have a common goal and therefore have to work together on one Product Backlog Refinement (PBR). Other recommendations are that other elements of execution should be shared: Sprint planning, Daily SCRAM meetings, Sprint Reviews and General Retrospective .

These two recommendations the search for synergy in the multinational team factor and the implementation of the Large-Scale Scrum methodology should allow the multinational team to be more flexible, creative and productive, as well as solve the problem of synchronization of two teams in the context of an international project, and solve the problem of division of responsibilities between two teams.

As a result of this work, a study of project management methods was carried out. The study showed that there are many project management systems, but there is no universal method suitable for all projects. Most often, teams have to create their own ways of managing projects from various elements of other systems, depending on the specifics of the project.

The results of this term paper contribute to further research to solve the problem of project management in international business. This thesis may be of interest to project managers, project customers, project organizations and other professional participants in various spheres of business.

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