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## PROJECT MANAGEMENT: MAIN STAGES AND APPROACHES

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*The article describes and analyzes the approaches of project management, their application and importance for Armenian organizations. Stages of project management are described in details and we are shown how the use of project management brings to the competitive advantage of organizations.*

**Key words:** *project, project management, project stages, project knowledge field, set of processes/procedures, small and medium enterprises (SME)*

### Introduction

The idea of using project management has long been ignored by Armenian organizations. In Armenia there is a general opinion that the project management tools are primarily intended for large companies. However, taking into consideration the capabilities and threats of global developments, project management should become a daily issue of all Armenian SMEs (Small and Medium Enterprises).

### Conflict settings

Why to invest the project management approaches in SMEs? The use of the project management approach helps to identify and further to reduce the hidden costs of the organization, to increase the efficiency of SMEs and to optimize the use of already limited SMEs.

### Research results

To understand how to invest the culture of project management in the organization and what tasks can occur during the investment, we should try to understand first what the project is.

Project «projectus» (lat.), means «rushed forward»:

We present the definition of project by famous social organizations of project management teaching and development as following

- PMI® 2012, USA<sup>2</sup>, «Project is a temporary activity which is implemented for creating an exceptional product, service or result»;
- ISO 9000:2000 Basics and glossary<sup>3</sup>, «Special process which consists of a number of systematized and controlled activities with their starts and deadlines foreseen for reaching the aims thus taking into account certain limits of cost and resources and its time as well»;
- PRINCE, CCTA 19974, «Management environment which is created to supply one or more product according to stated business characteristics».

Project activity creates exceptional product, service or result [1].

«Exceptional» means that the organization has never implemented such activity and the project working group deals with the tasks, issues and problems of the project for the first time. Even if in

<sup>2</sup> Project Management Body of Knowledge, PMBOK®

<sup>3</sup> ISO 9000:2000, "Quality Management System – basics and glossary "

<sup>4</sup> PRINCE2-п (PRojects IN Controlled Environments) an effective method of project management based on procedures and is registered as brand of government staff

some cases there are certain repeating stages or elements in the results of the new project, the exclusivity is maintained due to new changed requirements, design or new functionality as required.

"Timely" means that each project has a time limit, i.e. it has clear beginning and end.

The project management area, as a separate management direction, has been formed in the 50-60s and has rapidly gained popularity around the world. Project management approaches are mainly used and widely spread in Information Technology (IT), in the fields of construction, consulting, banking, telecommunications, energy and manufacturing [4].

The projects are realized (implemented) in all areas and at all levels of the organization raising the effectiveness of the organization.

The project may involve one person, one structural unit or several structural divisions.

Recently the approach of project management has started to be carried with great difficulty also in Armenian market. As a result in Armenian SME market two types of organizations have been formed such as

- Organizations which get revenues mainly from implementing projects for other organizations by signing contracts (advisory, adversary and other SMEs),
- Organizations which accepted the approach of project management as already formed management system and management working style.

The main reasons for the beginning of the projects can be the following: the need to solve any problems, new opportunities or desire to meet new job requirements and legislative changes etc.

Project samples [6]

- Developing new production or service,
- Change of structure of organization, personnel or style,
- Developing new course,
- Developing new information system or its obtaining,
- Construction of building or structure etc.

Project results

- Realizing a definite mission,
- Creating or developing new product or service,
- Innovation,
- Social and organizational changes etc.

What is project management and what is its purpose and what stages is it consisted of? [6]

«Project management is the application of knowledge, skills, tools and methods of realizing and gauging the project tasks and demands during project activity» (PMI® 2012, USA) [1]

The efficiency of project implementation is usually estimated due to the criteria of satisfying its cost, time and demands.

Project management includes

- Defining of demands,
- Defining certain and real objectives,
- Balancing the demands which contradict limitations of quality, time and cost and other values,
- Combining properties, plans and approaches based on the demands, opinions and expectations of different stakeholders of the project.

Today there are various methods and schools on the topic. The following approaches have become the most widespread such as

- Project management book of knowledge developed by Project Management Institute (PMI® 2012, USA) PMBOK (Project Management Book of Knowledge) with the approaches and tools presented in the guidebook,
- The tools and approaches of PRINCE (**P**rojects **I**N **C**ontrolled **E**nvironments) developed by the Great Britain office of OGC (the Office of Government Commerce),
- Flexible project management approaches and tools which are represented by Agile Alliance group organization (USA).

You can be introduced to the most widespread project management tools and methods which are represented in PMI® project management book of knowledge PMBOK guidebook.

Any project can be realized through processes/procedures independent on its size, character, sphere and value which are grouped in five interrelated groups.

The component processes/procedures can also interrelate both within the process/procedure groups and between their groups.

The five process/procedure groups are [1]

- I. Introduction process group – start of the project and authorization,
- II. Planning process group – clarification of plans and division, planning of actions ,
- III. Implementation process group – implementation of actions according to project management plan,
- IV. Control and monitoring process group – regular supervision and measurement of implemented and planned actions
- V. Decline process group – closing of total project or project stage. Official admission of result or service.

What tools and methods are carried out while implementing those processes?

Pre – implementation.

In its initial stage after the project is started the project manager should answer the following question “Do we have vital and valuable project?”

It means he/she should do the analysis of the validity and implementation of the idea of the project.

The analyses should be done from the following view point – technical, organizational, staff, legal, economic and ecological.

This analysis can be done using the methods of standard business such as S.M.A.R.T<sup>5</sup>, SWOT<sup>6</sup> and PESTEL<sup>7</sup> analysis which help to estimate the vitality of the idea, the usefulness of the expenses etc.

The analysis of validity and implementation of the project can be considered as separate project.

The project starts by the development of Project Constitution/Description which includes the following:

- The description of final product/service/result,
- Production/realization of schedules,
- Descriptions of business tasks, opportunities and aims,
- Project content,
- The financial prediction of project,
- The strategy of implementation and program deadlines,
- Project staff and stakeholders,
- Critical suggestions and success factors and quality demands, ,
- Limitations and dependencies,
- Risks.

In this stage all the stakeholders of the project are identified.

Planning processes group - The project plan clarifies the steps needed to implement the idea of the project, project activities and resources distinguished for them (including personnel requirements).

The project plan is designed taking into account such limitations as:

<sup>5</sup> S.M.A.R.T (Specific, Measurable, Attainable, Realistic, Time-bound and Testable)

<sup>6</sup> SWOT (Strengths, Weaknesses, Opportunities, Threats) analyses, method of strategic planning which enables to evaluate the influence of internal and external factors of the company on the company activity thus distinguishing four main categories of the factors.

<sup>7</sup> PESTEL – marketing tool which is for distinguishing the external factors influencing the company’s activity such as (Political), (Economic), (Social), (Technological), (Ecological) and (Legal).

- project content (i.e. all the necessary activities),
- project value,
- availability of project resources,
- project time,
- project quality,
- project risks,
- the client's satisfaction.

These limitations are interconnected and one or more factors may be modified in case of each change. For example, changing the content (action / work) brings to the schedule limitations which in turn affects the requirement of budget and resources.

The results of project planning stage are the following:

1. The structure of work components,  
Aim - the main results and division of the work into smaller and more controlled components.
2. Plan list model  
Aim- the estimation of project duration, detailed plan creation, exploration of personnel needs, prediction of budget and money flows and estimation of efficiency.  
The applied tools and methods are PERT sketches, the techniques of project estimation and supervision, network models, prototype networks of Kritical ways and Gantt drawing, program tools as MS Project, Jira etc.
3. Development of project management plan and extra planning (definitions of applied methods, standards and responsables) [1]
  - Content management plan,
  - Schedule management plan,
  - Value management plan,
  - Quality management plan,
  - Procedure management plan,
  - Human resources plan,
  - Communication plan,
  - Risks management plan,
  - Purchase management plan,
  - Stakeholders management plan,
  - Demand management plan,
  - Changes management plan,
  - Configuration management plan.

The project activities are carried out in accordance with the pre-stated plans taking into account all the limitations and correcting the fluctuations.

The processes of this group end after gaining the results of the project.

The main objective of the monitoring and supervising group processes is to monitor the correspondence of the planned and completed works.

If changes are detected, a Change Request /Application will be formed if necessary. The Change Management Committee analyzes the application, evaluates the consequences of the changes and potential risks, and, if necessary, permits to make the required changes.

Changes can mainly relate to the plan list, requirements and cost.

Fluctuations can be detected through communication, system monitoring, meetings, reports, conversations and observations.

After the plan is finished it is necessary to do the following actions:

- Handing the project results, official notification on implementation,
- Analysis of the information received (information on the costs, hours, project documents and other cheques),
- Meetings with team members, interviews and discussions on the issues concerning the project.

### Conclusion

Any project that is implemented in accordance with project management standards should deal with any of the processes, tools and methods above mentioned. An unsuccessful project may lead to huge costs and, in some cases, can seriously damage the business. Proper use of project management standards is to match them to each specific case. In this case it is intended to use all the possible solutions and to control project work effectively. Successful implementation of the project and application of the project management model can be very beneficial for small businesses.

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<sup>1</sup> Շուշիի տեխնոլոգիական համալսարան

<sup>2</sup> Երևանի պետական համալսարան<sup>3</sup> ԵվրասիաՍՄ միջազգային համալսարան

Հողվածում նկարագրվում և վերլուծվում են նախագծերի կառավարման մոտեցումները, կիրառումը և կարևորությունը Հայաստանի կազմակերպությունների համար: Մանրամասն նկարագրվում են նախագծերի կառավարման հիմնական փուլերը և ինչպես նախագծային կառավարման կիրառումը բերում կազմակերպությունների մրցակցային առավելությանը:

**Բանալի-բառեր.** նախագիծ, նախագծային կառավարում, նախագծի փուլեր, նախագծի գիտելիքների ոլորտ, գործընթացների/պրոցեսների խմբեր, Փոքր և Միջին Ձեռնարկատիրություններ (ՓՄՁ):

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### УПРАВЛЕНИЕ ПРОЕКТАМИ: ОСНОВНЫЕ ЭТАПЫ И ПОДХОДЫ

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В статье описываются и анализируются значимость, подходы и применение проектного управления для организаций Армении. Подробно описываются основные этапы проектного управления и как внедрение проектного управления в управление организацией приводит к ее конкурентному преимуществу.

**Ключевые слова:** проект, проектный подход, этапы проекта, области знаний проекта, группы процессов, предприятия малого и среднего бизнеса (МСБ).

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