

Použití nástrojů projektového řízení v České republice

The Use of Project Management Tools in the Czech Republic

Jiří Koleňák, Lenka Smolíková

Abstract:

Purpose of the article: is to present results of the research realized in the framework of the project: CZ. 1.07/2.2.00/15.0433 Innovation of the selected subjects in the field of preparation, management and implementation of development, education and research projects realized by the Faculty of Business VUT in Brno.

Methodology/methods: The research was conceived as quantitative, *i.e.* after formulation of the expected declarations was drawn up a set of questions verifying the effects of individual factors upon the implementation of development projects in enterprises. Survey respondents were project managers most of whom are members of the Society for project management.

Scientific aim: The objective of the project is to improve and increase the education level in the field of preparation, management and implementation of development, education and research projects. This should increase the qualification of the graduates; provide them with better employability and a better position in the labour market. The project emphasizes in particular the practical aspects of the education, where the participants will prepare in the form of a training model projects under real terms and conditions from announced calls and will be informed about all the essential aspects for a successful preparation and implementation of the projects.

Findings: The aim of this research was to determine the level of technical and behavioural competences during the implementation of the development projects in companies in the Czech Republic. The purpose was disclosure of the opportunities for innovation of study programs on the Faculty of Business VUT in Brno by the elements of the project management. The article presents a part of the research oriented to the field of projects implementation, the individual stages of the project, tools, methods and the benefits of the project management. Further it points out the most common causes of projects failure.

Conclusions: The realized research supports the allegation about a move of the importance of usage of the instruments of project management from the implementation stage in the pre-project stage, which is assessed at the same time as the hardest one. The project organization is most frequently used in fields of products innovations (products and services) and in information technology. The article further presents the level of use of various instruments and methods of the project management.

The research results will be used in the proposals for innovation of study subjects in the Faculty of Business VUT in Brno.

Keywords: Project manager, project, life cycle, project management, managerial decision making

JEL Classification: M21, M16

Introduction

The project management is coming in recent decades to the forefront mainly due to the turbulently changing business environment which constrains not only the companies but also the entrepreneurs to use the tools and methods of project management and this brings to those subjects competitive advantages.

There are many definitions of the project management, each publication and scientific article has its own definition of the project management. For the purposes of this article have been selected definitions from high-ranking professional association PMI and from well-known manager Mr. Harold Kerzner.

The definition of professional association of the project managers in Project management Institute, PMI (Svozilová, 2006) see the project management as: “Project management is the application of knowledge, skills, tools and techniques to project activities to meet the target requirements.”

Definition of Harold Kerzner (Svozilová, 2006), which defines project management as: “Project management is the sum of the activities including the planning, organisation, management and control of the company resources with a relatively short-term

objective, which has been established for the implementation of the specific goals and objectives.”

In the project management plays a key role the concept of the project. The definition of the international society for the project management IPMA (Doležal, 2009) defines the project as: “Project can be defined as an activity that is limited in time and costs and which objective is the achievement of defined benefits according to the appropriate standards and quality requirements.”

The word “project” comes from the Latin verb proicere: “which means to throw something forward” (Bendová, 2011). When we investigate the word in detail then pro is the marking of something preceding the particular activity at a time, and icere means to throw. The word project in the original means: “that what comes before anything else happens” (Bendová, 2011). When English took over the word, it meant only to plan, not to implement the plan.

Understanding of the importance of the concept of the project is an essential prerequisite for understanding the project management. Each publication dealing with project management and also each company or institution that implements projects, has its own definition. Definition adapted to its needs. Our one is the following.

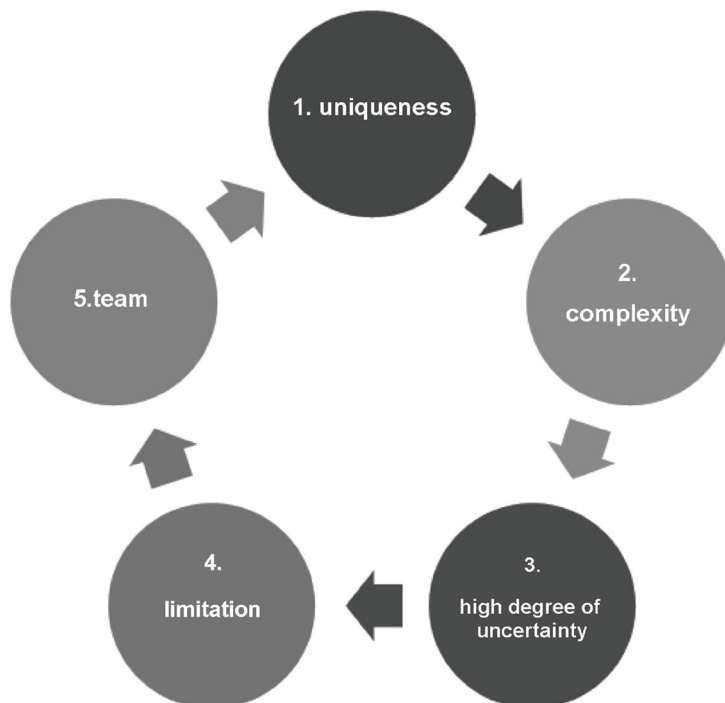


Figure 1. Definition of the project on the basis of the five attributes. Source: Bendová, 2011.

According to the collective of authors (Bendová, 2011) the project is: “*Set of concrete activities designed to meet the unique goal. It is limited in time, finance, human and material resources. The project is implemented by the project team in conditions of above-average uncertainty with use of complex methods. Implementation of the project is implementation of the change.*”

Another form of the definition of the project can be its specification on the basis of five attributes. These attributes are the uniqueness, complexity, high degree of uncertainty; limitation and team (see Figure 1).

We can also define the project by using so-called triple-imperative. Dolezal (Doležal, 2009) defines triple-imperative as: “*Triple-imperative of the project management works with three basic terms – objective, time and costs. The purpose is the optimal balance between these three requirements. The basic concept is mutual relation of these three items.*”

1. Methods

During preparation of the research has been used in particular the terminology, definitions and tools of project management as contained in the national standard of competences of the project management version 3.1.

The research was conceived as quantitative, *i.e.* after formulation of the expected declarations was compiled a set of questions verifying the effect of individual factors upon the implementation of development projects in enterprises.

Types of questions have been the following:

- With the optional answers and choice of only one.
- With the optional answers and possible choice of several answers at the same time.
- Some questions have the option of free additional answer variants.
- With the selection of the importance (weight) for each variant.

Survey respondents were project managers of whom substantial majority are members of the Society for project management.

The actual questionnaire survey was carried out by an electronic questionnaire. After sending it to 104 project managers there were acquired back 87 completed questionnaires.

2. Research results (findings) and Discussion

The results showed that project approach is most frequently used in innovation of products and services, where is most obvious the current competitive pressure between undertakings and therefore is placed great emphasis on triple-imperative parameters (range, time and budget). Furthermore, in the fields of software development and information technology which together occupy nearly one-third. The project management is also often used in the education. In the construction industry was the project management used also in history.

Answers to this question may be distorted by professional focus of members of trade associations of the project management, who were the most fre-

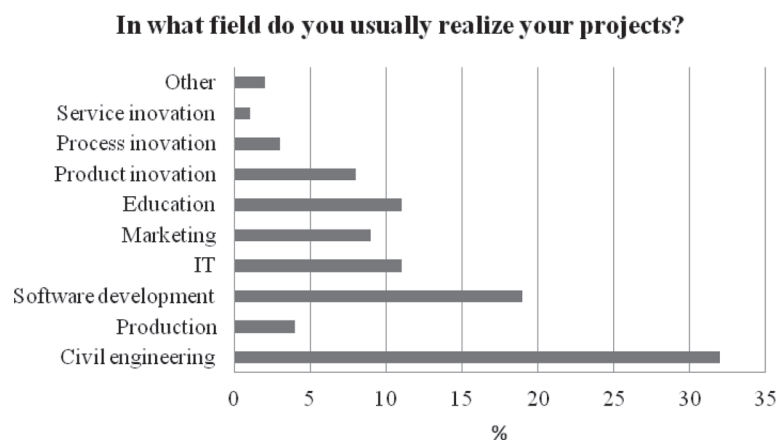


Figure 2. In what field do you usually realize your projects? Source: authors.

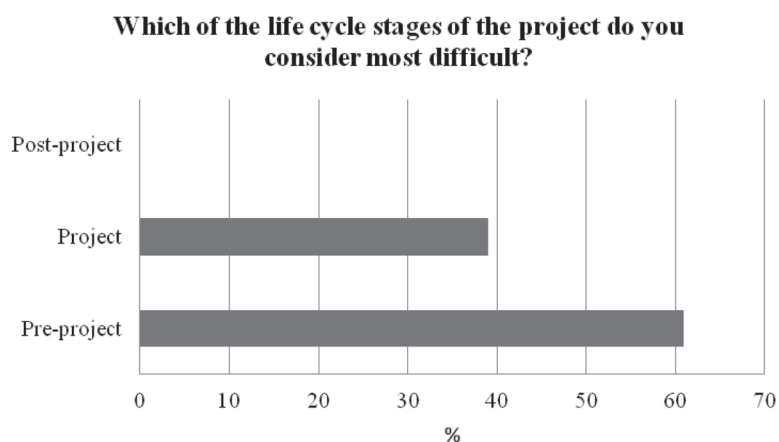


Figure 3. Which of the life cycle stages of the project do you consider most difficult? Source: authors.

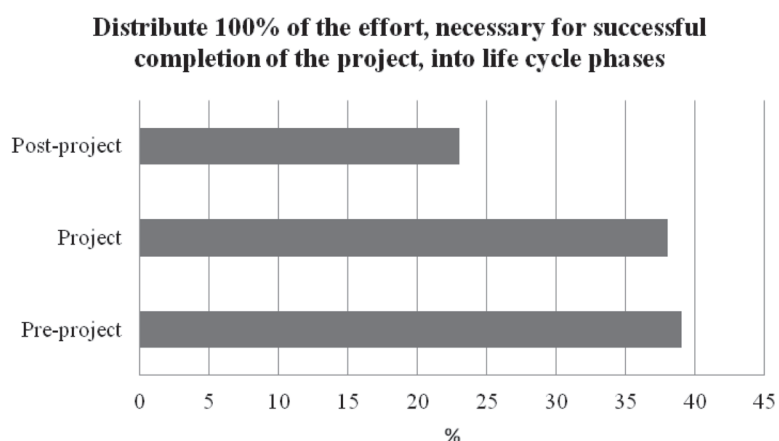


Figure 4. Distribute 100% of the effort, necessary for successful completion of the project, into life cycle phases. Source: authors.

quent respondents. As the distortion correction, however, may be effective the fact that the members of the professional associations represent essentially the distribution of the market.

Average effort necessary for successful completion of the project is the largest in the pre-project phase. It seems to be given by the difficulty of obtaining the set of information, project enforcement and obtaining of a sponsor. The project phase, characterized by its own implementation of key activities, by the need for compliance with the schedule, the communication in the team and the pressure on keeping the budgets requires effort that is, however, only slightly smaller. The after-project stage can be

declared as the phase which requires the minimum effort.

The pre-project phase is known as the phase “consuming” for its implementation the major part of effort. It is marked in this question as the most difficult too. Comments in a partially-closed question show that it’s due to the high level of uncertainty (the risks are only estimated, there is not enough information, the need of enforcement among the interest groups, etc.). Those who have marked the project phase as the most difficult have done so for reasons of, in particular, dependency on the human resources, external influences, strategic interventions and changes in the market. None of respondents

What tools and methods of project management do you use in practice?

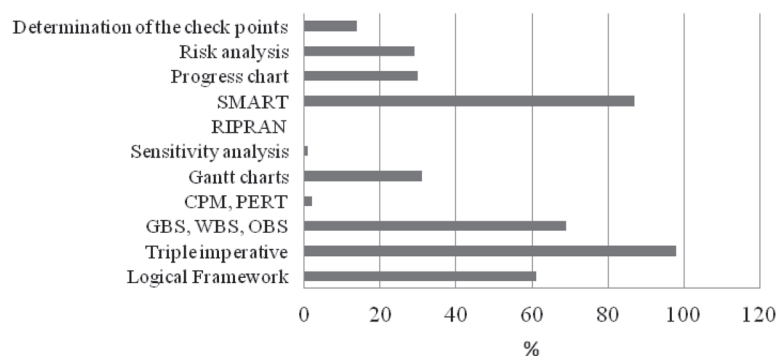


Figure 5. What tools methods of project management do you use in practice? Source: authors.

What essential has changed since the time of deployment tools for project management in your company?

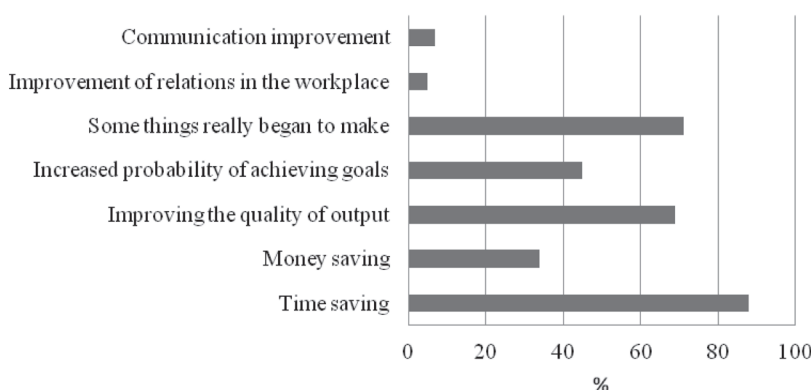


Figure 6. What essential has changed since the time of deployment tools for project management in your company? Source: authors.

has marked the after-project stage as the most difficult.

The most commonly used tools, aids and rules are: triple-imperative, SMART, all breakdown structures, logical framework and also all the methods of planning of the projects in time (schedule, gantt, control points). The risk analysis is also important. The results of the answers to this question may help to direct innovation of the objects of study fields to the requirements from practice.

Use of the project management brought in enterprises, in particular improvements in the area of time saving and quality increase of the outputs of the project and of the achievement of objectives

(which will be probably due to improvements in the area of definition of objectives and the need to allocate and schedule individual activities according to the PM-methodologies). The respondents also note that some overdue issues have been implemented only after introduction of the methodology. As additional benefits of the project management are stated improvements of relations and communication on the workplace.

For the most common causes of project failure is considered non-compliance with the time and the budget of the project. It may be noted that despite the implementation of projects by specialists in organized environment remains the failure in the area

What are the most common causes of failure?

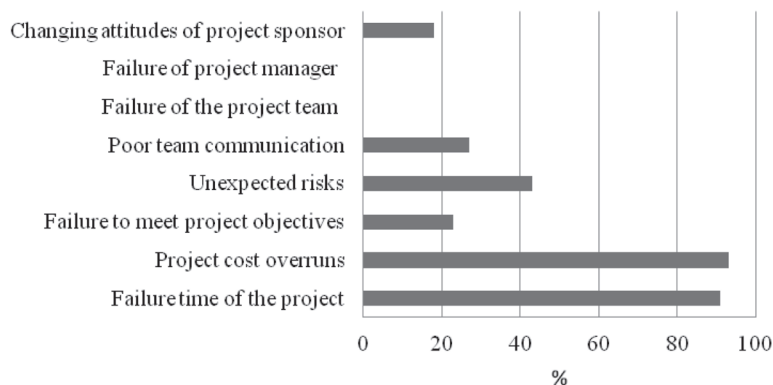


Figure 7. What are the most common causes of failure? Source: authors.

of triple-imperative parameters the most important. However, not negligible importance has the risks and their management and also communication. These areas are often neglected in education and it is appropriate to give them attention when developing the competences of participants at schools.

For comparison of our findings we present the outcomes of research published in Trends Economics and Management magazine in 2010 (Chovanova, 2010):

From the analysis of a consulting technical company Logos followed, that a successful finishing of projects is conditioned mainly by project managers' abilities. From the study of The Standish Group we

have come to similar conclusions. According to it up to 97% of projects, which were finished on time and within the given budget, was steered by an experienced project manager. Of the factors influencing the success rate of projects are:

- Experience of project manager.
- Clear goals for the project.
- Company management support of the project.
- Inclusion of future users.
- Firm definition of basic requirements,
- Simple and exactly defined framework of the project.
- Verified software platform.
- Project methodology.
- Reliable estimates.

Do you use any software to support project management?

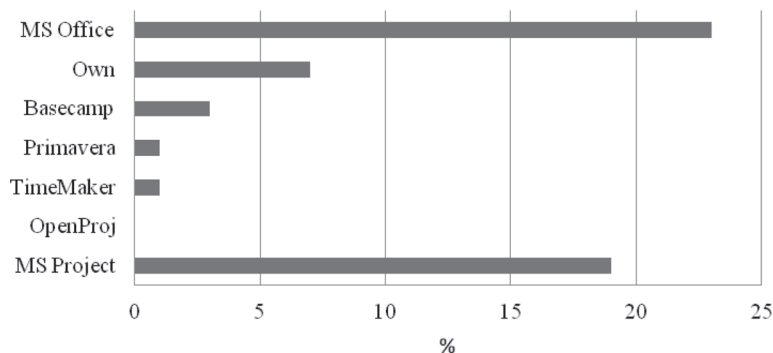


Figure 8. Do you use software to support project management? Source: authors.

Are you or your company certified in project management?

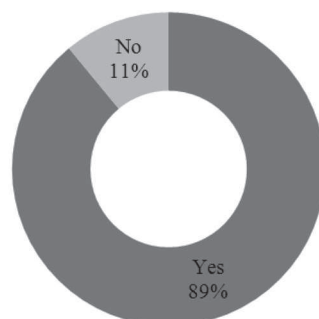


Figure 9. Are you or your company certified in project management? Source: authors.

Use of specialized software for support of the project management is not too spread. As the most commonly used software was supplemented MS Office in the item Auxiliary. Microsoft's products are the most commonly used software tools. Others are meanwhile used only marginally or are not seen primarily as a project management tools.

A large portion of the respondents are project management certification holders. This finding is however distorted by addressing a group of project managers and professionals from the database of the project partner, who is a training and certification authority for one of the methodologies. Therefore the question was not further elaborated for individual forms of certification, since the outcomes would not be objective. The reason for listing certification verification was supporting credibility of answers to above mentioned questions.

Conclusions

On the basis of realized research it is possible to formulate the following conclusions:

- The project approach is most often used in innovation of products and services, where is most obvious the actual competitive pressure among firms.
- Average effort necessary for successful completion of the projects is the largest in the pre-project phase.
- The pre-project phase is known as the phase "consuming" for its implementation the major part of effort. It is marked in this question as the most difficult too.
- The most commonly used tools, aids and rules are: triple-imperative, SMART, all breakdown structures, logical framework and also all the methods of planning of the projects in time (scheduling, gantt, control points).

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- The use of project management in enterprises brought improvements in particular in the area of time saving and quality increase of the outputs of the project and the achievement of the objectives.
- For the most common causes of project failure is considered non-compliance with the time schedule and the budget of the project.
- Use of specialized software for support of the project management is not too spread.
- Majority of respondents answered that they are holders of certifications in the area of project management.

The research results will be used in the proposals for innovation of study subjects in the Faculty of Business VUT in Brno.

The presented results represent part of the studied issue from the area of level of using project management tools in company practice in the Czech Republic. The same meaning is born also by the competencies and experience of project managers and their ability to transfer these into practice. This is a basic direction in which our research will progress in the future. An inspiration for further work can be for example the article: Project manager and Managerial Decision Making (Chovanová, 2010).

Acknowledgment

The article presents results of the research realized in the framework of the project: CZ. 1.07/2.2.00/15.0433 Innovation of the selected subjects in the field of preparation, management and implementation of development, education and research projects realized by the Faculty of Business VUT in Brno.

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Ing. Jiří Koleňák, Ph.D.
Technical University in Brno,
Faculty of Business and Management
Institute of Management,
Kolejní 2906/4,
612 00 Brno, Czech Republic
e-mail: kolenak@fbm.vutbr.cz

Ing. Lenka Smolíková, Ph.D.
Technical University in Brno,
Faculty of Business and Management
Institute of Computer Science,
Kolejní 2906/4,
612 00 Brno, Czech Republic
e-mail: smolikova@fbm.vutbr.cz