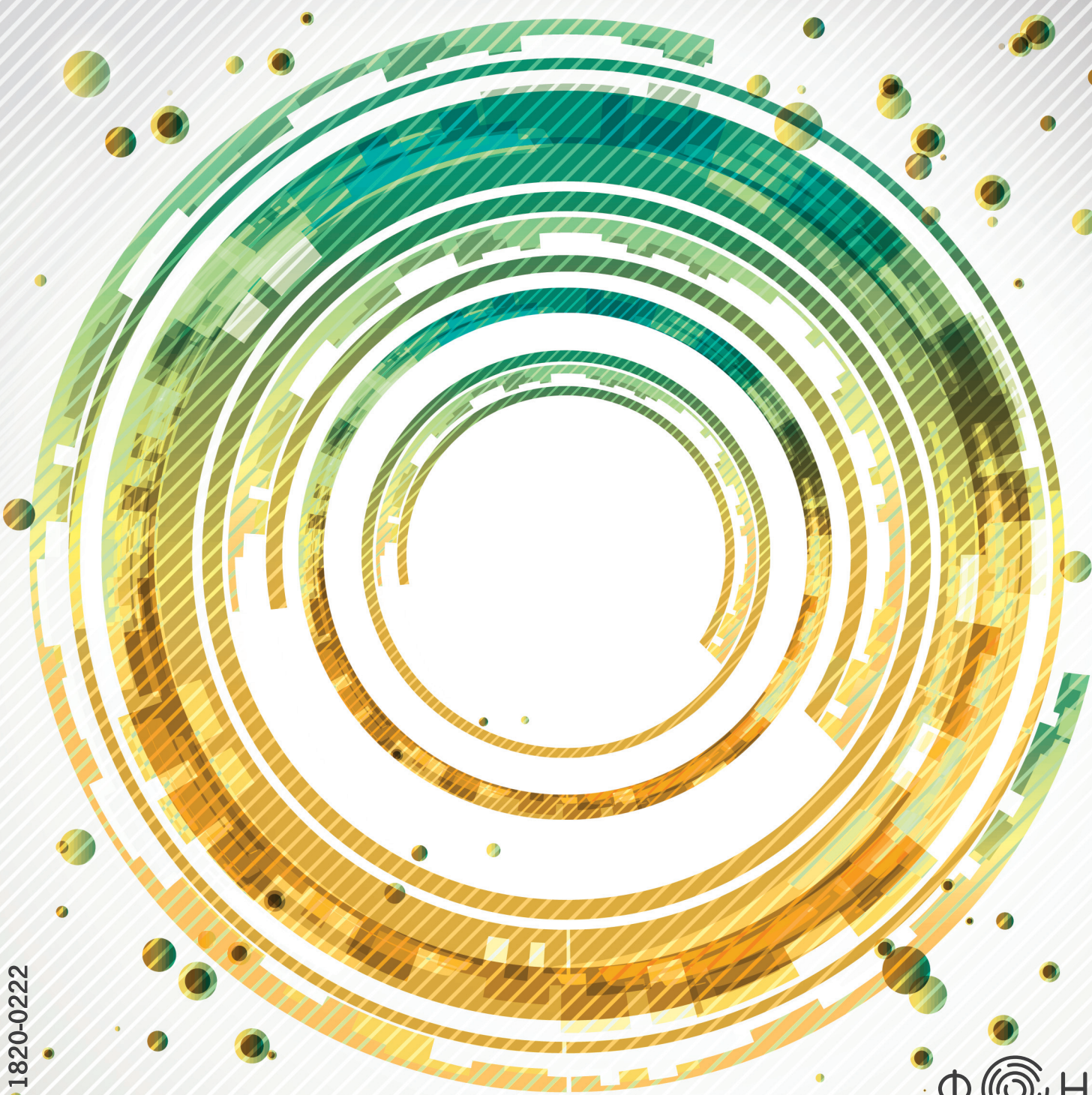


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# Implementation of Project Management in Managing Organizational Projects

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This paper presents the possibilities of project management application in managing organizational projects. The specific methodology for managing business projects which can be used for other types of projects such as IT, consulting, marketing projects etc. is used. The possibilities of application of methodology for managing business projects in practical situations are shown on the case of the project of a manufacturing firm restructuring.

**Keywords:** project, management, organization, implementation

## 1. Introduction

The development of project management and emergence of new management disciplines and concepts are primarily based on the fact that this discipline can be effectively implemented in every area of human life and work. Project management is effectively used in the execution of large scale investment and military projects as well as in organizational, information, manufacturing, consultant and other projects.

Detailed research and analyses conducted for the purpose of defining specific characteristics of certain types of projects and a better implementation of project management which in turn produced different classifications of projects that can now be found in respective literature [4, 5, 7].

One simple classification distinguishes among three basic groups of projects:

- Investment projects;
- Business projects;
- Social projects [1].

Each of the listed groups of projects has its specific characteristics that require adequate methodologies for managing the execution of this particular group of projects.

Analyses have shown the major characteristics of the above listed groups of projects relevant for forming an adequate procedure or methodology. For example, the major characteristics of investment projects are the following: these projects are long-term and complex projects, they involve a large number of organizations and individuals, they use large quantities of various resources, the execution costs are high and the preparation for the execution is significantly shorter than the execution itself. On the basis of the characteristics defined, the YUPMA methodology for investment project management is devised and has been extensively implemented in managing large investment projects in this country.

There are a number of different project management methodologies in this country and worldwide, used in different types of projects with different characteristics. The best known among them are: PMI methodology, IPMA Competence Baseline, APM methodology, the European Commission Project Cycle Management, PRINCE 2, etc. [2, 5]. In addition to these foreign methodologies, the above mentioned YUPMA methodology is used in this country for managing investment projects, and also specific management methodologies for business and social projects are developed and used [1, 2].

## 2. Investment project management methodology

The analysis of investment projects reveals that these are complex and long-term projects whose execution requires management in order that their realization should be effective. Hence the project management concept is well implemented in the management of investment projects where the effects of the implementation of such a concept are clearly defined and significantly powerful. It is in this sense that the YUPMA methodology for investment project management is used, based on the fundamental principles of management and project management and taking into account the major characteristics of investment projects as regards duration, complexity, resource consumption, etc.

YUPMA methodology is, together with setting the respective project management organization and the necessary computer support, defined and shown via the analysis of the basic phases of the general management process, and these are as follows: execution planning, execution monitoring and execution control [1].

Then follows the analysis of the elements of the execution of every investment project that is to be planned, monitored and controlled and a detailed definition of the potentials and methods of planning, monitoring and control of the project execution timeline, the resources consumed by the project and the project execution costs.

Hence this concept of investment project management includes three basic modules – time management, resource management and project execution cost management. By planning, monitoring and the control of time, resources and costs of project execution the fundamental goals of investment project execution management are achieved – completion of the project in the planned time and within planned costs [1].

YUPMA methodology is developed on the basis of the general principles of project management and the practical implementation of project management software packages in the management of the complex investment project execution. The most frequently used software packages, Primavera and Microsoft Project, allow for a separate treatment of time, resources and costs of a project, namely, a strict and direct planning and monitoring of the time of the project execution, and then planning, levelling and tracking the resources consumed, and also planning, monitoring and actualization of the investment project execution costs. These three elements – time, resources and costs – are essential in an efficient management of investment project execution.

YUPMA methodology for investment project management can be described via the elaboration of the global phases of the project cycle presented below [2].

1. Project definition
  - 1.1. Proposal and scope of project
  - 1.2. Goal definition
  - 1.3. Defining the project management organization
  - 1.4. Project structuring
2. Project planning
  - 2.1. Defining the project planning and control systems
  - 2.2. Planning project execution time
  - 2.3. Resource planning and levelling
  - 2.4. Planning project execution costs
  - 2.5. Defining operations planning and project execution monitoring systems
3. Project execution tracking and control
  - 3.1. Tracking and control of project execution time
  - 3.2. Tracking and control of resources consumed
  - 3.3. Tracking and control of project execution costs
  - 3.4. Reporting on project execution progress
  - 3.5. Reporting on delays and defining corrective actions
  - 3.6. Actualization of plans
4. Project closing
  - 4.1. Summing project results
  - 4.2. Project closing
  - 4.3. Lessons learnt [2].

In practice, the above methodology needs to be adjusted to each individual project, also taking into account the software package applied. This especially goes for the operations planning and project execution monitoring systems, as well as for the system of reporting on project execution.

### 3. Business project management methodology

A detailed analysis of the basic characteristics of investment and business projects reveals significant differences between these two types of projects. These differences require that a specific methodology be devised to be implemented in business project management, different from that implemented in managing the investment project execution.

Clearly, business projects, as defined above, vary in types and characteristics, therefore it is possible to define only the basic procedure of business project management which would be further elaborated depending on the specific characteristics of the project under consideration.

In order to define the methodology of project management implementation in managing business projects as easily as possible, it is necessary to start from a general approach to project management applied in investment project execution management. The methodology of implementation of the basic concept of project management applied in investment project execution management is based on the implementation of the fundamental postulates of project management and a respective standard software package for project management. This methodology is complex, which is absolutely logical given the complexity and duration of investment projects. Since business projects are considerably less complex and shorter-termed, the methodology for managing such projects can be considerably simpler applying a respective software package [1, 2].

The following discussion will present two approaches in the business project management methodology, namely, two business project management methodologies. One is based on the use of an adequately defined life cycle of the business project and tracks and guides the project through the life cycle phases up to its completion [1, 8, 9].

Business project management methodology can be viewed through the basic phases of the project life cycle, and these are the following [9, 10]:

- Devising project proposal;
- Project planning;
- Project implementation;
- Project closing.

The business project management methodology is defined via the elaboration of the listed phases of the project life cycle, using adequately defined formulae or lists that allow for taking more efficient steps in the project management process.

Using the WBS technique, the activities in a given phase required to be accomplished in order that the project should be realized are defined, and this is done for each project phase. This is followed by allocating the required resources – equipment, materials and personnel employed in the execution of individual phases and of the project as a whole. Also allocated are the required financial resources, that is, the budget for the project execution. Thus a strategic plan of the project execution is obtained, later to be developed in detail, primarily from the aspect of delegating responsibilities for accomplishing individual activities, of appointing the persons in charge of execution of individual activities, of defining the time span for the accomplishment of the activities and the planned deadline by which these activities are to be completed [9, 10].

The other approach to business project management is based on investment project management methodology especially developed and adjusted for this purpose. Given the characteristics of business projects and the differences of these projects in comparison with the investment ones, the investment project management methodology can be relieved of all the phases characteristic of investment projects and an adequate business project management methodology can be thus designed. Such a methodology can include the following generalised phases (after 1, modified):



1. Project goal and description;
2. Appointment of project manager;
3. Project team assembling;
4. Planning project execution time;
5. Planning necessary resources and funds;
6. Defining responsibilities for execution of project activities;
7. Monitoring the execution and necessary interventions;
8. Reporting on project execution;
9. Project closing and lessons learnt.

The above described methodology represents one global approach that can be used for a number of business projects, among them: introducing information system, opening new markets, restructuring project, organization of a meeting, advertising campaign project, etc.

In case of a concrete project, the project phases can be defined more accurately, taking into account, as mentioned above, the most important tasks to be accomplished in the course of project execution. This is a somewhat different approach in comparison to that of a project life cycle, which basically has a structure of the project itself and the project execution according to that structure [1].

#### 4. Social project management methodology

The analysis of various project classifications revealed a need to define a specific methodology for managing social projects. Without any further analysis of the characteristics of social projects and having in mind the business project management methodology described above, below is given a short description of a possible methodology for managing social projects. The methodology involves the following phases (after 1, modified):

1. Project and project goal definition;
2. Appointment of project manager;
3. Definition of project phases and activities;
4. Delegation of activities – responsibility matrix;
5. Defining the time of activities and the overall project timeline;
6. Allocation of required resources and costs;
7. Accomplishment of activities;
8. Monitoring the execution and corrective actions;
9. Project closing – summing results.

The presented social project management methodology does not differ significantly from the business project management methodology since the differences in characteristics are not too big. On the other hand, the general approach to project management implementation makes it necessary that certain phases or activities important for all types of projects and indispensable in an efficient project management should be included into every concept or methodology of project management implementation. Generally, the same software packages are also used (Primavera and Microsoft Project) that provide adequate support in the project execution regardless of the project type.

#### 5. An example of project management in firm restructuring

To illustrate the possibility of implementation of the above described methodology, a simple case of a firm restructuring project or introduction of organizational change into a small manufacturing firm will be presented. This project, i.e., its structure obtained using the WBS technique, is composed of the following global phases:

1. Planning organizational change (restructuring);
2. Analysis and diagnosing of the current state of affairs;
3. Designing new organization;
4. Introducing new organization;
5. Sustaining new organization [1].

Assuming that the project manager is appointed and the project team appropriate to such an organizational project is assembled, the procedure in methodology implementation requires that these global phases be further divided into individual activities to be accomplished in order that the project should be realized:

1. Planning organizational change
  - 1.1 Analysis of environment and of environmental changes;
  - 1.2 Identification of environmental changes;
  - 1.3 Analysis of needs for change in the firm;
2. Analysis and diagnosing of the current state of affairs;
  - 2.1 Insight into the current state of affairs in the organization of the firm;
  - 2.2 Analysis of the current state of affairs in the organization of the firm;
  - 2.3 Assessment of the current state of affairs in the organization of the firm;
  - 2.4 Identification of necessary changes in the organization of the firm;
3. Designing new organization
  - 3.1 Examining the available knowledge;
  - 3.2 Analysis of the solutions existing in practice;
  - 3.3 Defining alternative organizational solutions;
  - 3.4 Selecting the best organizational solution;
4. Introducing new organization
  - 4.1 Presentation and explanation of the new firm organization;
  - 4.2 Adopting the new firm organization;
  - 4.3 Provision of necessary organization documentation;
  - 4.4 Recruiting personnel for the new organization;
5. Sustaining new organization [1, 2].

As pointed out above, the implementation of the methodology for an efficient realization of this project requires that a project manager and a project team be appointed that will work on the execution and the management of the execution of the project. In addition to the project manager who has to be an expert in the area of organization and project management, the project team for such projects may include 3-5 experts from different fields of expertise (organizer, economist, information technology expert, etc.).

The procedure in planning the project realization requires that the time necessary for the completion of each of the phases and individual activities and the creation of a global and a detailed time plans be defined, most frequently using the gantogram. Figure 1 presents an example of a global gantogram for the above mentioned firm restructuring project. The time periods necessary for the completion of each phase are given on the basis of experience from similar projects realised in practice [1].

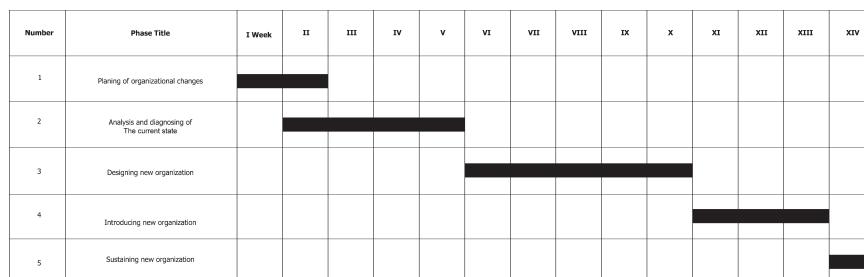


Figure 1

Upon the completion of the global plan a detailed elaboration of the project is made and a detailed execution plan is devised, by activities. Then follows the delegation of activities among individual team members, i.e., defining which team member is responsible for which activities, using a respective responsibility chart.

In case the project team consisting of a project manager and four experts from respective fields (economist, organizers 1 and 2, information expert) is formed, the responsibility chart can look like the one presented in Figure 2.

This is followed by an analysis that involves the definition of possible risk events for each project phase (activity) as well as defining the strategy for acting (response) in case these risk events occur. Then the necessary material resources and financial assets are allocated in accordance with the defined time plan, which is also written in the respective documents.

Project title Project number <b>RESPONSIBILITY CHART</b>		
No.	Phase (activity) title	Performer of activity
1.1.	Environment analysis	Economist
1.2.	Identification of change in environment	Economist
1.3.	Analysis of needs for change in the firm	Organizer1
2.1.	Insight into the current state of affairs in the firm' organization	Organizer 2 Information expert
2.2.	Analysis of the current state of affairs in the firm' organization	Organizer 1 Information expert
2.3.	Assessment of the current state of affairs in the firm' organization	Organizers1and 2 Information expert
2.4.	Identification of necessary changes in the organization of the firm	All
3.1.	Examining available knowledge	All
3.2.	Analysis of the existing solutions from practice	Organizers 1and 2
3.3.	Defining alternative organizational solutions	All
3.4.	Selection of the best organizational solution	All
4.1.	Presentation and explaining the new organization of the firm	All
4.2.	Adopting new organization of the firm	Organizational bodies
4.3.	Provision of necessary organizational documentation	Organizers1 and 2 Organizational bodies
4.4.	Recruiting personnel for the new organization	Organizational bodies
5.	Sustaining new organization	All

Figure 2. Responsibility chart

The risk analysis is conducted for each phase or each activity separately. The example presented below shows two characteristic activities and a simple analysis conducted for them is shown as a risk analysis chart (Figure 3).

No.	Possible risk events	Impact (H, M, S)	Likelihood of occurrence (H, M, S)	Risk event response strategy
1	No significant change in environment is identified	H	M	Conduct new analysis of environment
2	Poor diagnosis of the current state	H	M	Include external experts

Figure 3. Risk analysis 1



This completes the process of project planning and preparation for execution and the project execution, namely, of activities given in the detailed project execution plan. The project team together with the project manager are engaged in the execution of certain activities according to the time plan and the responsibility chart.

The project manager is responsible for the completion of all the listed activities and he is involved, together with the individuals in charge, in the execution of each individual activity. Through a system of previously scheduled meetings they monitor and control the execution of each individual activity and reduce possible deviations from the plan.

The operational monitoring and control of the project execution is conducted on a permanent basis in accordance with the time plan and the responsibility chart. Monitoring is primarily the responsibility of the project manager and then of the entire project team. Monitoring is performed on a permanent basis and at the meetings held daily the project team members report to the project manager about the state of the project, about the progress made and about possible problems and delays. Together they define measures and activities to be undertaken immediately to solve problems and eliminate delays. This process lasts until the completion of the project when activities are taken to close the project.

## Conclusion

The paper describes the business project management methodology adequate for managing the execution of organizational, information, marketing, consultant and other similar projects. The methodology is devised with respect to both the basic principles of project management and the investment project management methodology that is also described in the paper. In forming the business project management methodology the basic principles related to management processes of planning, monitoring and control of time, resources and costs of realization are observed, as well as the most important characteristics of business projects in terms of size, complexity, duration, etc.

The methodology has proven to be effective in practice and this is documented by a concrete case of a manufacturing firm restructuring project. The example presents the basic phases of the methodology and the method of their implementation in concrete situations. Special attention is paid, and this is also stressed in the above case, to the fact that the implementation of organizational project management methodology is rather easy and effective and hence is the best choice for a large number of users.

Analysing the effects of the implementation of project management in managing the execution of various types of projects allows for a conclusion to be drawn that project management helps save the time required for project execution, as well as resources and costs in the project execution. In case of organizational projects, it can be maintained on the basis of the experience in the execution of similar projects that the implementation of project management methodology may shorten the time consumed in the execution of the project under consideration by around 15% and also reduce the costs of the project execution by 10% to 15%.

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