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SELECTED ASPECTS OF SYSTEMIC APPROACH TO PROJECT MANAGEMENT[*]

The shift to project orientation of organizations creates the precondition for increasing the efficiency of outcomes generation, both in internal and external environments. On the other hand, it generates pressure on organizations to handle multiple projects simultaneously and to create professional project management framework. This article analyzes the factors influencing the quality of project management approach in an organization and suggests measures for correcting typical mistakes identified within this research.
Keywords: project life cycle; project management; project manager; risk management.
JEL classification: M12, M16.

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ВИБРАНІ АСПЕКТИ СИСТЕМНОГО ПІДХОДУ ДО УПРАВЛІННЯ ПРОЕКТАМИ

У статті показано, яким чином перехід до проектного способу організації став умовою підвищення ефективності — як всередині організації, так і у зовнішньому сприйнятті. З іншого боку, проектне управління створює додаткове навантаження на організацію, яка змушена паралельно керувати кількома проектами, що вимагає особливого професіоналізму. Проаналізовано чинники впливу на якість управління проектом та запропоновано заходи з коректування типових помилок в управлінні проектами.
Ключові слова: життєвий цикл проекту; управління проектом; проектний менеджер; управління ризиками.
Рис. 1. Літ. 15.

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ИЗБРАННЫЕ АСПЕКТЫ СИСТЕМНОГО ПОДХОДА К УПРАВЛЕНИЮ ПРОЕКТАМИ

В статье показано, каким образом переход к проектному способу организации стал условием повышения эффективности — как внутри организаций, так и во внешнем восприятии. С другой стороны, проектное управление создаёт дополнительную нагрузку на организацию, которой приходится параллельно управлять несколькими проектами, что требует особого профессионализма. Проанализированы факторы, влияющие на качество управления проектом и предложены меры по корректировке типичных ошибок в управлении проектами.
Ключевые слова: жизненный цикл проекта; управление проектом; проектный менеджер; управление рисками.

Introduction

Organizations tend to have big problems with implementation of their projects. There are many reasons for this. If combined, they create barriers, nearly impossible to overcome. As a result, projects do not reach their targets, they are not run on time and they do not bring desired benefits. This situation among other affects significantly organization's competitiveness (Dedkova, Srbkova, 2013).

Problem statement

The transition to project orientation of organizations causes the increased pressure on the availability of quality procedures and qualified personnel in the field of corporate governance. Companies often implement several (and dozens) projects in parallel and the systematic methodology chosen by management is of paramount influence on the projects results (Horvathova, 2008). We can say that at the market there exists an absolute predominance of projects that are managed unsystematically. Many of them end unsuccessfully or with only partial success. Here are a few facts from completed surveys which confirm this thesis:

— during the preceding 12 months 70% of organizations experienced failure of at least one project (KPMG, 2010);

— 50% of projects did not reach long-term goals set out (KPMG, 2010);

— 56% of IT projects achieve a lower value than expected (Bloch et al., 2012);

— 45% of large IT projects fail to comply with planned budget (Bloch et al., 2012);

— there are large disparities between the quality of projects best and worst organizations (in quality indicators project) — the best organizations are up to 10 times more successful than the worst rated (IBM, 2008).

This statistics and the real experience of managing dozens of large, medium and small projects allow us identify this condition as problematic. Enterprises lack internal specialists with experience and training in project management. Top management of organizations do not realize the importance of their own involvement in the promotion of project organization creation and running of specific projects. We often encounter the situation in which a company begins a project not having clearly defined project justification, benefits, timing is vague and there are no precise responsibilities for each team member. We agree with Olenich and Shatska, who stress the importance of early project team creation and responsibilities definition (Olenich, Shatska, 2012). In 2012 we realized an empirical study to analyze the situation in the field of project management at Slovak companies. We used the form of indepth interviews on the sample of 20 managers with middle and top managerial positions. The sample was created as transversal, including companies and organizations from different sectors and with different primary activities.

Based on this background we formulated the following objective: to determine and summarize the crucial factors, determining the success of a project in an organization, to identify typical mistakes, which happen when trying to manage projects and to propose measures increasing the efficiency of projects by systemizing the project management approach.

Factors determining success of a project

We see a number of critical factors that cause failure of the majority of projects:

— vaguely defined project justification (business case);

— changing expectations and conditions;

— low involvement of business management;

— lack of fusion project organization with corporate culture;

— underestimation of project complexity.

Majority of the projects being implemented, don't have a written justification. Consequently, it is not possible to evaluate the contribution of the project, but what is the bigger problem, owners tend to expect project outputs that were never defined.

The critical factor is tied to the following. If the requirements are not captured, they change in time. Changing the conditions under which the project is implemented can have a major impact on the project direction and results.

Low involvement in project management is usually quite often in organizations. Based on the empirical study realized, the behavior pattern regarding project management is the following: At the beginning of a project we can observe high intensity and then slowly and gradually the project loses priority. This changes only if there is a significant problem on the project. That does not mean that management should actively carry out project tasks. This is the responsibility of the project manager and other team members. However, if a management committee member comes from the top management of the organization, it is necessary that he/she is available whenever project meetings are scheduled. Top management must also create conditions for the development of project organizations at an enterprise and project-oriented culture (Miklosik, 2013b).

Another problem of a project organization in relation to corporate culture is that unless projects are an intrinsic part of corporate culture, frequent conflicts may originate. Projects, by their nature, at some stage require intensive commitment of employees that may be well beyond their typical work pace and may exceed their standard working hours. Typically we can observe the situation when one part of employees who are not assigned to key projects, work 8 AM to 4 PM and other workers need their cooperation on project tasks, which are often being solved beyond the regular working time. If the project team does not receive timely inputs, feedback and cooperation from employees, who are not directly involved, motivation and commitment of the project team may decline rapidly. These managerial issues have to be solved to increase the efficiency of corporate management (Toth, 2012).

Underestimating the complexity of a project is happening in many of them. The causes may vary:
— lack of planning time;
— the existence of large number of factors that an organization cannot control;
— new technology that has not yet been tested in practice etc.

It is also frequent that owners do have a clear idea of the project budget but they require more outputs than can realistically be achieved under certain conditions.

To improve the overall effectiveness of project implementation we suggest to concentrate on the following aspects:
— awareness of project complexity in all project phases;
— definition of the sense of project implementation;
— project scope definition;
— systemic project management process;
— quality of project manager;
— competencies and tolerances;
— proceeding through stages;
— quality planning;
— management of risks and change.

Key factors in systemic project management

Awareness of project complexity and life cycle. The project life cycle methodology by the UNIDO (United Nations Industrial Development Organization) characterizes the following phases of the investment cycle (Vsetecka, 2007):

1) Pre-investment phase (pre-planning and preparation of project proposal)
2) Investment phase (detailed planning and implementation),
3) Use and evaluation phase (also referred to as the operational phase).
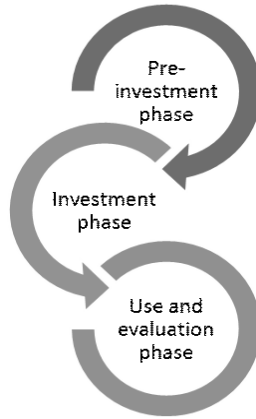
Source: Composed by the author according to (Vsetecka, 2007).
Figure 1. **UNIDO project life cycle phases**

We can consider the Westland's approach being quite universal, describing 4 phases of the life cycle (Westland, 2006):
1) Initiation of a project,
2) Project planning,
3) Project implementation and
4) Completion of the project.

We use this approach to point out at important factors determining project success and the systemization of project management approach. The first phase is the initiation of a project. It is an extremely important phase, often underestimated in many organizations. Thus, to create a systemic approach to project management in an organization it is necessary to pay attention to decisions and operations at this project stage. At this stage it is also important to define the basic framework of the project. At the initiation phase we can expect more intensive participation of project owner, i.e. the person who is the holder of the project idea. This person, typically from managerial positions or shareholder level, is responsible for defining the framework of the project. He is the bearer of know-how, best knows the segment in which the project will be realized, environment, competitors, suppliers and other aspects of the environment and the internal environment of the company as well. At the initiation phase, it is necessary to make sure that the project has meaning, is configured to bring benefits and it has the sense to be moved to the second phase.

The second phase is project planning. As the name suggests, at this stage it is necessary to prepare project plans. Planning documentation has several lines and levels. The overall project plan creates a rough plan for the project, divides the project into smaller parts (stages), prepares the planning of human resources / capacities, initiates the process of identifying and evaluating the risks in the project as the first essential step in management of project risks, the project manager prepares procurement and the financial plan.

The third phase of the life cycle is the actual construction of the project outcomes. It is the main phase, which results in products / outputs and runs the very essence of the project. Activities performed are significantly dependent on the nature of the project.

At the completion of the project the outputs are being passed to customers. The acceptance process, being part of this phase, needs to be well documented and demonstrate that the product meets specified requirements. Here organizations often make many mistakes. Despite the acceptance process rules being typically integrated in the project contract, it is usually not run as required and documentation is not complete. Furthermore, it is essential to immediately assess project outputs and their quality and to retain relevant conclusions regarding the implementation of the following projects (lesson learned).

It should be noted that the life cycle does not describe project stages. The project, depending on its intensity and the methodology used, is divided into two or more stages, each stage may fall into different phases of the project life cycle. At the same time in the implementation phase we can usually find more managerial stages.

Definition of the project implementation phase

Each project should be justified. Not all projects are implemented for profit. For some projects the justification lies in increasing the effectiveness of existing management activities, such as the introduction of a new information system, another project could have the ambition to ensure the education of employees, the other can target new experience of key personnel. Expectations from the project have to be defined before it begins. A typical mistake is that expectations are not captured not only in writing, but are not clearly stated at all. As the initiator of the project has not clarified the outcomes, the project cannot reasonably meet such expectations. In particular, of these outcomes are continually defined at runtime of the project. Capturing expectations in a structured document (business case) is therefore absolutely essential for the project. This document also cannot remain static, but it should be updated to reflect the real status of the project.

Benefits monitoring

Benefits monitoring is related to project justification. If the project does not achieve benefits, it should be stated soon enough and the project possibly should not be completed. Good project management methodology must reckon with the fact that benefits are monitored continuously and not only after project completion. At the end of the project it is too late to find out that the project did not fulfill expectations. Watching benefits must therefore be done continuously. This principle is therefore closely linked to project staging. This allows ending an unjustified project before its costs reach astronomical levels and possibly threaten the very existence of the company.

Defining the scope of the project

The scope of the project is extremely important and cannot be underestimated. It sets the difficulty of the project, which determines other important areas, such as allocation of necessary resources and project schedule. As mentioned previously, organizations often underestimate the scope of the project. This has resulted from the study by IBM on the sample of 1500 project managers. They reported that the complexity is undervalued in 35% of projects (IBM, 2008). We can state a common example scenario: Top manager is notified by project manager that the time estimates for

project implementation are not realistic and the schedule cannot be followed. In accordance with the principles of project management, such a project which has not set a realistic framework should be revised or stopped. In practice, however, top manager pushes project implementation and forces project manager to find other sources of savings. This induced pressure, although being natural, is extremely dangerous and introduces new risks and threats to the project.

Project management

Project management methodology, style, processes and the personality of project manager are crucial for project success. The factors of corporate culture, acknowledgement and self-realization are crucial for performance and motivation (Solik, 2010). It is necessary to know the principles of sound project management and its structure. The project needs to have a project manager that manages the entire project and is responsible for its outcome. Even this trivial requirement remains unfulfilled in many projects. From our research we can confirm that the situation when the project is run without a project manager, happens more often on the customer side compared to the supplier team. An example: The organization will launch a project of internal control system innovation. The project is managed professionally by a qualified person on the supplier side, but the responsibilities are unclear on the client side. The role of managing the project and its inputs becomes an integral part of the work plan of more employees. This causes delays in the implementation of project tasks (Janovska et al., 2012). In addition to the personality of project manager it is essential that the project has additional levels. Strategic level of the project should be covered by steering committee, which has the ultimate responsibility for selected strategic decisions on the project and the result of the project itself. It should be represented by key stakeholders who subsequently decide in case of escalation in the project, which threatens the project itself, or in other justified cases, such as failure to comply with the timetable.

Competencies and tolerances

It is important to delegate if the project should be successful. It is not acceptable if the project owner insists that all key decisions are to be personally approved by him. The standard project management methodology must define when and under what conditions may decide the project manager (or lower level) and define the cases when it is necessary to involve the steering committee into the decision process. Project manager must have the competencies that he received from the top level of project organization. Here it is important to apply the principle of tolerances. We can state the sample scenario: top management has determined that the project has to be finished by the end of December, 2013. Given the fact that the end of the year is weak in production terms, the steering committee of the project gets obligation to terminate the project 10 December, 2013, ±10 days. Tolerance received by the steering committee is 20 days. This shifts to the lower level of project management, to the project manager, reduced to 5 December ±5 days. Project manager again works with tolerance while communicating with the level of product delivery. For example, the manager of the supply team agreed that the delivery of the agreed output one gets the tolerance of ±2 days behind the schedule. This principle allows continuously maintain the project within the specified time frames. Exceeding the tolerance could mean the project manager's authority to continue to lead the project is lost.

Staging

Project management based on stages enables effective planning, it provides focal points in time for the steering committee. This creates the possibility to evaluate whether the project should continue without changes, or whether it requires significant correction. Each project should have at least two managerial stages. One planning and one executive. At the end of each stage achievements should be summarized, it is necessary to capture important lessons of the project and the project manager should work to prepare a detailed plan for the next stage.

Planning

Planning is the basis for being able to finish the project within the required timeframe. Good planning creates conditions for project success and can solve many potential problems before they occur. The plan provides the allocation of human resources on the key phases of the project while preventing their oversizing. In terms of scope and the level of detail of the plan we have to distinguish the overall project plan and detailed plans. The basic project plan should be constructed before the start of the project and must define the project as a whole, along with necessary resources and time. This plan defines how many stages should the project have and their position in time. A detailed plan is prepared before each new stage further and includes a plan of conducted activities included in this phase.

Managing change and risk

Change is an integral part of the project and we should not try avoid it. In our research we met with the opinions that the request for change is merely a consequence of incorrect assumptions and planning. It is true that a quality plan is able to capture the number of potential changes, but nevertheless changes are sure to come. In the project it is important to have a system to manage them so that change has the least negative impact on the project outcome. All change control procedures must be properly documented. If the change is urgent, it can be implemented operationally without proper documentation, which should, however, be added as soon as possible.

Risk is the vital part of every project as well. Identification of project risks should be carried out already at the beginning and monitoring should be done throughout the course of the project. Organizations lack systemic risk management. In the study by Hrytsenko and Krasulya we can find evidence confirming this fact as well as the classification of risks (Hrytsenko, Krasulya, 2011). Managers expressed the opinion that if risks are stated before the project, the project owner often assess this as the inability of project manager to look for proper solutions and think positively. But the opposite is true. Risk management can significantly reduce the negative impact in the event that the risk will occur.

Conclusion

We can confirm that organizations are aware of the necessity to improve the project management approach. Many organizations have run projects which were not successful or became far more complicated compared to the expectations. Creating a systemic project management process is not a simple task. It takes years to establish a framework which will guarantee the timeliness of projects and improve their overall results. Our findings could be used in further studying the factors of systemic approach to project management and after the application used to improve the project environment in organizations as well.

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