

PROJECT MANAGEMENT ADJUSTMENT TO THE NEW WORLD TRENDS

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Abstract

All changes that „govern” the economy, the society, the organization and the management based on knowledge (new world trends) could not have been implemented without projects. Also, the economy, society, organization and its management could not have adapted and develop should there not have been a rigorous project management. Therefore, both the project and the project management help the organization’s adaptation to change and also, in its turn, these concepts need transformations in order to adapt to a knowledge based organization. This article presents the changes (“mutations”) that occurred within projects and their managements in view of adapting to the new world trends.

Keywords: new world trends, project, project management, changes (“mutations”)

JEL Classification: D83, M10, M14, O22

Introduction

„Along with switching to the knowledge based economy, there can be observed an increase of project importance within organizations”⁵. The organizations become in this context project orientated organizations that develop their activity in a project orientated society.

Thus, all the changes that “govern” the economy, society, organization and knowledge based management (new world trends) could not have been implemented without projects. Also, the economy, society, organization and its management could not have adapted and develop should there not have been a rigorous project management.

Particularly, the interest is that of observing the method in which project management shall help the organization to adapt to change; and this shall be observed during this present article.

In order to understand the project management concept, below there is a presentation of the project concept.

Project. Concept. Characteristics

Projects existed ever since the Antiquity and have developed along with the progress registered at the level of the economy and society that we live in and also at the level of the organizations that run the activity that sustain human evolution.

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⁵ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaciu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

The project concept has been defined by many specialists, as follows:

- Project Management Institute: „the project is a temporary effort undertaken in order to create a product, service or a sole result”⁶;

- Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănuț, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar-Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu: „the project – a temporary process that contains a series of activities and that has to be developed over a well defined period of time, with an allocated amount of resources and that has to attain a specific defined objective”⁷;

- Rarita Szakats⁸ considers that the project represents a sequence of activities that do not have a well defined start and end, where some objectives are aspired to and a quantity of resources is used, etc.

The project presents more characteristics:

- It is accomplished over a certain period of time;

- It has stated SMART type objectives (to be specified, measurable, achievable, realistic and within the allotted time);

- It needs the allocation of financial, human, material, information, etc. resources;

- It is unique by project’s purpose and by modes of accomplishment, means of resource combination, etc.

My opinion is that the project represents a process that contains an assembly of interdependent activities that have to be achieved in a well defined period of time, using a certain amount of resources and by means of which some objectives are fulfilled.

In order to sustain the relation between the project and the knowledge based economy, I consider necessary the following statements:

- due to the changes in the economy and society, you can observe the significant need for using projects for adapting to these changes; also, the changes in the external environment influence the organization and its management, taking into consideration that changes themselves can be seen as projects;

- knowledge is used within a project, by putting to good value the intellectual capital existing in the organization; the results of project developing is other ‘knowledge’ that will satisfy both the needs (requests) of the client and the needs of the organization.

Project typology

The specialists⁹ have classified the projects by many criteria, such as:

- by their complexity: *complex projects* and *simple projects*;

⁶ Project Management Institute, 2008

⁷ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănuț, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

⁸ Rarita Szakats, 2006, pg. 3

⁹ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănuț, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008
Mariana Mocanu, Carmen Schuster, 2001

James McCollum, Cristian Silviu Bănuț, 2007

- by their financial support source: *projects with public financing, projects with private financing and projects with mix financing*;
- by their volume: *organizational projects, local projects, national projects, regional projects and international projects*;
- By project consequence: *construction projects with public or private purpose, product projects, information projects, informatics and telecommunication infrastructure projects, industrial development projects, etc.*;
- By branch of activity: *education projects, health projects, industry projects, tourism projects, public administration projects, etc.*;
- By financing duration time: *short-term projects (under 1 year), medium-term projects (1-2 years), long-term projects (over 2 years)*;
- By specialty purpose intended to accomplish: *investment projects, research and development projects and organizational projects*;
- By the projects' degree of novelty and implications from social point of view: *acceptance projects; standard projects, pioneer projects and potential projects*.

Researching the projects' criteria diversity, I believe that all projects developed in an organization can be classified by more criteria developed by the specialists. Also, the extensive project typology offers the possibility to choose that type of project (types of project) adequate to the organization that would best fulfil its needs.

Project's life cycle, processes within a project and project's areas of knowledge

The project's life cycle illustrates all the stages and phases that a projects goes through, after which the project is considered finished.

Below, there are a few models of project life cycle:

1. Model of projects with European funding:
 - "Programming;
 - Identification;
 - Enunciation;
 - Implementation;
 - Evaluation (and/ or identification)¹⁰”.
2. General model of a project's life cycle¹¹:
 - define the project: identify the project's purpose; project idea; draw the project; feasibility study; project's approach strategy; obtain approvals and notifications;
 - plan the project: draw a resources plan; fix the costs; draw the main project; conclude the contracts and set the deadlines; elaborate a detailed plan;
 - execute the project: establish the project team and the tasks of its members; achieve the actual project based on the agreed upon plan; conclude the project; achieve an intermediary check-up;

¹⁰ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănuț, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

¹¹ James McCollum, Cristian Silviu Bănuț, 2007

- check the project: test the project's results; internal and external evaluation of the project's results; results' propagation; internal and external financial control; project extension.

Because of the field of activity, the projects are different from the life cycle point of view.

But, certain stages that appear in all presented model can be observed:

- “project start;
- project set up and organization;
- carry out the activities within the project;
- project finishing”¹².

Within a project, the project's life cycle and the processes carried out within the project must not be confused.

All projects are made of processes. “A process represents the sum of actions and operations achieved within the project and are characterised by inputs, outputs, instruments and techniques used for obtaining the outputs”¹³.

The specialists¹⁴ identified the following processes as being those developed during a project:

- initiate/ initialization – processes through which the project or a project phase received the approval to start;
- planning – processes that establish the project's detailed plan;
- execution – processes that implement the prior set plan;
- monitor and control – processes that analyze the project's results by comparing them to the set plan and maybe restart the planning process in view of achieving the project's purpose;
- finish – processes that conclude all the activities of the project or of one of its phases.

Reflecting upon the previous mentioned theoretical concepts, it can be observed that the processes that develop within a project are included in the project's life cycle.

Also, the five above-mentioned processes have the same order of development in any project or subproject. There is a strong interdependence between the processes, that leads to the idea that should one of the processes not be achieved or be achieved incompletely, malfunctions will appear in the project or subproject.

Each process is characterized by certain inputs and outputs. The process outputs shall be inputs for the following process, thus observing the processes' interdependence and, implicitly, the importance of abiding by deploying the processes in the above-presented order.

¹² Project Management Institute, 2008

¹³ Mariana Mocanu, Carmen Schuster, 2001

¹⁴ Project Management Institute, 2008

Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaçu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

Kim Heldman, 2009

Mariana Mocanu, Carmen Schuster, 2001

“Each group of processes is made up of a range of processes that is used during the entire life cycle of the project. The PMBOK guide groups these processes in nine categories named “Areas of Knowledge of the Project Management”¹⁵.

The PMBOK guide integrates in a table the interactions that take place between the processes groups within a project and its areas of knowledge:

Table 1

Groups of processes for project management and separating the areas of knowledge¹⁶

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
Project Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Execution	Monitor and Control Project Work; Perform Integrated Change Control	Close Project or Phase
Project Scope Management		Collect Requirements; Define Scope; Create WBS		Verify Scope; Control Scope	
Project Time Management		Define Activities; Sequence Activities; Estimate Activity Durations; Estimate Activity Resources; Develop Schedule		Control Schedule	
Project Cost Management		Estimate Costs; Determine Budget		Control Costs	
Project Quality Management		Plan Quality	Perform Quality Assurance	Perform Quality Control	
Project Human Resource Management		Develop Human Resources Plan	Acquire Project Team; Develop Project Team; Manage Project Team		
Project Communications Management	Identify Stakeholders	Plan Communications	Distribute Information; Manage Stakeholder Expectations	Report Performance	
Project Risk Management		Plan Risk Management; Identify Risks; Perform Qualitative Risk Analysis; Perform Quantitative Risk Analysis; Plan Risk Responses		Monitor and Control the Risks	
Project Procurement Management		Plan Procurements	Conduct Procurements	Administer Procurements	Close Procurements

Source: PMBOK Guide, 2008

¹⁵ Kim Heldman, 2009

¹⁶ Project Management Institute, 2008

Project management. Definition and concept clarifications

Due to the changes enforced by the economic, political and social environment, in the second half of the 20th century, the project management (or projects' management) concept took shape. In time, it developed and adapted very well to the business environment, thus being in the 21st century an efficient method to support the organization's management (management by projects).

Project management has been approached by many specialists:

- Project Management Institute considers that project management implies “applying the knowledge, skills, instruments and techniques to the project's activities in order to fulfil the project's requests”¹⁷;

- Radu Victor and his co-workers¹⁸ defined the concept using an adaptation after The Chartered Institute of Building, according to which project management represents the assembly of the project's planning, organization, coordination and control stages, from its start to its finish, with the purpose of fulfilling the client's requests regarding obtaining a viable product both from financial and functional point of view, while complying with the quality imposed standards, the execution costs and deadlines agreed upon by the implicated parties, etc.

My opinion, project management represents the assembly of planning, organization, coordination, training and control- evaluation actions that help fulfil the project's purpose, according to the client's needs.

Project management has the purpose to anticipate the threats and problems that can occur within a project and also to forecast, organize and control the carried out activities so as the project to be successfully concluded irrespective of the existing risks.

“Project management must be:

- Objective centred;
- Change centred;
- Multidisciplinary;
- Innovative;
- Control centred;
- Performance orientated;
- Flexible.”¹⁹

The project management (or project's management) concept must not be confused with the concept of management through project. In other simplified words, management through project represents a method of running an organization in which all carried out activities are considered a project. When applying this method of management, the knowledge of project management is used. Therefore, after defining the two concepts, it can be asserted that management through project

¹⁷ Project Management Institute, 2008

¹⁸ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaciu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

¹⁹ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaciu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

cannot be used without project management, but project management can be used independently from a management through project.

Both project management and management through project are “key” concepts in the knowledge based organization, because it becomes an organization that in run through projects. In these conditions, we need an organization through projects, precisely to be able to adapt the classical organization to the new world trends.

Organizational structures used in projects

Depending on the frequency with which projects are achieved in order to fulfil own activities or activities for third parties, the organizations have available a certain structural organization.

On account of the fact that the project is accomplished with the help of a project team that aims to achieving the project, considering abiding by the set budget, concluding in due time and complying with the technical specifications, “the existence and operation of such teams imply two organizational problems: integrating the project team in the organization’s organizational structure and creating an organizational structure for the project itself”²⁰.

Below, there are presented the types of organizational structures that are most used within projects.

The functional organization is that classical organization in which each employee receives tasks from only one superior; the employees are grouped depending on their specialities in their functional departments; the moment a project has to be carried out, each employee shall achieve his activities within the department he belongs to, independently from the activities carried out by the other employees from the other departments implicated in that project. This form of organization “implies integrating the project within the organization’s functional organization”²¹.

The organization by projects (or „pure organization by projects”) is that organization in which the project represents an entity that carries out its activity independently from the rest of activities within the organization; the project manager holds the full authority and responsibility for the entity that he runs.

The matrix organization is the organization that combines the advantages of the functional organization and of the organization by projects. This organization can be found at organization level under different forms: Weak Matrix Organization, Balanced Matrix Organization and Strong Matrix Organization.

Within a project, it is very important to choose the most adequate form of organization, as without an efficient organization, the project cannot run and the wanted results cannot be obtained.

²⁰ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaciu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

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In key with the above-mentioned idea, the knowledge based organization promotes the organization by projects, exactly because the project is essential for supporting the ideas of the new world trends and also it represents an adequate mode for adaptation.

The relation between project/ projects management and the economy, society, organization and knowledge based management

In order to explain the relation that exists between project and the economy, society, organization and knowledge based management, below there are just a few of the transformations²² of the new world trends:

- „the explosion of information technologies” – increase in the importance of the information resource in running the economic processes and implicitly in project running;
- „increase in the importance of generating, exploiting and perfecting the technologies” – these processes are carried out exclusively through projects;
- Strong “innovation character” – characteristic present in each project;
- “production demassing” – the obtained products are in small series or unique; these products are generally obtained after running some projects;
- “decreasing the factor in the production field in favour of the services field” – increase the frequency of using project management.

The characteristics presented above denote the fact that the knowledge based economy needs projects, and the organizations need an efficient project management that ensures the continuity in the near future which faces the new transformations.

After running the projects, knowledge is obtained, both technological as well as managerial and economical.

In order to survive and also to develop in the present conditions, the organizations become project orientated organizations.

“The relationship between project and the knowledge based economy is thus a strong one especially a bivalent one, and as demonstrated by the present evolutions, it shall, in the future, be the main concern in the economic and managerial field”²³.

Importance of projects and project management

In a century of changes, governed by „knowledge”, the project and its management became requisite concepts in running and developing of organizations.

In the 21st century organization, the project is a very important element that helps carry out the activity, as it:

- “Initiates change;
- Ensures development;

²² Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaciu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

²³ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaciu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

- Allows achieving the objectives proposed in time, abiding by the budget, with the available human resources and technologies;
- Maintains the internal and external competitiveness;
- Creates competitive advantages;
- Makes efficient the organization's activity²⁴.

The importance of project managements originates from the fact that it is a modern management concept that tries to integrate the structures and methods of management, irrespective of the complexity of the activity carried out by the organization and taking into consideration the its organizational flexibility. Also, it tries not to neglect the social and psychological aspects of the organization.

In the present conditions (economy and knowledge based society), the organization's management intends to integrate as well as possible the projects within the organization and tries to develop its capacity to run projects, considering that this shall confer one or more competitive advantages (ideas promoted also by the knowledge based organization).

Changes within the projects and project management in view of adapting to the new world trends

This subchapter would like to emphasize the „mutations” (changes) that have to be achieved at project and project management level in view of adapting to the changes set by the knowledge based organization.

From the consulted biographical sources, the “mutations” at project and project management level could not be identified, and therefore below there are my own ideas on the subject of this present subchapter.

Thus, my opinion is that the predictable “mutations” (changes) that can occur within a project and project management are the following:

- First, I have to mention that within the project the knowledge shall represent the main element that shall help in its planning, running and concluding;
- Within a project, the knowledge shall fulfil all three economical roles: raw material (knowledge of the project team's members, of the project manager and of the other stakeholders); the production factor (knowledge, together with the other classical production factors shall help run the project and obtain the wanted product or service) and the final product;
- Within a project, there shall be the four major processes that imply knowledge: achieving or obtaining knowledge – the project team's members shall divide certain tacit knowledge, thus offering a partial capitalization of the intellectual capital; creating knowledge – the product, service or work to be obtained after running the project; using the knowledge – that are in the possession of the project team, the project manager , stakeholders; and maintaining the knowledge – databases that shall contain project considered a start point for running other similar projects;

²⁴ Victor Radu, Ion Ioniță, Carmen Nadia Ciocoiu, Cristian Silviu Bănaçu, Cătălin Răzvan Dobrea, Doru Curteanu, Cezar- Petre Simion, Mihai Vrâncuț, Florin Gabriel Anghel, Monica Irina Radu, 2008

- The organizations shall run projects with mixed teams, made up of specialists from within the organization and also from outside the organization, especially in order to develop own knowledge and to acknowledge the synergetic type cooperation opportunities in the knowledge field;
- The motivation system at project level shall be present as follows: the increase of the rewards shall be achieved depending on performance and merits for the project team's members; and the simultaneous use of the global, group and personal stimulants shall be intensified, for the project team;
- An open culture at organization level shall be promoted and implicitly at project level, so that the stakeholder categories observe the method to make operational the decisions they are interested in;
- Integrating the project within the organization shall be possible by adopting an organizational structure specific to the knowledge based organization and namely the organization by projects;
- The organization shall become an organization through projects; in these conditions, all that the organization produces or renders, shall be perceived as a project by its own, requiring a project management as well as an administration as efficient as possible (project management);
- The project team's members shall become knowledge based employees, the project manager shall be a knowledge based manager (T-manager), and the project shall become a knowledge based community;
- Both in the Areas of knowledge and in the project management processes, there shall be used, according to case, financial, material, human, information and knowledge resources, that shall help fulfilling the project's entire life cycle;
- All inputs within a project process shall imply besides certain resources categories, also knowledge; all outputs within a process shall mainly represent the knowledge assimilated in the following process; therefore there can be conveyed the idea that all processes that develop within a project shall be based on the material, human, financial, information resources and the knowledge of the persons implicated within the project and not only, meaning on putting to good value the intellectual capital of the organization and exclusively of the project;
- Within the project management, the intellectual capital (human capital, structural capital and clients capital) shall put to good value through planning, organization, coordination, training and control- evaluation actions that shall help fulfil the project's purpose according to the client's needs, meaning they shall support the obtaining of "new" knowledge.

Conclusion

Both the project and project management help the organization in case of change and also, in its turn, these concepts need transformations in order to adapt to the knowledge based organization.

Bibliography

Bogdan Ciungu - "*Managementul proiectelor*", September 29, 2008, http://www.managementulproiectelor.ro/index.php?option=com_content&task=view&id=867&Itemid=86

Clifford Gray, Erik Larson - "*Project Management. The Managerial Process*", 4e, McGraw-Hill/ Irwin, New York, USA, 2008, ISBN 978-0-07-128751-7

Jack Meredith, Samuel Mantel Jr. - "*Project Management. A Managerial Approach*", Sixth Edition, John Wiley & Son, Inc., USA, 2006, ISBN- 13: 978-0-471-74277-7

James McCollum – "*Idei americane pentru manageri romani. 42 Studii de caz din mediul de afaceri american*", Management general, Editura Universitară, Bucharest, 2006, ISBN (10) 973-749-081-9, ISBN (13) 978-973-749-81-0

James McCollum, Cristian Silviu Bănaciu – „*Management de proiect. O abordare practică*”, Ediție bilingvă engleză- română, Editura Universitară, Bucharest, 2007, pg. 37, ISBN 978-973-749-161-9

Kim Heldman – „*PMP:Project Management Professional Exam. Study Guide*”, Fifth Edition, Wiley Publishing, Inc., Indianapolis, Indiana, 2009, ISBN 978-0-470-45558-6

Lewis Ireland - "*Quality Management for Projects & Programs*", Project Management Institute, Inc., Pennsylvania, USA, 1991, ISBN 978-1-880410-11-0

„*Management de proiect- probleme generale*”, www.cimec.ro/Arheologie/arh-management/05-Managdeproiect-probgenerale.pdf

Mariana Mocanu, Carmen Schuster – "*Managementul proiectelor*", Editura All Beck, Bucharest, 2001, ISBN 973-655-107-5

Michael Thomsett - "*The Little Black Book of Project Management*", Third Edition, AMACOM (American Management Association), New York, USA, 2010, ISBN - 13: 978-0-8144-1529-0, ISBN - 10: 0-8144-1529-6

Project Management Institute – “A Guide To The Project Management Body Of Knowledge (PMBOK Guide)”, Fourth Edition, Project Management Institute, Inc., Pennsylvania, USA, 2008, pg. 13, ISBN 978-1-933890-51-7

Rarita Szakats – „*Managementul de proiect*”, Baile Felix, 2006, 1154685291921suport_de_curs_Management_de_proiect_curs_Fonduri_Structurale_BNS_iulie_2006.pdf