MANAGEMENT OF THE INFORMATION SYSTEMS IMPLEMENTATION PROJECT

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Abstract—This thorough studious analysis of ERP systems implementation projects management in practice identifies the causes of failure of ERP system implementation project, also the analysis provides us with the answers to the question what should leadership and management of enterprise and business systems change when ERP systems would be implemented again, as well as why does it happen that ERP system implementation projects fail. Analysis of the management of ERP solution implementation project based on key success factors is performed in order to evaluate the reasons for failure of the realization of new information systems project management, and it consists of theoretical study of ERP solution implementation projects, as well as studies in practice with concrete results, which confirm theoretical knowledge that the first place, as a key factor of successful implementation of new ERP system or renewal and upgrade of the existing information system, was occupied by active support of top management of the company.

Keywords—management, information systems, management information systems.

I. INTRODUCTION

THIS paper presents the results of thorough research of ERP solution implementation project management based on critical success factors, which is carried out in order to evaluate reasons for the failure of the realization of new information system project management in the enterprise. In order to verify theoretical model, we have performed the study of critical success factors of ERP implementation (*Enterprise Resource Planning*) on representative sample of respondents from the group of big companies as well as group of small private companies, different in the aspect of the type of activity and ownership structure. Each approach to project management project implies definition and use of appropriate organizational structure for the management of realization, where main role is played by a team responsible for project realization management.

Research results have shown respondents mostly prefer so-called approach that implementation of a new modern management system in enterprise will be a solution to all difficulties and problems in business of enterprise and business system, without considering the essence of business. Let's see what are the difficulties when introducing ERP system that were observed by managers in the survey of journal Computerwoche.

As the most expressed problem, we have also observed the lack of attention in process optimization. Reason is very simple, and still neglected many times: regardless how the technology itself was efficient, it cannot help the enterprise to achieve its business goals if business processes are not carefully harmonized firstly. Therefore, business processes in enterprises need to be improved, then we decide which business process we will change, which we might reject, and then apply the possibilities of modern information systems.
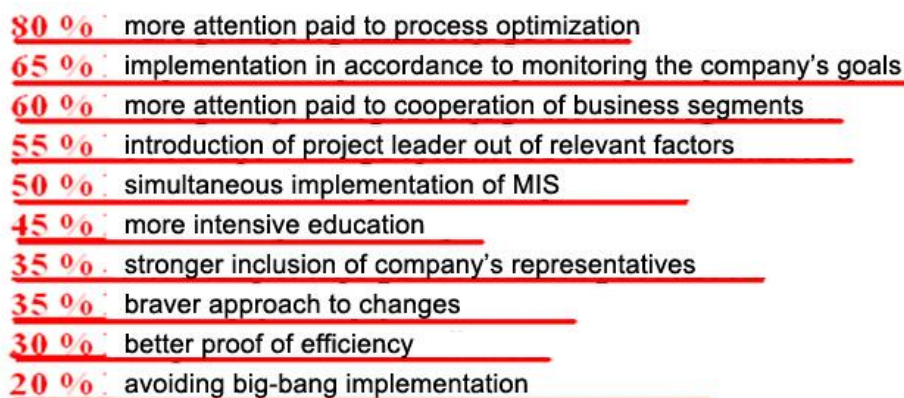
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80 %	more attention paid to process optimization
65 %	implementation in accordance to monitoring the company's goals
60 %	more attention paid to cooperation of business segments
55 %	introduction of project leader out of relevant factors
50 %	simultaneous implementation of MIS
45 %	more intensive education
35 %	stronger inclusion of company's representatives
35 %	braver approach to changes
30 %	better proof of efficiency
20 %	avoiding big-bang implementation

Fig. 1.- What would management change in re-implementation of ERP system? [Source: Computerwoche]

II. CAUSES OF PROBLEMS

According to professional analysis carried out by Robert Block, there are 12 classified categories that affect the failure of project implementation. Some authors (Mary Sumner, 1999), however, as direct causes of failure list the attitudes given in the following table 1.

Table 1: Causes of project failure

Failures	Reasons	Results
Lack of resources	Conflict between people, time and volume of project due to lack of resources	Inaccurate systems with poor reliability, difficulties with maintenance and dissatisfaction of users
Failures – requirements	Bad specification of requirements	Leads to development of bad systems with many changes in requirements
Failures – goals	Inadequate settings of system goals by leaders	Leads to development of bad systems in a way that they are led by lack of requirements
Failures – technical	Failures in using the approach of effective software development, such as structural analysis and design	Causes inadequate requirements of specification, poor reliability, high maintenance costs, problems with planning and budgeting
Failures – contact with users	Impossibility of communication with systemic users	Causes inadequate specifications and poor preparation for adoption and use of information system
Failures – organizational	Poor organizational structure, lack of leadership	Leads to poor coordination of work tasks, delay in planning and unbalanced quality
Failures – technological	Unreliable products, deficiencies and poor hardware and software	Causes delay in planning and schedule, maintenance problems and dissatisfied system users
Failures – size and scope of project	When a project is cumbersome, its complexity affects the development of possibilities of organizational system	Caused by insufficient resources, inadequate specification requirements, poor use of methodology
Failures – people management	Insufficient labour, loss in creativity and opposed attitudes cause deficiencies	Overrunning the budget and the time, poor project specification, system is difficult to maintain
Failures – methodological	Lacks in execution of necessary activities, while the required activities are performed	Such a form of deficiency can result from defects and errors in a system
Failures – planning and control	Consequence of undetermined tasks, inadequate project and monitoring tools management	Work tasks can be intertwined
Failures – personal	Personal conflicts	Passive cooperation and hidden opposing with possible revenge act

Many researchers (Milutin R.Đuričić,2006) stress the following principles that need to be followed when managing the realization of investment projects from information systems:

1. Optimization of the approach to investment project implementation from the standpoint of providing active relationship, coordinated and responsible work of all the participants in the process,
2. Harmonization of goals, tasks and instruments of project implementation,
3. Programming and harmonized performance of works on project implementation,
4. Specification and acquisition of resources required,
5. Optimal work organization on project implementation,
6. Optimally projected and applied information system of performing investment projects,
7. Network planning of project implementation,
8. Assignment and contracting of performance with the best contractor and
9. Provision of efficient supervision on project implementation.

It is not a simple task and in order to successfully acquire it we need efficient communication among all the participants in establishment and functioning of ERP system. All of them need to speak the same "language". From the consultants for software implementation, experts for the improvement of business processes to the

users within particular departments. Very often, inefficient communication between key users is a cause of a great number of difficulties.

Let's take a look at other points as well. Implementation, in accordance with monitoring of enterprise's goals, where we can see that goals are not set properly. It is necessary to pay more attention to cooperation of business segments, introduction of project leaders from relevant departments where business units are not well included. Almost all the problems are observed in the very business of enterprise and business systems, while information technology mostly was a minor problem.

The conclusion is imposed that the very process of monitoring business requirements of enterprise often makes a difference between successful and unsuccessful ERP systems implementation. That is precisely what we are offered as a solution by process approach in implementation of management information systems (ERP).

There are various causes of the problems mentioned, we will only list some of them:
➢ Not understanding the significance of previous process improvement;
➢ Lack of knowledge regarding business processes in enterprise and their mutual connection;
➢ Poor support of top management;
➢ Project was initiated by IT sector-department that had no capacity to include
   - Important people from other sectors-departments;

With all the problems that appear during implementation of ERP systems in enterprise, there are those that appear during the process of system maintenance. There is monitoring of further development of ERP system, comparison of new versions with the implemented one, as well as monitoring the changes of business system by implemented ERP system. Causes of these problems reflect in non-existence of appropriate system documentation, bad communication between business and IT departments, inadequate tools for monitoring business system etc.

All these above-mentioned activities lead to poor cost effectiveness of the project. Experiences say that efficiency of experiments is 75 and more % on the projects where appropriate recommended methodology is used, while in case of experiments that do not use appropriate methodologies, efficiency moves between 50 and 60% of their hours.
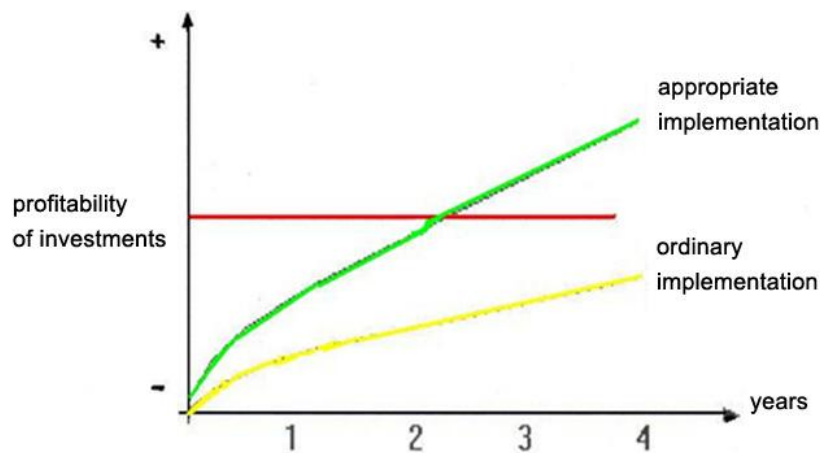

Fig. 2.- problems of solution implementation

For success or failure of a project of implementation or modernization of information system, it is very important how strategic and tactical level affect each other within critical success factor.

From all above-mentioned examples and causes we could say that active support of top management is at the first place as the critical success factor of implementation of new ERP solution in enterprise or restructuring and upgrading the existing information system in enterprise. Then, the use of standard activities and basic ERP solution, as well as adaptation to business processes and functions of standard ERP solution when necessary is the second most important factor, which provides the success of implementation of ERP solution to some enterprise or business system. As the third most important factor of success from analyzed examples there is extensiveness, i.e. universality of undertakings for covering specificities of functions of each enterprise.

III. CONCLUSION

From above-mentioned analyses, we could put at the first place active support of top management and leadership of company as a critical factor of successful execution of the implementation of new ERP solution or restructuring of information system. In addition, not following determined methodology has negative consequences on efficiency and effectiveness of investment processes, as well as efficiency and profitability of business system. ERP consists of a series

of the best practical manners for execution of standard business processes. In order to draw the most out of this business software in enterprises, you need to convince people to accept the manners of executing business processes in a way they are described in the software itself. If the people from different sectors-departments do not agree with methods described and think that they current/old methods are better, they will either refuse to use new methods or they will require from the team for implementation/maintenance to modify the system in order to support their methods. It is the key moment when ERP system can fail. It is not necessary to mention

again to what extent any greater change of ERP software is recommended and to what extent such change is risky, with far-fetching consequences for the enterprise. In addition to the possibilities of the appearance of bugs and inability of standard performance of software upgrade, we can jeopardize complete functionality of ERP system. Studies show that if business system or enterprise has a resistance towards new information system, technologies, i.e. generally changes, there is great possibility that the project of ERP system implementation in enterprise will succeed.
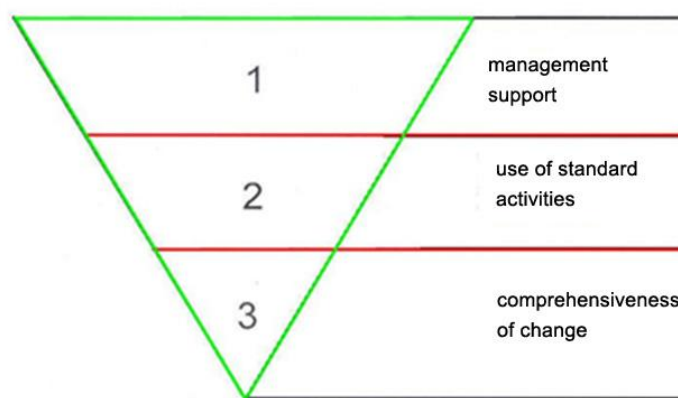

Fig. 3. - Critical success factors having mind the experiences from practice

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