

Challenges of Project Management During the ERP Implementation Process in Large Companies

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Abstract — Modern business requires assistance of IT systems in order to be successful. An advanced information technology helps management to be informed, reduce business costs and understand the customer requirements. ERP systems are complete software solutions made to satisfy company's needs, but implementation of ERP is complex and demanding process which can produce large costs for the company in case of failure, so it is very important to provide adequate project management. The aim of this work is to present the challenges in process of implementing SAP at Naftna Industrija Srbije (NIS), with focus on change and risk management.

Keywords — ERP systems, project management, SAP, change management.

I. INTRODUCTION

Researches continually show that companies have difficulty to complete information technology (IT) projects in time or within the budget. In fact many are cancelled before completion or not implemented. To illustrate this point, bellow are the data coming from Standish Group's study on project outcomes. [1].

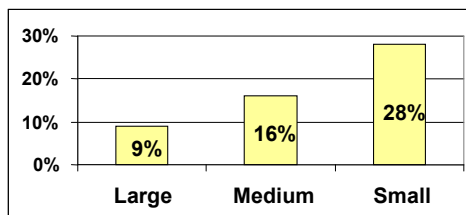


Figure 1. Successful IT implementation in companies

The percentage of “successful” projects in large companies was estimated at an unflattering 9 %. The Report [2] findings highlight success factors (in order of importance):

- User Involvement
- Executive Management Support
- Clear Statement of Requirements

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- Proper Planning
- Realistic Expectations
- Smaller Project milestones
- Competent Staff
- Ownership
- Clear Vision & Objectives
- Hard-Working, Focused Staff
- (Other)

Another finding was that project failures were in the increase in 1995 compared to 1990 or 1985. This Standish Group Report comments could apply well, and arguably still do, to the implementation of ERP solutions.

II. WHY IT PROJECTS FAIL?

The project team, the suppliers, the customers and other stakeholders can all be a source of failure. However, the most common reasons for project failure are rooted in the project management process itself [3], and the aligning of IT with organizational cultures.

According to Boehm [4], top ten risk items are:

- Personnel Shortfalls
 - Staffing with top talent; job matching; team-building...
- Unrealistic Schedules and Budgets
 - Design to cost; incremental development; software reuse...
- Developing the wrong software functions
 - Organizational analysis; mission analysis; user surveys...
- Developing the wrong user interface
 - Prototyping; scenarios; task analysis.
- Gold-plating
 - Requirements scrubbing: prototyping; cost-benefit anal...
- Continuing stream of requirements changes
 - High change threshold; incremental development...
- Shortfalls in externally-performed tasks
 - Reference-checking; pre-award audits; award-fee contracts; prototyping; team-building...
- Shortfalls in externally-furnished components
 - Benchmarking; inspections; compatibility analysis...

- Real-time performance shortfalls
 - Simulation; benchmarking; modeling; prototyping...
- Straining computer science capabilities
 - Technical analysis; cost-benefit analysis; prototyping...

Stephen P. Laughlin also considers that it is in the implementation of the packages that most of the headaches arise [5]. He identifies success factors as:

- A motivating business justification
- Strong internal owner
- An empowered and influential internal team
- Management driven change
- Proven external partner
- Clearly defined vision
- Change management effort
- Aggressive schedule and timelines
- Strong Sponsorship,
- Target communications
- Focused issue resolution
- Limited Scope
- Early success
- Appropriate project staffing
- Solid project management

In summary, IT software projects often ‘fail’ but the failure usually is not caused by technical reasons. More often, they fail because of reasons related to the management issues. Main reason of ERP’s failure is implementation itself. Analysis of success or failure factors show that primarily it is the implementation’s effect on organization, the workplace and the individuals at work which yields a positive or negative result.

III. CHALLENGES OF MYNIS PROJECT

MyNIS Project is implementation of SAP at Naftna Industrija Srbije (NIS). SAP is an ERP software product that integrates different functions in a business providing rich functionality in each of included business areas [6]. At the starting point of myNIS Project, NIS was at the beginning of restructuring phase, so company started two complex processes at the same time: changing usual way of doing business and implementation of ERP system. The partnership cooperation between SAP and NIS was the key to the overall SAP implementation project (myNIS) success.

A. Project introduction

The main deficiencies of the current situation in daily business activities arise from the missing integration between the divisions on one side and the corporate level on the other side. Communication between these levels is based on the exchange of paper and emails-based information flow between divisions and corporate level. As a consequence the NIS corporate level lacks real-time information. In this situation it is very likely that results are

erroneous because of “human interfaces” in data capturing. It also cannot be excluded that systematic errors occur because of different interpretations and misunderstandings. Therefore the reliability of results is rather questionable.

NIS faces challenges including:

- Modernization of ICT department
- Training for more than 300 people
- Prioritization of restructuring and reengineering over consistent process adoption,
- Coordination and alignment between the entities of NIS and HQ,
- Project execution across multiple entities,
- Transition efforts to consolidate applications and systems,
- Benefits realization from process and system improvements.
- Handling risks, especially related to HR

B. Implementation areas

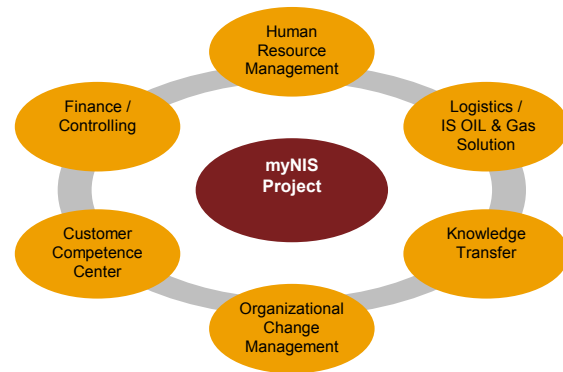


Figure 2. Implementation areas of the myNIS Project

The SAP Project was envisaged to be implemented using *ASAP Methodology*, with the following Phases:

- PHASE 0 – Project preparation
- PHASE 1 – Finance & Controlling, Basic Elements, Master Data, Human Resources Basics.
- PHASE 2 – Purchasing, Inventory, Human Resources Payroll
- PHASE 3 – Asset Management, Production Revenue Accounting

C. Organizational Challenges for NIS ICT Departments

The initial situation of the different business divisions of NIS can be characterized from an IT perspective as followed:

- IT Organization
 - no relationship between IT departments of different business divisions

The risk exposure for each review topic assessed is summarized in the *Project Review Dashboard*:

TABLE 1. myNIS Project Review Dashboard:

Topic Area of Review Risk Exposure Level	Risk Exposure Level
Project Management	
Integration Management	High Risk
Scope Management	Medium Risk
Time Management	Medium Risk
Cost Management	Medium Risk
Communications Management	Medium Risk
Human Resource Management	High Risk
Quality Management	No Risk
Risk Management	<i>Low Risk</i>
Procurement Management	<i>Low Risk</i>
Functional and Technical Topics	
Business Organization and Process	Medium Risk
Organizational Change Management	<i>Low Risk</i>
End User Training and Documentation	No Risk
Technical – Systems Management	Medium Risk

The detailed description and recommendations of findings were developed and presented to the key users.

F. Research results

Shortly after the Phase 1 of the myNIS Project was finished, a survey among the key participants on the SAP and NIS side was conducted. Objective was to learn systematically from experience in order to improve the effectiveness of the myNIS project. Top answers were [7]:

- 1) 63 % of the participants state that there is a good relationship and good cooperation between the teams.
- 2) 25 % of the participants state that NIS counterparts displayed a total commitment to the project
- 3) 19 % of the participants state that to have SAP and NIS team members in one room is a good idea.
- 4) 13 % of the participants state that the consultants show a total commitment to the project

On the question «What went well in Phase 1? », the answers were:

- Good relationship on a personal level
- Clear definition of responsibilities
- Good cooperation between the teams

At the same time, the disturbing feedback was:

- No clear decision process - who is in charge?
- Multi role assignments within the project and other tasks
- Skill set of team members not always according to role requirements

Participants agreed that the most troublesome issue was lack of the management support to the Project.

IV. CONCLUSIONS

ERP implementing process in large companies such as Naftna Industrija Srbije is very complex and demanding task related to many risky decisions.

Some challenges (like foundation of new ICT division, training of employees and creation of good relationship between team members) were managed, and some of them are still to work on. Main challenges to face in near future are :

- Process decision path has to be absolutely clear
- Business and ICT requirements has to be harmonized
- Trust and devotion to the project need to be stronger to reduce resistance to the changes (it is a must because NIS has more than 12.000 employees)
- Find a solution to stimulate team members (they are responsible for their regular jobs + for the myNIS project, and no salary change)

Software projects like myNIS are dynamics and unique, which lead to the existence of many risks that are supposed to be managed [8]. When teams don't manage risk, they leave projects vulnerable to factors that can cause major rework, major cost or schedule over-runs, or complete project failure The main reasons that risk management is inefficient or it is not implemented in many organizations is the lack of management support, missing documentation, skipping procedures and lack of knowledge...

Project myNIS proved that the most important factor to the Project success were people. Even the best implementation methodology is incapable of insuring success in case of bad relationship and cooperation between the teams. Risk management requires a fear-free environment where risks can be identified and discussed openly. Based on a positive, proactive approach, risk management can greatly reduce or even eliminate the need for crisis management within our software projects.

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