

IT Project Management – Cost, Time and Quality

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Abstract: Many organisations recognise the potential benefits that technology can yield. Successful organisations, however, understand and manage the risks associated with implementing new technologies. Thus, management needs to have an appreciation for it and a basic understanding of the risks and constraints of information systems in order to provide effective direction and adequate controls.
Keywords: organisation, information, cost, time, quality

Introduction

Management software analyzes demand signals from every part of the organization - from the infrastructure through the extended enterprise - delivering business insight while managing and optimizing the user experience in a secure, continuous infrastructure (Figure no. 1). A key contributor is human input - managing and adjusting the shape of the IT environment itself to ensure maximum flexibility and agility [1, 1-12; 2; 3; 4, 659-671] in the face of unpredictable changes in the future business environment.

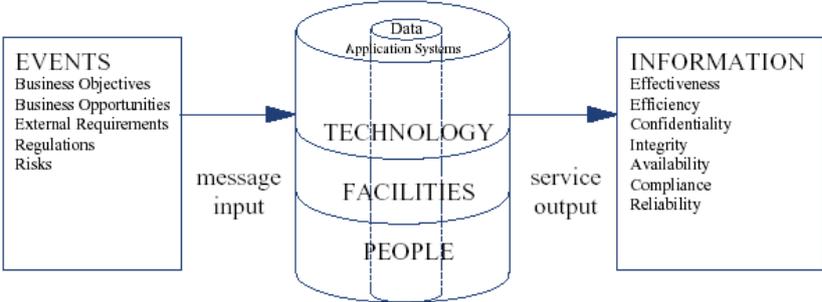


Figure no. 1 Interaction - Events, Data, Information

IT services provided by internal or third parties, that adequate security and control exists (Figure no. 2).

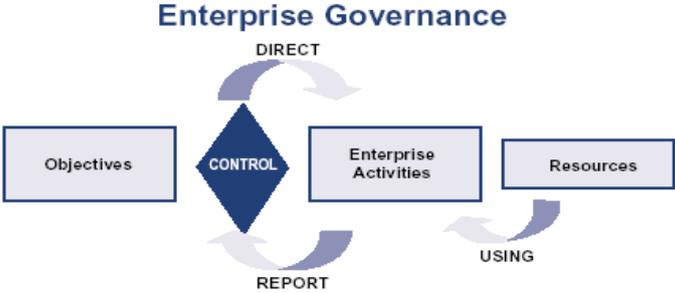


Figure no. 2 Enterprise Governance

I.T. can facilitate both the integration as well as the coordination of the employee’s tasks. Through it, the employees can interact between them more properly.

The specialists of management consider that while using the IT for the accomplishment of leader's tasks, the number of the hierarchical levels of the organization will decrease.

Management techniques must similarly adapt to the new environment. Changes need to be made to the internal management structures within projects; in particular, the use of multidisciplinary teams is becoming more widespread. You should have a project management style based on elements such as:

- integration
- systemic management
- simultaneous management
- the use of teams
- managing functional plans simultaneously and interdependently.

1. Problem Formulations

Looking wider than one project, new views have to be taken of the multi-project environment.

The process of design an information system is a long term and complex activity, which implies big financial, human and time resources [1; 2; 5]. Planning and coordinating the entire activity regarding the process of design informatics project is the responsibility of the project manager [6; 2]. He must decide which control structure is the best for the project.

It is a well - known fact that making the decisions without having the target to make them work is usually without effect. The same can be said about the planning activity, which will bring lesser benefits if it is not controlled and supervised. The control is a continuous evaluation of the progresses made in the making of the project, in relationship with certain criteria divided on targets levels.

The evaluation system offers the leaders the required data necessary for the administration of that business. But it's still the job of those being in charge to create and launch such a system.

The purpose of this paper, comes from the basic need of every company to understand the status of the own COMPLEX I.S. and refers to making a decision regarding the control and safety which should be offered to these systems to obtain an objective vision of the current state, of the activities development that must be automatized.

The owner of the system is able to determine the level of adhesion to the control targets, whether as a self-evaluation, or as a reference related to a balance, or an independent cross – examination.

For every product, one can specify:

- the identification of the process;
- the purpose declaration for each process;
- the declaration of possibilities (how to keep the process under control in order to see if the target has been achieved) under control for achieving the goal;
- the I.T. resources;
- the criteria of information, by specifying the importance of the process for which is applied;
- the critical factors of success;
- the target indicators;
- the performance indicators.

This evaluation tool can become for the company:

- a self-evaluation method which decides where is the company situated;
- a method for the use of the results of the evaluation in order to establish the targets for that company's future development, based upon the level wished to be reached, which does not necessarily implies level 5;
- a planning method for the reach of the desired purposes;
- a method to establish the priorities in the development of the projects based on a classification of the projects and analyze of their benefits as compared to the costs.

For every criteria of evaluation, the company must use a measurement scale between 0 and 5 in order to define the estimated position [7]. This can be easily compared with the other three targets: target performance international standards and the best practice.

In order to make a simple evaluation, an organization must take into consideration every evaluation criteria, to read the 6 levels of scaling and determine which one of the six is better suited for the company's current state. The more important is the process for the company, the higher it is situated on the scale. For example, in a relatively stable commercial environment, the growth maturity of the 13's processes from the "supply and support" field is the one that separates the successful companies from the others. On the other hand, in a very dynamic economic field, successful companies are highly depended on the maturity of the field "planning and organization", "acquisition and implementation".

One must mention the fact that there is a difference between the measurement of the abilities and that of performances. For example, the achievement of the abilities for a certain security or control of practices is one of that decisions that must be taken and done, but the consistent appliance of the abilities, once required, also demands to be measured.

In many cases, the level indicators for the two evaluations, the position of the society and its desired position, will be separated on the graphic by a pause, a blank, measure which offers a visual impression of the quantity of work that must be done to close the space and achieve strategic targets. This space must also be details described in order to plan a series of projects which help the company achieve strategic targets in the data safety department and their control. The process of analyze of the discrepancies will turn into a list of all the required actions to remove the discrepancy between the current state and the correspondent strategic purpose. This list of the discrepancies will be used in order to plan a suitable list of projects which will make these projects. There will probably exist a plenty to plenty kind of relationship in the drawing of the discrepancies and projects. (Figure no. 3)

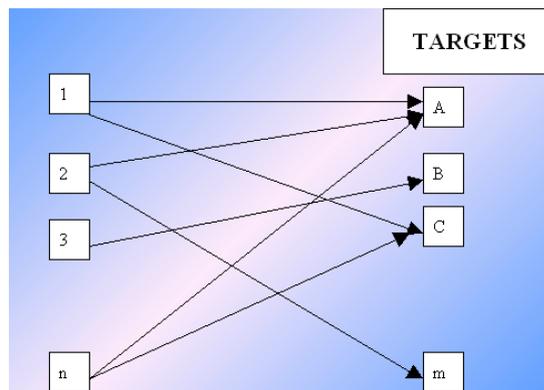


Figure no. 3 Relationship projects-targets

The degree of complexity of the project is a major factor, which determines the method of control and report. When we are dealing with complex projects, which involve a period of two-three years and more than 20 persons, flexible and control tools are necessary [3; 4, 659-671]. A complex project strictly implies intermediate levels of leadership and report. The major problem, which appears is that of assuring the quality of the software.

2. The Problem Description

The managers usually come upon situations in which they have to take into consideration a business depending on resources and expenses in order to maintain control upon informational infrastructure. The majority of the questions are about: "how far should we go and is the price justified by the profits" [8, 780-792; 9; 10]?

These problems and opportunities appear as a result of the desire of the companies to adapt to changes, a major aspect being occupied by informational processing. Due to the high degree of flexibility, the importance of the evaluation method is underlined. Starting from the observation that a main characteristic of each level is that of finalizing with a check up and a validation in order to eliminate certain anomalies, it is underlined the fact that a good security of the I.T. and the administration

practices control of the complex I.S. projects is essential. Under these circumstances, one can search new managerial solutions in order to integrate:

- Time control;
- Cost control;
- Quality control of the working team;
- Obtained results control.

To all these we can add a great flexibility and adaptability to changes of the imposed system. The role of the project's manager in planning, coordination and control of the complex S.I. project activities is being underlined.

Is difficult to answer and to argument because the instruments necessary in such evaluation are not always available. The management of complex IS in a continuous need for instruments for self evaluation and control on levels as an answer to the need of knowing what the manager of project should do in a more efficient manner.

Based upon the help of the design product the project manager can evaluate the degree of the accomplishment of the targets. This means:

- a relative evaluation of the position of the company;
- a manner to efficiently decide where the company is going to;
- a tool in the measurement of the progress of the projects in comparison with the target.

With the help of a flexible evaluation system, we can establish how well achieved is a process from an The design of a flexible evaluation system offered the advantage that each company will understand its own performance [8; 9] and will be able to measuring its own progress offering in the same time the manager of project the possibility to correctly evaluate [8, 780-792; 9; 10] and in due time the degree of accomplishment of the tasks of each team work (Figure no. 4):

- Witch is the correct level of control for its own informatics system in order for this to support the aims of the economic unit?
- How much do we automatize?
- Do we have enough resources?
- How far should one economic unit go with the IS implementation and is the price justified?
- What international recognized standards exist and what relation do we have with them?
- What is regarded as best practice in economy and what is the position of the society in regard of this best practice?
- We have taken „reasonable” cautions in order to keep safe the information?

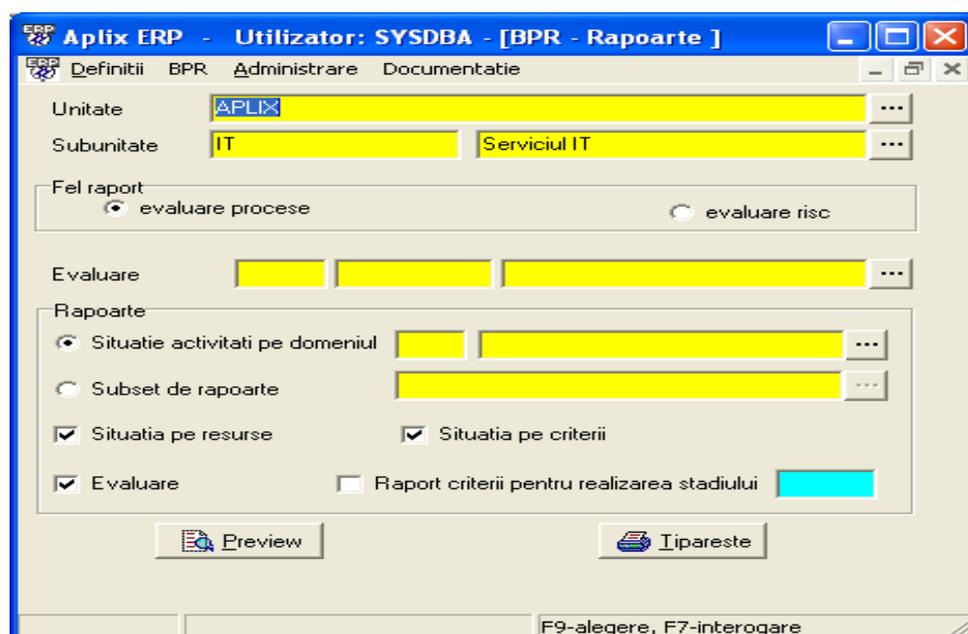


Figure no. 4 Aplix ERP – Process definition

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3. Instruments for Evaluation and Data Control

Based upon the help of the design product the project manager can evaluate the degree of the accomplishment of the targets. (Figure no. 5)

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Domenii risc (1)		
Nr	Cod	Denumire
1	OCD	Riscul privind operatiile centrate pe date
2	CSA	Crearea sistemului de aplicatii
3	DSA	Dezvoltarea sistemului de aplicatii
4	RUM	Obtinere resurse umane si materiale

Criterii risc (2)			
Nr	Cod	Denumire	Pondere
1	OCD1	Numar de persoane implicate in operatii cu date	1
2	OCD2	Efectul in grupul de afacere	5
3	OCD3	Numarul de aplicatii	5
4	OCD4	Numarul de utilizatori	2
5	OCD5	Constatari prioritare ale auditului	1
6	OCD6	Complexitatea procesarii datelor	2
7	OCD7	Schimbari in echipament/platforma/personal	1
8	OCD8	Numar de platforme	3

Factori risc (3)		
Nr	Denumire	Punctaj
1	Foarte mic (sub 2 persoane)	1
2	Mic (3-7 persoane)	2
3	Moderat (7-15 persoane)	3
4	Mare (16-25 persoane)	4
5	Foarte mare (peste 25 pers)	5

Figure no. 5 Aplix ERP- Evaluation details

This model can help the specialists to explain the managers the managerial IT deficiencies and to fix the targets in order to compare the control practices of their own company with those of the „best practice”.

Designing a flexible evaluation system allows the project manager to correctly evaluate the opportunities and to take high decisions (Figure no. 6).

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Figure no. 6 Control objectives

Good managers realize that the recognition of the symptoms of the problems, the diagnosis of these problems and then the confrontation are imperative solutions [6; 11, 1116] for the business if we want the business to work in the most proper way.

The project manager is responsible for the correct investment of the resources, as well as for their usage in order to obtain the desired result.

The demand for the management teams is to think in terms of process and not in divisions and functional units if the companies want to successfully compete among them, they must frequently modify the processes, to adapt them to the market requests and to add new tools which have to adapt to these changes.

Conclusions

The control of the planning and organization activities for the I.S. systems means the use of the feedback in order to monitor the project, including comparing the planned stage with the actual stage of evolution. In addition, the control means making the right decisions in order to accelerate or to reorganize the activities to be able to finish them in time as well as to motivate the team to do the job right and to be able to remain in the fixed budget. (Figure no. 7)

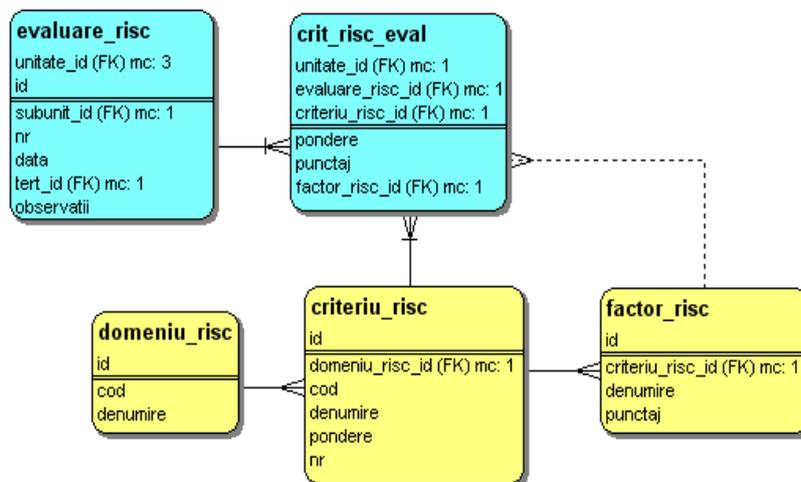


Figure no. 7 Data model for risk evaluation

The effective administration of the I.T. has a major importance in the success and survival of the company. For many companies, the data and the technology they have, represent the biggest values. Indeed the information and the information systems are general for the entire company - from the users platform to the local networks and those of bigger cover, to the servers of the user within the computers. Many companies recognize the potential benefits produced by technology. Yet, the successful companies understand this and administrate the risks with the introduction of new technologies. Thereby, the administration needs a good appreciation and a basic understanding of the risks and limitations within the I.T. in order to supply adequate controls.

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