

# Project management office function – small project portfolio control

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**Abstract:** This paper presents the implementation of project portfolio control procedures in a Brazilian unit of a multinational food company. The portfolio has about 150 projects that generate an expenditure reduction of more than € 10 million per year. Although the portfolio is managed by the supply area, there are several other areas involved in the project execution. This fact generates some interface management problems. The estimated duration of these projects varies from 6 to 12 months and about 60% of them have a delay expectation. Moreover, there has not been a regular information flow that allows for a timely follow-up of each project situation. This means that some projects, due to eventual change in priority, are interrupted and forgotten by stakeholders. The developed information system uses the earned value model to measure the project and projects group efficiency. It also became possible to assess the impacts generated by the projects and to compare them with the established goals.

**Keywords:** project management office, project portfolio control, reduction cost project, earned value.

## 1. Introduction

Some authors (ARCHIBALD, 1992; CLELAND; KING, 1988; KERZNER, 2006; VALERIANO, 1998) affirms that the project management is one of the essential tools to the companies survival in the competitive environment that if established in the last few decades because the strategical actions are implemented through projects. The pressure for the launching of innovative products, in short periods and with low cost, took the organizations to search coordinated and controlled development processes. Many times, in markets with one high brand and product fidelity, improvement projects of current products allow an efficiency profit that generate substances reductions of operational costs.

This paper presents a project portfolio control in which the lack of a formal control routine has created a great difficulty to know the status of the majority of the projects in any moment. The company, funded 100 years or more ago, is in Brazil since 30's. The portfolio projects in this article contains reduction of cost projects for its lines lines of consumption good. As result, it is considered a accompaniment and control routine of projects portfolio that updates a data base that generates reports with different levels of aggregation of the information.

In the next chapter, one brief bibliographical revision on office of projects is made. The following chapter presents the methodology and the case study is presented. Finally, the final remarks are presented detaching the main contributions already identified and the possible extensions of this work.

## 2. Theoretical review

A structure of project management processes can contribute significantly for the management efficiency, therefore it defines the work and activities to prepare the deliverables on negotiated budget and schedule.

Given to the temporary and multi-departmental aspect of the projects, they can, eventually, generate some type of difficulty of alignment with the organizational structure. Also in projectized organizations with matricial structures, the synergy and the integration of the management of the projects can be very unlikely.

In this context, the offices of projects (PMO - Project Management Office) configure a abilities center that try to assure profits of efficiency in the projects management. These organizational units allow to the consolidation of the projects management area of a company, incorporating this concept to the organizational culture.

The PMOs, can be defined as

[...] a organizational entity established to assist the controlling of project and the teams of the organization in the implementation of the principles, practical, methodologies, tools and techniques of the management of projects [...] (DAI; WELLS, 2004 apud CARVALHO; RABECHINI Jr., 2006).

It means, the project offices can help the managers to transform the strategies of the companies into results using the tools of project management. Kerzner (2006) cites diverse positive points of the establishment of a project office:

- General overview of the project portfolio, allowing more assertive decisions, better planning of capacity and priorização;
- Standardization of operations and processes;
- Bigger efficiency and effectiveness in the operations;
- Lesser necessity of meetings; and
- Easy and faster access to important data (therefore they are concentrated in one same place).

So that the project office is most accepted for the employees, it is important that its mission and objectives are established before its implementation. As Carvalho and Rabechini Jr (2006) and Kerzner (2006) said, the basic objectives of an office of projects are:

- Approve proposals of projects on the basis of analysis of risks and application of better methodologies of practical in project management;
- Aid to the controlling in the application of tools of management of projects as forms and standards;
- Carry through the revision and supervision of the projects;
- Guarantee the appropriate filling of the documentation of the projects;
- Promote the maturity of management of projects in the company with the development and the update of methodology and training of the employees;
- Register and to center information learned with the projects;
- Guarantee the systematic application of the systems and demanded common processes for the best execution of programs; and
- Focus in the process improving while the teams of projects concentrate in the successful execution of the program.

Although some similarity, literature shows different taxonomy on office of projects (PMO - Project Management Office). Although small differences between the types detailed in each boarding, the authors converge how much to the fact to exist a gradient of responsibilities scope. Two views had been selected to be presented in this work, for configuring different examples of scope.

Kerzner (2006) shows a general approach of the classification of projects, he does a division based on the type of projects managed for one determined department:

- Functionary: management of resources for the projects of a specific department;
- Group of Customers: management of projects/common customers, aiming at the best communication; and
- Corporate: it takes care of all the corporation and it is focused in strategical questions.

Dinsmore (1998) adopts the participation in the strategy and results as criterion for division what it generates 4 types of project offices:

- Project Support Office (PSO): it is responsible for the support to the project controlling, offering administrative services, tools of management and aid to the planning and development of the projects. The PSO do not possess responsibility on the gotten results;
- Project Management Center of Excellence (PMCOE): it posses experience in projects, being responsible for incorporating the ideas of Management of Projects to the organizational culture of the company. He is in charge for the methodologies, but it does not possess responsibility on the results reached for the projects;
- Program Management Office (PrgMO): it is necessary that it withholds to be able, freedom to determine priorities and control in relation to the strategies. It posses in its target of work the management of the project controlling and is made responsible by the gotten results; and
- Chief Project Officer (CPO): it is the clerical type of more complete project and with the biggest number of attributions. It must be involved in the strategy of the business, decisions that culminate in a new project, priorização, negotiation of resources, management of the projects in enterprise level, dissemination and awareness of the employees on the importance of the Management of Projects, evaluation of the performance of the portfolio, among others activities.

The projects office is a central of the knowledge of project management in the company, and can store all the data and use an appropriate information system. The information systems considered by Kerzner (2006) are composites for the following groups: Added value measurement, Risks management, Performance faults and Lessons learned.

## 2.1. Projects and programs monitoring

A methodology of projects, according to Kerzner (2006), is of great utility to support the execution of a project, supporting the planning and control of the same. Cleland and King (1978) argues that it is important that standards and plans are formed that allow that the project is developed adequately during its cycle of life and that they supply the necessary information stakeholders. As displayed for Meredith and Samuel (2003), in companies with little focus in the project management, in general, the necessary information to the controlling of projects are outdated, disorganized, incomplete or with errors. It is important that if it has a structure that includes registers stored in an information system so that the data are available immediately, allowing the controlling of project taken decisions basic quickly.

In this chapter, concepts and studies of case of applications of methodologies based on the recognized PMBOK will be presented and world-wide, that they are presented by the literature of management of projects.

The choice of a methodology to conduct projects portfolio in an organization promotes greater efficiency during the execution of a project beyond increasing the trustworthiness of the customers in relation to the management of the company. For an organization of great transport, that searches all these aspects and posses space for the application of structuralized programs, it is pertinent and useful to adopt well established standards and flows. Although important, it is not simple to create a methodology. Many times, the companies tread wrong ways when choosing different methodologies for different types of projects - making with that its employees have that to deal with diverse standards at the same time - or to create tools that are not integrated to its methodology. But if the companies make right in the choice, appear benefits that assist in the route to the maturity: lesser number of changes during the execution of the project and effective planning of processes.

To create a methodology of great projects demand efforts of the company, therefore is more convenient when a more complex projects portfolio is had. Moreover, it is not necessary to create a new methodology, since many models exist that can be adapted to the reality of each business with efficiency. Also it could have relations with different approaches already used in the company, searching best the practical ones. Previously to the work of study of methodologies, it is important to define clearly the problems that the organization faces in relation to the management of projects and that they will have to be decided with the creation of a methodology.

The most common, as Archibald (1992) and Kerzner (2006) said, are:

- Lack of support of the management in relation to the

management of projects;

- Lack of tools that provide fast information on the project for taking of decisions;
- Use of multiple methodologies;
- Lack of training;
- Lack of periodic communication for revision of the projects; and
- Little use of tools and techniques of management of projects, culminating in losses due the extreme delays and costs.

### 3. Methodology

The work was developed in 3 great stages. In first the 4 months the company routine of project portfolio management was observed and the organization behavior standards. After that, a revision of the literature related with the subject was done, and people key of the organization has been interviewed. Finally, a proposal was elaborated and implanted.

This approach was chosen because one of the authors of this article acted in the organization and was involved with the resolution of the presented problem that if – monitoring and control of the costs reduction projects. The main sources of data had been the existing registers in the organization regarding these projects and the interviews with involved controlling and technician.

Thus, this study of case it posses some similarities with a research action, although not to have followed the underlying methodology severity to this boarding.

### 4. Case study

The Innovation Department (ID) has regional structure, with resources in all Americas. It is internally divided in foods and hygiene, and each group posses a dedicated teams to the North America and another one to Latin America, being that the period of training carried through for the author is focused in foods for the second locality. The ID is responsible for the interface of the material management areas of global and local with the other teams that develop the innovation projects (Figure 1). It posses a project management function and information deliverer function, having freedom to emit opinions when pertinent and beneficial to the process.

The products of the food area are divided in categories: Derivatives of Tomato; Margarine, Ices cream, and Gravies and Drinks. They are cost reduction projects of the current products and they always involve, of some form, the relationship with the current and potential suppliers. They are changes in the processes of purchase of materials are on projects, that are not perceived explicit by the consumer nor are propagated by advertisment and that they have main objective to bring economic benefits to the company. Projects of lesser duration (of 6 months the 1 year), with few involved

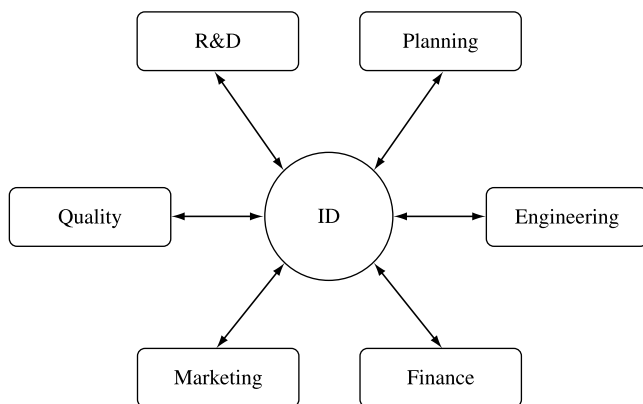


Figure 1. ID Interfaces.

people. This type of project is important to the company but it did not invest too much in the processes structure.

The projects monitoring was made basically for a spread sheet with excellent information: name of the project, code, responsible person in the material department, responsible person in R&D, date of beginning, associated risk, category, potential cost reduction and commentaries.

Although already to be used some tools of the project management, as meetings of follow up and fulfilling of some documents of control, did not have a regular use of these procedures.

Inside the organization, the projects are divide by:

- **Negotiation:** commercial condition favorable to the business (reduction of cost of acquisition of materials) gotten by the team of the Department of Materials. It is the only type of project that does not need resources of R&D for its development, since it does not have alterations in the product/process;
- **Suppliers Exchange:** development of new suppliers for raw materials bought currently, with the main objectives to have greater to be able of negotiation (that is, not to be limited to the prices of an only supplier) and to possess a supplier backup case the current one suffers some unexpected damage. Generally, these projects brings a cost reduction in the material acquisition from better negotiations or substitution of a current material for a similar material of the new supplier, that posses better price;
- **Change of Current Material for Similar Material:** change in the formularization of the product with alteration/raw material exchange or alteration in its packing, using itself a similar material to the current one. Depending on as it will be the result of the final specification of the product, the project will be fit in a category, as Figure 2;
- **Specification Optimization:** change in the formularization of the product with alteration/raw material exchange, using itself a different material of the current one, but that it plays similar function and it reduces the cost; and
- **Formula Optimization:** change in the formularization without substance exchange cousin, changing itself the percentages of the materials to get cost reduction.

As already said, the studied Innovation Department has in its target the projects of the categories Tomato Derived (TD); Margarine, Gravies, and Ice Cream (MGI) and Drinks (BB). Each category had, at the moment of the study, about 30, 100 and 20 projects respectively, that together they more than generate a economy of 10 million of Euros. The saved value delivers to the company in each project can arrive at some millions of Euros, being that the approach distribution is represented by Table 1. It can be noticed that most of the

projects (55%) delivers an average economy, of up to 100 a thousand Euros. Already the great projects configure small percentage in the total number of projects (5%).

The ideal duration of these projects is of 6 months the 1 year, however, the duration can in general arrive the 2 years -, due to lack of resources for the accompaniment of the processes or to the lack of focus on some projects, that finish if losing. Many projects have its initiated work, but they finish cancelled, therefore they had suffered to great delays, losing the priority.

#### 4.1. Project life cycle

The cycle of life of the projects has 4 main phases (i) ideas, (II) analysis of viability, (III) analysis of the capacity, e (IV) implantation (Figure 3). In the first one - ideas - a conceptual development of the project in terms of the main lines is made to be followed. The result of the activities (less

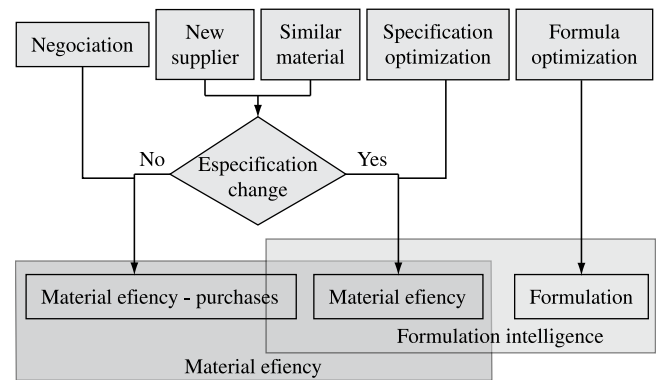


Figure 2. Project types

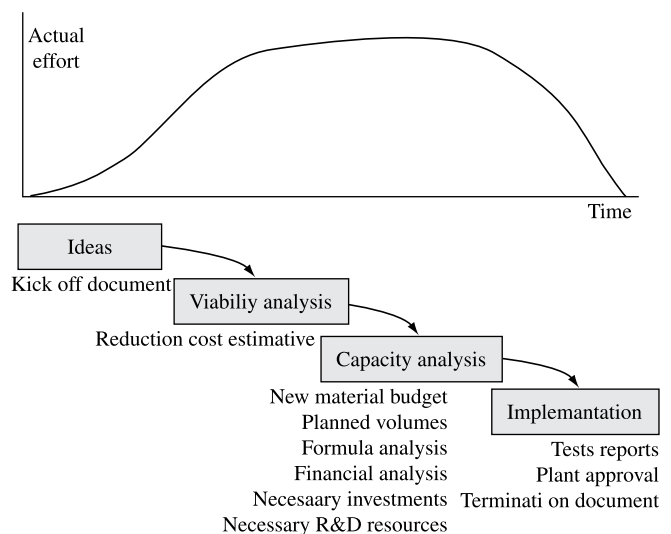


Figure 3. Project lyce cycle.

**Table 1.** Projects distribution.

Category (Euros)	Number of projects
Between 1.000 and 10.000	30
Between 10.001 and 100.000	83
Between 100.001 and 500.000	30
Above 500.000	7

structuralized) of this phase is the term of opening of the project (kick off document)

In the following stage - viability analysis - a detailed analysis more of the potential Of the characteristics of the project is made and is made a estimate of the profit to be gotten with the project in terms of the cost reduction that it will bring the organization during one year.

In the third stage - analysis of the capacity - the activities of detailing of the process and/or product alterations generate information of the following nature:

- New materials budget;
- Planned volume;
- Financial investments study; and
- R&D allocated resources.

Finally, in the stage of implantation, the actions if come back toward the transference of the project for production. The information that characterize the end of this stage are:

- Reports of test;
- Final approval of the plant; and
- Termination document.

## 4.2. Situation analysis

In the interviews with the controlling and professionals of the involved areas in the development of these projects, some critical ones were common:

- The new ideas shippers had not yet incorporated the culture to communicate the projects to the ID before the activities for its development are initiated, 50% of the current projects had not had the Project Charter filled before the stages of development and the beginning of tests;
- For the great number of projects and not having a regular flow of information, certain difficulty on the part of the managers in keeping all exists the brought up to date initiatives;
- The official projects management tool (a spread sheet with the important information) does not possess resources that they make possible to the ID to have a general vision of the projects, for example, to know accurately how many projects are in the stated period/ been slow;
- Lack visibility of the existing projects, that is, does not have a flow of work established between the ID and the areas of interface well (excluding R&D). In general, they are informed of the projects only when

its intervention is necessary, many times leaving little time of maneuver for detailed actions more;

- Inconsistency of flows of work between the different categories; and
- The high executives not yet face the management of these projects as a professional activity and allow that they are managed of informal form through the corporative experience of the employees.

Beyond the qualitative data, also they will be presented given quantitative, gotten for the description from January of 2008 of a spread sheet of accompaniment kept for the DI. It is important to point out that these numbers are approached, since a report structuralized for the accompaniment of the results did not exist.

The times of duration of the projects in the categories of MGI are presented in Table 2. The average time of the projects was gotten from simple average between the times of all the projects and notices that it is above of the ideal time of duration that is of 6 months the 1 year.

Already the delivery of the projects in 2009 can be visualized by Table 3. In this point, it is important to notice that more than 50% of the projects had been deliver with delay or have forecast of delay for its finishing.

It perceives that the management is made in accordance with the professional experience of the managers and the majority of the existing processes was not constructed on the basis of recognized methodologies for literature. The majority of the strategic decisions is taken by the intermediate controlling, showing little interest of the high executives.

By this fact and the low recognition of the management of projects as a professional activity, the involved employees of base in the projects dedicate to few efforts to the course of the project, what he finishes concentrating great load of work in the ID, making it difficult the update portfolio daily.

This deficiency in the management provokes delays in the scheduling, lower efficiency in costs reduction, lower control on the development projects and stakeholders discomfort sensation in relation to the projects transparency.

**Table 2.** Projects duration.

Item	Time (years)
Project duration mean	1,2
Shorter project duration	0,42
Longer project duration	2

**Table 3.** Projects delivery.

Item	Number of Projects
With expected delay	60
On scheduling	30
Cancel	10

## 5. Propose

By the described situation, some procedures for formalização of the process of accompaniment through the creation of the function of an office of projects had been considered.

The considered PMO is, in agreement the presented classification previously, of the Corporative type, given that it is not focused in specific projects of an area, but takes care of initiatives that if relate with the strategy of the company. Specifically, the establishment of an office of projects was considered that is between the Program Management Office and the Chief Project Office, therefore participates of many related strategic decisions to the business as a whole but, however, it is not responsible end for the results of the projects.

With the objective to display the functions of the office of projects considered, the following points are established:

- Project management tools delivery: reports document standard, models for project landmarks and models of project net;
- Supervision and evaluation of the portfolio projects: communication and control;
- Filling and recovery of documents;
- Guarantee of the systematic application of the tools established for the teams of projects with the objective to get greater efficiency;
- Continuous improvement of processes and standards;
- Efficient interface between Department of Purchases and the other involved in the projects, including participation in the decisions;
- Negotiation of resources; Interface with stakeholders of high level.

The kick off document of the project (Project Charter) will have to contain given that they will be of utility for the team of project in its development:

- Project name;
- Provisory code of the project;
- Code and description of the material focused for the project;
- Project sponsor;
- Country;
- Risk;
- Cost reduction proposal;
- Type of project;
- Description of the project with: main points, target, suppliers, category and plant related; and
- Premises the used ones for the creation of the project: cost of the current and considered material (when applicable), complexity, time of implantation, among others.

In relation to the systematic of attainment of the data of the reports, it can be made to the following division:

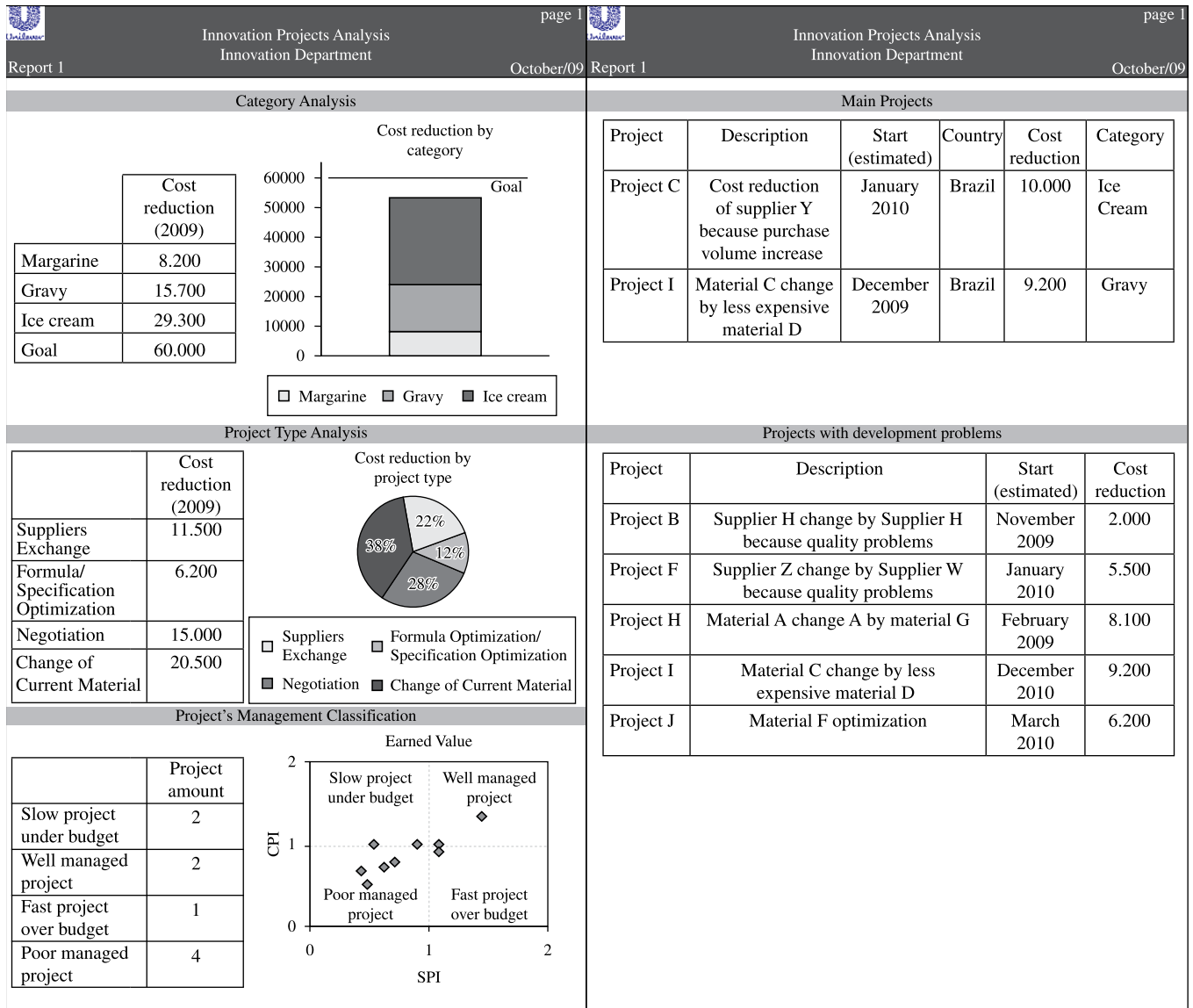
- Up dated data in the monthly meetings with the teams of projects: costs inferred until the moment, problems of execution, phase of the project, risk of the project until the moment, calculated investment, approval of projects and allocation of human resources;
- Obtained or calculated data from the monitoring spread sheet: target, values of cost reduction, suppliers, % of delayed projects, total number of projects, number of new projects, number of projects without Project to charter, number of projects already implanted in the year, number of projects cancelled in the year, main projects and indices of performance (EVA);
- Project chart data that must periodically have the actions brought up to date for each responsible one: dates of tests and results and date of implantation; and
- Extra data: goals of reduction of annual cost established by the leadership of the company.

It was determined that the high management (managing and vices-president) need information of more strategic matrix, so that they have a general vision and they take on decisions to the business as a whole. Thus, it is important to this public to receive aggregate information and relative analyses to the performance from the set projects, as the model of Figure 4, that it posses friendly interface and of fast agreement. The communication will be made (by means of the meeting with the executives) a time for trimester, to follow one practical already common one in the organization of spreading of results.

As already displayed previously, it is considered by the author who all type of communication is made by the DI, therefore all the reports will be elaborated and divulged for this department. The reports will be codified in accordance with the white public, so that the segmentation of the information is not explicit, thus preventing discomfort between the employees.

In the document destined to the high management the excellent information to the addressees (already determined for the communication plan) by means of graphs and tables will be presented. One of the analyses made in this point is of the performance of the projects portfolio. A based model of EVM (Earned Value Management) was used. From the data of cost and progress of the projects, it was possible to calculate the indices of performance of stated period (SPI) and cost (CPI).

Four controlling of the organization had shown preference for the presentation only of the performance matrix, for integrating in only one graph the visualization of the portfolio as a whole and of each project individually. Thus, the graph of relation between PV, AC and EV will not be used, being that the results will be shown by the performance matrix. The data used for the attainment of the EVA will have to be brought up to date by the ID in the meeting of monthly monitoring.



**Figure 4.** Management report.

## 6. Final remarks

The project management became an important tool of companies competitiveness of in the dynamic businesses environment in the last few decades. Mainly for companies focused in innovation, where great pressure for launching of new products in little time and with low cost exists, it is essential that if they search coordinate and controlled processes that can differentiate them of the competition.

The first step of the study was an analysis of the projects in quantitative and qualitative way. It was concluded, by means of the description since 2008, that, in the average, the projects were not finished inside of the foreseen stated period. Moreover, with the accomplishment of interviews and meetings, it was detected that the involved majority of

stakeholders, does not possess general vision of the portfolio and, however, not yet considers that the management of projects is a tool that all adds value to its end item and the process.

Thus, the objective of this work was to analyze the wallet of projects of reduction of cost of the nourishing unit of business, to understand its points of weakness and to search ways to improve the work carried through for this teams of projects and, consequently, the gotten results.

With the objective to give a bigger visibility to the projects control process of, some actions had been proposals:

- Determination of the Life cycle and marcs determination – for better visualization and control of the projects phases;
- Control Management – with objective to check

the projects evolution by monthly meetings of monitoring and communicate results to stakeholders by reports elaborated from the information collected throughout the meetings; and

- Application of control/monitoring procedures proposed – creation of a information system to store, organize and distribute the project data, improving the reliability of the bigger methodology.

These procedures already are implanted the 4 months and the observed results are sufficiently entertainers. The possibility of if getting quickly a picture of the individual projects and of sub-groups of the projects this allowing a more necessary analysis of the structural and conjunctural problems that these projects face. This general vision of the wallet of projects also has contributed with a critical analysis of its composition and with its alignment the strategy of the organization.

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