THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

Maturity Evaluation in Project Management and Implementation of a PMO– Case Study

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Abstract:
As a collaborator of MCG and actively participating in many of the company's projects, I often find myself with preventable situations, ones more complex than others, that call into question the success of projects. After the conclusion of my training in project management (PM), it became clear that many of these problems are easily surmountable through correct application of tools and techniques in PM.
Being MCG a successful company in continuous growth since 2011, the introduction of a Project Management Office can optimize and contribute to the improvement of its results by reducing unplanned work and reducing costs through risk management, thus introducing a PM culture in the company.
The aim is to make a diagnosis of the maturity in project management, identify the main obstacles to the implementation of a PMO, sensitize project teams for the importance of PM and on that basis, it is suggested to use the unanimously recognized techniques and tools.
In addition to the internal knowledge already pre-purchased in the company, a maturity assessment was carried out in PM using an adaptation of the OPM3 model, recommended by the Project Management Institute (PMI). Simultaneously, during the application of the model, formal conversations with responsible for the PM of different units were held.
Despite the constraints encountered, such as the inability to assess accurately the costs associated with each of the projects, this evaluation has shown that maturity in PM in the organization is still below the expectations for a company with the size and the market position as MCG. Therefore, it is recommended to create a PMO in order to standardize procedures, tools and techniques throughout the company, thus contributing to increase the project management culture in all employees.

Keywords: *Project Management, PMO, Maturity Models, Organizational Structures.*

1. Introduction

In a globalized and ever more competitive world of today, companies should be guided by Charles Darwin's theory of evolution, that is, only the best adapted organizations survive. These should always be alert and aware of the external environment and strategies prepared, not only to enable them to maintain their position in the market, but as well to be prepared for potential changes and developments conjectured to your business area. When making a proper project management and change, businesses will always be better prepared for the future.

It is through projects that organizations get towards or away from the outlined goals. In order to increase the success rate of their projects, increasingly, more organizations are adopting "better practices" in terms of project management.

In order to increase the commitment of the entire structure with project management, with this project work, we intend to define the level of maturity of the MCG project management, based on these results, suggest the creation of a functional structure type Project Management Office (PMO) to manage the company projects according to the recommendations of the Project Management Institute.

With this, we intend to follow the trend identified during the bibliographical research, through which it was verified that, more and more, organizations tend to create a unique functional structure for project management, the PMO.

In this paper, a brief analysis of the maturity models for project management (PM) was carried out, and being this an evaluative tool and advisor, it is critical to understand the peculiarities of the different models to select the most appropriate for the case of context and study, as maturity models enable organizations to improve strategies and take advantage of their processes. The use of a maturity model identifies the strengths and weaknesses within an organization, measures and actions can be taken in order to raise their level of maturity in project management.

There are also different types of PMO, each with different responsibilities and functions that may vary between a structure with limited intervention to a department or division and a structure at a higher level of support to senior management, i.e. at the corporate level.

The methodology uses quantitative and qualitative methods, using different types of tools such as bibliographical research and informal interviews during which we applied the maturity assessment model, field work and the use of the company's own documents so that they could have a contemporary "portrait" of the case study, as well as the strategy and vision of MCG itself.

2. Literature Revision

2.1. Project Management

Complex and large-scale projects appeared many years ago, just look at the serious challenge of erecting the great pyramids of Giza (2550 BC) and the Great Wall of China (220 BC to century. XV). With the industrial revolution and globalization, competitiveness settled in society, leading to an increasing lack of resources and forcing to obtain increasingly demanding efficiency levels. All these procedures required to be designed with a view to efficiency and reducing the waste, as well for project management, which had a big impact during the development of PM techniques.

Project management has emerged side by side with the increasing of the complexity of the projects, blunting an increasingly prominent need to plan, monitor and control the various activities and the scope of projects, aimed at achieving the goals set by all stakeholders. Kerzner, H. (2004).

Besides financial aspect, the use of effective project management enables organizations to make use of a set of "better practices" that formally accepted, promote better governance and perception of the company's strategy, as it allows the entire organization to be at the same level of knowledge about the ongoing projects.

Kerzner, 2001 also notes that for a long time project management was overlooked in organizations as it was not seen as a competence that should integrate the companies. It is often regarded in the same business as a threat to their authority. In the same state, is referred that organizations, projects present themselves more and more as a critical success factor, as these are going to recognize its critical points to reach their success, project management is gaining space and recognition of the need implementing continuous improvements to that level.

In short, project management is the application of knowledge, skills, tools and techniques to project activities aimed at meeting its requirements.

2.2. Project Management Office

The Project Management Office, began to be used in large military and aerospace projects during the 50s and only in the 90s began to be used in all areas of business, particularly by supporting the development of strategies of organizations and the definition of methodologies work for project management (Kerzener, 2009).

Throughout the bibliographic research a number of definitions were found for "Project", however, the definition used in ISO 21500 (2012) is generally accepted, it is defined as a single process consisting of a set of structured actions and controlled starting and ending dates, performed in order to get a goal. Its implementation results in a set of deliverables in accordance with the agreed requirements, taking into account the available resources, costs and time constraints.

There is no universal definition for PMO, diverging all of them in details ranging from the type of functions it performs, through the level at which inserts within the organization, to the degree of authority that it should have in the company structure.

In general, the creation of a PMO is a process that is not immediately taking, it takes on average 5/6 years to have their activities in full. Usually its activity begins with the execution only of most basic functions, later evolving to a level of complexity, with greater responsibilities and that will allow strategic decision making (Hobbs, 2007 & Aubry, 2008).

This diversity of definitions, causes the very name of an organizational structure with these characteristics, it also has different description, the literature states as diverse designations (Crawford, 2011), for example:

- Project Management Office;
- Center of Excellence;
- Project Support Office;
- Name which has included the word "project" or similar (ex.Project Direction);
- Project Management Office;
- Project Office;
- Other

Being the very implementation of a PMO a project, its complexity is clear, as this requires defining or redefining processes already embedded in organizations and respective departments, which in most cases requires a cultural change within the organization (Pellegrinelli & Garagna, 2009)

In short, a PMO has the fundamental purpose to obtain better results for the organization, drawing on project management. Its main responsibilities: (PMI, 2013d&Kerzner, 2009)

- Support the Project Managers and members of the project team;
- Create and maintain the best methodologies in terms of project management, controlling and guaranteed the use of tools and techniques defined for the organization.
- Ensure response capacity to the needs of Project Managers that the company is likely to need for future projects;
- Ensure the sharing of information relating to underway / completed projects as lessons learned, risks and capital gains.
- Ensure that projects are aligned with the organization's strategy;
- Develop norms, processes and project management methods, putting them into practice later for the appropriate qualification;
- Keep under control all the organization's projects through constant monitoring;
- Identify and train the teams and project managers;

- To manage the acquired knowledge to the execution of projects;

The majority of the business areas have struggled with frequent problems of delays in the delivery of projects and exceeding of the initially established budgets. And one of the solutions that have been proven as more effective in combating these problems is the establishing of a PMO.

The starting point for obtaining project management excellence levels should be obtained from the designated Project Management Maturity Models (PMMM). Existing models that help determine the maturity of the sensitivity of the organizations for project management, these methodologies previously standardized by several authors, allows it to be carried out monitoring of defined processes, increasing their chance of success (Kerzner, 2009).

As stated Anderson et al. (2007), the main concept of the maturity model is that "no one starts running without knowing how to walk." PMMM is a set of concepts that produce "good practices" in project management with the objective of evolving an immature situation to a situation of processes and procedures already been optimized in project management (Kerzner, 2009).

Through project management maturity we can measure the evolution of the organization regarding the use of project management as a tool. This qualitative measure will tell us what the state of play as well as a number of outputs that we can use in order to make it more efficient.

The creation itself of a PMO involves risks, because due to its complexity the risks are always present, thus identifying numerous critical success factors that need to be considered in order to reduce the risks related to its implementation. Implementing them in organizations has, undoubtedly, been becoming a key factor in the success of projects in companies. Hubbard e Bolles (2015)

2.3. Organizational Structures

In recent decades, governments and corporate executives realized that the dynamism and resilience are essential to succeed, given the constant fluctuations of the markets, companies must be increasingly adapted to change in line with market needs. (Kerzner, 2001)

The organizational structure of the companies is certainly a component that influences the availability of resources and which could also affect the way of the project management (PMI, 2013a).

The structure and culture of the organization affecting the way this manages its projects, and are no more than group dynamics known as "cultural norms", which increase as time goes on (PMI, 2013a).

The culture of the organization is nothing more than the result of the experience lived by the organization's members with the ability to influence and to make decisions. According to the PMI, 2013a these experiences can be:

- Shared vision, mission, values, beliefs and expectations;
- Regulations, policies, methods and procedures;
- Motivation and reward systems;
- Assumed risks;
- Vision of leadership relations, hierarchy and authority;
- Code of conduct, work ethic and work hours; and
- Operating environments.

The organizational structures of companies are essential factors that will influence the availability of resources and thereby can affect how the projects will be managed.

As will be shown below, the very types of existing organizational structures also have opposite ends, with the functional structure in one hand and the projected structure on the other, being the Matrix structures the midpoint. Still, these last may be Weak, Balanced or Strong, depending on the balance of influence between the Functional Managers and the Project Managers.

2.4. Maturity Models

The maturity models in project management relied primarily on the Maturity Model from Carnegie-Mellon University (Capability Maturity Model - CMM). While the Organization Project Management Maturity Model (OPM3), developed by PMI (2003c) as a reference in achieving an alignment of projects with the very strategy of organizations, being probably the maturity model of the most popular project management, having had by based on the CMM.

The use of maturity models in the diagnosis of Project Management culture in organizations, especially aim to identifying weaknesses and strengths in their project management processes, so that it can then define a set of actions and measures to better its performance as an organization.

For Souza, Salomon, and Silva (2010), the term maturity can be used as a measure of indication of the organization's capabilities, to use designs for different purposes, and with high probability of successful outcomes.

With analysis of maturity in Project Management is intended to implement continuous improvement, being the model in use the tool that will help develop processes that enable reach a level of excellence recognized by all stakeholders. Thereby leaving the most prepared and competitive organizations to meet the challenges of its business areas.

According Kerzner (2002), maturity is the development of systems and processes that are repetitive in nature and ensure a high probability that each of them is a success. However, repetitive processes and systems are not, by itself, guarantee of success. It only increases their probability.

The definition of maturity will help define the path and the direction that an organization should take to achieve levels of excellence in terms of Project Management. The maturity level is set based on the processes that the organization currently uses in Project Management, having been developed in order to identify areas within the organization that require improvements.

All existing models were created with common goals, namely through an assessment, identify gaps and potential enhancements that turn the achievement of a higher level of maturity possible. The definition of current maturity of the organization in Project Management will allow to define a suitably adapted plan and customized to the business plan for levels of excellence in terms of maturity in Project Management.

Being the OPM3 model (Organizational Project Management Maturity Model) created in 2003 as an extension of the PMBOK with the seal of PMI, for this work it was decided to apply a model that is based on the OPM3, with a view to defining the organizational maturity in Project Management.

The OPM3 model consists of the following elements:

- Knowledge: serves to present and learn about project management in organizations, as well as the different levels of maturity;
- Assessment: For this element present methods, processes and procedures by which the organization evaluates its Maturity. The model has a questionnaire with 151 questions through which the strengths and weaknesses are identified, this will help define best practices to be used;
- Improvement: This element provides us a possible process through which the organization can move from the current situation of maturity to the next level, if you follow the suggestions for improvement proposals based on the previous element.

This model, is a reference in terms of evaluation of maturity in organizations for PMI, it allows you to establish the link between the strategic planning of companies and projects in its portfolio, enabling the results to be better evaluated, as it is directly linked to your success.

It is distinguished from others for enabling the identification of which are the best practices and which are the organizational gaps in terms of management and projects. This recognition is based on the set of "better practices" developed by PMI, allowing the definition of a set of measures and actions to be implemented in the organization in order to allow the established strategy will be achieved through projects with high success rate.

Through the application of all three OPM3 parts mentioned above (knowledge, assessment and improvement) you can have a diagnosis about the organization's maturity level of project management. Based on the methodologies used at the present time, it will be able to get an idea of which should be the results and outputs to be reached.

3. The company - MCG

MCG is a 100% Portuguese capital family business, incorporated on January 19, 1979, as a private limited company, giving continuity to 40 years of experience of its founder, Mr. Manuel da Conceição Graça (MCG), still with us, and today 92 years old. Despite the recent economic problems affecting Portuguese and global economy, MCG always recorded an invoicing above 15 million Euros, having increased its business volume steadily over the last five years, thereby demonstrating its vitality and resilience when adapt to the new trends. This year will have an invoicing of 35.9 million Euros, establishing a goal for 2018, at an arrival up to 52.7 million Euros of invoicing.

The company currently has around 400 employees. Having their strategy focused on products and services related to Metal, the four area and Business of MCG (*automotive*, solar, laser and *tooling*) currently supplying more than 25 guests.

MCG has no department or unit responsible for the direction and management of the portfolio of company projects. That management is made independently by each of the "manufacturing units" (Direction of Industrial Metal 1 + 4, Direction of Industrial Metal 2 and Direction of Industrial Metal 3). The organization chart shows how the leadership and business management is organized, i.e. a CEO coordinates and directs the eleven directions.

Currently the MCG is a stable and well established company, largely due to the dedication and commitment of all its employees, as well as the perseverance of the founding family in maintaining jobs and the company's success.

4. Research Problem

In a market and an increasingly competitive economy, efficient project management can certainly make a difference and contribute to increasing the company's productivity, since the frequent occurrence of breach of terms, undefined costs, serious communication gaps often between team members, poor management of shared resources, blurring of responsibilities, gaps in the quality control, conflicts with the client, among others.

The MCG is a successful company with great dynamism, where the model of management has remained constant over the years, based mainly on family tradition. Having MCG many years of existence and where many of the employees have few decades at its service, they carry out their duties according to a set of procedures long pre-established, always implementing the same method of management and leadership. The introduction of technical and project management tools causes always some revulsion on the part of the elements that make up the project teams.

Although some of top management members of the company recognizes unreservedly to capital gains from their use, the Project Management culture has not yet passed to the operating elements, not only because capital gains are not yet evident, but also because most of the team leaders also have not yet assimilated all the important points of this procedure.

5. Methodology

Based on the literature, it proved crucial to harmonize the PMO Maturity in existing organizational project management. To get a sense of maturity and sensitivity of the organization to this issue, processes developed within the PMBOK guide (or PMI, 2013a) have

been adopted, using the Organizational Project Management Maturity Model (OPM3), following the Project Management Institute standards.

The adapted maturity OPM3 model used in this work, is no more than a survey on the use of tools and project management techniques defined for each of the procedures described in the PMBOK. To reach the level of maturity, you have to consider each of the six stages, the assigned value has to be multiplied by the respective weight attributed to the file.

The survey is to examine the existence of evidence of the use of tools and techniques related to the application of skills and capabilities described in the areas of knowledge, for at least 3 projects. It is composed of 42 questions in total distributed by 5 universal processes of project management (Initiation, Planning, Execution, Measurement and Control and Closure). Also covering the 10 areas of knowledge referred to in PMBOK, 5th edition.

- Integration: 06 questions
- Time: 06 “
- Quality: 03 “
- Communication: 03 “
- Acquisitions: 04 “
- Scope: 05 questions
- Costs: 03 “
- Human Resources 04 “
- Risks: 06 “
- Stakeholders: 02 “

Based on the evidence presented by elements responsible for project management of different unit, in particular as regards the use of tools and techniques in project management associated with 10 areas of knowledge, duly recognized by PMI, the current stage is set "AS IS ".

These tools and techniques related to the application of skills and abilities, are defined as "Good Practices" in project management, its implementation increases the probability of success of the projects. Still, "Good Practice" does not represent that the knowledge, processes, tools and techniques described in the PMBOK should be applied equally in all projects. Each project is unique and together with the whole team, the project manager must define the procedures to be used and what the respective level of detail is.

Evaluating the maturity in project management, will define actions that allow direct organizations develop core competencies that enable the alignment of strategic objectives with operational side through projects.

Have therefore used both quantitative and qualitative methods, using different kinds of tools such as bibliographical research. There were also conducted informal interviews during which we applied the maturity assessment model, field work and also the use of the company's own documents so that it would be possible to have a contemporary "picture” case study, as well as the strategy and view of itself MCG.

6. Results

6.1. Maturity Evaluation – “AS IS”

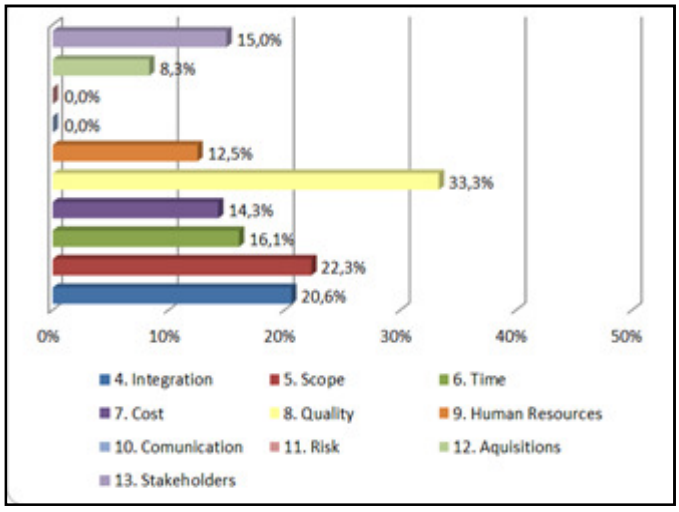

Figure 1: Evaluation "AS IS", Knowledge Areas - Metal 1+4

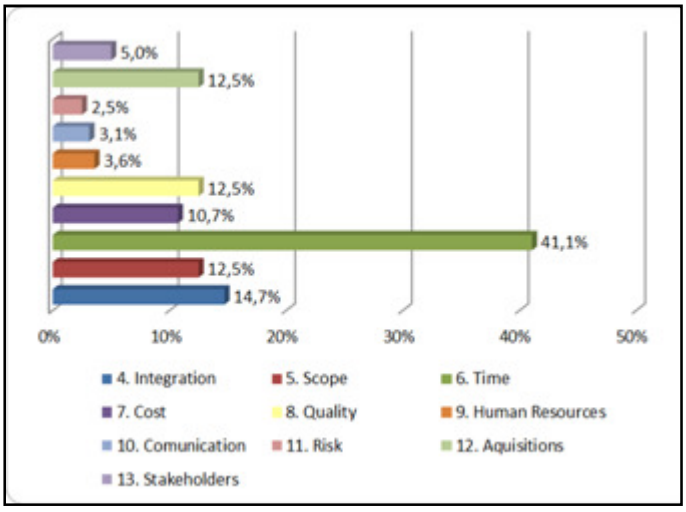

Figure 2: Evaluation "AS IS", Knowledge Areas - Metal 2

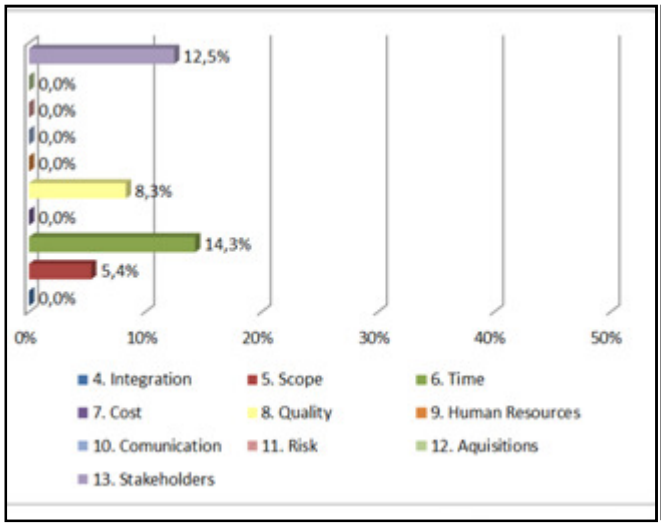

Figure 3: Evaluation "AS IS", Knowledge Areas - Metal 3

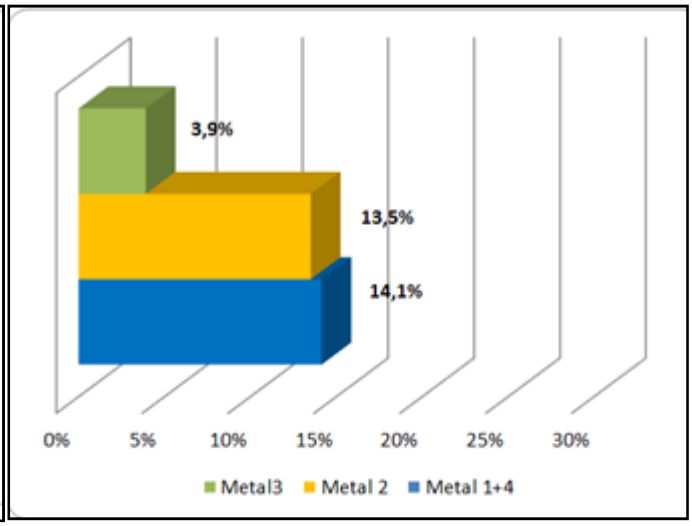

Figure 4: Maturity Evaluation Metal 1 + 4, Metal 2 and Metal 3

The maturity analysis ("AS IS") is related to the Assessment element of OPM3, aiming to present the methods, processes and procedures by which we assessed the level of organizational maturity. Using a questionnaire which identifies the strengths and weaknesses that will help define best practices to use. The results of the evaluations by areas of knowledge for the different units of the MCG are as follows:

After analyzing the current state of project management maturity in all manufacturing units of MCG ("AS IS"), we can now implement the third element of the OPM3 model, Improvement. From the above values carried out its OPM3 maturity assessment for each of MCG units, having verified that the unit with the highest level of maturity is the Metal 1 + 4, 14.1%, followed by Metal2 with 13,5% and Metal3 with 3.9%. Still, the highest figure falls short of the mean value obtained by the assessments carried out by the consultancy Winning Scientific Management (2014) for different areas of business in the Iberian market.

Benchmarking							
Bank	Defense	Credit	Natural Resources	Services	Pharmacceutical Industry	SIBS	**Mean Value**
17%	27%	29%	25%	8.3%	8.3%	14.1%	**19.1%**

Table 1: OPM3 model, other business areas.

6.2. Maturity Evaluation – "TO BE"

The third element of the OPM3 model, the Improvement, sets some processes through which the organization can move from the current situation of maturity to the next level, if the suggestions for improvement proposals based on the previous Assessment element are implemented. It will now be possible to make an attempt to match the resources available to the organization's needs, implement procedures recommended by the Project Management Institute, accessible on the PMBOK, and also set the priority for the implementation of 'good practice' in project management with a view to improving the level of maturity.

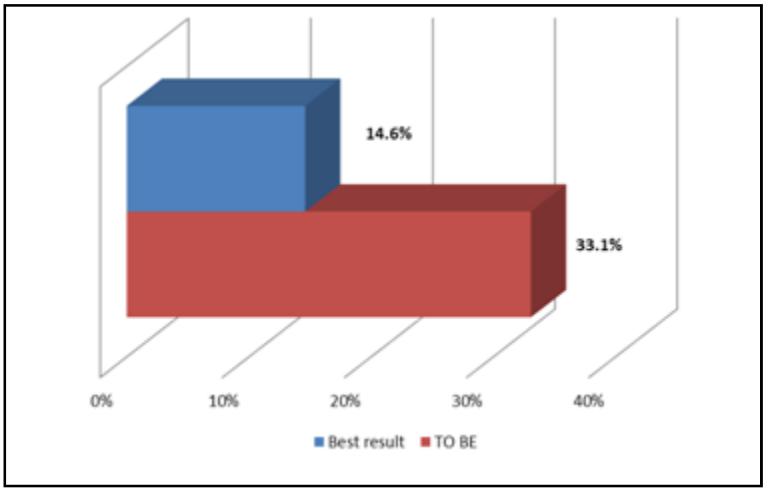

Figure 5: Maturity level, considering best results between all units and after the introduction of Improvement actions.

Once the different units of the MCG share resources, often resort to the services with each other and above all and often have at hand strategic projects for the company, it was decided to suggest a joint improvement for all units assessed. That is, we want to encourage the sharing between units of "best practices" already existing today in the company, adapting them to the specific business unit, but with the advantage of having already as benchmarking the result of their application and more capital gains that brought the group unit in which has been applied.

Based on the current maturity level of all processes, it has been defined a set of processes, tools, techniques and training for project teams, with the aim of increasing the level of maturity on the case in question, and thereby increasing the overall level of maturity in of MCG project management.

After setting tools, techniques, and outputs that led to the desired stage, always bearing in mind the improvement for each of the processes defined in the PMBOK, for the current stage ("AS IS"), made up the "exercise" to define the level of maturity that is intended for the organization, taking into account the reality of the company and the specifics of the area and business, MCG obtained a value of 33.1%.

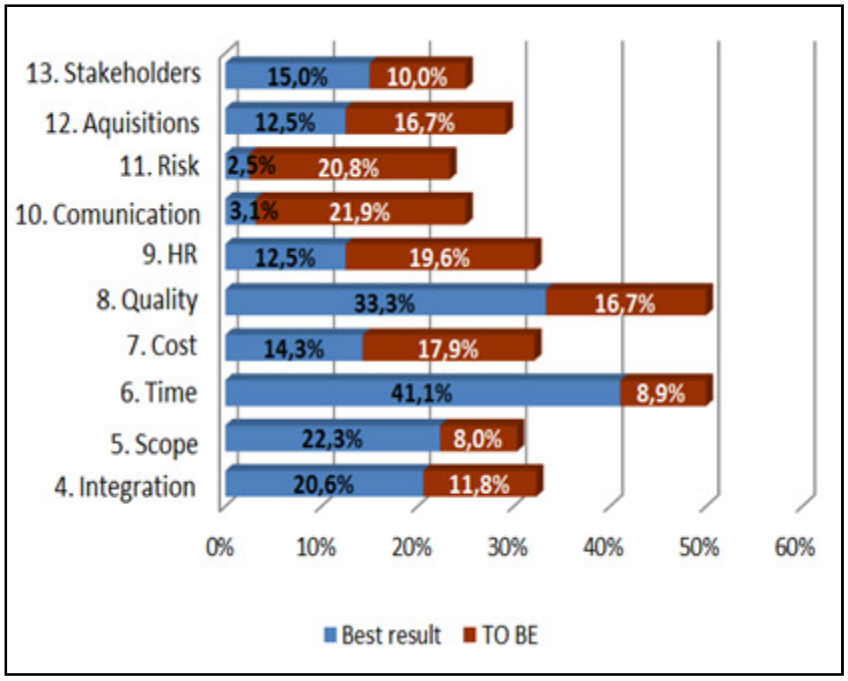

Figure 6: Knowledge areas comparison "AS IS" Vs "TO BE".

The aim is to get a higher value than the best case removed from the benchmark, 29% average for the Credit area organizations and 27% for the defense area of institutions and much more up to the value obtained for the set of processes best score among the three units (14.6%).

Making a review by areas of knowledge, since the processes of knowledge areas risks and communication were those who obtained a lower maturity level in Assessment element, conducted by the inquiry "AS IS", the main effort to increase the level maturity should be given by establishing techniques and tools related to this area. As shown in Figure 6, through the OPM3 element Improvement, it is intended that the level of maturity in the area of risk and communication climb 20.8% and 21.9% respectively.

To this end, it is intended that all processes of the risk area will become standard practice for all MCG projects, creating immediately a mandatory risk plan for all projects. The planning and risk management allows the entire team to know how to react to their occurrence, allowing them to acting in line with what was defined in the risk management plan, instead of, as at present, to react without adequate weighting. Through this process makes also sure that the degree, type and visibility of risk management is the most appropriate depending on the strategic importance of the project for the company.

The risk management process should involve the various parties interested in the project so it will have guaranteed a commitment from all to plan and defined actions in those cases.

Just around the Risk Register stage, must be made a probability and impact analysis in order to prioritize how each risk should be viewed in the process 11.6. Risk Management.

Communication is also a number of processes which occurrence is fundamental in an effectively and efficiently way throughout the project. Being the main tool of the project manager, because he has necessarily to communicate with all stakeholders often, becoming a sore point due to the fact that project teams can be composed of elements with different levels of knowledge, training areas, cultures, opinions, etc. So they have the ability to influence the progression of the project.

To reduce the impact of such situations and increase the level of maturity to 25% in this area of knowledge, it suggests the standardization of these processes as 10.1.Planning the management of communications, 10.2. Management of Communications and

10.3. Control Communications. This will be possible through the creation of a Communications Plan which is clear how they are planned, organized, monitored and controlled.
The communication plan should also standardize the models for follow-up meetings, information storage, minutes and forms, emails, etc.
For the most part of the remaining processes related to other areas of knowledge, it was decided to normalize them in order to generate more information. Especially with regard to the areas of knowledge, Scope, Cost and Timing. If the projects have the processes of these areas of knowledge under control, the risk of project failure will drop dramatically.
To obtain the above mentioned level of maturity (33.1%), most of the processes should become common practice in MCG projects through the use of techniques and tools mentioned PMBOK, through which will obtain a set of outputs that will prove an asset to the project.

7. PMO Integration on the Organization

After this study, where in addition to the evaluation of OPM3 maturity, there was the opportunity, through informal side conversations, carried out of the survey of those responsible for project management of different units. It can be concluded that apparently, there is interest in all units in the introduction of a business project management. i.e. that uses techniques and tools recognized as "best practices" in this area.
Still, it is also evident that culture in project management only recently begun to enter the business lexicon, as demonstrated by the results in the maturity assessment "AS IS". Nevertheless, the company begins to reveal signs of wanting to change this situation, this option reinforced with the entry of employees with direct formation or indirectly related to this area.
One way of increasing maturity in project management in business is by creating an organizational structure as a PMO, one of its main functions is to control and secure the use of a formal methodology and properly normalized to management projects in the company (Barcaui and Quelhas, 2004). By defining a methodology for project management through a PMO, it will require a process of organizational cultural change, while promoting the management of change within the company (Lessa, 2010).
By factors already mentioned above, namely, because there is resource sharing; due to the fact that all units' complement each other in the production process; complexity of projects; capital gains of the joint sharing of experiences by project managers; etc. The entire project management should be managed and be centralized into a single entity within the company. (Mariusz, 2014).
PMO should be inserted in the company's organizational structure in terms of other existing directions, albeit with a very close relationship with the Executive Board, which should answer directly. Still, its introduction in the organizational structure should be managed with great care not to be denied by the remaining structure. Such a unit changes many of the procedures so far initiated by modifying habits and assumptions, that is, it requires a careful management of change. (Hubbard & Bolles, 2015)
Still, small reduced complexity projects, i.e. no large consumption of human resources, equipment and low number of stakeholders, will continue to be fully managed within the team unit. This should be the exception regarding the procedure in terms of project management which is expected to become effective.
For the situation that has been identified, the most appropriate organizational structure is composed, as it acknowledges the existence of a PMO where coordination of the project is clearly a project manager appointed from the PMO resource pool (Project A in Figure 7), and simultaneously also allows for small projects of low complexity and small size, which the functional units can monitor and control directly, project B in Figure 7.

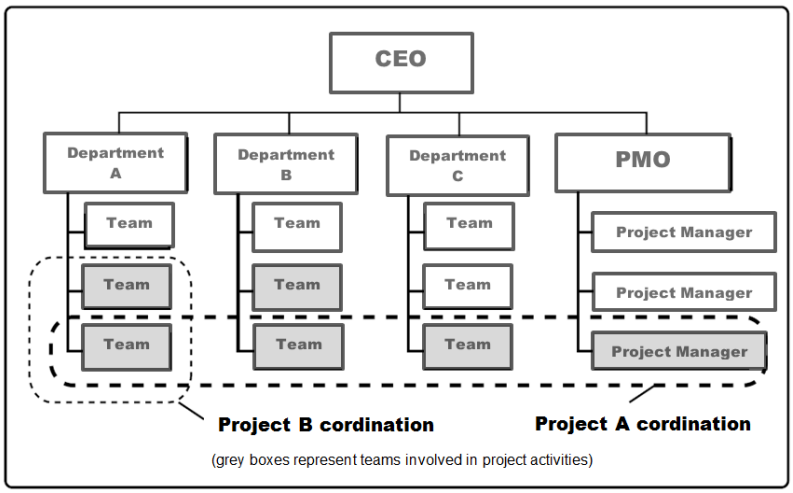

Figure 7: Organizational Structure Composite (adapted from PMI, 2013a)

8. Conclusion

The PMO are now used in all areas of business, having proved the efficiency in supporting the development of strategies of organizations, and above all, the definition of strategies and working methods to avoid the most frequent problems such as delays in project delivery, over budget and a failure to comply requirements.

In the case of MCG, and like other companies, in order to take advantage of the technical and project management tools, it is necessary that the culture in management and project is assimilated in the "arteries" of the company, both at the operational level and functional as strategic. To this end, the PMO was revealed to be the most effective way of doing this.

After applying the OPM3 maturity assessment model, it became clear that the MCG still has a long way to go to achieve acceptable levels of maturity. A reflection of that are the results "As Is" of the OPM3 assessment that were obtained with the Metal 1 + 4 to get 14.1%, Metal 2 managed 13.5% and Metal 3 only 3.9%. These values are far from 19.1% obtained as average value of maturity in different areas of business enterprises.

A more detailed analysis determined that the Metal 1 + 4 obtained quite acceptable results for application processes of knowledge area Quality and scope. In turn, the Metal 2 obtained interesting results in the Time area of expertise. Finally, the Metal 3, with irrelevant results when it comes to project management maturity, it is limited to make a control schedule.

In order to increase the level of maturity in PM, the Improvement element ("To Be") of the OPM3 model has suggested a set of processes to be implemented. Comparing the "As Is" with "To Be", it turns out that the focus was on all the processes of knowledge areas Communication and risks to project success and currently little or none are considered in project activities.

This last element took into consideration the best value obtained for each of the processes between the three units of the MCG, i.e. it was assumed that creating a projects unit, would take best practice between the evaluated units. Still, the maturity value in project management "As Is" was 14.6%.

With the implementation in future projects of processes suggested in the evaluation grid, it is intended that the MCG comes to 33.1% of maturity, and the best way to do this is by creating a PMO through which the guidelines will be given for introduction of these processes in future projects. In organizational structures, the PMO should be at the same the level of the company's other directions as having a strategic role in the company, it will report directly to the Director General, which should be submitted periodically one status of all ongoing projects, using for this one Dashboard with a summary of the information, which must include project management indicators.

The company's organizational structure would be made, i.e. a PMO with a pool of resources, autonomy and authority to manage the different projects regardless of the units to whom the projects were awarded. But by being composed, the structure also admits that small projects without complexity, are developed by the functional department, although the company's organizational structure would have the existence of a PMO.

There were several constraints encountered in carrying out the work, but the lack of project management indicators and the lack, until recently, of a way to get all the costs associated with a given project, conditioned in part the line of this work project.

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