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EFFECTIVE IMPLEMENTATION OF PROJECT MANAGEMENT OFFICES - PMO - IN ORGANIZATIONS

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ABSTRACT

This work aims to identify and analyse the relevant factors to the implementation of Project Management Offices in organizations, according to internationally recognized standards by PMI - Project Management Institute, based on the concept of PMO - Project Management Office. The PMO allows companies to get benefits of process integration, one area of knowledge advocated by PMI. This is done by the PMO, a strong and emerging trend in Project Management worldwide. The literature review pointed 16 key success factors to the implementation of the PMO in organizations. The qualitative research was done with 2 Focus Groups made with 16 Brazilian experts in 2 groups of 8 experts each. They organized the 16 key success factors into 4 categories, in a model for implementation of PMO. The qualitative research (spontaneous) had interviews with 20 Brazilian experts. In quantitative research (stimulated) 64 international experts were interviewed. They are from 21 countries, in 5 continents worldwide. They are recognized as "experts" in the subject by ISO - International Standards Organization, because they work in preparing the international standard ISO 21500 – Guidance on Project Management. As a result of the work, a model was developed that could be used as reference for the successful implementation of the Project Management Office (PMO), enabling better results for projects in organizations.

Key Words: Project management; PMO; Project Management Offices

Purpose

The objective of this paper is to present for discussion the results of a worldwide research about key success factors and good practices in the implementation of PMO – Project Management Office – in organizations. The authors interviewed 20 Brazilian experts in qualitative research and 64 international Project Management Experts from 21 different countries of the 5 continents worldwide in order to determine relevant factors for a successful implementation of PMO's in organizations validated worldwide.

Design/methodology/approach

The first question was to verify and confirm the existence of PMO in organizations worldwide. The second question was to determine key success factors and good practices to the effective implementation of PMO in organizations. The 84 experts were divided into 2 groups. The author invited 20 Brazilian experts in a qualitative research and the other 64 international experts were asked to elect key success factors in a quantitative research by means of a questionnaire.

The same questions were done for the 20 Brazilian experts in project management or PMO officers in Brazil, in order to compare the results with the 64 international experts from 21 countries in the 5 continents outside Brazil. The comparison of the results from 64 international experts with the 20 Brazilian experts is very interesting and it is presented in the paper.

The author invited 16 Brazilian experts (from the group of 20) and they were divided into 2 focus groups with 8 members each group in order to compile and categorize the key success factors. Each of the 2 groups was compared to each other. Each group is supposed to confirm the other.

These two focus groups worked with intense participation of the author and they determined 4 categories of key success factors so that they have built a model of successful implementation of PMO in organizations with 16 key success factors grouped into 4 categories with 4 success factors each.

These 4 categories and the assignment of 4 key success factors into each of the 4 categories was not aimed initially and it was considered very interesting as well as it was validated for the 2 focus groups.

Findings

The 64 international experts has voted and ranked the importance of the 16 key success factor as well as the 20 Brazilian experts. The comparison of the 2 ranked lists of key success factors is also presented in the paper. The results are very interesting and the conclusion is a model for effective implementation of PMO – Project Management Office in organizations.

Originality/value

This paper presents a literature review, prior to a worldwide research in order to determine a model for implementing effective Project Management Offices – PMO – in organizations.

Conclusions

Literature review has indicated factors affecting the implementation of PMO in organizations. Subject matter international experts have listed key success factors or good practices and they were organized into categories so that we could build a model for successful implementation of PMO's in organizations. They validated and ranked the factors as well as the model for implementation of PMO.

1 INTRODUCTION

Project management is an increasingly recognized worldwide activity. According to the PM BOK Guide (2013), the Project Management Offices (PMO) establishes a methodological framework that provides planning and controlling for projects through integration of the knowledge areas in PM (Project Management), with development of procedures, standards and indicators for processes of initiating, planning, executing, controlling and closing projects. The implementation of these procedures in business in general, is provided by the PMO – Project Management Office.

Literature studies determine international best practices for implementation of the Project Management Office - PMO - that increase the efficiency of the organizations and projects that may be developed in the companies, through the PMO. The methodology used is also validated in literature. According to Yin (2005), previous experience of the author of the research, in the subject of the research contributes to the development of qualitative research, selecting experts to interview, moderating the interviews. According VIEIRA and Zouain (2007), also contributes to the selection of experts and moderating focus groups (“Focus Groups”).

According ENGLUND, DINSMORE and GRAHAM (2003), the PMO concept fundamentally changes how companies manage projects and how companies "think" project management. The PMO provides methodology and formal procedures for identifying, analysing and responding to project risks. Through a Project Office, you can get patterns, forms and spreadsheets validated by use, as well as, standards, formalization of procedures processes of project management.

For the interviews as a method of qualitative research, they favor the adoption of various methods that intervene over the course of the investigation and, according RUEDIGER and RICCIO (2007), an interview allows you to check specific situations, marked by subjective traits that would not be properly seized by a "survey". According to MORRA and FRIEDLANDER (1999), studies with other subject matter experts tend to describe what happened and why, so as to have a clear picture of the current situation.

The challenge of this type of study lies in the definition of the instances to be analyzed, which somehow was easily overcome in this study, given the real and active participation of the author in the research, from the selection of experts ("experts") to moderation / meeting facilitation, analysis and conclusions.

Thus, to complement the methodology of qualitative and quantitative research, the author's participation in the choice of experts and moderation of the focus groups, interviews and research groups, it was important, and is based on the concept of action research. It is a method that handles the action to do the survey (DICK, 1999): action to create change in some community or organization or program to increase understanding on the part of the researcher than is occurring. It is a method where, according to CHECKLAND and HOLWELL (1998), the researcher should always be part of the team involved with the proposed change as such in this study.

2 PMO – PROJECT MANAGEMENT OFFICE –CONCEPT AND DEFINITIONS

According to MORRIS & JAMIESON (2004), the implementation of PMO-Project Management Office - is a growing trend in global organizations. So the theme is mandatory in conferences, seminars and articles, as well as in academic and professional discussions due to its increasing relevance. The main roles of the PMO are:

- Serve as support to the strategic planning at the highest level of management in organizations, portfolio management and program management, including planning, controlling and reporting;
- Development of methodology, reports, tools, techniques, templates and forms;
- Guidance, guidelines, standards and support the implementation of best practices, tools, techniques and software related to project management (PM).

The PMO provides guidelines and standards by means of tools, techniques and appropriate software, reducing the problems caused by uncertainty and excessive stress generated by cheaper / faster / better projects. The PMO methodology is used efficiently establishing formal identification procedures, database, analysis, data collection, information gathering and distribution, report of results and the guidance of risk management, procurement, quality and other areas of knowledge in project management, such as documentation and communication, as discussed in VALLE (1997).

According PM BOK Guide (2013), PMI considers the *Project Management Office* - PMO - as an innovative concept for the successful implementation of the best practices of Project Management in the establishment and promotion of standards and methodology for Project Management in organizations as well as developing corporate governance practices and financial results for an effective integrated planning and control of projects, the critical value of success for improving management processes.

DAVENPORT, 1993, states that "the use of technology and management methodology strongly influences the improvement of the results of business processes and be addressed by strategic processes, as suggested in the figure below diagram":

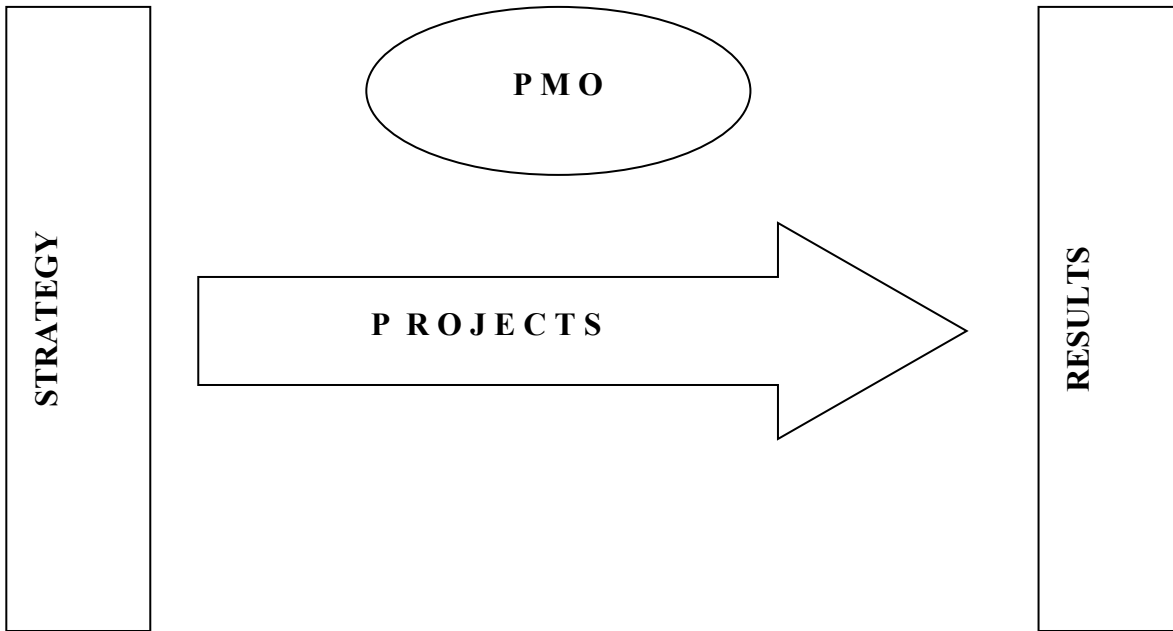


Figure 4: PMO as a link between strategy and results in organizations

3 LITERATURE REVIEW

The relevant factors to the implementation of Project Management Offices were classified by the 2 focus groups into four categories listed below:

- * Organizational factors
- * Structural factors and the organizational structure
- * Strategic factors and knowledge management
- * Personal factors, the human factor and the individual

3.2 ORGANIZATIONAL FACTORS

3.2.1 PM maturity in the organization

Several authors discuss the corporate culture focused on the management of the company associated with maturity in project management. LETAVEC (2006, page 241) addresses the role of project management offices as an unit for standards within organizations. Standardization is the highest degree of maturity, according to the maturity model of PRADO (2006). KERZNER (2006) also shows a maturity model addressing the standardization of the processes of project management in organizations. The project management offices play an important role in the standardization of data collection, processing, support for systematic decision and standardized reports.

3.2.2 Top down commitment

DINSMORE (2003, page 13) mentions the need for sponsors to the successful implementation of the Project Management Office. DIESTERER (2003, p 63) also states that top down commitment is essential to support senior management for the successful implementation of the PMO. CRAWFORD (2002, page 259) mentions that the successful implementation of the PMO depends on top down commitment with incentive and award, providing resources of the organization for education, skills and training. Top management sets the strategy. The implementation of the PMO is part of a culture of project management. Creating a culture of project management from top management is required.

3.2.3 Power given to the PMO

According LETAVEC (2006, p. 241), the successful implementation of the PMO depends on the power given to the PMO, with regard to prestige of their activity so that it can optimize the organization's resources, making decisions that affect the organization as a whole when project managers supersedes functional managers who remain leaders of pools of resources in order to develop skills and lend them to projects where PMO would centralize the power for acquisitions, procurement, contingencies, tools and standard.

3.2.4 Competence of the PMO members

RAD & LEVIN (2003, p 43) define competence as the ability to operate at certain levels of performance. They noticed that competence does not mean just knowledge. Competence is related to results and the ability to apply knowledge to achieve goals. This is very important in the implementation of the PMO. Each type of PMO demands different skills. According DINSMORE (2006, page 220), the skills required for PMO members and staff should be identified. Other areas of interest include recognition of the results of the PMO, customer feedback, measurement and documentation are part of that competence of the PMO itself, according to Kerzner (2006, page 217).

3.3 STRUCTURAL FACTORS

3.3.1 Position of the PMO in the organization

KENDALL & ROLLINS (2003, p 35) mention the importance of proper positioning of the PMO in the company hierarchy and the correct positioning of the PMO in the organization chart. They suggest possible higher placement on the appropriate level of relationship with senior executives to support the decision making process. The flow of information, data collection, accountability involves a perspective of the hierarchy in the decision making process, according to LETAVEC (2006, page 226), which is linked to the position of the PMO in the organization chart.

3.3.2 Size of PMO

LETAVEC (2006, p. 212) mention the size of the Project Management Office. Scaling the number of people depends on the position of the PMO and the comprehensiveness of the PMO own organizational chart. According LETAVEC, implementation of PMO should take into consideration their functions, positioning and sizing as well as the size of the organization. The size is defined to fit the objectives, the scope, results and the functions to be performed.

3.3.3 Structure of the organization by projects

CRAWFORD (2006, page 257) noticed that the PMO is connected to the organizational culture of project management that, by itself, is linked to adequate perception of the organization's projects. This link is much higher when the company is organized by projects. The PMO support to projects and its control structure is designed to provide more employment more best practices in the Project Management environment, as well as integrated systems and project controls.

3.3.4 Structured Information Systems

According DINSMORE (2003, page 49), information systems for project management facilitate and provide good communication between professionals of projects and enable decision making by senior management and information sharing among members of the project teams in a given project or across multiple projects, a department or a business unit, according to the interest of the organization.

3.4 STRATEGIC FACTORS (S)

3.4.1 PMO in strategic planning

KENDALL & ROLLINS (2003, p 117) define the benefits of a strategic approach to implementation of Project Management Offices. The PMO should be part of strategic planning in order to emphasize from the outset, the value proposition of the PMO. The PMO can have a deeper understanding of the existing supply chain ("supply chain") within the enterprise and optimize it with more efficient management of the conflicts for resources. The problems of constant battles for scarce resources in the company and priorities are changing constantly minimized when the company has a strategic approach. One of the roles of the PMO is managing portfolio and programs which are sets of projects. The implementation of the PMO should be in the strategic planning of organizations that have a clear vision of the role and benefits of projects to transform their own corporate strategies into results through projects.

3.4.2 PMO in Knowledge Management

Crowford (2006, page 179) directly associates the PMO to Knowledge Management of the organizations, especially knowledge in project management. According to him, the PMO is where project management (PM) and Knowledge Management (KM) meet. The process of closure of projects, especially the capture and analysis of lessons learned provide a valuable opportunity to consolidate knowledge of organizations through the PMO. The PMO serves as a repository of knowledge for the Project Manager and offers to their members a perspective of managing programs and portfolios. The PMO has visibility into project resources in the organization, even if the PMO does not actively manage projects in addition to internal projects PMO, and also the simple role to standardize the processes of the projects that are undertaken.

3.4.3 Internal and External Benchmarking

Bolles (2002, page 96) states that "internal and external benchmarking is an essential activity in the development of maturity in Project Management". According to Bolles, benchmarking is an activity that has developed since 1980 for evidence of practices of other companies that lead to higher performance in comparable processes in various companies. Benchmarking was born today widely used expressions such as: "best practice" and "world class."

3.4.4 Performance Metrics

One of the main expectations of the PMO is to control projects. You do not control what you do not measure (Kendall & Rollins, 2001, p 26). According to Bolles (2002, page 56), measuring productivity and performance of projects is necessary to determine the ability to complete projects on time and within budget. Therefore, it is up to the PMO to determine performance metrics that will be monitored over projects. This is a key to its successful implementation requirement.

One of the goals of the PMO, in the case of strategic PMO or the Center for Excellence in Project Management is successfully achieve the objectives of all projects. For this, a system of methodological guidelines of Project Management, associated with a system of performance metrics is needed. The first positive results will encourage further implementation of the PMO.

3.5 PERSONAL FACTORS (P)

3.5.1 Implementation of PMO as a project

LETAVEC (2006, page 149) shows the step-by-step for the implementation of the PMO as a project, with development of a value proposition previously reviewed and approved, identifying key groups of "stakeholders" and their needs and expectations. KENDALL & ROLLINS (2003, p 33) emphasize the importance of this value proposition of the project to implement the PMO. It should show to everyone in the organization that the PMO is in business to help achieve corporate goals that are aligned with project objectives. They add the importance of showing fast results to motivate deployment ever. They suggest regular meetings to show project results to stakeholders and senior management. If senior executives are supporting the implementation of the PMO, then they will want to track the results of that implementation of PMO.

3.5.2 Time Factor for implementation

The success of the PMO depends on the time devoted to its implementation, because, according to Bolles (2002, p 87) "maturity takes time." Everything has its time. The time factor does not mean only the period of implementation. It also means adequate to start the

implementation of PMO moment. Is there an English word that defines very well the aspects related to the time factor which is called "timing". It is necessary to provide the "timing", suitable time for implementation of the PMO. Not very long, because rapid results ("quick wins") will increase motivation, as LETAVEC (2002, page 41), or very fast which does not allow individuals to develop and consolidate steps.

3.5.3 Recognition and reward

RAD & LEVIN (2003, page 150) show the recognition and reward as important factors in the implementation of the PMO. Traditionally, companies have an award system for performance ("pay-for-performance") in which people are recognized and rewarded based on their performance and contributions to projects. People like to be recognized and rewarded. Systems of recognition and awards encourage project participants to meet and exceed individual and collective goals of the projects.

3.5.4 Internal Integration of People

CRAWFORD (2002, p. 80th) analyzes the importance of internal integration of the people involved in the implementation of the PMO, as well as the importance of internal integration of people involved in the projects of the organization. The success of the PMO depends on the degree of integration across the enterprise PMO because projects usually cover a large part of the organization. The PMO can have relationships with "stakeholders" of various levels from where the requirements are collected to where the measured results are analyzed and distributed.

4. MODEL FOR IMPLAMENTATION OF A PMO IN ORGANIZATIONS

The 16 Brazilian experts grouped into 2 focus groups, with 8 members each, grouped the 16 success factors into 4 categories. It is shown below in FIGURE 2 the model for implementation of PMO in organizations with key success factors.

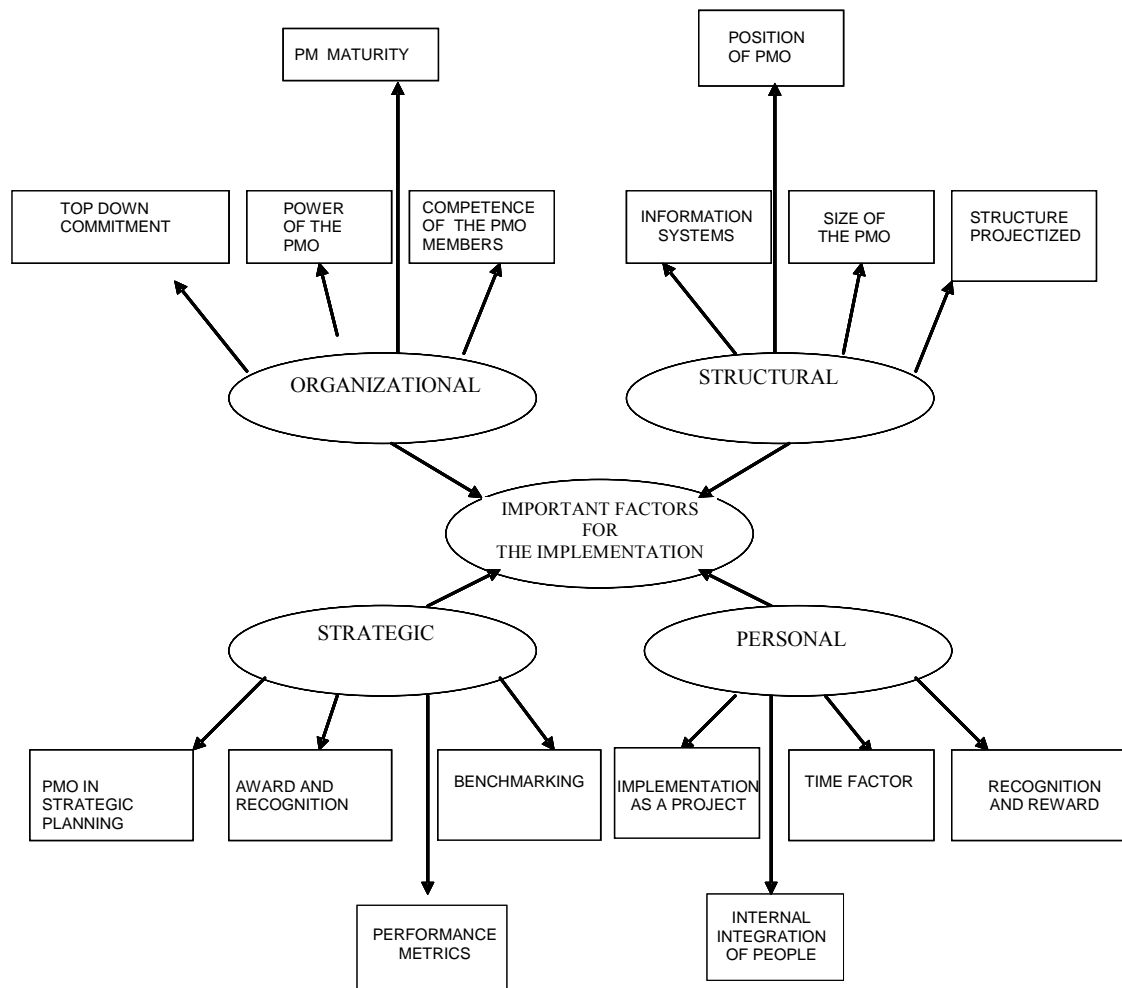


Figura 2: Model of relevant factors to implementation of PMO

5 QUALITATIVE RESEARCH

Qualitative research (spontaneous) had interviews with 20 Brazilian experts in project management ("subject matter experts"). Three questions were presented to them:

Question 1: tell me about your qualifications in "project management" topic and a brief professional summary, addressing your involvement with project management offices, if any.

Question 2: do you agree that the PMO (project management office) are a reality in project management? All respondents answered yes to question 2.

Question 3: in general, which are important success factors for the implementation of the PMO in organizations? It is noteworthy here that we do not want to discuss the success of project management in organizations but to identify relevant aspects for companies that want to implement a Project Management Office (PMO).

Table 3 shows the result of the relevant aspects (key success factors) mentioned by 20 Brazilian experts. Relevant aspects (factors) were numbered 1-16 as below:

- 1 PM maturity in the organization
- 2 Top down commitment
- 3 Power given to the PMO
- 4 Competence of PMO members
- 5 Position of the PMO in the organization
- 6 Size of the PMO
- 7 Structure of the organization by projects
- 8 Structured Information Systems
- 9 PMO in strategic planning
- 10 PMO in knowledge management
- 11 Internal and external benchmarking
- 12 Performance metrics
- 13 Implementation of PMO as a project
- 14 Time factor for implementation of PMO
- 15 Recognition and reward
- 16 Internal integration of people

Experts	Factors															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1		X		X	X					X						
2	X	X		X						X						
3					X				X				X			
4									X				X			X
5				X						X						X
6		X		X	X								X			
7			X				X		X							
8		X	X		X								X			
9	X	X		X	X											X
10	X	X		X	X				X	X						
11	X	X					X									
12												X				X
13		X														
14	X	X		X					X					X		
15		X			X			X	X							
16	X	X	X													
17	X					X					X				X	
18	X	X		X					X							
19	X	X		X									X			X
20	X	X		X									X			X
TOTAIS	10	14	3	10	7	1	2	1	7	4	1	1	6	1	1	6

Table 3: Sixteen relevant Success Factors for PMO raised by the 20 experts interviewed

The 5 most important factors are:

1	Top down commitment	14
2	Competence of PMO members	10
3	PM maturity in the organization	10
4	Position of the PMO in the organization	7
5	PMO in the strategic planning	7

Table 4: The five most important factors mentioned by 20 respondents

6 QUANTITATIVE RESEARCH

In quantitative research (stimulated) we have interviewed 64 international experts, recognized as subject matter experts in project management by ISO - International Standards Organization, because they work in setting the international standard ISO 21 500 – Guidance on Project Management. They received a list of 16 factors identified in the literature and mentioned by the first group fo 20 Brazilian experts. They are asked to rate the factors at Likert scale of 1 to 5.

The relevant in this methodology is that the survey was conducted with 64 international experts, representing 21 countries worldwide, from the 5 continents. The international experts who participated in the survey has an average 20 years experience in Project Management, some are teachers or active consultants of Project Management in their countries.

Country	"Experts"
United States	11
Japan	8
Germany	5
Netherlands	4
Austria	4
Australia	3
France	3
Sweden	3
United Kingdom	3
South Africa	3
Canada	3
Denmark	2
Costa Rica	2
Finland	2
Egypt	2
Spain	1
South Korea	1
Luxembourg	1
Portugal	1
Romania	1
Mexico	1
Total people:	64

Table 7: Distribution of PM experts by country

A questionnaire with the 16 relevant success factors for the implementation of PMO was prepared. The question was: "This is an important factor for the successful implementation of the PMO in organizations?".

The results are shown in Table 8, below, for a 5-point Likert scale as follows:

- 1 - strongly disagree
- 2 - disagree
- 3 - neutral
- 4 - agree
- 5 - strongly agree

expert	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	5	2	4	5	4	1	3	2	1	5	5	5	4	5	4	4
2	5	1	3	3	3	3	1	1	4	5	4	5	2	4	1	4
3	3	4	5	5	5	3	4	4	5	4	4	5	4	4	4	4
4	5	4	3	3	3	2	5	4	4	3	2	2	2	2	1	2
5	4	5	5	4	4	3	1	4	4	2	2	2	2	4	3	4
6	2	3	2	2	2	3	1	3	2	2	2	2	1	2	2	2
7	4	5	3	5	4	3	3	4	3	3	3	4	4	4	3	4
8	3	1	2	2	1	4	2	3	2	2	4	3	3	3	4	1
9	2	2	2	3	3	2	3	3	3	3	1	2	2	3	3	2

10	5	5	5	4	5	3	5	3	5	4	4	5	5	5	4	5
11	5	5	5	5	5	3	4	4	3	4	3	5	5	5	4	5
12	4	4	5	4	4	4	4	5	4	2	3	5	2	3	4	3
13	3	4	4	4	5	2	4	3	4	4	4	4	5	5	3	3
14	5	5	5	4	4	2	3	5	5	4	4	4	4	4	4	4
15	5	5	3	4	5	3	5	2	4	4	4	5	3	4	2	3
16	3	4	4	5	4	3	4	3	4	4	3	3	3	4	4	4
17	5	5	5	5	5	4	4	4	3	3	4	4	4	4	4	4
18	2	3	2	2	2	2	2	3	1	2	3	3	3	3	3	2
19	4	5	3	5	3	2	4	4	4	3	5	5	3	4	4	3
20	3	3	4	5	3	3	1	2	1	4	2	2	3	1	4	4
21	5	4	4	5	3	3	4	4	4	3	4	4	3	4	4	4
22	4	4	4	3	3	4	4	3	3	3	3	3	4	3	3	3
23	5	5	2	4	4	2	4	3	3	2	2	3	4	4	2	3
24	3	4	4	4	4	3	3	3	2	2	2	3	3	3	3	3
25	2	2	1	2	1	2	1	2	2	3	3	3	3	2	2	2
26	3	3	4	4	4	3	4	4	5	4	4	4	3	3	4	4
27	4	3	2	2	1	4	2	5	5	4	3	3	4	3	2	2
28	4	5	3	5	4	3	2	2	4	2	2	3	5	5	4	4
29	5	5	4	4	4	3	2	1	4	4	3	4	3	3	3	4
30	4	4	2	4	2	2	2	3	2	3	4	4	2	3	4	3
31	4	5	4	4	4	4	4	4	5	5	4	4	5	5	5	5
32	4	5	3	5	4	2	4	3	4	4	3	4	3	5	2	2
33	4	5	2	5	3	3	4	4	4	4	4	5	5	5	4	4
34	5	4	4	4	5	4	2	2	2	2	4	4	1	4	4	4
35	4	4	5	3	4	2	2	3	5	3	3	4	3	4	4	5
36	4	4	4	5	4	4	5	3	5	5	5	5	4	4	4	4
37	5	5	4	4	4	3	4	4	3	2	2	4	5	4	3	3
38	4	4	3	2	5	2	3	3	4	2	2	5	2	4	3	2
39	5	5	3	5	3	1	1	2	3	4	4	4	3	4	4	4
40	5	5	5	5	5	4	3	2	3	4	4	2	5	4	3	2
41	5	4	4	4	5	3	4	3	4	5	5	5	3	2	4	4
42	4	4	2	3	3	2	3	2	2	4	4	4	3	3	2	3
43	5	3	4	4	5	3	2	1	3	5	3	5	3	1	3	3
44	4	2	4	4	5	3	3	4	4	3	3	4	3	4	4	3
45	2	5	3	5	4	1	2	4	4	4	3	4	5	2	3	4
46	4	4	5	4	4	4	5	3	3	4	4	5	4	3	3	4
47	3	5	4	4	4	3	4	4	2	5	4	5	3	4	3	3
48	4	5	4	4	5	2	3	3	3	4	4	4	4	3	3	4
49	4	5	4	5	4	2	3	4	4	5	3	5	5	4	4	5
50	4	5	4	4	3	3	2	3	3	2	3	4	4	5	3	3
51	4	5	3	4	4	5	4	4	5	5	4	4	3	3	3	4
52	3	4	3	3	4	3	4	4	3	5	4	4	2	3	4	4
53	4	4	5	5	4	3	4	5	3	4	3	5	5	5	5	3
54	4	4	3	4	5	3	3	2	3	3	3	4	3	3	3	3
55	4	3	3	4	4	3	4	4	4	3	4	3	4	4	4	4
56	3	5	3	2	4	2	4	4	2	2	3	2	2	2	3	3
57	3	4	3	3	4	3	4	4	3	5	4	4	2	3	4	4
58	5	5	3	4	4	2	2	3	3	4	2	5	3	3	3	2
59	5	4	4	5	3	3	4	4	4	3	4	4	3	4	4	4
60	4	4	3	4	5	3	3	2	3	3	3	4	3	3	3	3
61	4	5	4	4	4	4	4	4	5	5	4	4	5	5	5	5
62	4	4	5	4	4	4	4	5	4	2	3	5	2	3	4	3

63	4	5	2	5	3	3	4	4	4	4	4	5	5	5	4	4
64	4	3	3	4	4	3	4	4	4	3	4	3	4	4	4	4
Averg:	3,9	4,1	3,6	3,9	3,8	2,8	3,2	3,2	3,4	3,5	3,4	3,9	3,4	3,6	3,3	3,4

Table 8: Sixteen relevant factors analysed by 64 international project management experts

7 CONCLUSIONS

As the scale is 1-5, we have a central point that 3 is the neutral value. Above 3 means agreement and disagreement means below 3. We note that only one item was below 3. It was item 6 - Size PMO. It got 2.8 average. The interviewed experts considered relevant the fact that the group of 64 experts have agreed (validated) 15 of the 16 relevant to implementation of PMO factors. The survey confirmed 15 of the 16 proposed factors. These 15 factors received 3 or above 3. The average of this 15 (out of 16) factors was greater than 3 (neutral).

Consolidated the results with the factors ranked by the average obtained from the highest to the lowest, they are presented in Table 9.

Relevant factors p / deploy PMO		Average
2	Top down commitment	4,05
1	PM maturity of the organization	3,95
4	Competence of PMO members	3,95
12	Performance Metrics	3,88
5	Position the PMO in the company	3,79
14	Time factor for implementation	3,57
3	Power given to the PMO	3,55
10	PMO in knowledge management	3,48
16	Internal integration of persons	3,41
9	PMO in strategic planning	3,39
13	Implementation of PMO as a project	3,39
11	Benchmarking internal and external	3,36
15	Recognition and reward	3,32
8	Structured Information Systems	3,21
7	Structure of the company by projects	3,16
6	Size of PMO	2,82

Table 9: Consolidated results of the survey

It should be noticed that the first 3 key success factors indicated here by the 64 international experts (quantitative research) are the same 3 key success factors indicated by the 20 Brazilian experts, interviewed at the initial spontaneous qualitative research, and they are in the same order.

The main factor, highlighted, is unanimous: top down commitment means the commitment of senior management for successful implementation of the PMO. It is noteworthy that the first 3 factors listed above ("top-3") are unanimously in interviews. It is suggested that the factors presented here be more widely explored by other researchers, including information obtained

from this research, broadening horizons and methodologies and adopting alternative techniques for classification ("ranking").

It is considered, therefore, that the research was planned, conducted and performed satisfactorily, since the results achieved the goals of the research. Noteworthy is the general consensus on three major factors ("top-3") that should be considered in the successful implementation of Project Management Offices. The model developed will help the successful implementation of Project Management Offices in companies, enabling greater efficiency in its implementation and better results for the organizations worldwide.

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