

Challenges in Establishing, Managing, and Operating a Project Management Office

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Abstract— The purpose of this study is to identify the challenging factors leading to the success or failure of the PMO establishment along with recommendation on how to address and overcome those challenges. Lack of a defined project management methodology, project resource contentions, not tracking resources utilization and project managers not being empowered to make needed decisions were found to be the top challenges in establishing a new Project Management Office.

Keywords— *Project Management Office, Project Management, PMO, PMO Challenges, PMO Failure.*

According to Pinto & Selvin (1988) a project is characterized by having a defined time for completion, limited budget, well defined and pre-set objectives, as well as a series of activities to achieve those objectives. As for project management; (Kerzner, 2003) defines it as the planning, organizing, directing, and controlling of company's resources to achieve specific goals defined for a particular project. According to the Project Management Institution (PMI, 2000), project management involves applying knowledge, skills, tools, and techniques to project activities to meet or exceed project's stakeholder needs and expectations.

I. INTRODUCTION

According to a research conducted by the Standish Group, only 16% of projects were successful with regard to time, budget, and technical specifications (Crawford, 2001). In a follow up research, the Standish Group had observed an increase in the success rate of projects from 16% to 26% (Crawford, 2001). Amongst the reasons offered for the improved success rate was enhanced project management and use of standard project procedures as a consequence of the implementation of the PMO. According to the State of the PMO 2010 survey, 84 percent of organizations are currently implementing PMO within their organization, a jump of 36% from the year 2000 (PMI, 2012). Organizations with PMO report more projects coming on time, on budget and meeting business goals. Having that said, it is not a straight forward process to establish a project management office within even the smallest firm. According to a research conducted by Gartner Research, Project Management Offices have a failure rate of 50 percent or more on their first attempt of establishment (Crawford, 2001).

II. PROJECT AND PROJECT MANAGEMENT DEFINITION.

A project is the organization of people and resources to achieve a defined objective and purpose (Tuman, 1983).

III. PROJECT MANAGEMENT OFFICE DEFINITION

The origin of PMO can be traced back to the 1930's (Singh & Keil & Kasi, 2009 p.411) and gained popularity in mid 1990s (Dai & Wells, 2004, p.526). The number of PMOs forming in organizations is increasing (Hobbs and Aubry, 2007; Hobbs et al, 2008; Spelta and Albertin, 2012). Through the literature, there have been various definitions of PMO and its implementations. According to the Project Management Institute (PMI, 2008), a project management office (PMO) is an organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those projects under its domain. The responsibilities of the PMO spans from providing project management support functions to being responsible for the direct management of projects (PMI, 2008)

Authors tried to meet PMI definition of "Project Management Office", never the less, some of its entities were given different names such as Project Office (Kerzner, 2003; PMI, 2004, p.17), Centre of Excellence (Hill, 2004, p.50) or Centre of Expertise (Dai & Wells, 2004, p.524), Program Management Office (Rajegopal et al., 2007, p.27). Some authors noted that a universal definition for PMO is not possible due to the difficulty in customization of individual PMOs to fit all organizational needs (Desouza & Evaristo, 2006, p.415). The responsibilities of the PMO can range from providing project management support functions, to actually

being responsible for the direct management of a project.” (2008, p.11)

Several organizations have established a Project Management Offices (PMO) in order to insure successful management and support of projects within their organizations. PMO provides a wide range of functions spanning from designing and maintenance of project procedures to strategic selection and initiation of projects in a matter that aligns with organizational vision and objectives (PMI, 2008) (Kerzner, 2009). The concept of Project Management Office (PMO) as an organizational entity came into shape in the late 1990s. Currently, the Project Management Office (PMO) is a well-established concept around organizations. The evolution of the PMO as a concept and important entity within organizations has continued to evolve to this day since the early days when the US Air Corps and later, the US Air Force, used Project Offices to assist with monitoring and controlling aircraft development projects during the Second World War and Cold War periods (Benson, 1997).

In a two-year empirical study conducted by Dai and Wells (2004) to investigate the establishment and use of PMO, they found that 113 of 234 responses from a random sample reported having a PMO or similar entity within their organization. According to Dai and Wells (2004), the majority of PMOs were established in the mid-1990s to 2000.

IV. PROJECT MANAGEMENT OFFICE IMPORTANCE

As the number and complexity of projects throughout the business world has increased, the need to have a centralized project coordination functions has gone up. The popularity and expansion of PMO among organizations appears to be related to this (Dai&Wells, 2004). Organizations are increasingly implementing PMOs. Measuring PMO success is difficult, while some researchers adhere to its importance to making a project successful, some research (Stanleigh, 2006) found that 75% of PMOs in the IS domain shut down within three years of formation. Other researchers highlighted the frequent changes to the form of PMOs (Aubry et al, 2010a; 2010b). To determine how a PMO delivers business values, some authors examined the innovation in organizational project management (Dai & Wells, 2004; Desouza & Evaristo, 2006; Hill, 2004; Hobbs & Aubry, 2007; Hurt & Thomas, 2009; Kerzner, 2003; Martin et al, 2007)

In a 1994, the Standish Group conducted a research through which they found that only 16% of projects were successful with regard to time, budget, and technical specifications (Crawford, 2001). In a follow up research in 1998, they had observed an increase in the success rate of projects from 16% to 26%. Amongst the reasons offered for

the improved success rate was enhanced project management and use of standard project procedures as a consequence of the implementation of the PMO. According to the State of the PMO 2010 survey, 84 percent of organizations are currently implementing PMO within their organization, a jump of 36% from the year 2000 (PMI, 2012). Organizations with PMO report more projects coming on time, on budget and meeting business goals. According to PMI's Puls of the Profession Survey (PMI, 2012), PMO helps reduce failed projects, delivering projects on/under budget, improve productivity, deliver projects on/ahead of schedule, and increase cost saving. Having that said, PMO case of failure starts when the value of PMO within an organization is being questioned due to the fact of having projects not being completed and delivered within the defined sets of objectives ranging from budget, time, and deliverables. For the PMO to not deliver results is one form of failure; but not communicating PMO results upward is one of the main reason several organizations have the perception of a failing PMO (PMI, 2012). According to the State of the PMO 2011, only 15% of project managers who report to vice president of IT believed their firm acknowledges the value of PMO. In addition, 70 % of respondents to the Global State of the PMO study (2011) said that the PMO's value was questioned among senior management. Furthermore, some authors attributed to PMO performance dissatisfaction to internal politics and power systems (Aubry et. al., 2010A)

V. RESEARCH STUDY

In this study, a group of project management professionals that have been part of an initiative to establish a PMO within a software development firm have been questioned about the challenges they have phased during their effort setting up the new PMO. At the time of the study, it has been over three years since the PMO establishment. The PMO was an initiative sponsored by the CIO to enhance the management and delivery of many struggling and low performing software and IT projects within the organization. In this firm, the project organization is a matrix one in which project managers work with project teams whose resources are pooled from various functional departments such as Software Engineering, Software Quality Assurance, Implementation and Support, and Product Development. The PMO challenges that have been surveyed in this study are:

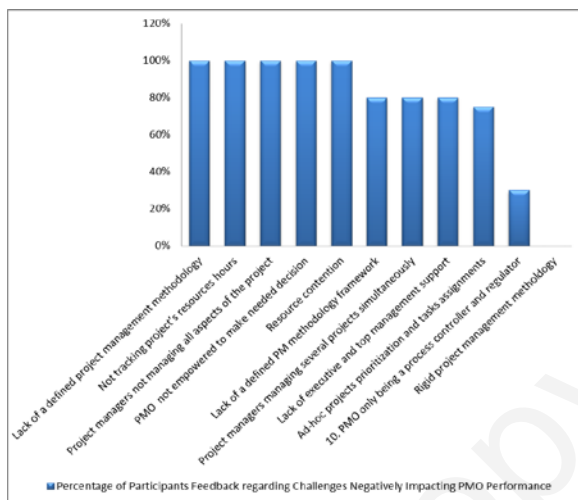
1. Lack of a defined project management methodology
2. Not tracking project's resources hours and utilization
3. Project managers not managing all aspects of projects
4. PMO is not empowered to make needed decisions
5. Resource contention
6. Lack of a defined project management methodology framework
7. Project managers managing several projects simultaneously
8. Lack of executive and top management support

9. Ad-hoc projects prioritization and tasks assignments
10. PMO is only being a process controller and regulator
11. Rigid project management methodology

VI. STUDY RESULTS

The results of the study regarding the challenges in establishing a project management office and leading to either its success or failure are presented in Figure 1.

Figure 1: Study Results with regard to Project Management Office Challenges



VII. ANALYSIS RESULTS

Below is the list of the PMO challenges surveyed in this study sorted by the percentage of feedback reported by the study participants.

1. Lack of a defined project management methodology. 100% of participants reported this as a factor negatively impacting the performance of the PMO.. Not implementing a standard and well defined project management methodology within the project management office is a major contributor to the failure of the PMO. Not having a well-defined methodology and practices leads to inconsistency in managing and controlling projects. Consequently, reporting and visibility into projects status and portfolio becomes a challenge and constantly a moving target that is never attained

2. Not tracking project's Resources Working Hours. 100% of respondents reported this as a challenge in meeting the PMO objectives. For the PMO to be able to provide metrics-based analysis of resources there should be a mechanism and a system to track actual time worked on actual projects and other work. Without this it is impossible to identify the true capacity of a resources working on a project, consequently leading to failure in meeting projects estimated schedule and cost.

100% of project managers not managing all aspects of the project reported this as a challenge negatively impacting the performance of the firm's PMO. This is mostly a challenge that should be addressed when working in a matrix project organization. The matrix organization structure brings many benefits to an organization through the utilization of cross-functional teams that are working to support a common project. Having that said, a matrix project organization has several challenges. Project managers competing for the same resources can lead to conflicts leading to set backs in project schedule and performance. In a matrix organizations, both the functional manager and the project manager should be in constant and tight communication to insure alignment of project objectives and obligations along with functional departments ones. Resource availability and commitments is one of the most difficult challenges to overcome without a matrix structure.

3. The PMO is not empowered to make needed decision. This is so much related to the need of having constant and persistence top management and executive support to the PMO. 100% of participants have reported this as a challenge negatively impacting the performance of the PMO.

By not having an active executive support, the PMO is not empowered to make the needed decision. While it is important for the organizations executives to demonstrate their support both at the initiation phased and throughout its lifecycle, it is also equally important for the PMO to be seen as an enabler of the business. The PMO should be felt as an independent body challenging the status quo, rather than as an approving body to all executives' decisions.

4. Resource contention. Resource contention in project management is a conflict over access to a shared resource especially when this resource is needed to complete a task that is on the project critical path. 100% of respondents reported this as a challenge they phased during the start up

of the PMO within their firm. In most cases, resource contention leads to delays in projects delivery and schedule consequently impacting the effectiveness of the PMO performance. There are several factors that can lead to project's resource contention such as inadequate on incorrect resource forecasting, conflicting resource priority, inadequate information on what and when resources are available, not enough skilled resources, and too many unplanned requests for resources. One of the most challenging reasons leading to resource contention which was dominant in the feedback of this study participants is the presence of a significant disconnect between the PMO and decision makers who assume that there are enough resources for all projects when, in reality, there often are not. Resource contention challenge is highly related and impacted by both challenge 2, 8, and 9.

5. Lack of a defined PM methodology framework

This challenge is mostly applicable to the PMO that is established within IT and software development organizations since the integration between the Software Development Life Cycle (SDLC) and project management methodology is usually not straight forward. 80% of respondents reported this as a challenge. An overall project management framework with the basic phases and gates and a few key controlling artifacts such as business case, project schedule, status report, etc. should be defined and agreed upon between the PMO and the software development related departments. This is sometimes known as a PDLC (Project Development Life Cycle), and many different SDLCs can fit under the framework, tailored to the needs of the project type.

6. Project managers managing several projects simultaneously. One of the major factors that lead to a perception of PMO failure is not being able to deliver projects as planned. A major factor contributing to this is the PMO managing number of projects more than it can handle. This happens as a result of not being able to prioritize projects according to demand and supply (Challenge 9) and also not being able to estimate the load of a department or team due to the lack of metrics-based understanding of resource capacity (Challenge 2). 80% of respondents reported this as an obstacle phased within the PMO. The number of projects a project manager can hand simultaneously depends on several factors including the organization culture, the maturity of the project and organization teams, project manager skills, complexity of

project, and project phase. The PMO should consider all these factors when having its project managers managing several projects simultaneously.

7. Lack of executive and top management support. Not having executive support is one of the major challenges facing the success of new PMOs. 80% of respondents reported this as a challenge they phased. In practice, executive teams are the ones authorizing the establishment of the PMO to address challenges faced within their organization in delivering and executing projects. There are various ways through which executive team should show support to the PMO organization and its members and processes. For instance, top management should attend steering committee meetings, embrace the PMO processes and methodology, and empower the PMO and its PMs by giving them decision making authority. One of the worst things an executive can do is to undermine the authority and power of the PMO by overriding a PMO decision which have been reported to be one of the dominant behavior top executives demonstrated their lack of PMO .

8. Ad-hoc projects prioritization and tasks assignments. Accepting and authorizing new projects to be managed and supported by the PMO should not be performed in an ad-hoc or informal matter. 75% of participants reported this as a PMO challenge. Ultimately, ad-hoc authorizing of projects leads to failure of projects due to the lack of available resources and conflicting priorities. Most of the time, accepting new emergency projects trumps already running projects leading to a serious project block. The process of accepting and prioritizing new projects should be done periodically along with all new projects requests along with the currently running projects.

9. PMO only being a process controller and regulator. The necessity and importance of having a PMO methodology to manage projects should not lead into falling into the trap of being only a methodology controller. 30% of participants reported this as a PMO challenge. The objective of the PMO should be to work on following the methodology in order to aid and guide project management practices to insure consistency of project execution and reduce risks resulting from complex projects and inexperienced project managers. By just blindly enforcing methodology without paying attention to individuality of projects and people, the PMO is risking

resistance and lack of process embracement among other departments.

10. Rigid project management methodology. It is very important for the PMO to implement a project management process that is flexible especially at the start of PMO implementation. This is important to insure better change manageability within the organization and absorb any resistance of the new PMO and its new adopted project management process. For the PMO to insure proper alignment and collaboration among organization's teams and functions is crucial, and this is not possible to take place if the PMO taking a very rigid approach with regard to the newly defined project management method implemented by the PMO. The PMO should encourage collaboration among project professionals and various functional departments within the organization the PMO is serving. In this study, none of the participants reported this as a challenge which is correlated with the fact that 100% of participants reported the lack of project management methodology as a challenge. In this firm, the fact that there was no standard and defined project management methodology, lead to a form of undesired flexibility in project management.

When asked of the top challenges contributing to the failure or partial success of their PMO organization, the participants have reported both lack of defined and standard project management methodology and not being empowered to make needed decisions as top factors. Table 1 summarizes the details of participants' responses regarding top factors or challenges leading to PMO failure.

The top challenges crippling PMO performance	Participants feedback
Lack of a defined project management methodology	80%
PMO was not empowered to make needed decision	80%
Conflicting projects prioritization	60 %
Ad hoc projects and tasks assigned to resources	20 %
PMO only being a process controller and regulator	20 %
Lack of executive and top management support	20%

Table 1: Top Challenges leading to failure of PMO

Conclusion

The role of the Project Management Office (PMO) in organizations continues to be a topic of great interest to project management practitioners. Yet, for many organizations a struggle exists to define the PMO role, to position the PMO for long-term success, and to leverage the PMO to support achievement of the organization's tactical and strategic objectives.

This study has surveyed the challenges faced while establishing, managing and operating a PMO in a software/IT firm. The surveyed firm had its PMO organization for three years at the time of the conducted survey. The PMO was setup to manage the organization's software development, delivery, and implementation projects. The organization had a matrix project organization in which projects resources were pulled from various departments such as software engineering, quality assurance, technical writers, implementation engineers, and product development. The PMO was setup to report to the CIO. In this study, all the surveyed project management practitioners reported that the PMO was partially successful due to several encountered challenges.

According to the findings of this study, the main challenges encountered while operating and managing the PMO were related to the lack of a defined and standard project management methodology, not tracking project's resources utilization, not being empowered to make project's needed decisions and PMO not being able to manage all aspects of projects due to conflict with functional managers and departments specific priorities. In addition, resource contention with other projects and tasks was reported by all study participants as one of the main PMO challenges. Moreover, when asked to indicate the top three challenges facing the PMO, 80% of practitioners reported the lack of defined project management methodology, and not being empowered to make projects needed decisions as top factors. As for the conflicting projects prioritization, 60% have reported it as one of the top three challenges.

References

- [1] Aubry, M., Müller, R., Hobbs, R., & Blomquist, T. (2010a). Project management offices in transition. *International Journal of Project Management*, Vol 28, No. 8, pp. 766-778.
- [2] Aubry, M., Hobbs, B., Müller, R., & Blomquist, T. (2010b). Identifying Forces Driving PMOs Changes. *Project Management Journal*, Vol. 41, No. 4, pp. 30-45.

- [3] Benson, LR 1997, *Acquisition Management in the U. S. Air Force and Its Predecessors*,
- [4] Crawford, K 2001, *The Strategic Project Office: A Guide to Organizational Performance*, Center for Business Practices, New York
- [5] Dai, CX & Wells, WG 2004, 'An exploration of project management office features and their relationship to project performance', *International Journal of Project Management*, vol. 22, no.7, pp. 523-532.
- [6] Desouza, K. C., & Evaristo, J. R. (2006). Project management offices: a case of knowledge-based archetypes. *International Journal of Information Management*, Vol. 26, no. 5, pp.414-423.
- [7] Hill G.M. (2004) Evolving the Project Management Office: A competency continuum, *Information Systems Management Journal*, Fall 2004, 45-51
- [8] Hobbs B. and Aubry A. (2007) A multi-phase research program investigating Project Management Offices (PMOs): The results of phase 1, *Project Management Journal*, Vol.38,No.1, 74-86.
- [9] Hobbs, N., Aubry, M., & Thuillier D. (2008). The project management office as an organizational innovation. *International Journal of Project Management*, Vol. 26, No. 7, pp. 547-555.
- [10] Hobbs, B., & Aubry M. (2008). An empirically grounded search for a typology of project management offices. *Project Management Journal*, Vol. 39, No. 6, pp. 569-582.
- [11] Hurt M. and Thomas J.L. (2009) Building Value Through Sustainable Project Management Offices, *Project Management Journal*, Vol.40, No.1, 55-72.
- [12] Kerzner, H. (2003). *Project management, A systems approach to planning, scheduling and controlling*. New York: John Wiley and Sons.
- [13] Kerzner, H 2009, *Project management: a systems approach to planning, scheduling, and controlling*, 10th ed., John Wiley & Sons, Hoboken, N.J.
- [14] Martin N.L., Pearson J.M. and Furomo K. (2007) IS Project Management: Size, Practices and the Project Management Office, *Journal of Computer Information Systems*, Summer, 52-60.
- [15] Pinto, J. K., & Slevin, D. P. (1988). Project Success: Definitions and Measurement Techniques. *Project Management Journal*, 19(1), 67-72.
- [16] Project Management Institute (2000). *A Guide to the Project Management Body of Knowledge*. Newtown Square, PA: Project Management Institute.
- [17] Project Management Institute (2004) *A Guide to the Project Management Body of Knowledge*, 3rd Edition, Newtown Square, PA:PMI.
- [18] Project Management Institute (2008), *A guide to the project management body of knowledge (PMBOK® Guide)*, 4th ed., Project Management Institute, Inc, Newtown Square, Pa.
- [19] Project Management Institute (2012), *The Project Management Office In Sync with Strategy*. edn, Project Management Institute, Inc, Newtown Square, Pa.
- [20] Rajegopal S., McGuin P. and Waller J. (2007) *Project Portfolio Management: Leading the Corporate Vision*, Palgrave-Macmillan.
- [21] Singh, R., Keil, M., & Kasi, V. (2009). Identifying and overcoming the challenges of implementing a project management office. *European Journal of Information Systems*, Vol. 18, No. 5, pp. 409-427
- [22] Spelta, A.G., & Albertin, A.L. (2012). Project management offices in the IT area: A context-discriminant model of their establishment. *Information Systems Management*. Vol 29, No. 1, pp. 40 – 54.
- [23] Stanleigh (2006). From Crisis to Control: New standards for project management. *Ivey Business Journal*, (March/April), pp. 1-4.
- [24] The Global State of the PMO: Its Value, Effectiveness and Role as the Hub of Training, ESI, March 2011. Results based on a survey of more than 3,700 respondents from around the world.
- [25] The State of the PMO in 2011, Forrester Research. Results based on an online survey of 693 PMO leaders conducted from April to May 2011 in conjunction with PMI's Program Management Office Community of Practice.
- [26] Tuman, G.J. (1983). Development and implementation of effective project management information and control systems, in Cleland, D.I. & King, W.R. (eds.) *Project management handbook*. New York: Van Nostrand Reinhold Co., 495-532.