کنفرانس بین المللی مدیریت پروژه
International Project Management Conference

Organizational Project Management Implementation in Iranian Project Practitioners

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Key words:

Project management office, learning, Knowledge management.

Abstract

Many organizations consider project management as an essential capability and attempt to achieve sustainable benefits through effective management of projects. Leading companies are managing their projects more effectively to achieve competitive advantages and enhance their underlying profits. The purpose of this paper is to underline the need for Iranian organizations to adopt project management systems. This paper provides an interpretative investigation of the issues concerning implementation of project management for Iranian organizations. The study involves one of Iranian leading companies in Petro-chemichal industry. The results indicate that the organizational culture is resistant to change and there is no support of senior management for implementation of project management. Based on the analysis conducted, the impacts of organizational learning and training are not truly realized. Moreover, dissemination of knowledge and project histories among project teams is not appreciated, and the need for project management is not sincerely recognized. The other Iranian companies may find commonalities in problems and issues raised and solutions proposed. This paper has a potential to put forward the practical solutions for Iranian project practitioners to critically reflect on their current attitudes and put the use of organizational project management into their practice.

Introduction

Over the last decade, the consideration has been made that organizations are confronting a new context characterized by increasing competition, growing rates of product, service and process

innovation and an escalating emphasis on time to market. Organizations have responded to these challenges by changing their structure, work processes and the way of doing business. With the impending move toward globalization and liberalization of markets, organizations have to be prepared to cope with the rapid changes in the business dynamics. Every organization must submit to the varying demands and changes in the environment. Changes within an organization take place by developing new, agile and more flexible organizational forms in which project are both more numerous and more strategically crucial (Pettigrew, 2003; Jamieson; Morris, 2004).

As a response to these new challenges and as a movement to drive forward change, strengthen their market position, satisfy their customers, empower their employees, avert risks and uncertainties, and capitalize on new market opportunities, various organizations have implemented novel project management systems. Large companies recognized the importance of achieving excellence in project management and have invested significant sums in developing their project management systems. Companies that have adopted project management as a "way of working" for their organization can demonstrate the dramatic and successful benefits of that investment. Companies who most successfully utilize the project management "way-of-thinking" have a combined focus on identifying their products' lifecycle (the most appropriate procedures to take product or service to market), developing their knowledge and competency (how to best implements these procedures) and have the support of the organizational culture as well as the senior management towards a project management "way-of thinking" (Eve, 2007).

The value of a formal and structured approach to project management is becoming increasingly recognized as the discipline develops and more organizations begin to harvest the benefits of proactive project-based management. The successful firm will be the one which directs and manages its projects most effectively, maximizing competitive benefits while minimizing the inevitable risks and uncertainties.

In an attempt to improve the organizational project management capability, many firms have established a new organizational entity, the most common name for which is the project management office (PMO). The PMO has been addressed extensively in the professional literature (Crawford, 2002; Englund et al., 2003; Kendall and Rollins, 2003; Aubry, 2007). As companies begin to recognize the favorable effect that project management has on profitability, emphasis is placed upon achieving professionalism in project management using the project management office concept. The concept of a project management office (PMO) could very well be the most important project management activity in this decade. With this recognition of importance comes strategic planning for project management. Maturity and excellence in project management does not occur simply by using project management over a prolonged period of time. Rather, it comes through strategic planning for project management. General strategic planning involves the determination of where you wish to be in the future and then how you plan to get there.

The PMO could facilitate project debriefings, develop project templates and maintain project repository. The PMO strives to standardize and introduce effectiveness in the execution of projects. The PMO is the source of established procedures, documentation, guidance and metrics within the practice of project management. It could also serve as the contact point for customer surveys, using customer feedback as a basis for continuous improvement (and reinforcing the organization's focus on the customer). One of the key responsibilities of the PMO is organizational learning and training. The concept of organizational learning has been accepted by many organizations which are keen on developing and creating an environment to support learning. In these organizations the delivering of quality projects is highly related to the project team's performance (Law and Chuah, 2004). Project team members detect errors and correct them by improved action through their rectified knowledge and understanding of how these errors occur. This process leads to a change in an organization's range of potential behaviors that can be adopted (Huber, 1991), its creative capability to deliver the results it truly aspire, and encourage new expansive patterns of thinking to be nurtured. It permits personnel to continually learn how to learn together. Pedler et al. (1991) emphasized that it is an organization as a whole that facilitates the learning of all its members and employees to continuously transform itself rather than being an individual activity. Team learning is the central issue of concern, since in an organization today, as major tasks or functions are generally performed by different project teams

rather than individuals (Poell and Van der Krogt, 2003). For the team to be effective, members must be able to adapt, learn, and perform as a team (Law and Chuah, 2004). The performance of teams directly affects the performance of the organization. Organizations are developing their skills in creating, acquiring, and transferring knowledge, and modifying their behavior to reflect new knowledge and insights and be able to act accordingly (Garvin, 1993).

This paper is structured as follows: First, a brief literature review about organizational project management, the impact of learning and knowledge management on continuous improvement, and the concept of project management office is introduced. As a supporting document, the results of the research on a leading Petro-chemical company aligned with the suggestions and practical solutions for implementing effective project management processes are presented in the following section. Finally, the conclusions and managerial implications are drawn.

Literature review

Over the last few years organizations have recognized the competitive advantage that "management by projects" can provide in fast changing competitive business environments (Root et al., 2006). Many organizations started observing their processes as sets of projects. The effective adoption of a project based approach and the associated project management practices are seen by many in industry and academia as having the potential to improve overall organizational performance by enhancing the prospects for project performance and minimizing the likelihood of failure (Munns and Bjeirmi 1996) as well as providing organizations with the capability to quickly adapt to constantly changing conditions (Kerzner 2000). It was also known that organizational culture played an important and underlying role in the change process (Pool, 2000; Ahmed, 1998; Silvester and Anderson, 1999; Lorenzo, 1998; DeLisi, 1990; Schneider and Brief, 1996). Perhaps the most significant characteristic of companies that are excellent in project management is their culture. Successful implementation of project management creates an organization and culture that can change rapidly because of the demands of each project, and yet adapt quickly to a constantly changing dynamic environment, perhaps at the same time. Successful companies have to cope with change in real time and live with the potential disorder that comes with it. These organizations, which are referred to as project-driven in the literature (Kerzner, 2003), have a less formalized structure, which enables learning to happen, as opposed to a more rigid functional structure where learning is prohibited (Fiol and Lyles, 1983; Stata, 1989). Lyles (1994) observes that organizations learn from their experiences and can remember incidents from the past that may influence future actions. Particularly, since different projects have some common tasks or tasks with similar scope, as projects are repeatedly implemented the knowledge obtained in one project, if transferred successfully, will affect the way the successor projects are implemented. This leads to improved performance through learning. Leading organizations have tried to accelerate learning to achieve excellence in project management.

Organizational learning means the process of improving actions through better knowledge and understanding (Fiol and Lyles, 1985). The new insights or "theory-in-use" are embedded in the shared mental models of other organizational members or in the organizational artifacts to make the learning become organizational. According to Argyris and Schon (1978), individuals are the "agents" for learning in organizations. Organizational learning occurs when the individual members detect the discrepancy between actual and expected results, and try to correct the errors or challenge the underlying assumptions. There is an inherent assumption from the definition that learning will improve future performance through change of insight, new organizational structure, new actions or the combination of all (Argyris and Schon, 1996). Four components are developed to describe the learning process, which are: (1) knowledge acquisition, (2) information distribution, (3) information interpretation, and (4) organizational memory (Huber, 1991). Organizations also learn by direct experience (Levitt and March, 1988).

In a project-driven organization learning refers to the improved project efficiency gained from repetition of individual tasks (Badiru, 1993). Project team members learn by executing a task which

results in improved performance in succeeding tasks. Typically, improved performance is in the form of a reduction in task times, project cost savings, and reduced project duration. The accumulated learning represents the knowledge generated during the implementation of a project that is expected to be transferable to other projects. A variety of methods to transfer knowledge have been suggested that include personnel movement (Almeida and Kogut, 1999), personnel observation (Nonaka, 1991), technology transfer, alliances, training, patents and publications (Darr et al., 1995; Appleyard, 1996).

Each time a new project launches, learning does not necessarily commence from the beginning again. Project team members can transfer previous skills and knowledge to new operations. However, for learning to have a general impact, it must spread quickly and efficiently using appropriate incentive mechanisms (Garvin, 1993). In addition, Koskinen et al. (2003) suggest that tacit knowledge is a critical part of project work and can be shared and utilized through language, trust, and proximity of the members of a project team. In fact, team members may be reassigned to other projects before the project completely shuts down. They recommend project close-out documents as a means of collecting the knowledge generated during a project, which can then be transferred to future projects. The point at which learning begins again depends on the degree of similarity of the new task and the previously performed tasks as well as how much of the knowledge is and can be transferred (Kotnour, 2000).

An integrating link at the organizational level that would group all parts of project management as a true field of organizational management is project management office (PMO) (Aubry et al., 2007). PMO is a response to the challenges facing project-driven organizations to develop more flexible organizational forms (Pettigrew, 2003). Nowadays many companies comply with the concept of project management office (PMO) which supports the implementation of the project management know how. The project management office is a professional entity that defines and maintains the standards of processes related to project management, within the organization. The PMO is responsible for managing the day-to-day activities of projects that are under its oversight (Rozenes and Vitner, 2009). Establishing a PMO is one way a company can formalize its project management methodology (Bates, 1998) and therefore stabilize its process as a starting point for continuous improvement. OPM focuses on the correlation between an organization's capabilities in the management of projects, programs and portfolios and its effectiveness in implementing strategy (PMI 2008). This means developing not only the facility to accomplish individual projects, important as this is, but also developing an overall organization that is oriented toward treating as many endeavors as possible as projects and managing them individually and collectively in such a way as to support the organization's strategic goals. Many writers relate project management performance and effectiveness to OPM competency and maturity (PMI 2008; Rad and Levin 2002; Fransis and Skulmoski 1999). Clearly, a PMO can furnish a project-based organization the structural support and leadership needed to institutionalize systematic approaches to continuous improvement (Crawford, 2002; Englund et al., 2003; Kendall and Rollins, 2003).

The case study and supporting research

The data that forms the basis for ideas explored in this paper have been derived from the case study developed from the experience of working for a management consulting company in Iran. The data was collected through extensive formal and informal discussions and structured interviews conducted over six months and were drawn from the project manager and project team members, all of whom have several years of experience in various projects to reflect upon. The case study formed within a capacity expansion of a Petro-chemical refinery in south of Iran. This project is being conducted by one of the leading contractors executing projects in Iranian oil and gas industry. The project was to be completed in 18 months appeared to be a straightforward construction project. However, more that 4 years passed and the project is still being executed. On the other words, the current status of the project is very behind the planned schedule and over the planned budget with considerable scope creeps. The corporate culture resists change. The contractor's organizational

knowledge of project management is poor and naïve. The organizational culture does not foster better relations with senior stakeholders and external customers. There is no culture of always being honest in reporting the results of the project execution to the senior stakeholders. The contractor does not treat the key stakeholders as partners. The project manager and the project team members are unable to operate effectively to meet the planned schedule, cost and scope. The relationship and communication among the project team members and the project stakeholders is weak. "Rogue" stakeholders have incited conflicts and caused troubles for project manager, these troubles come in the form of seeking to change the scope or technical direction of the project, reduce the funding, or requiring additional or different reporting.

These problems are similar to many other projects are being executed or have been executed in Iran and caused by many reasons and roots originated from the lack of organizational project management implementation. There is an obvious need for organizational change to cope with these challenges. As stated earlier, it was known that organizational culture played an important and underlying role in the change process. Change is inevitable in project-driven organizations. As such, excellent companies have come to the realization that competitive success can be achieved only if the organization has achieved a culture that promotes the necessary behavior. Corporate cultures cannot be changed overnight. Years are normally the time frame. Also, if as little as one executive refuses to support a potentially good project management culture, disaster can result.

Corporate cultures may take a long time to create and put into place, but can be torn down overnight. Corporate cultures for project management are based upon organizational behavior, not processes. Corporate cultures reflect the goals, beliefs, and aspirations of senior management. It may take years for the building blocks to be in place for a good culture to exist, but can be torn down quickly through the personal whims of one executive who refuses to support project management.
Project management cultures can exist within any organizational structure. The speed at which the culture matures, however, may be based upon the size of the company, the size and nature of the projects, and the type of customer, whether it be internal or external. Project management is a culture, not policies and procedures. As a result, it may not be possible to benchmark a project management culture. What works well in one company may not work equally well in another.

Good corporate cultures can also foster better relations with the customer, especially external clients. As an example, one company developed a culture of always being honest in reporting the results of testing accomplished for external customers. The customers, in turn, began treating the contractor as a partner, and routinely shared proprietary information so that the customers and the contractor could help each other out.

Furthermore, the organization does not have an effective system to document the lessons learned from the project histories and to transfer the knowledge quickly and efficiently through out the organization. The reason for this deficiency is the lack of support from senior management. The senior management does not know the benefits of the lessons learned from project histories and experiences. The knowledge gained from previous experience as well as benchmarking against the competitors, should be saved in project repository and effectively disseminated among project team members. Developing a project history requires the management of the large volume of information generated while project is being executed, and the identification and classification of information that may be of use on future projects. It is often recommended that this should be part of project debriefing; however, experience shows that this is often not sufficient to provide and record useful information for future use. The lack of interest of the project team in participating in project debriefing further aggravates the problem. The end result is that there is very little that is carried forward from current project that can be used in the future projects. In practice, most of the knowledge carried from one project to other remains tacit, often unspoken, and certainly not documented. At the very least, the organization should conduct project debriefings, analyzing the project's performance against planned results. Candidly answering a series of questions about what went right (and wrong) and why is a good starting point for assessment. Project debriefings must be candid to be meaningful. This information should be shared broadly, without recriminations. These debriefing assessments may trigger action items for project management methodology improvements. Project debriefing questions are listed below:

(1) Project performance against objectives:
- Was the primary objective met? If not, why not?
- Were the secondary benefits accomplished? If not, why not?
- Did the objectives change during the project? How? Why?

(2) Project performance against schedule and budget:
- Did the project produce the desired deliverables? If not, why not?
- Did the project finish on time? If not, why not?
- Did the project finish within budget? If not, why not?

(3) Process performance:
- What aspects of the project went well? Why?
- What aspects of the project could have gone better? How?
- In hindsight, what could have been done differently to improve the work?
- What was learned from this project that could be applied to future efforts?
- What skills or experience were gained by project team members?

Ideally, this information-as well as other project documents would be retained in a project repository, a form of organizational memory. This information and knowledge form previous projects stored in project histories and can be used when preparing a tender bid for a new project. To assess the feasibility of making a tender bid, a good understanding of the project is required based upon previous organization experience and knowledge. This will extend the usefulness of the assessment and provide a longer-lasting basis for continuous improvement.

A key factor is the support of senior management, and the project histories need to be aligned with strategic and business philosophy like knowledge management.

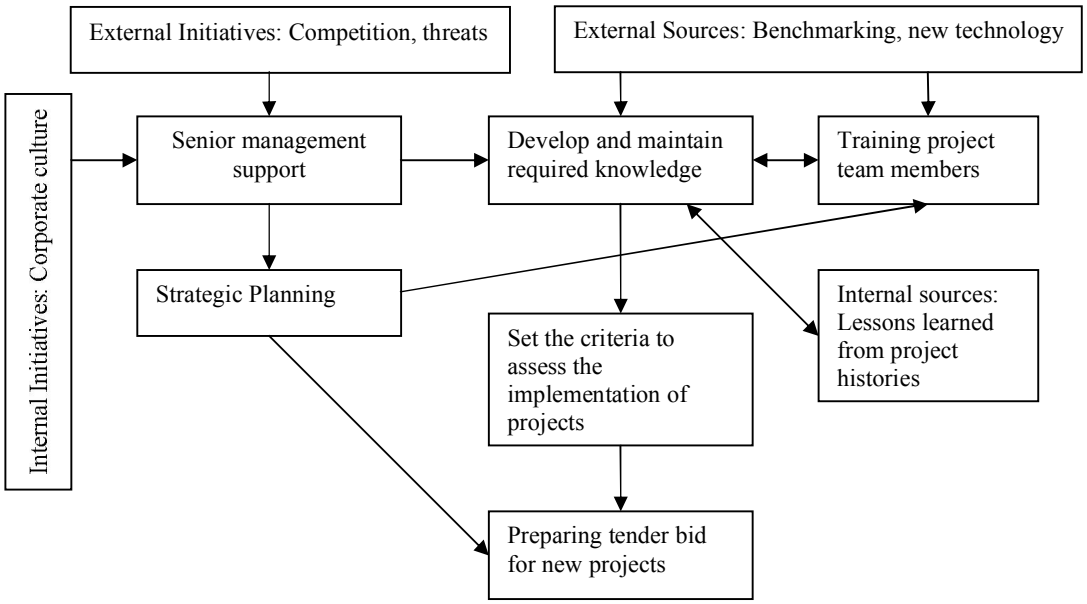

Figure (1): Integrated knowledge management, organizational learning and project assessment model

The benefits of project histories are significant, and are very clear in the minds of the people who want to use them. However, the project history users have little influence over the project team members who are essential for the creation of project histories, but have very different priorities. The value of knowledge management is that it provides senior management with a rationale to support the creation and maintenance of repositories of project histories. These repositories will contain the lessons learnt and the unique problem handling techniques devised by the project team. Future projects can then avoid re-inventing the wheel, thus saving time and resources. As depicted in Figure (1), attaching the context of knowledge management to the scenario of project histories will give these endeavors a new vigor and a convincing rationale for both senior management and project team.

In this case study, the transformation of knowledge, processes and technology together with details of past projects, must be used to create and maintain a repository of project histories. To make this happen, the learning framework must be built to foster the culture of learning within the entire organization. The learning framework should be expanded in three dimensions:

- Identification of learning goals within the organization
- Development of learning approaches and motivation systems to enhance organizational learning
- Development of evaluation systems for both self and objective evaluation.

The development stage should be aiming to set up the structure of learning framework for organization to enhance its learning and establish the culture of cooperative learning.

Learning embraces the acquisition of existing and the development of new knowledge, attitudes and skills, the application of knowledge, attitudes and skills in existing or new contexts, with the improvement purpose to performance (Yeo, 2002). In today's work environment knowledge is a key asset, which is created by learning. As such, managers have an important obligation to cultivate and utilize it across projects. Knowledge learned across projects. Learning teams acquire knowledge through projects and experiences, and bring along the learned knowledge to new projects. Infrastructure for learning and facilitations are vital for the learning to happen and make it as part of the project. Knowledge sharing across the organization must be emphasized within the concept of inter-project learning, thus technology tools and human resources support aimed at sharing knowledge are essential for this type of learning to occur during the project. Within a project, knowledge is created and shared by focusing on tasks, which support the delivery of the project by solving the problems identified during the project. Learning is taken place through the discussions between project team members as to complete the tasks.

Project team members, who were grouped according to their specific functions, must be assigned with specific tasks and evaluated with reference to predefined performance goals or expectations. Apart from these performance goals which must be set by the company, individuals also must have their individual learning goals. As the project being processed, team members are facilitated by the project tasks, from which their job knowledge can be inspired and enhanced. Moreover, individual learning is expected to happen within the team for members to fulfill the performance goals required. Mutual benefits can be achieved through such cohesive relationship.

The serious problem facing this contractor is how to make sure that critical information is known throughout the organization. Intranet lessons-learned databases would be one way to share information. However, a better way might be for the project management office (PMO) to take the lead in preparing lessons-learned case studies at the end of each project. Establishing a PMO is one way a company can formalize its project management methodology (Bates, 1998) and therefore stabilize its process as a starting point for continuous improvement. As stated earlier, the PMO could facilitate project debriefings, develop project templates and maintain project archives. It could also serve as the contact point for customer surveys, using customer feedback as a basis for continuous improvement (and reinforcing the organization's focus on the customer). A PMO can furnish a project-based organization the structural support and leadership needed to institutionalize systematic approaches to continuous improvement.

This company should formalize its project management processes by establishing a PMO. As a center of excellence in project management, the PMO should cope with the following issues:

- Develops, illuminates and manages the scope of the project, describes contract deliverables and achieves targeted outcomes
- Ensure project requirements are achieved in a timely fashion and within planned budget
- Selects project team, identifies needed resources, assigns responsibilities and develops timeframes to facilitate successful completion of project activities and deliverables
- Confirms compatibility and consistency with the organization's existing standards
- Performs cost/benefit analysis of tasks and initiatives
- Identify potential risks and uncertainties, performs qualitative and quantitative risk analysis, and develop risk response plan for the entire project.

One of the major responsibilities of a PMO might be benchmarking which requires the use of experienced project managers. The personnel assigned must know what to look for, what questions to ask, the ability to recognize a good fit with the company, how to evaluate the data, and what recommendations to make. Benchmarking is directly related to strategic planning for project management and can have a pronounced effect on the corporate bottom line based on how quickly the changes are implemented.

Another task that can be assigned to the PMO is identifying the need for training project team members. As we discussed earlier, training is one of the fastest ways to build project management knowledge in a company and, second, that training should be conducted for the benefit of the corporate bottom line through enhanced efficiency and effectiveness. Companies are realizing that the speed by which the benefits of project management can be achieved is accelerated through proper training.

Identifying the need for training has become somewhat easier in the past ten years because of published case studies on the benefits of project management training. The benefits can be classified according to quantitative and qualitative benefits.

The quantitative results include:

- Shorter product development time
- Faster, higher quality decisions
- Lower costs
- Higher profit margins
- Fewer people needed
- Reduction in paperwork
- Improved quality and reliability
- Lower turnover of personnel
- Quicker "best practices" implementation.

Qualitative results include:

- Better visibility and focus on results
- Better coordination
- Higher morale
- Accelerated development of managers
- Better control
- Better customer relations
- Better functional support
- Fewer conflicts requiring senior management involvement.

In this case, the project management office might be a good starting point for building and maintaining alliances with key stakeholders. The PMO personnel should have the Ability to communicate (verbally and in writing) effectively with stakeholders and senior business leadership of

departments and agencies participating in the project. Partnerships with key stakeholders must be built and nurtured, and that requires time. However, the project management office's activities should be designed to benefit the entire company, and giving the project management office sponsorship responsibility may create a conflict of interest for project office personnel. Hence the PMO personnel should be able to resolve conflicts and solve problems.

Given the fact that the project management office is a repository of project management intellectual property, the project management office may be in the best position to identify continuous improvement opportunities. The project management office should not have unilateral authority for implementing the changes, but rather the ability to recommend changes. The project office continuous improvement opportunities can be evaluated by a strategic policy board or executive steering committee. As a starting point, continuous improvement opportunities may be classified as illustrated in Figure (2). Typical activities in each category might include:

Existing process improvements:

- Integration of new or updated software
- Easier use and application of existing tools
- Better customer/contractor interfacing
- Convincing other internal organizations to use the project management methodology

Integrated processes:

- Integrating other systems, such as risk and change management, into the project management system
- Integrating other corporate databases into an integrated intranet system available to project team members
- Integrating, or making more compatible, customer and contractor databases with the company's database

Cultural issues:

- Better management of required changes in organizational behavior
- Overcoming cultural barriers

Benchmarking:

- Improvements in the benchmarking process
- Increasing the number of benchmarking partners

Managerial issues:

- Improvements in project sponsorship
- Improvements in communications management with stakeholders
- Projections of future resource skill levels versus existing capabilities

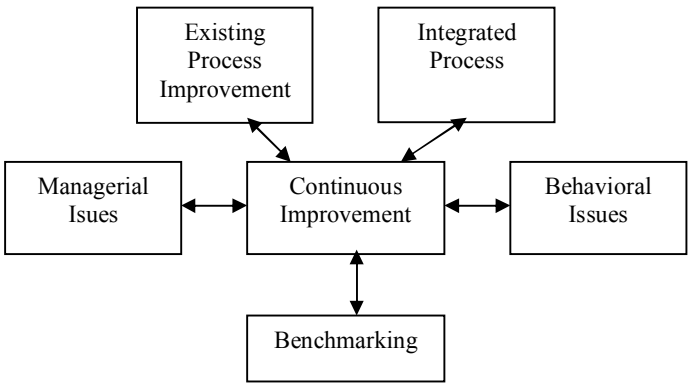

Figure (2): Factors to consider for continuous improvement

Of all of the activities assigned to a project management office, the most important activity in the eyes of senior management could very well be capacity planning. For executives to fulfill their responsibility as architects of the corporate strategic plan, they must know how much additional work the organization can take on, when, and where, without excessive burdening of the existing labor pool. The project management office must work closely with senior management on all activities related to portfolio management and project selection. Strategic timing, which is the process of deciding which projects to work on and when, is a critical component of strategic planning.

Senior management could "surf" the company intranet on an as-needed basis to view the status of an individual project without requiring personal contact with the team. But to satisfy the requirements for strategic timing, all projects would need to be combined into a single database that identifies the following:

- Resources committed per time period and per functional area
- Total resource pool per functional area
- Available resources per time period per functional area

There may be some argument as to whether control of this database should fall under the administration of the project management office. The author believes that this should be a project management office responsibility because:

- The data would be needed by the project management office to support strategic planning efforts and project portfolio management
- The data would be needed by the project management office to determine realistic timing and costs to support competitive bidding efforts
- The project management office may be delegated the responsibility to determine resource skills required to undertake additional work
- The data will be needed by the project management office for upgrades and enhancements to this database and other impacted databases
- The data may be necessary to perform feasibility studies and cost-benefit analysis.

As a digest of our discussion, an integrating part of organizational project management, PMO can be performed some operative tasks relating to investment controls, cost variations, and payment transactions. For each activity placed under the auspices of the project management office, there may appear strong resistances that initially view removing this activity from their functional area as a threat to their power and authority.

The basic functions proposed for the Corporate PMO are related to the following:

- Strategic planning to determine where the company wishes to be in the future and how to plan to get there
- To be a link between the projects and the company's strategic plans by participating in project portfolio management
- To improve the maturity of project management in the company by the development and updating of the methodology, personnel coaching and training
- To benchmark the organizational project management methodology against the other project-driven companies within or outside the country
- To evaluate the continuous improvement opportunities basis on the current condition of the company in the industry and the maturity of the project management level
- To evaluate and incorporate an adequate information system technology
- To provide expert assistance to the project managers and to the project teams
- To perform assessments and audits of the projects
- To register and centralize project information and lessons learned
- To transfer the lessons learned and project close-out documents to the new project teams
- To promote project management as a fundamental core competency in the company

Conclusion and managerial implications

It is believed that advocating of organizational project management implementation would increase the project performance. The Iranian organizations begin to recognize the favorable effect that project management has on profitability, emphasis is placed upon achieving professionalism in project management. The analysis presented here makes several contributions to the study of organizational project management in Iranian companies. It has presented a case of an Iranian leading contractor in oil and gas industry. The investigation was conducted though several discussions and structured interviews with senior managers and project team members. Conclusions broadly endorse the absence of organizational project management within the company. The results are pragmatic, exposing weaknesses at a very detailed level that enable improvement plans to be targeted precisely. The solutions presented are both valuable and cost effective and lead to enhanced project management effectiveness and performance. It confirms that the organizational resistance against implementation of project management is strong. This resistance and tension comes from the organizational culture and lack of the senior management support. Hence, the organizational culture is the most fundamental factor needs to be changed. In order to have continuous performance improvement, the company should pay strong attention to the organizational learning, strategic planning, benchmarking against competitors, and establishing a project management office (PMO). The research argues that embedment of PMO in the organization can drive the company toward higher maturity levels and excellence in organizational project management. Practically it has been proven that establishment of a PMO as a centre of excellence for project management results in significant project performance improvements.

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