Project Management Paramount Practices to Intensification Project Accomplishment

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Abstract
Utilizing good project management practices has become one of the key differentiators in delivering successful information technology projects. Kerzner (2001) defines project management as "the planning, organizing, directing, and controlling of company resources for a relatively short-term objective that has been established to complete specific goals and objectives" (p. 4). The field of project management has seen explosive growth in the amount of individuals holding a job title such as project manager, in the amount of research being conducted, and in the amount of topics and articles being published. This paper explores the reasons for this growth, the reasons why project management has become so important to the on-going success of IT projects and thus the success of organizations and what future directions the field of project management will travel.

Keywords: Capability Maturity Model Integrated (CMMI, Project, Project Management, Project Management Methodology, Project Management Maturity Model, Project Management Office

1.0 INTRODUCTION

In 1995, a study entitled "CHAOS" was conducted by the Standish Group. The study surveyed 365 information technology (IT) executive managers in the United States who managed more than 8,000 IT application projects. The sample contained small, medium, and large companies across several industry segments including banking, securities, manufacturing, and retail, wholesale, health care, insurance, and local, state, and federal organizations. The Standish Group also conducted focus group sessions and numerous personal interviews to provide a qualitative background for the survey results. The results of the study showed, as the title of the study indicates, that IT projects in the United States were in total disarray (see Table 1).

"A huge portion of the more than $250 billion spent annually on IT application development is wasted because companies fail to utilize effective project management practices." Average cost overruns were 185%, average time overruns were 222%, only 16.2% of projects were counted as successful and the projects were only delivering 61% of the desired features. Successful projects were defined as meeting all project objectives on time and on budget. The study concluded that project management was one of the top catalysts to ameliorate these statistics. Wilder & Davis (1998) agreed with the CHAOS study stating that poor project management is a major contributing factor leading to failed IT projects.

The Standish Group repeated the study in 2001 entitled "Extreme Chaos" and observed some noteworthy improvements (see Table 1). Successful projects had increased from 16.2% to 28%, and average time overruns had diminished from 222% to 63%; likewise average cost overruns went from 185% to 45% and delivery of required features rose from 61% of the total to 67%. The study listed the following items as contributors to the improvements in IT project results: Improved project management, Better development tools, Reduction in hardware and software cost, Better management processes.

One of the major reasons for the improvements, mentioned in the CHAOS study, was attributed to better project management practices and better-trained project managers. When you look at how these distressing statistics were improved and read about some of the tremendous project disasters (Bailey, 1996; Gibbs, 1994; Lucas, 1995), they demonstrate how important project management has become. The importance of project management to today's organization continues to increase. Schwalbe (2004) reports that the U.S. spends $2.3 trillion on projects every year, an amount equal to one-quarter of the nation's gross domestic product. All nations combined spend nearly $10 trillion of its $40.7 trillion gross product on projects of all kinds. More than half a million new IT application projects were started in 2001, up from 300,000 in 2000 (The Standish Group, 2001).

Table 1. Standish Group Study Results

	1995	2001
Successful IT Projects	16.2%	28%

Percent of projects cancelled	31%	23%
Average time overruns	222%	63%
Average Cost overruns	185%	45%
Delivery of required features	61%	67%

We can see from these statistics that project management is and will continue to be important to the success of today's organization. The next section outlines three key "best practices" that need to be adopted by organizations to allow project management to reach a higher level of success.

1.1 Best Practices

This section of the article lists and describes three project management best practices: a project management office, establishing a project management methodology, and finding or making good project managers. The top three best practices were chosen based on the literature review, personal interviews, and the author's 20 plus years of IT project management experience. The literature review consisted of journal articles, topics, and case studies (Cai et al., 2004; Crawford, 2002; Johnson et al., 2001; Kerzner, 2003; McConnell, 1998; Murch, 2001; Perks, 2003; TechRepublic, 2001; The Standish Group, 2001; Visitacion, 2003). Three large organizations with established project management practices were used to conduct the personal interviews. The interviews were done in face-to-face sessions held at the respective organization's facility. Two to three project managers with an average of 15 years of project management experience each were interviewed at each organization. The interviews were designed to serve two purposes: one, to substantiate the information that was gathered during the literature review and, secondly, to generate new ideas. The three organizations, two large pharmaceutical companies and a large cardiovascular medical product company asked that their names not be mentioned.

Establish a Project Management Office (PMO): There are several variations that exist on what a PMO is; depending on what role a PMO plays in an organization and what level it operates at. A PMO is the "administrative mechanism by which a focal point is provided for organizational project management activities" (Rad, 2001). In some corporations, a PMO functions as a support organization that caters to multiple projects with administrative, time tracking, reporting, and scheduling services, while in some others it is merely responsible for business and technical management of a specific contract or program only. Depending on the maturity and capability of a PMO, it can serve different functions. Crawford (2002) discusses how PMOs can operate at three different levels. Level 1, or the individual project level, helps add value to individual projects by defining basic processes that can then be adopted by other projects. At Level 2, the PMO helps to diffuse the processes and uniform methodology to other projects and divisions. Level 3, the corporate level, has PMOs managing the entire collection of the organization's projects and reviewing their goals, history, and progress.

PMOs can help improve project success rates and establish standard project management practices throughout the organization (Kerzner, 2003). However, there is no uniform approach for success of a PMO. Each PMO has to conform to the specific company's culture. Robert Handler, vice-president of Meta Group's enterprise planning and architecture strategy service, feels that a PMO has to be "instituted in a way that doesn't fly in the face of the culture" (Santosus, 2003). If done correctly, a PMO can offer more accurate schedule estimates, improve stakeholder satisfaction levels and facilitate higher employee productivity rates. Even though many organizations have been moving from a functional organizational structure to a matrix or projectized structure in recent times, the PMO might represent a revolutionary change. Crawford (2002) states that, "reorganizing a company's work around projects is the equivalent of moving from a feudal system to participatory democracy."

The efficacy of a PMO has been questioned by several organizational decision-makers. As with any new technology or concept, there are proponents and detractors. There are those who dismiss the concept of a PMO as a fad and regard it with a high level of distrust. Tom Pohlman, an analyst at Forrester Research Group and author of the report How Companies Govern Their IT Spending feels that too many PMOs function as "process cops and report compilers for executive teams and often lose sight of what they are supposed to be doing — making sure projects are running effectively" (Hoffman, 2003). "People think about implementing a project office and they usually think bureaucracy paperwork and increased costs" (Bernstein, 2000).

The current concept of a PMO, which now has the responsibility for maintaining all project knowledge (Kerzner, 2003), evolved as recently as 2001 and hence it is still in its fetal stage. A study conducted by the Forrester group, based on telephone interviews with 704 North American IT decision-makers between late April and June of 2003 reported that 67% of the respondents said that their organizations have one or more PMOs, up from 53% the

previous year. Gartner group has predicted that, "through 2004 companies that fail to establish a project office will experience twice as many major project delays, overruns, and cancellations as will companies with a project office in place."

Kerzner (2003) lists the following benefits of using a PMO: Standardization of operations, Company rather than silo decision-making; Better capacity planning (i.e., resource allocations), Quicker access to higher quality information, Elimination or reduction of company silos, More efficient and effective operations, Less need for restructuring, Fewer meetings that rob executives of valuable time, More realistic prioritization of work, Development of future general managers

2.0 PROJECT MANAGEMENT METHODOLOGY

Achieving project management maturity and increased project success generally comes from having defined re-peatable processes that are used on every project. These repetitive processes are referred to as the project management methodology (Kerzner, 2003). In a recent PM Network article, Jeff Sterba, Chairman, President and CEO, PNM Resources Inc., stated that they implemented project management methodologies in2001 to manage enterprise project efforts. The tools and processes they developed allowed them to meet their goals on time by eliminating do-over work and controlling last-minute changes. "Now, we have trained more than 1,400 employees in project management skills, and these cross-functional team members help ensure success in all of our project management initiatives, saving us valuable resources and improving our productivity" (p. 31). In this same article; Tony Salvaggio, President, Computer Aid Inc., is quoted as saying "I saw that we could have a dramatic competitive advantage if we implemented advanced project management for all our activities…It keeps us from making monstrous mistakes and also keeps us from making the same mistakes repeatedly" (p. 32).

Www.dictionary.com defines a methodology as: a body of practices, procedures, and rules used by those who work in a discipline or engage in an inquiry; a set of working methods. Murch (2001) defines four key components: **Guidelines -** defined flexible steps necessary for successful application development, **Techniques -** detailed process descriptions that support the activities throughout the product development lifecycle, **Tools -** project management tools used in support of the methodology, **Templates -** Reusable documents and checklists. The need for adopting a project management methodology is clearly established, what remains is which one and how.

To lower cost, reduce resource requirements for support, minimize paperwork, and eliminate duplicate effort an organization should maintain and support a single methodology across the organization (Kerzner, 2003). Many methodologies exist either commercially or as a byproduct of hiring a consulting company that has its own. Murch (2001, p. 143) offers several examples: Process Engineer from Platinum, Inc., SUMMIT from Price Waterhouse Coopers, METHOD/1 from Andersen Consulting, and Architect from JMC, Inc. Many organizations have chosen to develop their own methodology starting with a defined, complete body of knowledge and adapting this to their organization. All three of the organizations interviewed for this article had their own project management methodology, which was based on some established principles and methods. The path they each used to evolve from a standard body of knowledge to a tailored methodology was very similar:

1. Current assessment of projects, organizational culture and identification of control metrics
2. Obtain senior management commitment and executive champion
3. Training for the entire organization
4. Don't start from scratch, base it on some proven tools and techniques
5. Start with a light or less complex methodology and grow it as you learn
6. Integrate the project management methodology with other management processes.
7. Review lessons learned and adapt.

The Project Management Institute (PMI) describes their body of knowledge in a document called A Guide to the Project Management Body of Knowledge (PMBOK). The PMBOK defines 5 process groups (initiating, planning, executing, controlling, and closing), which overlap over time during the project, and nine knowledge areas (management of integration, scope, time cost, quality, human resources, procurement, risk, and communications). In the U.K. there is PRINCE2, a process-based approach for project management providing a customizable and scaleable method for the management of all types of projects. PRINCE2 stands for (PRojects IN Controlled Environments) and consists of seven major processes: starting up a project, initiating a project,managing stage boundaries, controlling a stage, managing product delivery, planning, and closing a project (Prince2, 2004). IEEE/EIA 12207 is another body ofknowl-edge, which describes the major component processes of a complete software life cycle and the high-level relations that govern their interactions. This standard covers the life cycle of software from conceptualization of ideas through retirement. IEEE/EIA 12207 describes 17 processes that define the software development life cycle starting

at initial concept, through requirements analysis, design, coding, testing, installation, operation, maintenance, and retirement (Gray, 2000).

3.0 FINDING OR MAKING GOOD PROJECT MANAGERS

As organizations are becoming more "project" based (Crawford, 2002), the current number of IT project management positions is creating demand for experienced competent project managers. It is important for these organizations to place individuals in a project manager role that have the skills to be successful. As demonstrated earlier in this article from the CHAOS studies done by The Standish Group, project management and better trained project managers are essential to help increase the success rates of IT projects. A project manager must have skills in addition to the basics of project management to succeed. According to David Foote, managing partner at Foote Partners LLC in New Canaan, Connecticut, "It requires all these soft skills that have to do with getting things that you want (and) adjudicating issues between people, managers, egos and agendas. It's how to get a job done without annoying people" (Melymuka, 2000). These soft skills can include basic leadership and team building abilities that are needed for the team to complete the designated project

Finding the right people to fill the role of project manager has become a major problem for most organizations. Many of these "soft skills" are thought to be innate and may not be teachable. Organizations, in trying to find potential project managers from inside, have turned to personality tests, such as the Myers-Briggs Type Indicator or The Keirsey Temperament Sorter. "The MBTI descriptions of personality did what no other personality instrument has done before, be able to give most people some insight into themselves and others" (Viawest, 2003). Using these evaluations, organizations can examine a person based on the skills required to be a successful project manager and decide whether to put them in that role, whether they will need further training to be successful in a project manager role, or whether they would be best placed in a different position.

4.0 FUTURE TRENDS

Many key trends have emerged since the turn of the twenty-first century and will continue to guide project management in the near future. Listed below are several key trends that organizational leaders must pay close attention to.

Strategic outsourcing - many firms are finding a positive ROI when looking outside of the United States to service many parts of their development efforts. These relationships will create a need for new project management skills in the areas of managing geographically remote teams and diverse culture issues.

Product and service life-cycles becoming shorter -building solutions faster with higher quality for lower cost will lead to more complex projects to manage.

Ever increasing rate of technology discovery -technology continues to mature at faster and faster rates adding more technology related risk to IT projects.

The increasing role of the Internet - The Internet has softened the borders of our organizations, creating new and diverse projects and project teams, creating the need for project managers to master new tools and technique.

Sophistication of end users - Users of today's technology are getting more sophisticated in their use of technology and more demanding forcing project leaders to be more technology knowledgeable

Increasing use of maturity models - Organizations are beginning to use maturity models to assess themselves on improvements in their project management practices. Models such as Capability Maturity Model Integrated (CMMI) from SEI or the new Organizational Project Management Maturity Model (OPM3) from PMI. Project leaders will be held accountable for more than just the successful completion of a single project – are they moving the organization up the maturity scale? (More information about these maturity models can be found at the relevant Internet sites: www.sei.com and www.pmi.com).

5.0 CONCLUSION

This article has established that better project management practices are essential to all organizations that wish to increase the success rate of current and future projects. The number of IT projects is only increasing and requiring more and better-trained project managers. The success rate of IT projects has improved, although much more is needed. Establishing a PMO, although not a silver-bullet, holds great promise in improving repeatable successes. The tools and techniques needed to perform good project management practices have existed for some time; the issue has been and continues to be getting organizations to recognize the benefits to building and using a single sound methodology and training their people to become better project leaders.

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[1] PRINCE2: PRoject IN Controlled Environment is a structured method for effective project management. The method was first established in 1989 by CCTA (the Central Computer and Telecommunications Agency).

[2] IIL: International Institute of Learning: http://www.iil.com