Two Birds! A Simple Approach to Improving Program/Project Management Practice and Governance

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ABSTRACT

Project management (PM) is implemented perfectly on few programs and projects, and in few organizations. The continued high rate of project problems and even outright project failures suggest improvement is needed in many organizations. The causes of most plan deviations are well known and well documented. Serious PM problems can also be attributed to lack of top management attention or knowledge (aka weak PM governance).

With the increased complexity of many modern projects, few managers and individuals can identify all internal weaknesses. This paper shows that independent assessments and/or perspectives are needed at various points in the life cycle of every large program or project to ensure that important issues are not overlooked or ignored. Just as independent cost estimates have long been recognized as invaluable for checking the validity of a project cost estimate, so are periodic independent reviews needed to check the overall health of a program or project.

This paper reflects the Authors’ recent experience as advisors to government agencies, national laboratories, global programs and major corporations. It outlines their successful model for conducting short independent reviews, and shows how such reviews can help organizations improve both basic Program and Project Management practice and governance.

The “Two Birds” in the title refers to the context of the paper: how to address practice and governance in a single review (killing two birds with one stone!); and the use of two expert advisors to conduct short assessments.
PROJECT MANAGEMENT – NOT AS EASY AS IT LOOKS

Project management may not be rocket science, but it is often much more difficult than many people, including executives and other stakeholders, realize.

Failure Rates Stay the Same

Discussion of project success and failures is a natural aspect of project management. After all, don’t we implement professional project management in order to increase the probability of project success? Research (Cortex 2015) has revealed that project failure rates appear to have remained relatively unchanged for many years. Beginning around 1995, several well-publicized reports described failure rates on major IT projects, including the infamous Chaos report. Most reports indicate average project failure rates exceeding 50%.

According to McKinsey (2012) half of all large IT projects—defined as those with initial price tags exceeding $15 million—still massively blow their budgets. On average, they run 45 percent over budget and 7 percent over time, while delivering 56 percent less value than predicted. Software projects run the highest risk of cost and schedule overruns.

PMI (2014) indicated that “only 56 percent of strategic initiatives meet their original goals and business intent… nearly one half of strategic initiatives (44 percent) are reported as unsuccessful…” According to recent research by the Association for Project Management (APM 2015) in the UK, “nearly 80% of projects fail to meet their planned objectives as a result of gaps in good practice.”

Stretton (2015) authored a series of articles citing the statistics on project failures and calling for both better criteria for project success and more research into project outcomes in more industries.

Basic PM is not Easy!

Let us examine just four of the world’s leading PM standards. The Guide to the Project Management Body of Knowledge (PMBOK® Guide)(PMI 2013a), now in its 5th Edition and the basis for PMI’s widely adopted Project Management Professional (PMP®) certification, describes five process groups (initiating, planning, executing, monitoring and controlling, closing) and ten knowledge areas (project integration, scope, time, cost, quality, human resources, communications, risk, procurement and stakeholder management). Each of these general subject areas includes dozens of concepts, processes, activities, inputs, outputs and other considerations recommended for every project, knowledge that every project manager is supposed to know.
The Association for Project Management (APM), the United Kingdom’s national project management professional body, has published its Body of Knowledge (APM BOK) (2012), now in its 6th edition, that describes the context (organizational governance and settings), people (interpersonal skills and professionalism), delivery (integrative, scope, schedule, financial and cost, risk, quality and resource management) and interfaces (accounting, health and safety, human resource management, law, security, sustainability) aspects of projects and project management. Each of those topics includes definitions, processes, activities and other considerations.

The International Competence Baseline (2006) published by the International Project Management Association (IPMA), is the common framework document which all IPMA Member Associations and Certification Bodies abide by to ensure that consistent and harmonized standards are applied. As such, the majority of its content focuses on the description of the competence elements… IPMA’s approach to project management is broken down into 46 competence elements, covering the technical competence for PM (20 elements), the professional behavioral competence of PM personnel (15 elements) and the contextual competence, understanding of the context of the projects, programs and portfolios (11 elements).

The Electronic Industries Alliance standard EIA-748, Earned Value Management Systems, is used by the US Department of Defense (DoD) and other US government and contractor organizations for designing, implementing and using mature program and project management systems. It is the basis for earned value management (EVM) in many countries and industries. The 32 guidelines described in EIA-748 provide a consistent basis to assist the government and the contractor in implementing and maintaining acceptable EVM systems. Compliance with an organization’s implementation of EIA-748 and an EVMS validation are required for DoD cost or incentive contracts and agreements valued at or greater than $50M. Knowledge, discipline and demonstrated capabilities associated with each of the 32 guidelines are required.

In addition to these, there are dozens of other international, national, industry-specific and organizational standards, guidelines and directives related to managing programs and projects. All differ in some ways; each has a specific set of definitions and terms; each is followed or required by different organizations. It should be no surprise that in most organizations, project managers are among the most educated, knowledgeable and respected individuals.
Unique Projects increase Uncertainty

PMI defines a project as “a temporary group activity designed to produce a unique product, service or result” (PMI 2015). APM defines a project as “a unique, transient endeavour, undertaken to achieve planned objectives, which could be defined in terms of outputs, outcomes or benefits”. While there is sufficient similarity between projects for general management approaches to be formulated, there are differences at the detail level which makes each project unique. This “uniqueness” can cause many difficulties. Literally every aspect of a project could be unique, including all of the issues discussed in the standards mentioned above. For example, the lifecycle, the location, the people involved, the technology, the supply chain, the customers and stakeholders, the timing or one or more other factors could be different from the last project undertaken, or any other project for that matter. Uniqueness creates the need for new learning curves, new knowledge, new plans, new communication requirements, new teambuilding processes, new leadership considerations and/or many other possible actions.

Increasing Complexity

According to PMI (2013d), “Organizations that undertake ambitious programs and projects have always encountered the unforeseeable, the unexpected, and the complicated. However, today’s world of expanding globalization, rapid pace of change, intense competition, and continual innovation in a “do more with less” market environment is forcing organizations to recognize that their strategies—and the projects executed to implement them—are becoming increasingly complex.”

PMI (2013d) also claim that the leading factors associated with complexity in projects are identified as: multiple stakeholders; ambiguity of project features, resources, phases, etc.; significant political/authority influences; unique project features, phases, resources, etc.; dynamic (changing) project governance; significant external influences; use of technology that is new to the organization; significant internal interpersonal or social influences; highly regulated environment; and project duration exceeding the cycle of relevant technologies.

PMI (2014a) noted that “complexity is a characteristic of a program or project or its environment that is difficult to manage due to human behavior, system behavior, and ambiguity. Complexity is not directly proportional to the size of a program or project; small programs and projects may contain substantial complexity. Complexity in programs and projects has always existed…However, globalization, new technologies, and fragmented supply chains have significantly increased and compounded the complexity of what practitioners are being asked to manage.”
Size Matters – Major Projects Fail More Often

According to the UK’s Major Projects Association (2015), “A major project is one that may have singly or in combination the following: (1) High monetary value; (2) Time and schedule urgency; (3) Organisational and managerial complexity – the extent to which there are a significant number of managerial interfaces to be managed; and/or a significant number of hierarchical layers either within the organisation or project structure to be managed, and/or significant number of stakeholders to be managed; or (4) Technological complexity or high level of innovation.”

Major projects are normally much bigger than other projects. The largest, often called “megaprojects”, can cost billions of dollars and have multi-year schedules. These large projects multiply the issues and difficulties of smaller projects, often many times over. For example, the scope of work can be many times larger with much more work needed, with a work breakdown structure of many levels, hundreds of work packages, and schedules with thousands of activities. Supply chains can grow to hundreds of suppliers and contractors, located around the world. Project teams can grow from a few dozen to hundreds, even thousands of people. And more of everything increases complexity and risk.

According to Flyvbjerg, (2014), “Megaprojects are large-scale, complex ventures that typically cost US$1 billion or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people…Megaprojects are a completely different breed of project in terms of their level of aspiration, lead times, complexity and stakeholder involvement…Megaprojects are increasingly used as the preferred delivery model for goods and services across a range of businesses and sectors…” In his view, nine out of ten such projects have significant cost overruns and many other problems, for a wide variety of reasons. He even coined the phrase, the “iron law of megaprojects: over budget, over time, over and over again”.

PROGRAMS & PORTFOLIOS – COMPOUNDING THE ISSUES

In recent years the terms multi-project, program and portfolio management have been used almost synonymously with PM. Planning and managing a single project can be complicated and difficult enough; managing multiple projects, a program or a portfolio of projects aligned with corporate strategy can take the issues to another level.
Multiple Projects – Multiple Problems

Many organizations have multiple projects, for example project-based organizations, service contractors, government agencies and product companies. Projects can be done in parallel or sequentially, but usually require some attention to enterprise PM systems and capabilities. If the same people are working on multiple projects, their lives become more complicated. If different people are working on different projects, then organizational complexity comes into play. In any case, the requirements and issues associated with managing individual projects are multiplied. The processes do not get easier.

Programs – More Money, More Stakeholders, More Headaches

In May 2006, PMI published its first Standard for Program Management which is now in its 3rd edition. According to PMI (2013b), a program is a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Program management is the centralized coordinated management of a program to achieve the program’s strategic objectives and benefits. It involves aligning multiple projects to achieve the program goals and allows for optimized or integrated cost, schedule and effort.

By definition, programs involve multiple projects, more closely aligned with strategies; involve high level stakeholders; and are usually larger, more complicated and more difficult than individual projects to manage.

Portfolios of Projects (and Programs) – Organizing the Complexity

According to PMI’s Standard for Portfolio Management (PMI 2013c), a portfolio is a collection of programs, projects or operations managed as a group to achieve strategic objectives. The portfolio components may not necessarily be interdependent or have related objectives; rather they are directly related to organizational strategy. An organization may have more than one portfolio, each addressing unique organizational strategies and objectives. Suffice it to say that portfolio management multiplies the issues associated with managing projects and programs, adding the complexity of aligning all with organizational strategies and plans. Portfolio management also deals with the highest range of stakeholders and other external factors affecting the organization.

P/PM GOVERNANCE

The APM’s guide to governance of project management (APM 2011), outlines 13 principles that can be summarized as follows:

(1) the board has ultimate responsibility;
the organization distinguishes between project and non-project activities;
roles and responsibilities are clearly defined;
every project has a sponsor, and governance processes are defined;
there is a clear relationship between organizational strategy and projects/portfolios;
every project has a plan and key decision points;
decision makers have sufficient authority, competence and resources;
project business cases are reliable;
independent reviews occur;
status reporting and escalation criteria are clearly defined;
culture supports honest reporting and continuous improvement;
stakeholders are engaged appropriately and honestly; and;
projects are closed in a timely manner.

In summary, governance assures that an appropriate chain of authority and responsibility is established all the way from the top of an organization to the project level that ensures alignment to organizational efforts; effective project planning, reporting and communication exist; qualified resources are employed; effective processes and systems are implemented; and appropriate reviews are undertaken.

INDEPENDENT REVIEWS

Independent reviews of program/project management capabilities, processes, systems and performance have been employed for decades. However, in recent years, their role in both good practice and good governance has grown.

Independent Oversight in Corporate Governance

The use of independent oversight in corporate governance in the United States has generally been implemented in two ways – the employment of independent directors and the requirement for annual independent financial audits. For all public corporations listed on the New York Stock Exchange or NASDAQ, the number of independent directors must outnumber “insiders” on the board of directors Independent Director (2015). Independent directors also often outnumber corporate officers on board committees related to audit, compensation, investment, nominations and risk.

According to the Sarbanes-Oxley Act of 2002, corporate financial audits must be prepared by independent accounting firms. There has been some criticism of the Act but it seems to have prevented further embarrassing failures such as the ENRON scandal (Deloitte 2006). Similar requirements are outlined in The UK Corporate Governance Code (FRA 2014).
Peer Reviews for Major Projects – an Emerging Requirement

Independent reviews, including formal “peer reviews” have also been common for large programs and projects for many years, ranging from project cost and schedule system “validation” reviews for defense programs to peer reviews for major US Department of Energy (DOE) projects, to key decision reviews on a wide range of infrastructure projects worldwide. In a report resulting from a 1998 review of the DOE’s major capital projects, a committee of distinguished US construction industry experts endorsed, among other things, the use of “special panels of experts to provide technical advice on complex or unusual issues” (DOE 1999).

The DOE now has a robust program for Independent External Reviews, Independent Cost Reviews and Independent Cost Estimates for major projects. That is supported by the Peer Review Guidelines published by the Project Management Working Group within DOE’s Energy Facilities Contractor Group (EFCOG 2011).

For many years the US Federal Transit Administration (FTA) within the Department of Transportation has used a PM oversight program to contract with independent engineering firms to review the project management readiness and capabilities of state transportation agencies on major projects funded by the US government. Approximately 1% of FTA funding is set aside each year for PM oversight (GAO 2000). Other US government agencies have implemented similar programs – all focused on P/PM reviews of major capital projects.

According to Flyvbjerg (2012) mega projects’ internal cost estimates, systems and management controls simply cannot be trusted. His seminal paper strongly advocates “taking the external view” in all cases for more reliable predictions of major project outcomes.

Independent Reviews for Programs, Portfolios and Smaller Projects

Independent reviews of major programs have occurred on a regular basis in defense, aerospace and several other sectors based on policies and practices similar to those for major projects. Independent reviews of smaller programs, projects and portfolios of programs and projects, however, have not been emphasized or discussed much in professional literature. This seems to be true even when the cumulative budgets of those smaller initiatives become quite significant, as was the case on a program with which the authors are familiar.

TWO BIRDS: A PRACTICAL APPROACH

Based on experience with National Nuclear Security Administration reviews since 2007 and independent P/PM assessments of moderately-sized programs and projects at four national laboratories, a simple approach for independent reviews of projects
and programs has been formulated. A similar P/PM assessment for a European nuclear power plant megaproject in 2014 and advisory assignments for several other US federal government agencies and the Japanese Ministry of Defense all show the value and impact of the approach advocated.

**Two Birds**

‘Two birds’ refers to the age-old adage of “killing two birds with one stone”, or accomplishing more than one thing at a time. In this instance, the two birds refers to ‘project practice’ and ‘project governance’. That is, during the reviews, experts can easily ask questions and identify issues associated with the planning and management of individual projects as well as the reporting, oversight and governance of the project or program involved.

‘Two birds’ also refers to the use of two very experienced P/PM experts who can review plans, processes, procedures and capabilities quickly by asking pointed questions. Experienced and knowledgeable experts can identify shortfalls, issues and risks quickly. Since most such experts will need to be “flown in” from other locations, the bird analogy refers to those two experts literally flying in, conducting their review and flying out again. The use of two experts ensures that the review is conducted effectively and efficiently, and that evaluations reflect more breadth than that of a single viewer.

**Two Birds Approach**

The following model has proven effective:

**Initial Review of 3-5 days** – An initial P/PM review is conducted consisting of review of documents, meetings with program/project team members, and interviews of various participants, including stakeholders. Program/project plans, status reports and other documents are reviewed; experience, training and qualifications of project personnel are considered; organizational support systems, functions and staff are assessed; internal and external stakeholders identified and discussed; and all weighed against global P/PM standards and good practices.

**Outbriefing** – A Microsoft PowerPoint® presentation is prepared for the program/project manager and her/his team including the following topics, in bullet format: Positive Observations; Potential Opportunities; Potential Concerns; Recommendations for Immediate Improvement; Long Term Considerations; Conclusions. Beginning with positive observations is critical as there are always many and such emphasis creates more willingness to hear about issues or weaknesses. The outbriefing occurs on the afternoon of the final day of the review.
Report – A report is then prepared and delivered within two weeks of the assessment. Based on contents of the outbriefing presentation, the report is a Microsoft Word® document with all presentation bullets fully explained. The report serves as the final record of the review and includes a list of documents reviewed and people interviewed (or who participated in review meetings).

Follow-up Review – A 2-3 day follow-up review is conducted within 3-6 months to assess implementation of recommendations from the initial review, to identify ongoing or new issues or concerns, and to document remaining suggestions for improvement. The follow-up review includes updated/new documents, interviews with key persons, and assessment of progress/status of each bullet in the initial report. An outbriefing is again provided to the program/project manager (and team, but this is up to the PM), normally in oral format since there is less time to prepare a formal presentation. A final report follows two weeks after the follow-up.

Two Birds Experience

In most cases, P/PM assessments have been requested by a responsible executive or customer who simply wanted confirmation that a program or projects was being properly managed. In one case, an assessment was requested by a department manager who requested a portfolio management review. Below are examples of some recent results:

Examples of Positive Observations: Strong internal executive support; good relations between project manager and customer; highly experienced and knowledgeable team members; mature support organizations; strong contracts; good schedules and scheduling capabilities; strong/effective internal communications; thorough understanding of project scope; good program management information system/tools; good work breakdown structure; good internal database and document control system; mature supporting enterprise PM system; good cooperation with other labs and federal agencies; strong corporate experience available.

Examples of Potential Issues/Concerns: Technical risks; security risks; resource planning; inadequate assessment of cost estimates; inadequate schedules; inadequate risk management; complexity not adequately considered; inadequate attention to project leadership/teamwork; conflicts in ownership of information; positive bias in plans, cost estimates and schedules; no formal stakeholder engagement/management process; weak (or little attention to) governance; new tools being implemented, but not yet fully operational; weak or no formal work authorization process; future budget uncertainties exacerbate planning.

Examples of Potential Opportunities: Increased collaboration with other program participants; customer reporting improvements; possible sharing of good
practices with other internal projects and programs; possible learning from other projects and programs; current stage of project (allows for more options/actions for positive change); grow special relations with one or more stakeholders; review other P/PM tools; templates for future projects/deployments; more stakeholder involvement in planning; project as corporate model for managing smaller projects.

Examples of Recommendations for Immediate Consideration: Prepare P/PM plan; projectize sub-projects; improve schedules with more team involvement; establish formal risk register and risk management plan; establish pilot project to test process; increase use of templates & checklists; raise project profile to gain access to resources; focus on data quality in reports; consider other tools; share internal progress reports with customer.

Examples of Long Term Considerations: Increase collaboration with other labs; identify staff training options; exchange lessons learned with other internal projects and programs; encourage corporate support for improving P/PM for small projects/programs; recognize project investment as capital asset & budget for replacement.

CONCLUSION

Experienced PMs know that project management is not as easy as it may appear. By its very nature, modern P/PM requires a great deal of knowledge, experience and competence. In addition to basic project considerations, uniqueness, complexity, size and other factors can further complicate the process. When multiple projects, programs and portfolios of programs and projects are considered, it becomes clear how many problems are not only possible but highly probable.

In addition to project management practice, the governance of P/PM has become recognized as a major factor affecting the success of projects, programs and organizations. New guidelines for P/PM governance parallel corporate governance and call for the use of more independent oversight. The trends towards more peer reviews by some organizations is a move in the right direction, however, too many projects still go without independent P/PM reviews.

Recent experience with conducting short, high-level reviews of both large and small programs and projects shows that a simple approach based on short reviews by two experienced experts, with an emphasis on identifying both good practices and major concerns, and recommendations for practical solutions is highly effective and provides excellent value for money. This approach is recommended for more organizations in order to identify potential improvements in both P/PM practice and governance. The Two Birds approach can be a practical solution in such cases.
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