

Challenges for the I.T. Project Manager

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In 1994, I started my career in project management. At the time, I was working at Hewlett-Packard as an HP3000 operating systems specialist and it appeared the HP3000s were finally heading towards the end of their support lifecycle¹. It appeared the time had come to move on to doing something different.

I took a project management fundamentals class and came away thinking, “Hey, there is a lot of similarity here to doing systems design!” My first impression was that there would probably be many fun, challenging, technical things to do. Creating the WBS would be similar to doing a top-down design for an application. Putting together the schedule, doing risk analysis, and putting together the cost baseline all have technical components and involve using some interesting tools. Project Management had the promise to be fun and involve some technical challenges.

Of course, I quickly learned there was a lot of familiar territory working with customers and doing planning, but very little of this would involve doing technical things or solving technical challenges. I learned that successful project management focuses on managing people: identifying all the key stakeholders, learning their expectations and setting expectations, managing teams, communicating with all the stakeholders and running meetings.

In the last fifteen years, there has been tremendous growth in PMI membership and in the number of PMPs. Most of this growth arises from the growth in the numbers of I.T. project managers. Many of these project managers have come from technical backgrounds, but ironically, the skills that made them successful in their technical careers are, for the most part, not the skills required for successful project management.

I think all new and prospective I.T. project managers should think carefully about the differences in the skill sets required for project management as opposed to I.T. jobs, before making this career change. Companies looking for project managers should also consider the differences.

¹ As it turns out, there is still a large base of HP3000 customers today!

Software engineers and I.T. specialists are often highly analytical types. They love difficult challenges, and have a mindset that drives them to seek out the most difficult challenges. They like logic and know they'll need clear, precise definitions in analyzing any problem. They are adept at sorting through large volumes of data and facts to arrive at their conclusions. They prefer their cold, objective world of facts and logic to the world of subjective opinion and uncertainty. Typically, I.T. personnel find long meetings quite unappealing and a waste of good time where they could be doing something useful like solving problems. They can be very impatient with bureaucratic, contractual, and administrative details; they can be impatient with sorting through the nuances and details of personalities and company politics. They wish solving these kinds of issues could be as algorithmic as solving a computer problem.

The challenge is: how can the analytic I.T. project manager prepare for dealing with the world of project management? How will the I.T. project manager approach some of the key areas of:

- Scope definition
- Communications management
- Managing teams
- Monitoring and controlling

Scope Definition

When projects fail, they usually fail at the beginning. Most often, failure starts with poor scope definition; key stakeholders may be left out of the process and a clear, precise, specific, measurable, bounded statement of the scope is not achieved. Often, incorrect assumptions are made and the customer and the project team do not have the same understanding of the project deliverables. This will mean tremendous risks for the project and put it in jeopardy of the dreaded scope creep, cost overruns and schedule delays.

The technically minded, analytic project manager may understand the importance of getting a clear, precise definition of the scope but may underestimate all the nuances and subtleties of doing this. The highly analytic and technically minded project manager may assume everyone else is like-minded and has the same understanding of the key terms. As former IT professionals, we may not realize that other stakeholders have a quite different understanding of what we are talking about. We need to probe, rephrase and ask questions to ensure there really is a common understanding. In addition, we need to understand there are often legal or contractual technicalities at issue. If we assume another department will handles these issues, then we are making a dangerous assumption.

In the *PMBOK® Guide* version four, key tools of the *Collect Requirements* process include efforts to get technical teams together with their customers and engage in conversations to

iteratively define the scope and progressively elaborate the requirements. The *Voice of the Customer* process is precisely for this purpose.

The project manager must take great care to ensure that all stakeholders who are affected by the project (and who can influence the project) have been identified. Their political influence and interest must be mapped out. Personally, I remember disdaining the work involved in understanding all the company politics, and only later learned the real necessity of navigating political waters. For external projects, we also need to understand the politics and organization of the customer's company.

Communications

We all know how important communications are for projects. A truism is that projects in crisis - that are failing - almost always have big communications issues. What the I.T. project manager may not appreciate includes:

- **The importance of planning, and documenting the plans, for all communications with the stakeholders.** The plan must detail the frequency, methodology, and format, of communications, with special attention paid to the importance of staying closely in touch with upper management and ensuring that they are comfortable with the project's performance.
- **Following up and ensuring team members and stakeholders did receive the message, and did understand it properly.** It is the PM's responsibility to follow through on this. We cannot think that it was good enough just to send the message.
- **Sending the right amount of detail, and putting it in the right format.** As technical people, we may think that more details are always good. We might not realize that a very detailed report to a senior manager might not be read at all, leaving the manager with an unfavorable opinion of our approach and invariably the project.. We need to be conscious of the times when it is best just to send the executive summary.
- **Recognizing that in face-to-face meetings, it is essential to pay close attention to the body language and tone of voice.** PMI says in such communications, the words themselves are only 7% of the message! This is very hard for most analytics to accept.
- **We need to realize there will be times when we think we have communicated a very precise, specific and accurate message, but other stakeholders might not have come away with the same understanding.** As mentioned above for Scope Definition, it is our job to ensure everyone reaches a common understanding, by repetitively asking the right questions and teasing out any nuances in the different understandings.
- **We need to follow best practices for meetings:**
 - Send an agenda in advance of the meeting.
 - Delegate responsibilities for agenda items where feasible.

- Have time limits for the agenda items.
- Keep to the agenda, and stay on time. PM may need to interrupt and have conversations continued off-line.
- Track minutes and publish the minutes.
- Track action items, owners, dates and status.
- Publish the action items and status.
- Meet regularly, but not too often. Don't meet just for the sake of meeting.
- Have the right stakeholders at the meeting.

Managing Teams

We need to appreciate that one style of management does not fit all situations, and we will have to adopt different approaches for different team members and different situations. There are times when it is appropriate to be very decisive and directing, and times when it is better to be much more of a coach and a facilitator. For example, if we are very independent and enjoy working on our own to solve problems, we should not assume all our team members work this way. Some team members might work best in structured team environments and need more support and encouragement.

As good managers, we should be advocates and supporters of our team members. We should ensure they have the right training to do the job, and we should look at the long-term picture. If we can help our team members obtain skills and training that will benefit their careers, then they will likely be much more motivated to forward the success of the project.

In our very diverse world, we should also be very sensitive to other stakeholders' different cultures and points of view. As an analytic, I know I am one who can sometimes be oblivious to all the diverse points of view I may encounter!

Lastly, we should not assume that the world or our team members are logical pieces of a puzzle that can be solved deductively.

Monitoring and Controlling

A key aspect of project success emphasized heavily by PMI is the need to constantly do monitoring and controlling of the project. PM's should be regularly checking the pulse of the project to ensure that the projected results will match the plan. If we are not on plan, then corrective actions should be taken.

As an active member in my local chapter – PMIWDC (Washington, DC chapter) – I have attended more than 50 presentations in the last three years, and some of the best presentations emphasized the critical need to do effective change control. On November 17, 2009, we listened

to a very impressive presentation on the Panama Canal Expansion project by the Executive Vice President of the project, Jorge Quijano. In the question and answer session after Mr. Quijano's presentation, the question was posed: "What was your most important lesson-learned in this project?" The answer was they had embraced a much more robust change control process and ensured all changes were documented, were evaluated with an impact analysis, and were passed through a change control review process (most times, a change control board). This was providing very significant benefits not realized in previous projects.

A second presentation I remember very well was delivered by Dr. Steven Meier on February 17, 2009: "Best Project Management and Systems Engineering Practices for Large-Scale Federal Acquisition Programs." Dr. Meier reviewed the truly staggering cost overruns and schedule delays in a number of key DoD programs which amounted to total cost overruns of \$295B and an average schedule delay of 21 months! Dr. Meier's conclusion was that one of the key causes of the overruns and delays was that the project's change control and configuration management were ineffective. Rigorous change control processes were not being followed, changes were not being systematically reviewed by a Federal Change Control Board, and, often times, effective impact analyses were not executed.

PMI would emphatically say that a planned change control system should exist for all projects. Even for fairly simple projects, we should address this and plan the change control process – even if it is only a one-page, informal plan. Our presumption may be that our original plans will be so thorough and clear that change control will occur very rarely and will be minimal. If we take this attitude, we are being naïve, and we will have exposed the project to unnecessary risk.

Conclusion

Project management is a very rewarding field, and there is tremendous satisfaction to be obtained by guiding a project from infancy through to completion. If our background is quite technical, then we should pay close attention to some very different factors that will guide our success as project managers than what helped us in our technical fields. We need to be much more tuned into important issues for arriving at a clear, specific, unambiguous scope statement; we need to focus on the many aspects of effective communications; we need to recognize the importance and challenges of leading a team; and finally, we need to appreciate the importance of planning and executing an effective change control system.

About the Author

Mark Tolbert, PMP has over 30 years' experience in I.T., including 27 years at Hewlett-Packard. Mark has been very active in the Washington, DC PMI chapter for the past 14 years. He has served on a number of board positions for the chapter, currently serving on the board as the trustee for the chapter. Mark is very passionate about project management and believes adopting the best project management practices and skills is crucial to the success of enterprises today.

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