



CHAPTER 1

PROJECT MANAGEMENT 2.0

1.0 INTRODUCTION: CHANGING TIMES

In today's business environment, we have a new generation of workers that has grown up in a Web 2.0 world of Web-based project management tools allowing people on virtual or distributed teams to work together much more closely than in the past. Advances in computer technology and information flow have shown that the way we traditionally managed projects, PM 1.0, is a hindrance and ineffective for many of today's projects. Literature is now appearing describing PM 2.0, which focuses on new project management tools, better project governance, improved collaboration with stakeholders, and more meaningful information reporting using metrics, key performance indicators (KPIs), and dashboards.

1.1 CHARACTERISTICS OF PM 1.0

Project management had its roots in the aerospace, defense, and construction industries more than 50 years ago. Project management practices were effective on large projects with reasonably known and predictable technology, assumptions, and constraints that were unlikely to change over the duration of the project and a somewhat stable political environment. Unfortunately, for most companies, these types of projects represented only a small portion of all of the projects that companies needed to complete to remain in business.

Today, we are applying the project management approach to a wider variety of projects encompassing all areas of business where politics, risk, value, company image and reputation, goodwill, sustainability, and quality are seen as being potentially more important to the firm than the traditional time, cost, and scope constraints. As such, the traditional project management practices that we have used for decades, which we shall call PM 1.0, are now seen as ineffective for managing some of these new types of projects.

PM 1.0 is based upon the following activities:

- Projects are identified, evaluated, and approved without any involvement by project managers.
- Project planning is done by a centralized planning group, which may or may not include the project manager.
- Even though the planners may not fully understand the complexities of the project, the assumption is made that the planners can develop the correct baselines and plans which would remain unchanged for the duration of the project.
- Team members are assigned to the project and expected to perform according to a plan in which they had virtually no input.
- Baselines are established and often approved by senior management without any input from the project team, and again the assumption is made that these baselines will not change over the duration of the project.
- Any deviations from the baselines are seen as variances that need to be corrected to maintain the original plan.
- Project success is defined as meeting the planned baselines; resources and tasks may be continuously realigned to maintain the baselines.
- If scope changes are necessary, there is a tendency to approve only those scope changes where the existing baselines will not change very much.

With PM 1.0, executives were fearful that project managers might begin making decisions that should be made only at the executive levels. Senior management wanted standardization and control in the way that projects were being managed. Project managers were given very little real authority to make decisions. Almost all important decisions were made by the project sponsors. Enterprise project management (EPM) methodologies were created with the mistaken belief that one size fits all. Every project had to follow the EPM methodology because it supported the executives' comfort zones regardless of the ramifications. The EPM methodologies were constructed around rigid policies and procedures. Project status reporting resulted in massive reports and as much as 25% of a project's budget could be consumed by reporting requirements.

Even though a new edition of the **PMBOK® Guide** comes out every four or five years with changes to get us further away from PM 1.0, the **PMBOK® Guide** still contains many of the elements of PM 1.0. It may not be possible, or even practical, to create a single **PMBOK® Guide** that can satisfy those firms that still prefer PM 1.0 and those that have a necessity for PM 2.0.

1.2 OTHER CRITICAL ISSUES WITH PM 1.0

PM 1.0 has worked well for many companies for the types of projects that they traditionally managed. But for other companies there were significant defects with PM 1.0 that needed to be changed. As an example, conventional project and even business planning, as used with PM 1.0, worked on the expectation that managers can predict future outcomes by extrapolating from past results. Planning is often based upon history. But for many new business opportunities and the forthcoming projects this way of planning was often not possible. Experience may be lacking or extrapolating from past experience may be misleading.

A solution to this problem using PM 2.0 is to predict future outcomes based upon assumptions. Some of the assumptions made during the planning process will very likely come true, whereas the outcome of others may very well impact the project to a point where the project should be redirected or even canceled. Project managers may have to test all of the assumptions by developing contingency plans based upon “what-if” scenarios. However, with PM 1.0, the assumptions that appeared in the business case or the project charter were taken as fact and often never challenged. This resulted in a waste of valuable resources.

There were several other PM 1.0 issues that needed to be corrected with PM 2.0. Some of these were:

- Believing that one project management methodology can be applied to every project
- Taking for granted that the constraints and assumptions that are in the business case/charter are correct and need not be tracked
- Trusting that the planning of others, such as a planning department, is always correct and need not be challenged
- Lacking ownership of plans we did not participate in, resulting in lack of commitment to the project
- Working with a structured project plan that does not allow for the creativity of team members
- Not having all necessary information available to the project team
- Working with sponsors and governance committees that do not understand their roles and responsibilities
- Trusting that all of the decisions made by the sponsors or governance committees are the correct decisions
- Believing that implementing project management by executive decree will make it work
- Having no project management culture in the firm
- Believing that a changeover to a project management culture can happen overnight
- Having project management recognized as a part-time addition to one's primary job rather than seen as a career path opportunity
- Not understanding the need for project health checks or how to perform a health check
- Having limited tools to support project management activities
- Having too many projects and not enough qualified resources
- Wasting time on projects that need resources we do not have
- Not having any optimization of resources
- Having no benefit realization plan
- Not understanding how to track benefits or value
- Not working on the projects with the highest value
- Not recognizing the relationship between the project and strategic business objectives
- Believing that if the project fails, we still have an endless stream of customers
- Not having any collaboration with stakeholders

- Reporting project information vertically up the organizational hierarchy rather than accessing information to the whole team
- Preparing all reports in an optimistic manner with the hope that we can correct any problems before management recognizes the truth

Obviously, there are other issues that could be added to the list. But at least we recognize that a valid need exists for PM 2.0.

1.3 PROJECT MANAGEMENT 2.0



Project data will be displayed over mobile devices such as cell phone or tablet screens.

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The idea for PM 2.0 came primarily from those project managers involved in software development projects where adding version numbers to project management seemed a necessity because of the different tools now being used and different project needs. Over the years, several studies have been conducted to determine the causes of IT project failures. Common failure threads among all of the studies included lack of user involvement early on, poor governance, and isolated decision making. These common threads have identified the need for distributed collaboration on IT projects. From an IT perspective, we can define PM 2.0 using the following formula:

$$\text{PM 2.0} = \text{PM 1.0} + \text{distributed collaboration}$$

Distributed collaboration is driven by open communication. It thrives on collective intelligence that supports better decision making. Traditional project management favored hierarchical decision making and formalized reporting, whereas PM 2.0 stresses the need for access to information by the entire project team, including the stakeholders and those people that sit on the project governance committee.

The need for distributed collaboration is quite clear:

- Stakeholders and members of governance committees are expected to make informed decisions rather than just any decisions.
- Informed decision making requires more meaningful metrics.
- The metrics information must be shared rapidly.

Collaboration through formalized reporting can be a very expensive proposition, which is why PM 2.0 focuses heavily upon project management metrics, KPIs, and dashboard reporting systems. This increase in collaboration leads some people to believe that PM 2.0 is “socialized project management.”

Agile project management is probably today’s primary user of PM 2.0. However, there is criticism that the concepts of PM 2.0, accompanied by the heavy usage of distributed collaboration, cannot be used effectively on some large projects. This criticism may have some merit. There still exists a valid need for PM 1.0, but at the same time there are attempts to blend together the principles of PM 1.0 and PM 2.0.

All new techniques undergo criticism. PM 2.0 is no exception. Some people argue that PM 2.0 is just a variation of traditional project management. Table 1-1 shows many of the differences between PM 2.0 and PM 1.0. When reading over Table 1-1, we must keep in mind that not all projects such as those utilizing an agile project management methodology will necessarily use all of the characteristics shown in the PM 2.0 column. Project managers in the future will be given the freedom of selecting what will work best

for them on their project. Rigid methodologies will be replaced by forms, guidelines, templates, and checklists. The project manager will walk through a cafeteria and select from the shelves those elements/activities that best fit a particular project. At the end of the cafeteria line, the project manager, accompanied by the project team, will combine all of the elements/activities into a project playbook specifically designed for a particular client. Client customization will be an essential ingredient of PM 2.0.

PM 2.0 is not a separate project management methodology appropriate for small projects. It is more of a streamlined compilation of many of the practices that were embodied in PM 1.0 to allow for a rapid development process. The streamlining was largely due to advances in Web 2.0 software, and success was achieved when everyone on the project team used the same tools.

Although PM 2.0 has been reasonably successful on small projects, the question still remains as to whether PM 1.0 is better for large projects. The jury has not delivered a verdict yet. But some of the publications that discuss how PM 1.0 and PM 2.0 can be combined offer promise. Perhaps in a few years we will be discussing PM 3.0. Only time will tell.

There are other activities that differentiate PM 2.0 from PM 1.0. However, for the remainder of this book, primarily the PM 2.0 activities in Table 1-1 will be discussed.

TABLE 1-1 Differences between PM 1.0 and PM 2.0

Factor	PM 1.0	PM 2.0
Project approval process	Minimal project management involvement	Mandatory project management involvement
Types of projects	Operational	Operational and strategic
Sponsor selection criteria	From funding organization	Business knowledge
Overall project sponsorship	Single-person sponsorship	Committee governance
Planning	Centralized	Decentralized
Project requirements	Well defined	Evolving and flexible
Work breakdown structure (WBS) development	Top down	Bottom up and evolving
Assumptions and constraints	Assumed fixed for duration of the project	Revalidated and revised throughout the project
Benefit realization planning	Optional	Mandatory
Number of constraints	Time, cost, and scope	Competing constraints
Definition of success	Time, cost, and scope	Business value created
Importance of project management	Nice-to-have career path	Strategic competency necessary for success
Scope changes	Minimized	Possibly continuous
Activity work flow	In series	In parallel

(continued)

TABLE 1-1 (Continued)

Factor	PM 1.0	PM 2.0
Project management methodologies	Rigid	Flexible
Overall project flexibility	Minimal	Extensive, as needed
Type of control	Centralized	Decentralized
Type of leadership	Authoritarian	Participative (collaborative)
Overall communications	Localized	Everywhere
Access to information	Localized and restricted	Live, unlimited access and globalized
Amount of documentation	Extensive	Minimal
Communication media	Reports	Dashboards
Frequency of metrics measurement	Periodically	Continuously
Role of software	As needed	Mandatory
Software tool complexity	Highly complex tools	Easy-to-use tools
Type of contract	Firm fixed price	Cost reimbursable
Responsibility for success	With project manager	With the team
Decision making	By project manager	By the team
Project health checks	Optional	Mandatory
Type of project team	Colocated	Distributed or virtual
Resource qualifications	Taken for granted	Validated
Team member creativity	Limited	Extensive
Project management culture within firm	Competitive	Cooperative
Access to stakeholders	At selected intervals	Continuous
Stakeholder experience with project management	Optional	Mandatory
Customer involvement	Optional	Mandatory
Organizational project management maturity	Optional	Mandatory
Life-cycle phases	Traditional life-cycle phases	Investment life-cycle phases
Executive's trust in project manager	Low level of trust	High level of trust
Speed of continuous improvement efforts	Slow	Rapid
Project management education	Nice to have but not necessary	Necessary and part of life-long learning

1.4 CRITICISM OF PM 2.0

All new techniques bring with them both advantages and disadvantages. The disadvantages will most certainly undergo criticism. PM 2.0 is no exception. Examples of some of the criticism are:

- Some people argue that PM 2.0 is just a variation of traditional project management and that the changes would have happened anyway.
- Many companies have track records of success using PM 1.0. Asking them to now use PM 2.0 may lead to unnecessary problems.
- PM 2.0 works only on IT projects, especially those requiring use of agile or Scrum techniques.
- PM 2.0 advocates open communications, and this may not be possible on large projects. Distribution and control of proprietary information could be an issue as well.
- The data distributed in PM 2.0 may not be auditable, whereas most people believe that PM 1.0 data are auditable.
- Additional tools will have to be created to support PM 2.0 implementation. The cost of developing the tools may be expensive.
- Data requirements can easily get out of control and we can end up with information overload.
- Although PM 2.0 focuses on collaboration, there is no guarantee that stakeholders or governance committee members will communicate freely with one another.
- Even though PM 2.0 will most certainly benefit strategic as well as operational projects, there is no guarantee that executives will allow project managers to manage strategic projects even if governance is provided.

There are naysayers that will argue against any new technique that may be perceived as pulling them away from their comfort zone. Only time will tell if the criticism has any merit. But one thing is for certain: PM 2.0 is being implemented and it works.

1.5 PROJECT MANAGEMENT 2.0: TECHNOLOGICAL BLESSING OR CURSE?*



PM 2.0: Blessing or curse?

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There is no question that advances in technology have impacted and changed both our professional and personal lives in ways that most of us could not have imagined 20 years ago, or maybe even 10 years ago. The combination of mobile access to an ever-expanding Internet has created a level of connectivity to information and remote ideas that is unprecedented in the history of humanity, perhaps second only to William Caxton's first printing of a book in English in 1473.

Today we live and work in a Web 2.0 world of the three dynamic C's: namely, connectivity—context—collaboration.

The smartphones, tablets, and smart technology that we carry with us as we move through our daily lives enable us to be connected not only to online information but also to people. One only has to stand in a public space and look around to see that

* Material in this section was graciously provided by John R. Winter, Vice President—Global Learning Solutions, International Institute for Learning, Inc.

9 out of 10 people are talking, texting, checking Facebook, using their smartphone to get directions, or “checking” into their current location using apps like Foursquare or Find My Friends. There is no doubt that the mobile phone has become ubiquitous.

The smart devices we carry with us now are also context savvy; they can pinpoint our location and present information to us that may be helpful or important based on our location. We may be walking by our local drug store when our phone buzzes or sounds an alert to remind us that we need to pick up the prescription we phoned in earlier. The phone’s global positioning system (GPS) knows where we are in relation to the store’s location and this triggers the app where we set up a reminder earlier.

Context also works in the pull sense too. Try using an app such as Flixster to see where a movie is playing and it will present you with the location and movie times for those playing in theaters around you. So not only are we now connected, but we are connected in a powerful way incorporating the additional layer of context.

Collaboration, sharing, and user-generated content are very much at the heart of Web 2.0. To most of us, Facebook, Twitter, and Instagram are instantly recognizable names and have given rise to a whole generation of Web denizens who are very familiar with sharing information, creating and posting their own user-generated content, as well as collaborating in joint problem solving.

If we so choose, our smart devices will help us keep organized, ensuring we do things in a timely manner and enabling us to gather and share information rapidly among our family, friends, and work colleagues. These activities, it can be argued, are also at the heart of effective project management.

The project manager operating in a Web 2.0 world has this new set of tools at his or her disposal to support the successful completion of the project work in distributed teams. Working in a collaborative and distributed manner is nothing new; we have been using enterprisewide, server-based project management software for many years now. It could be argued that the possibility of working in a collaborative way, with distributed teams, was first brought to our attention by the late Douglas Engelbart in 1951 when he first wrote about this concept and went on to demonstrate it in 1968 along with his other inventions, the computer mouse, networked computers, and the early days of graphical user interfaces, in what was called “The Mother of All Demos.”

What is new, of course, is the hardware, software, and far-reaching Internet that we now have available to achieve what back in the late 1960s almost seemed like science fiction. Today we carry in our pockets devices that have infinitely more computing power than that of the Apollo 11 Space Shuttle, which got Armstrong, Aldrin, and Collins safely to the moon and back. Technology writer Grant Robertson wrote of Apple’s iPhone in a blog post several years ago, “The iPhone is so advanced compared to the computer used in Apollo’s guidance system that it’s hard to believe they both came from the same planet—at roughly the same period in time when viewed in contrast to man’s time on Earth.”¹

So we now have amazing hardware and a whole ecosystem of software and apps to run on our devices, but is all that sufficient to explain our adoption of the Web 2.0 approach to our work, life, and project management? I would argue it is not. If individuals do not quickly understand what they can achieve with a new piece of technology and

¹ “How powerful was the Apollo 11 computer?” Grant Robinson, July 20, 2009.

what it can do for them, that is, how it can help make their lives better/easier, they will quickly turn away and look for the next innovation.

One only has to think back to Apple's Newton that was released in 1993 and was subsequently discontinued in February 1998. This product was really the precursor of what is today a tablet, or tablet computer. Some people still maintain it was an amazing device that was ahead of its time, which indeed it probably was. However, it never achieved the kind of mass adoption that smartphones and tablets have today, because people could not see how it made life better for them and it ended up being coveted by "geeks" and "tech-heads"!

Simplicity and ease of use also contributed to our willingness to embrace the Web 2.0 world. Even though a staggering amount of complex engineering and programming is taking place just behind the glass surface of our touch-screen devices, what we appreciate most is the fact that it appears simple to use and just works in a reliable and predictable way.

Much like our day-to-day life, the work life of busy project, program, or portfolio managers is complex and there is a real need for the powerful handheld devices to help sift through, control, and coordinate the massive amounts of information that assault their senses every minute of every day.

If you have not come across the acronym VUCA yet, you probably will hear it soon. It comes from the U.S. Army training for soldiers and leaders of soldiers in intense combat situations. It describes situations they face which are volatile–uncertain–complex–ambiguous and how to account for this when gathering information, making decisions, and providing direction.

This categorization of factors can easily apply to situations in which project managers find themselves having to achieve results. Although the consequences may not be life or death as they are in the military, nonnegotiable changes in scope; reallocation of resources; unexpected cuts in budgets; midproject changes in stakeholders or the project sponsor; multiple schedule disruptions; changes in project deliverables; leading global team members with distinct cultural biases; all can at times make it feel like a VUCA battlefield for the project manager.

Successful project managers (of PM 2.0) not only need to understand effective project management methodology and be skilled in leading their project teams but also must know how to manage fast-paced and multisourced flows of information, curate it, and make the right decisions in a timely manner. Today that means using the hardware and software of today's Web 2.0 environment.

The key to being an effective PM 2.0 manager is mastering the art of being connected and using the best technology tools to get the job done in a collaborative way while working with a distributed team.

The importance of managing connectivity is probably more critical during the planning, executing, and monitoring and controlling phases of a project, that is, when the bulk of the project work is being completed. However, I am not discounting the importance of initiating or closing, as giving these phases scant focus and attention will invariably lead to major project troubles. But missing a vital piece of information or a warning sign when the project engine is running at full throttle and it is full steam ahead can quickly jeopardize a project's success.

So how does a PM 2.0 manager use the technology? What is available now? What might we expect in the future? I hate to provide this clichéd response, but it depends. It really does. It depends on the size of the project; the way in which the team is distributed; organizational readiness in terms of the technological adoption, knowledge, and cultural acceptance; and the technological development in general.

So with this in mind I am not attempting to address each of these factors but instead assume that the ideal situation exists for what follows.

Much of the success of the PM 2.0 manager rests on the software and hardware that he or she has in place to control the flow of incoming project information; process and make decisions based on the information; and communicate out to project team members, stakeholders, and clients.

In the Facebook/Twitter society in which we live there is already a great familiarity with the type of social media software necessary for the management of PM 2.0 information. While Facebook and Twitter would not necessarily be considered appropriate tools by chief information officers (CIOs), there are many alternative enterprise software solutions available that will achieve the same result safely behind an organization's firewall. Probably one of the best known tools is Yammer (<http://www.yammer.com/>), a private social network software that helps employees collaborate across departments and locations. A tool such as this, with its wiki-like format, encourages the sharing of informal information and joint problem solving.

"The devil is in the details," as the expression goes, and it is not uncommon for important details within the execution and tracking of a project to go overlooked, sometimes with serious consequences. As project complexity increases, the likelihood of this increases too. With a forum to pose questions, raise concerns, and get answers, missing the detail because it is buried in the in-box of someone's e-mail is less likely.

Yammer of course is not the only solution, and large software companies such as Microsoft and Google have many cloud-based enterprise resource planning (ERP) tools for large organizations that can be used for this purpose. In some respects the tool itself is almost irrelevant; what is important is that an electronic forum exists where project information can be shared informally, in addition to formalized dashboards, especially when working with a distributed team.

Here is an example of how Yammer or a similar tool can be used to facilitate the informal flow of project information. Within Yammer a main group can be established for a specific project and within the main group subgroups can be created for project team members, stakeholders, and so on. People connected with the project can post comments, questions, ideas, and suggestions in either the main group, which will be seen by everyone who belongs to the organization's Yammer group, or just to the specific people within their subgroup.

This is how it might work. Omar, who is a team member of a large engineering project in the north of England, has spotted an odd phenomenon while visiting an oil drilling rig in the North Sea. He is a little concerned because he notices that when the catalyst for an ultrastrong adhesive is added to a compound that will be used to hold steel plates together, it is causing the adhesive to harden much faster than usual. He wonders whether this will cause a problem with the integrity of the bond between the plates in the future. It is something he has never experienced before

and neither has any of the three other teams members who are working with him on the rig.

Omar has a nagging doubt that this may be significant, but he does not want to stop the project, which is already behind schedule for something that may be nothing at all.

He knows that other members of his project team are working on similar projects in other parts of the world, so he logs onto his company's social enterprise network that has been set up for the project and posts a description of his observation along with some photographs he has taken showing different phases of the engineering process.

As soon as his post is made, Elvin, the project manager in Singapore, feels a buzz from the smartphone in his pocket. Although he is having dinner with friends, he excuses himself, steps out of the restaurant, and checks his phone. The icon on his social enterprise network app shows five messages, then immediately jumps to six, then seven, and finally stops at nine. He quickly taps the app and reads the posts. He sees Omar's original message and the responses from other project team members in Argentina, Australia, and India. All three agree that this is out of the ordinary and Sumita in India remembers a similar incident several years before when the integrity of the bond between the plates eventually failed. It was due to a faulty batch of chemical compounds.

Elvin immediately posts his response to Omar, instructing him to temporarily halt the current work and then forwards Omar's post to the technical support of the adhesive, who is also part of the main group for the project on the company's social enterprise network.

The technical support representative immediately confers with the chemical engineers within his company's own social network and, after a brief Skype video conference with Omar, a working solution is provided, averting what could have been a very costly future structural failure. This allowed the project to proceed with the minimum of disruption to the schedule.

While this is a fictitious story, it clearly demonstrates the need for the PM 2.0 manager to be connected within context and be able to collaborate quickly and effectively across time zones and geographical boundaries the minute important situations arise.

Apart from social enterprise networks running behind organizational firewalls, as in the previous example, there has also been a rapid growth in new project management software and apps that will run on laptops, smartphones, and tablets. Initially these apps were designed to report, track, and monitor project activity and status in real time, but now they have been developed to incorporate the social network elements vital to the PM 2.0.

Cloud-based solutions such as **AffinityLive** (<http://www.affinitylive.com/products/projects>), **PieMatrix** (<http://www.piematrix.com/>), **Box** (<http://www.box.com/business/project-management>), and **Deskaway** (<http://www.deskaway.com/>) are a new breed of Web 2.0 project management software built specifically for small- to medium-sized projects that are designed to connect people with information within context and enable online collaboration.

You may wonder what is next. When we begin to venture into the world of the "thinking internet," the semantic web, or Web 3.0, what will life be like for the project manager then?

We know already that we are rapidly entering the age of wearable technology, with developments like Google Glass, although still not mainstream, and gadgets that

measure our activity, such as the Fitbit, Jambox's Up Band, and Samsung's Gear Fit, which are definitely mainstream. We are also just beginning to witness clothing with the technology woven directly into the fabric of the garment.

So linking this with the fact that the era of the "Internet of Things" is slowly dawning where objects previously not connected are beginning to be connected wirelessly to the Internet—yes your refrigerator can have its own Internet address! The future is beginning to look interesting.

It is easy to foresee that PM 3.0 manager may be sitting at home watching a movie, when suddenly the light in the table lamp beside her starts to pulse slowly, or turns to a deep magenta color, having received a message from the project management software on her tablet signaling the status of one of her projects has just changed from yellow to red.

Or, sitting in a theater during the performance of a play, the fabric in the right sleeve of another project manager's shirt begins to quietly vibrate, discretely informing him that he needs to look at his smartphone during the intermission to attend to an issue that has arisen on one of his projects. And, yes, the smartphone knew he was in a situation where he needed to be notified graciously. And, yes, it knew which play he was watching and when the intermission would take place and had calculated that based on the severity of the issue the next 20 minutes would find.

Whether these scenarios ever become a reality or not—I suspect they will—the important thing is for managers of projects to strive to be connected to the information they need, within the context of their current situation, so they can collaborate without boundaries to their distributed teams. How they will do this and what technology will help them present a future full of exciting possibilities.

1.6 POLICING PM 2.0



Who is responsible for policing PM 2.0?

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It is wishful thinking to believe that all of the PM 2.0 activities listed in Table 1-1 will evolve naturally. Some of the changes may be initiated by senior management, others by functional management, but most of them will be the result of project management initiatives. Someone must assume responsibility for the policing of the changeover from PM 1.0 to PM 2.0 and making sure that the transition goes smoothly. Without some sort of structure and guidance, the initiatives can take much longer than necessary, which will then prolong the time needed to see the benefits of PM 2.0. The policing function must be performed by the project management office (PMO).

Traditionally, PMOs were created to help promote the installation and growth of project management. This included creating a project management methodology and the accompanying forms, guidelines, templates, and checklists. As the number of project management successes increased, management began assigning additional responsibilities to the PMO. Some of these responsibilities are:

- Forms for standardization in estimating
- Forms for standardization in planning

- Forms for standardization in scheduling
- Forms for standardization in control
- Forms for standardization in reporting
- Clarification of the project manager's roles and responsibilities
- Preparation of job descriptions for project managers
- Preparation of archive data on lessons learned
- Continuous project management benchmarking
- Developing project management templates
- Developing the project management methodology
- Recommending and implementing changes and improvements to the existing project management methodology
- Identifying project management standards
- Identifying best practices in project management
- Performing strategic planning for project management
- Establishing a project management problem-solving hotline
- Coordinating and/or conducting project management training programs
- Transferring knowledge through coaching and mentorship
- Developing a corporate resource capacity/utilization plan
- Assessing risks in projects
- Planning for disaster recovery in projects
- Performing or participating in the portfolio management of projects
- Acting as the guardian for project management intellectual property

Companies began recognizing the return on investment of using a PMO. It is therefore a natural follow-on for the PMO to take the lead with PM 2.0 implementation activities. However, there are significant challenges. Perhaps the greatest challenge is that PM 2.0 is now aligned to strategic business objectives as well as the operational objectives most commonly used with PM 1.0. The PMO must now monitor closely how PM 2.0 will interface with all business units rather than just those functional areas that are using project management.

1.7 WORKING WITH STAKEHOLDERS IN PM 2.0

From the birth of project management in the early 1960s up to the last decade, stakeholder involvement in projects has been more passive than active. Stakeholders focused heavily on the deliverables at the end of the project. And, if they did get actively involved at all, it was close to the end of the project when there were fewer decisions for them to make.

During this time period, stakeholders knew very little about the actual processes used in project management. This included internal stakeholders, stakeholders from the client's organization, and governance committee stakeholders. Everything was end-results oriented. Information provided by the project manager was considered as the Gospel, never questioned, and the stakeholders had no way of validating whether or not this was the right information. When decisions had to be made, it was most often seat-of-the-pants decision making rather than informed decision making based upon

meaningful information. Simply stated, stakeholders did not know what information they needed and focused mainly on just time and cost metrics.

Today's View of Stakeholder Relations Management

Today, stakeholders appear to be much more knowledgeable about project management than in the past. Stakeholder involvement is much more active than passive, and the involvement begins right at the initiation of the project. Continuous stakeholder involvement is mandatory rather than optional as indicated in Table 1-1 as a primary characteristic of PM 2.0. There are several driving forces which necessitated this change:

- The projects we are working on now are more complex than in the past.
- Complex projects most often have a higher degree of risk associated with them.
- Stakeholders are expected to be and want to be more actively involved in certain critical decisions.
- Stakeholder involvement in project risk management requires meaningful information.
- Stakeholders understand the difference between traditional decision making and informed decision making necessary for a PM 2.0 environment.
- Stakeholders want to participate in the decision regarding what metrics they wish to see in order to monitor project progress.

As stakeholder involvement became more active than passive, project managers soon realized that the way that they handled stakeholder relations management also had to change. Project managers must now:

- Work closely with all of the stakeholders to understand the requirements of the project rather than relying solely upon the client for requirements definition.
- Work closely with each stakeholder or stakeholder group to understand what metrics they wish to have reported and how frequently.
- If necessary, create a separate project management information system for each stakeholder.
- Be aware that the information system will report status in a dashboard format, and there may be a different dashboard for each stakeholder.
- Have a dashboard designer as part of each project team.
- Understand that stakeholders now recognize the importance of informed decision making rather than ordinary decision making based upon guesses.

The latest version of the **PMBOK® Guide—Fifth Edition** introduced a new knowledge area, namely stakeholder management. In my opinion, it would have been better to call the new area of knowledge stakeholder relations management because project managers do not manage the stakeholders. Project managers may have some control over managing the relationships, but not managing the actual people. Most of the stakeholders may very well be at a much higher position in their respective organizational hierarchy than the project manager.

The starting point in managing stakeholder relations is a clear understanding of what is expected from the stakeholders in the way of authority, responsibility, and decision making. We traditionally map the stakeholders on a power–influence grid and

provide most of our attention to those stakeholders that have a great deal of power and can influence the direction of the project. Today, the stakeholders in this quadrant of the grid, possibly along with all of the other stakeholders, are expected to assist the project manager by making informed decisions. Making informed decisions requires that correct and meaningful metric information be presented to them in a timely manner.

Need for Meaningful Information

For years, stakeholders never fully understood metrics. They knew that a metric was a measurement, but they often failed to understand that not all metrics are equal in importance and that not all metrics provide meaningful information for decision making. Today, we differentiate between metrics and KPIs. Key performance indicators are those critical metrics that substantiate the health of the project and can be used to predict the future success or failure of the project. Project managers can identify up to 50 metrics on projects but usually somewhere between 8 and 10 metrics are considered KPIs. The KPIs are what stakeholders need to see for informed decision making.

All That Glitters Is Not Gold

Providing stakeholders and governance committee members with PM 2.0 metric/KPI information is certainly the correct thing to do. However, when something appears to be a great idea, there are always opportunities for bad things to happen.

PM 2.0 metrics management issues can create severe problems when dealing with stakeholders or members of a governance committee. Some of the more critical issues that may surface are:

- *What happens when stakeholders become infatuated with metrics and want all of the metrics in your metric library displayed on the dashboards?* If you have 50 metrics in your library, you will end up providing too much information to the point where you have information overload. The dashboard viewers may not be able to recognize which metrics/KPIs are critical for informed decision making. This could slow down the decision-making process rather than speeding it up.
- *What happens when stakeholders request specific metrics that you do not understand and do not have the organizational process assets to perform measurements?* This could cause delays in the execution of the project as well as delays in decision making. The project team may need to be trained in how to perform new types of measurements for client-specific metric requests.
- *What happens when stakeholders have disagreements with what the metric data show and conflicts will then occur?* This can happen even with the best dashboard designs.
- *What happens when stakeholders state that they do not want to hear any bad news or see bad news displayed on the dashboards?* This could eliminate effective stakeholder support during a crisis.
- *What happens when stakeholders want to see the data before it appears on the dashboards and filter the information such that they end up stretching the truth?* This could be seen as a violation to project managers' code of professional conduct.

Obviously, metric management does have a down side. But there are approaches that can be taken to minimize the risks, as will be discussed in later chapters.

1.8 FINDING THE INFORMATION



How easy will it be to find status information with PM 2.0?

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There are numerous benefits to using PM 2.0. Most of the benefits are derived from overcoming the challenges imposed upon us from using PM 1.0. One of the biggest challenges with PM 1.0 was the inability to find enough performance information to determine the true health of the project. We relied heavily upon time and cost as the two primary metrics for measuring and reporting project health because they were the easiest to track. Unfortunately, time and cost alone cannot determine the true health or status. This was known quite well in the early years of project management, but metric measurement techniques were just in the infancy stage. Therefore, only time and cost were used because they were the easiest to measure and report.

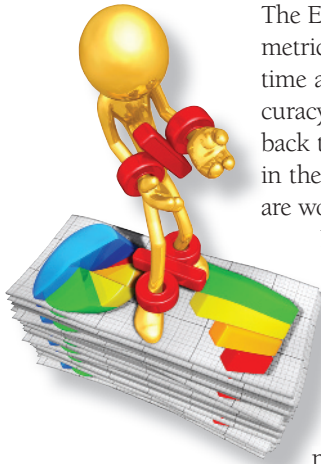
With PM 1.0, computer technology was in the infancy stages and the only software that was readily available was software associated with the earned value measurement system (EVMS). Status reports were printed out monthly and included direct labor, indirect labor (i.e., overhead rates), procurement costs, and other incidental costs such as the use of consultants, travel, printing, training, and conferences. Some companies were able to report weekly status, but for direct labor only. This approach unfortunately showed that any significant crisis may not be known in detail until the next monthly report appeared. Valuable time was lost when effective decisions could have been made.

We learned with PM 1.0 that the true status cannot be determined from just one or two metrics. It is possible that success could be measured by one metric, such as customer satisfaction or the number of deliverables provided to the client at the completion of the project. However, these situations are far from the norm. There are companies that have been successful with PM 1.0 and will probably continue using PM 1.0 in the near term.

In PM 2.0, we will be working on strategic as well as operational projects. Some of these projects may last for 10 years or longer, require hundreds of employees, go through numerous scope changes, and have the membership of governance committees change several times over the life of the project. The complexity of the projects will increase as well, thus mandating more metrics than used with PM 1.0.

The situation becomes even more complicated when project managers are asked to make business as well as project decisions. Significantly more metrics, especially business metrics, will be used with PM 2.0 than with PM 1.0. Most project managers may be unfamiliar with all of the business metrics that companies are using and how they interface with project-oriented metrics. Complexity will occur if the metrics show that what is in the best interest of the business is not in the best interest of the project, or vice versa. With PM 2.0, decision making will thrive based upon the abundance of meaningful metrics. However, as stated in Section 1.4, care must be taken to prevent the use of the new metrics from bringing forth additional problems.

1.9 PERCENT COMPLETE DILEMMA



How accurately can we calculate percent complete?

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The EVMS, which will be discussed in later chapters, focuses heavily on just time and cost metrics. On some projects, we may be able to approximate the status of the project from just time and cost as long as we know the performance percent complete with reasonable accuracy. But knowing percent complete is just a guess. Functional managers generally report back to the project manager their best guess on percent complete for the work performed in their functional areas. The situation can get complicated if several functional managers are working on the project and they all have a different opinion of the percent complete.

In the EVMS, the most important term is EV, which is the earned value, or the amount of the work performed to date, expressed in hours or dollars. The simplest equation to calculate EV is

$$EV = \text{percent complete} \times BAC$$

where BAC is the budget established for the completion of the project. If we are unable to determine percent complete with some degree of accuracy, then we may be providing the client with inaccurate information. To alleviate this problem, formulas were created to crudely calculate EV without ever having to accurately determine percent complete. The cost management section of most project management textbooks describes the use of these formulas. Some of the formulas are:

- **50/50:** Half of the budget is earned for each element and recorded at the time that the work is scheduled to begin, and the other half at the time that the work is scheduled to be completed.
- **0/100:** Usually limited to work packages (activities) of small duration (i.e., less than one month). No value is earned until the activity is complete.
- **Milestone:** This is used for long work packages with associated interim milestones, or a functional group of activities with a milestone established at identified control points. Value is earned when the milestone is completed. In these cases, a budget is assigned to the milestone rather than the work packages.
- **Percent Complete:** Usually invoked for long-duration work packages (i.e., three months or more) where milestones cannot be identified. The value earned would be the reported percent of the budget.
- **Equivalent Units:** Used for multiple similar-unit work packages, where earnings are on completed units, rather than labor.
- **Cost Formula (80/20):** A variation of percent complete for long-duration work packages.
- **Level of Effort:** This method is based on the passage of time, often used for supervision and management work packages. The value earned is based on time expended over total scheduled time. It is measured in terms of resources consumed over a given period of time and does not result in a final product.

With PM 2.0 and the accompanying growth in metrics, we may find it easier to determine percent complete or at least improve our approximation of percent complete. However, finding the data we need may prove difficult. Project teams will have to perform “data-mining” activities, which will include the identification of new metrics,

new measurement techniques, and better performance reporting. Finding all of this information will not be easy, but progress is being made and the benefits are rewarding. Significantly more information is needed for performance reporting with PM 2.0 than with PM 1.0, and many companies have already started creating PM 2.0 metrics.

1.10 INFORMATION OVERLOAD



Can information overload occur in PM 2.0?

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There's an old saying, "Be careful what you wish for because you may get it!" As with any new technique, people often go to extremes rather than following the straight and narrow or simplest path. The real fear with the quest for metrics is when a "metric mania" mentality sinks in and people look for the maximum number of metrics that can be collected rather than just what is needed.

While this approach of collecting more metrics than needed may have some merit, the result of all of this is usually information overload. The real fear is that everyone will want the metrics they found to be permanently part of the metrics database. Not all metrics carry with them an informational value that justifies their use. People may end up collecting metrics without fully understanding what the metric really means or how it should be used. As will be shown later in this book, simple metrics like time and cost can mean different things to different people.

When information overload occurs, it may become difficult to identify a core set of metrics for the project. Providing clients and stakeholders with too much or too little information can slow down a project. One of the responsibilities of the PMO's policing activities with PM 2.0 is to ensure that the correct metrics are placed in the metric library.

1.11 CUSTOMER SATISFACTION HEADACHE



Can a large metric library cause headaches?

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People seem to be enamored with the belief that customer satisfaction can be obtained from information overload, regardless of whether we are discussing an external or internal customer. Assume that metric mania sets in and you collect significantly more metrics than you need. All of the metrics are placed in the metric library. You just won a contract through a competitive bidding process and the firm-fixed-price contract has been signed. At the beginning of a project, you ask your external customer what metrics they would like to see on their project dashboards. You show the customer your metric library, and the customer then says that they would like to see all of the metrics reported on their dashboards. To make matters worse, they would like to see the dashboards in real time. While this may lead to customer satisfaction, you may have just created a migraine headache for yourself.

For companies that survive on competitive bidding, there can be a very large cost associated with the identification, collection, tracking, measuring, and reporting of a large number of metrics. During competitive bidding, you may have assumed that you would provide your customer with just one dashboard containing 6–10 critical metrics to track the project. This is what you priced out. After contract go-ahead, the customer sees all of the metrics in your library and wants them all reported. Unless you are able to push through a contract modification to account for the cost associated with the additional metrics, the project may absorb a financial hit.

The costs can be equally as bad when managing a project for an internal client. Even internal clients may ask for more metrics than they need. Giving clients too many metrics is an invitation for client micromanagement.

All metrics age and therefore periodic reassessment of the ongoing value of using each metric must be made. Maintaining a large metric library may not be cost effective and may result in migraine headaches. A possible remedy for the customer satisfaction headache is to prepare a list of recommended metrics that you believe should be used on the project. Allowing the client to make the decision could be a serious mistake. As we develop a history of metrics used and continuous improvements on the metrics, it should be easier for a project manager to convince customers on what metrics should be used. But, once again, the uniqueness of each project may cause headaches initially.

With PM 2.0, it may not be possible to regulate the number of metrics contained in the metric library. Project managers will be making both project and business decisions in PM 2.0. They will be expected to use both project and business metrics when discussing project status. Therefore, metric libraries will contain an abundance of business- and project-related metrics. It is entirely possible that, as the metrics library grows, all of the metric libraries and best practices libraries will be replaced by a single knowledge management system which will include:

- Project metric libraries
- Business metric libraries
- Best practices libraries
- Specialized knowledge libraries
- Benchmarking activities
- Continuous improvement activities
- Other knowledge repositories (i.e., historical project failure analysis data)
- Databases (e.g., estimating databases, client information databases)

1.12 DETERMINING PROJECT HEALTH



How many snapshots are needed to determine the true health of a project?

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With PM 1.0, status reporting was based upon just two primary metrics, time and cost. While it is true that we did look at other metrics in PM 1.0, the EVMS that was created focused heavily upon manipulations of just the time and cost metrics. We had a lack of understanding concerning the measurement techniques that could be used to track other metrics. Status reporting was often more of a guess than based upon fact. The result was a relatively poor understanding of the health of the project.

Project status was calculated primarily from time cards that indicated the hours spent on a work package. The hours were converted to dollars using either the actual salary of the workers or a departmental blended labor rate for a particular pay grade. Actual percent complete was difficult to estimate and therefore snapshots of work-in-progress were considered unnecessary. Customers often did not know the status of their project until the project was completed.

As stated previously, PM 2.0 projects are generally more complex and costlier than PM 1.0 projects. Waiting until we get close to the end of the project to determine the true status will not satisfy most of today's clients or members of the governance committees. Fortunately, today we have more sophisticated software that allows us to not only track

dozens of metrics at once but also report the information in real time. Dashboards can be updated as fast as the information can be inputted into an Excel spreadsheet. Therefore, the benefits with PM 2.0 are an infinite number of status snapshots in real time. This allows decision makers and members of the governance committee to make informed decisions rather than seat-of-the-pants decisions based upon a guess.

While real-time metrics display status, they may not clearly indicate the root cause of a problem. They may show only surface conditions. As an example, snapshots of time and cost may indicate that the project is running late and over budget. The project manager may have to dig deeper than just these metrics to find the actual cause of the problem. The problem may be caused by poor workmanship, a degradation in quality, unresolved action items that are causing delays, or a lack of resources. While having surface metrics is seen as a necessity, there is also a need for subsurface metrics as well.

The words *health* and *status* have been used interchangeably in this section. There is a difference between them, and this can best be described by looking at the four types of performance reports that were traditionally prepared with PM 1.0:

Progress Reports: These reports indicate the physical progress to date, namely, how much work was scheduled up to this point in time, how much work was actually accomplished, and how much money was spent. The report might also include information on material procurement, delivery, and usage, but most companies have separate reports on procurement of materials.

Status Reports: These reports identify where we are today and use the information from the progress reports to calculate variances or deviations from the project plan.

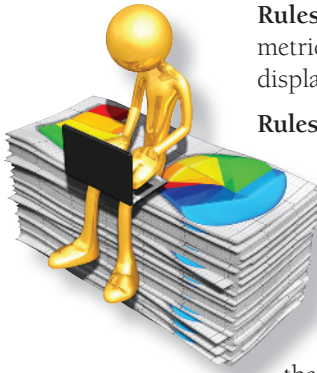
Projection Reports: These reports calculate forward-looking projections based upon trends. These reports emphasize where we will end up.

Exception Reports: These reports identify exceptions, problems, or situations that exceed the threshold limits on such items as variances, cash flow, resources assigned, and other such topics.

When we take snapshots of a project, we are collecting data related to how much progress has been made. Snapshot information goes directly into progress reports. The project team then takes the progress data and compares it to the previous reporting period to create the status (or variance) reports. Assumptions may be made as to the reasons for the variances. The projection reports extrapolate the status information into the future, and once again assumptions may be made. The less the number of assumptions made, the more confidence the reader has of the information that would traditionally appear in each of the four mentioned reports. The more metrics you use, the less the number of assumptions that must be made. With PM 2.0 and the use of additional metrics, dashboard performance reporting is expected to provide a more accurate picture of the project's health.

1.13 DASHBOARD RULES FOR DISPLAYING DATA

Having a metrics library with an abundance of metrics may provide no useful benefit unless the information can be properly displayed in such a manner that it can be easily understood. There are rules that most dashboard designers follow. They include:



Are there guidelines for displaying metrics on dashboards?

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Rules for Selecting Right Artwork: There are several images that can be used for each metric. Some images may be inappropriate. For example, gauges should not be used for displaying trends.

Rules for Screen Real Estate: There is only so much space available on a computer screen for images. Usually, only 6–10 images should be displayed on a screen.

Rules for Artwork Placement: Some people believe that the most important image belongs in the upper left corner of the screen whereas others believe it should be displayed in the upper right corner.

Rules for Color Selection: Usually the softer colors are used for metrics. Brighter colors are used to highlight critical pieces of information. There are also colors that should be used for people that are vision impaired.

Rules for Accuracy of Information (2D vs. 3D): While three-dimensional graphics looks impressive, there may be some difficulty with accurately reading the data. Most graphic designers focus on two-dimensional graphics.

Rules for Aesthetics: The display of the graphics must be pleasing to the eye.

If the viewers of the dashboards cannot understand what they are seeing, they may lose faith in the entire dashboard concept. This could lead to devastating results. Some companies prefer having pilot courses for first-time viewers to make sure that they understand what they are seeing. Because the space is limited on dashboards, care must be taken to avoid the heavy usage of company or project logos and other branding information. Company branding is always nice to have, but screen real estate is limited and expensive. Cluttering up a dashboard with too much information can lead to information overload.

1.14 REDUCTION IN COST OF PAPERWORK



Can PM 2.0 get us closer to “paperless” project management practices?

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PM 1.0 thrived on written reports. In some cases, the reports accounted for between 25 and 50% of the project's budget. Steps normally included in report preparation are:

- Organizing
- Writing
- Typing
- Editing
- Retyping
- Proofing
- Graphic arts
- Approvals
- Reproduction
- Distribution
- Storage
- Disposal

Typically, the cost per page for a report provided to a client runs between \$1200 and \$2000 based upon 8–10 hours per page for everyone involved in the above steps and using a fully burdened hourly labor rate. In some estimates, workers may spend



Can PM 2.0 metrics save us money?

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as much as 25% of their time writing reports. And to make matters worse, it is entirely possible that the reports are never read.

With PM 1.0, we are often plagued with staffing the project with people who have writing skills if we know in advance that reports are needed. We may know people who have the technical skills that we would like on a project but we cannot use them because of their poor writing skills. Several years ago, an engineering company selected project managers based almost entirely upon their writing skills.

With PM 2.0, reports are replaced with dashboards that show the most critical metrics on the project. Dashboard viewers see the most critical metrics needed for informed decision making and can connect to other dashboards using drill down buttons if additional information is required. Perhaps the most important benefit is that each dashboard can be customized for the individual viewer rather than giving everyone a massive report.

PM 1.0 supported the need for massive reports, many of which were never read. Because project sponsors and decision makers lacked all of the necessary information for informed decision making, many decisions were delayed and thus increased the cost of the project. An effective metrics management program, spearheaded by senior management, will allow for cost savings on projects.

Another area for cost savings is that the project report writers can now spend more time working directly on project activities that are part of project execution rather than writing reports. Not all project team members have writing skills. Not all reports can be eliminated. Those that can be replaced with metrics and a dashboard reporting system will result in cost savings. For companies that survive on competitive bidding, dashboard reporting systems may allow for the submission of a lower bid, thus increasing the chance of contract award.

With PM 2.0, the use of additional metrics and KPIs combined with Web 2.0 technology can save as much as 20% of a project's budget. Although support statistical data do not exist at this time, significant cost savings is expected.

Cost saving does not necessarily mean additional profits. Cost savings can allow the scope of the project to increase without having to add additional funds to the project's cost baseline. We will be doing more work for the same amount of money. Cost savings can allow the portfolio selection committee to work on more projects.

1.15 REDUCTION IN EXECUTIVE MEDDLING

Many of us that have lived with PM 1.0 can attest to continuous executive meddling on some projects. Meddling occurs most often because senior management does not have a clear picture as to what is happening on the project. Once again, time and cost metrics alone cannot provide a clear picture.

Another reason for meddling is that executives may believe that they have something to lose if the project were to fail. This may include:

- Viewing project failure as damage to their career
- Viewing project failure as damaging their reputation
- Viewing a lack of project knowledge as a sign of weakness



Can metrics prevent executive meddling?

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- Fear of exposing to others some bad decisions they may have made on the project
- Having to answer questions from stakeholders and not having the necessary information
- Viewing information as power and needing to know as much as possible about the project.

Meddling most often occurs when progress is less than expected or when serious problems occur. Meddling may not be bad unless the executives overreact and try to take over the project. In this case, the project manager is treated like a puppet.

With PM 2.0 and the use of a dashboard reporting system, executives can have daily updates on the status of the project. The dashboards can be customized for the needs of each executive. The need for continuous meddling should be reduced.

1.16 PROJECT MANAGEMENT SKILLS



What skills do project managers need?

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Project managers historically came from the engineering ranks of a company. The only criteria to becoming a project manager were a command of technology and some writing skills. Technical decisions were made by the project managers, but all business decisions were made by the project sponsors.

Most project managers were never trained on human relations management and lacked the necessary skills to resolve human relations issues and conflicts. On some large project teams, an assistant project manager or counselor was responsible for organizational development issues. Most of the engineers had not taken courses in interpersonal skills, leadership, mentorship, facilitation, or conflict resolution. The counselor assisted the project manager with all behavioral issues.

At that time, project management was in the infancy stages and we were not sure what skills an effective project manager should possess. Not very many companies had job descriptions for project managers. There were no **PMBOK® Guides** on project management or college or university coursework on project management other than possibly in civil engineering programs.

Today, there are numerous training programs for project managers. At the onset of a project, the project manager may be placed under a microscope to see if he or she possesses the necessary skills for the project. Specialized training may be necessary. Job descriptions are being replaced with competency models which identify the specific skills that a project manager must possess.

With PM 2.0, we are better able to match the correct person to the needs of the project. We have people with skills needed to manage specialized projects, such as a recovery project manager (RPM), who is an expert in turning around failing projects.

1.17 CONTINGENCY PLANNING

With PM 1.0, contingency planning was done sporadically. Projects were allowed to slip and cost baselines were allowed to overrun. To make matters worse, most project



Is there a need for contingency planning?

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managers who came from the engineering ranks were highly optimistic in their belief that whatever plan they laid out initially would work successfully and contingency plans were not needed. Contingency plans, if prepared at all, would be developed after a crisis occurred.

One of the reasons for poor contingency planning was a poor understanding of risk management. With PM 1.0, there was a tendency to look at only financial and scheduling risks. Today, with PM 2.0, risk management is maturing and we look at all types of risk.

With PM 2.0, there is significantly more information available to the project managers at project initiation as a result of a better portfolio selection process. Business cases are better defined, knowledge of the skill levels of the resources needed are known beforehand, organizational capacity planning models exist, and we have members on the governance committee that are more knowledgeable in project management.

All of this results in the benefit of being able to develop contingency plans throughout the life of the project. Metric and KPI data provided on a dashboard reporting system may eliminate the previous need for painful data mining to find the necessary information for contingency planning. Members of governance committees are more willing to participate. The need for contingency planning may be reduced, but it will not be eliminated.

DISCUSSION QUESTIONS

The discussion questions are for classroom use to stimulate group thinking about PM 2.0. There are no right or wrong answers to most of the questions.

1. What type of industries, companies, or projects could still be reasonably successful using PM 1.0 rather than PM 2.0?
2. What are the pros and cons of allowing executives to assume the responsibility for policing PM 2.0 implementation?
3. Why is the estimation of percent complete so difficult? Are there situations where it can be estimated with reasonable accuracy?
4. Which people will most likely be the source for creating information overload?
5. Can good metrics eliminate or reduce executive meddling? If not, then how can it be reduced?
6. Who has the prime responsibility to determine if a project health check is necessary?
7. Can PM 2.0 become more costly than PM 1.0 and, if so, under what circumstances?
8. Should the need for contingency planning with PM 2.0 be greater or less than with PM 1.0?
9. Who makes the final decision as to how many metrics should be displayed on a dashboard?
10. Why is stakeholder involvement so important with PM 2.0?