Navigating Complexity

PMI
Project Management Institute

INTRODUCTION

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.

So are organizations prepared to deal with this increasing complexity? IBM's 2010 *Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study*[1] reported that the complexity of operating in an increasingly volatile and uncertain world is the primary challenge of CEOs. However, more than half of CEOs expressed doubt in their organization's ability to manage it and when they were asked to look five years down the road, four in five CEOs expected the level of complexity to increase.

PMI's *Pulse of the Profession™ In-Depth Report: Navigating Complexity* explores the steps that organizations are taking to improve the success of their complex projects and programs. It reveals that, regardless of the degree of complexity, standardized project management practices, effective communications, and a strong talent base are necessary for project and program success. But there is more.

High-performing organizations recognize another key ingredient in their talent pool—project executives with superior leadership skills necessary to ensure that complexity in their projects and programs is navigated successfully. This ingredient assumes even greater significance in organizations that deliver a higher percentage of highly complex projects since typically there are more dollars at risk for these projects. Recognizing it is one thing, of course, but acting on that recognition to create organizational capability is quite another.

This report identifies several strategies that are pursued by high-performing organizations to develop appropriate organizational capability: strategies that together reinforce two important points. First, they demonstrate the vital need for "joined-up" thinking that relates the successful mastery of complexity to both mature organizational program and project management processes and to the development of a program- and project-capable workforce. And second, they highlight the need for sustained and committed leadership from the very top of the organization if such "joined-up" thinking is to be implemented intelligently.

The successful creation of an organizational capability to navigate complexity leads to more successful projects and programs, fewer dollars at risk, and staying ahead of the competition. If your organization wants to be in that situation, then this report provides essential pointers to what is involved in creating such a capability.

Terry Cooke-Davies, PhD
Group Chairman, Human Systems International

THE NATURE OF COMPLEXITY

Complexity has different meanings for different people and in different organizations. In the end, there may not be much value in wasting a lot of precious organizational time and resources defining complexity. Instead, if an organization thinks its work is complex, then it has to function in a way that best navigates that complexity. Ultimately, how organizations anticipate, comprehend and navigate complexity determines their successes and failures.

There are many ways to characterize complexity (Figure 1).

Figure 1: Some of the terms that organizations, practitioners and subject matter experts use when characterizing complexity.

"I think ambiguity derives from a lack of planning. I think every project starts off with a good idea but we don't necessarily always nail down that idea."

~ **Matthew Handi**, Project Management Specialist in a large insurance firm

"Well, the starting point of ambiguity is scope: what is this project about, and why are we doing it? When I sit down with stakeholders to learn what the project's about, I ask about scope, and value. And if we haven't had a chance to do a really thorough expectation study up front, that will make the project ambiguous."

~ **Bailie Foss**
    Project Manager in a Fortune 100 financial services company

In *Redefining Program Management for the Unique Challenges of Complex Programs*, Booz Allen Hamilton identifies complexity in projects as "the exponential increase in ambiguity surrounding stakeholder expectations, especially regarding the certainty of program outcomes and schedules."[2]

An organization's portfolio—its set of strategic initiatives, which are delivered through projects and programs—determines the nature of complexity. Our research finds that there are several common characteristics of complex projects (Figure 2a). This in-depth report focuses on the strategies necessary to managing two of the most defining characteristics of complexity in projects: **multiple stakeholders** and **ambiguity.**

Not surprisingly, ambiguity is central to the complexity conversation for organizations dealing with a high percentage of complex projects. Sixty-four percent of organizations whose portfolios are filled with mostly highly complex projects[3] report that ambiguity is the most defining characteristic, compared to just 44 percent of organizations whose portfolios have few projects that are highly complex (Figure 2b).[4] This suggests having a portfolio filled with complex projects forces organizations to search for effective methods to deal with ambiguity.

Most Defining Characteristics of Complexity in Projects

Characteristic	Percentage
Multiple stakeholders	57%
Ambiguity of project features, resources, phases, etc.	48%
Significant political/authority influences	35%
Unknown project features, resources, phases, etc.	33%
Dynamic (changing) project governance	29%
Significant external influences	28%
Use of a technology that is new to the organization	26%
Use of a technology that has not yet been fully developed	25%
Significant internal interpersonal or social influences	23%
Highly regulated environment	18%
Project duration exceeds the cycle of relevant technologies	10%

Figure 2a: Characteristics of complexity.

Another common characteristic of complex projects is managing multiple stakeholder demands. Research on complexity conducted in 2010 with PMI's Global Executive Council[5] found that dealing with multiple interfaces was one of several factors that have an impact on the ability to navigate complexity.

PMI's practice guide on navigating complexity[6] details several reasons why effective stakeholder engagement is an important focus area:

- The diversity of stakeholder agendas may have an adverse impact on assumptions about and constraints upon a program or project.

- Social and political stakeholder interactions may produce difficult conditions for the program or project manager and the team.

- Stakeholders may have strong and diverse opinions regarding processes and methods for managing a program or project.

Understanding, managing and connecting this diverse set of internal and external stakeholders in a project or program can be enormously challenging even for the most experienced project manager. And the challenge clearly exists; nearly three out of five organizations report that managing multiple stakeholders is a defining characteristic of complexity in projects (Figure 2a).

There are potentially many risks and repercussions for organizations from poorly managing complexity: scope creep, time and cost overruns, communication breakdowns and outright project failures.

The bottom line is that organizations must address the nature of complexity for three very critical reasons:

❶ Complexity is not going away and will only increase.
Just three years ago, IBM's 2010 report *Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study* revealed that the complexity of operating in an increasingly volatile and uncertain world was the primary challenge of CEOs. More than half of the CEOs expressed doubt in their organization's ability to manage it. And four out of five CEOs expected the level of complexity to increase within the next five years.

Most Defining Characteristic of Project Complexity–Ambiguity of Project Features, Resources, Phases, etc.

64% Most Projects Highly Complex

44% Few Projects Highly Complex

Figure 2b.

"In terms of the current projects we do for big companies in the financial world, ambiguity seems to be the norm because until the project is underway, it seems like they cannot define it well enough for the scope to be signed off. Regardless of that, they do sign off. And always they have this nomenclature in scoping that says 'this is an estimate and the actual will be billed later.' What this means for the team—and this ties up with resources (how many and what type of people are needed on the team)—until the scope is clear, you have to estimate the resources, as well. And everything else is an estimate, including time."

~ **John Manickam**
Program Manager in a large financial institution

"For any large bank, you have your business stakeholders. And your business stakeholders are usually kept apart from the rest of the bank's business so there is no conflict of interest. So you have the stakeholders that propose the project. Then you've got your project managers and your IT team who evaluate it. The IT team looks at a project to see if it's a sound decision, if it makes sense or not. They look at it as a bottom line. So as a project manager, you sort of straddle the line of having to appease both sets of stakeholders."

~ Marketing Manager in a global mortgage lending bank

"I think when multiple stakeholders are coming from different backgrounds or even from different perspectives in terms of how they are looking at something, that does cause ambiguity. And I think that's where communication plays a huge role."

~ **Julie Tuttle**
Project Manager at one of the largest banks in the U.S.

2 **Large budgets are at stake.** PMI's 2013 *Pulse of the Profession*™ research reveals that the average budgets for projects that are highly complex are nearly twice as large: there are more dollars at risk for projects that are highly complex.

3 **Effectively navigating complexity delivers a competitive advantage.** Research from McKinsey supports a mature view that when complexity is viewed as "a challenge to be managed and potentially exploited, not a problem to be eliminated, businesses can generate additional sources of profit and competitive advantage."[7] These added values may also mean that organizations have more strategic options, are better able to manage their portfolios and are in a more prominent position to enable innovation. McKinsey also suggests an additional competitive advantage: "Companies that manage complexity are arguably harder to imitate, since doing so requires their competitors to replicate their organizational and operating-model decisions in detail."

With complexity increasing, more money at risk and the real potential for added value, the imperative to successfully navigate complexity is critical. Research reveals that successful organizations implement specific techniques or approaches to proactively defy complexity in their projects and programs and, ultimately, improve their project success rates.

SPOTLIGHT: HOW YOU HANDLE AMBIGUITY CAN MEAN SUCCESS OR FAILURE FOR COMPLEX PROJECTS

Ambiguity can mean many different things to project managers. However, how it is handled can mean the difference between a successful project and one that falls short of the stakeholders' requirements and expectations.

"I would define ambiguity as when we have stakeholders that aren't really quite sure themselves what they want," said a marketing manager in a global mortgage lending bank. "So the challenge as a project manager is trying to define what your client wants—not having solid requirements is the biggest problem."

John Burbank, a project manager in a large asset management firm, says that ambiguity can come from stakeholders who may have a strong background in a specific field, but may not have as strong an understanding of the business and project management as a discipline.

"So very often that ambiguity comes from the IT manager who says we're doing it this way, while the legal and compliance people say we have to do it that way. And you have to have a lot of discussion to at least get on a similar page, if not the same page," says Mr. Burbank.

Communication also plays a big role in handling ambiguity. And project managers need to facilitate discussions between individuals of varying backgrounds, says Julie Tuttle, a project manager in one of the largest banks in the U.S.

"I like bringing all these people into the same room or on a phone call, saying 'This is what we actually mean,' and asking them, 'Is this what you understood?' And the questions that come out, time and time again, indicate that this meeting was required," she says.

This meeting can often lead to a clearer understanding of the requirements of the project and may even lead to new requirements that none of the stakeholders had even considered before the discussion, says Ms. Tuttle. She also recommends that this discussion happen earlier, rather than later, in the project cycle.

"I think you are taking a huge risk if the stakeholders are only involved in the last stage, or validation, and then you find that they are not happy because this was not what they expected. They were thinking apples and you give them oranges. I think that's a huge reason you should talk about it," she says.

For Mr. Burbank, ambiguity can always be settled by deferring to whoever may be funding the particular project that is in question.

"What it comes down to is… who is funding the project? Which group is funding it? They have the final say. In a way that makes for some more clarity," he says. "So, in a way, a lot of my work is not all that ambiguous. I know that all I have to do is go to a high enough level within that organization and get an answer."

TURNING COMPLEXITY INTO DEXTERITY

While there may be a perception that successfully implementing complex projects requires a different set of skills or capabilities, research continually shows that's not so. PMI's *Pulse of the Profession™* research, among other PMI studies, shows that regardless of the number of highly complex projects, when organizations use techniques at the same frequency and have the same level of project management maturity, they have similar project success rates (Figure 3a).

Project Management Techniques, Methods and Practices, and Maturity	Organizations where most projects are highly complex	Organizations where few projects are highly complex
	Percent using always or often	
Risk management practices	78%	66%
Project performance measures	75%	71%
Change management practices	74%	62%
Resource management to estimate and allocate resources	73%	61%
Program management	69%	57%
Project portfolio management	50%	48%
Agile/Incremental/Iterative project management practices	32%	30%
Mature benefits realization process	11%	11%
Mature portfolio management practices	13%	9%
High organizational agility	14%	12%
Average percent of active project sponsors	66%	59%
Organization has a PMO	69%	66%
Average percent of projects meeting goals and business intent	58%	63%

Figure 3a: Regardless of the number of highly complex projects, organizations are managing projects with relatively the same set of project management techniques, methods and practices, and have relatively the same amount of project management maturity. (Note: There are no statistical differences between the two groups at the 95% confidence interval.)

PMI's research confirms that organizations that manage projects successfully, whether they are very complex or fairly standard, use the same capabilities but **more frequently**.

High-performing organizations[8] are applying key project management techniques, methods and practices much more frequently, and have much higher levels of project management maturity. Accordingly, they experience dramatically higher project success rates (Figure 3b). Of note, the project portfolios of high performers are no more complex than low performers (see Figure 3c on page 10).

Project Management Techniques, Methods and Practices, and Maturity	High Performers	Low Performers
	Percent using always or often	
Risk management practices	81%	51%
Project performance measures	80%	57%
Change management practices	76%	64%
Resource management to estimate and allocate resources	82%	51%
Program management	80%	48%
Project portfolio management	76%	39%
Agile/Incremental/Iterative project management practices	53%	24%
Mature benefits realization process	29%	3%
Mature portfolio management practices	28%	3%
High organizational agility	28%	4%
Average percent of active project sponsors	79%	43%
Organization has a PMO	78%	67%
Average percent of projects meeting goals and business intent	90%	34%

Figure 3b: High performing organizations are using project management techniques, methods and practices significantly more than low performers and have higher levels of project management maturity. (Note: All differences are statistically significant at the 95% confidence interval.)

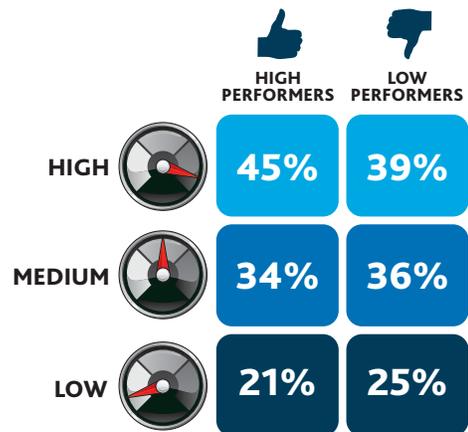## Average Percent of the Projects with Following Levels of Complexity

	HIGH PERFORMERS 👍	LOW PERFORMERS 👎
HIGH	45%	39%
MEDIUM	34%	36%
LOW	21%	25%

Figure 3c: Average percentage of projects with different degrees of complexity

Thus, the capabilities used by high performers are best practices that should be used by all organizations, regardless of the level of complexity in their projects. Doing so results in more projects meeting their goals—the hallmark of project success (as shown in Figure 3b).

While the nature of complexity varies depending on the organization and its projects and programs, our research shows that performing in a complex world requires a certain degree of dexterity.

High-performing organizations have mature project management practices, align their talent management with organizational strategy, and are significantly more likely to be highly effective communicators. And the payoff is huge: **High-performing organizations achieve an average project success rate of 90 percent, and risk 14 times fewer dollars than low performers**.[9] Considering that average budgets for highly complex projects are nearly double those with less complexity, this translates into a big boost to the bottom line—and requires more attention from organizations.

Additionally, our complexity in-depth research finds that high performers are focusing on specific capabilities within these three broad areas to manage highly complex projects—measures that have been proven to help them effectively manage ambiguity and multiple stakeholders.

Competencies to Manage Complex Projects

Create a culture of project and program management with engaged project sponsors	Assess and develop talent with a focus on fostering leadership skills	Communicate effectively with all stakeholder groups

So, in a world with not enough time or resources, focusing on these areas improves the delivery of complex projects.

■ CREATE A CULTURE OF PROJECT AND PROGRAM MANAGEMENT WITH ENGAGED PROJECT SPONSORS

Organizations with mature project management practices in place average a significantly higher percentage of projects meeting original goals and business intent (Figure 4). A key strategy to mature project management is **creating a culture of project and program management with engaged project sponsors.**

PMI's *Pulse of the Profession™* research on complexity reveals that a sponsor who actively supports the project is the second factor with the greatest impact on the success of projects that are highly complex— second only to effective communication.

PMI's practice guide on navigating complexity dedicates a section to key enterprise enablers that impact the outcomes of projects and programs with a high degree of complexity. Paramount to creating that enterprise mindset is "providing executive sponsorship and commitment." However, research sponsored by PMI—*Why Good Strategies Fail: Lessons for the C-Suite*, developed with The Economist Intelligence Unit—shows one out of eight (12 percent) organizational leaders do not believe that
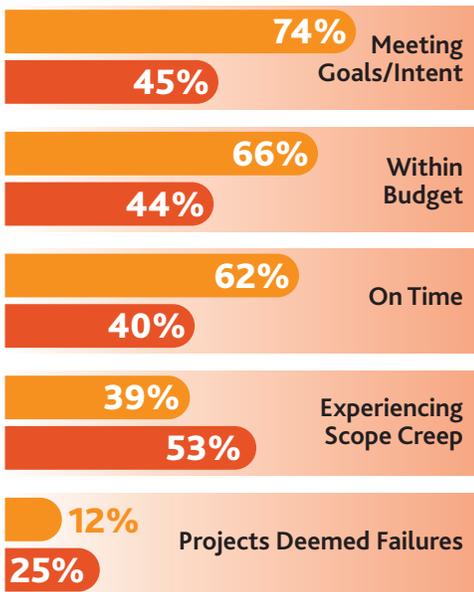
Projects Meeting Goals and Business Intent

Mature benefits realization processes	79%
Mature portfolio management practices	76%
High organizational agility	74%
Have active sponsors on 80%+ of projects	74%
Have a defined career path	71%
Standardization used throughout organization	70%
Have a process to develop PM competency	69%
Have a process to mature PM practices	69%
Have ongoing PM training	66%
Study average	62%

Figure 4: Mature project management practices result in more successful projects (Source: PMI's 2013 *Pulse of the Profession* report).

> *"We are living in a project world defined by complexity of interfaces. To be successful it is vital that we build strong relationships with sponsors and stakeholders based upon respect and inclusion."*
>
> ~ **Dr. Edward J. Hoffman**
>   Chief Knowledge Officer, NASA Academy of Program/Project and Engineering Leadership

Percentage of Projects that were Completed

Meeting Goals/Intent
74%
45%

Within Budget
66%
44%

On Time
62%
40%

Experiencing Scope Creep
39%
53%

Projects Deemed Failures
12%
25%

⬤ 80%+ of Projects Have Active Sponsors

⬤ <50% of Projects Have Active Sponsors

Figure 5: Organizations with a higher percentage of active project sponsors enjoy higher project success rates than those with a lower percentage of active project sponsors (Source: PMI's 2013 *Pulse of the Profession* report).

implementing strategic initiatives successfully is essential or very important to their organization's competitiveness over the next three years. This disconnect is an impediment to creating and maintaining the necessary mindset of executive commitment. Yet, senior support of strategic initiatives, and the projects and programs that implement them, is critical: 51 percent of senior executives say the leading reason for the success of strategic initiatives is leadership buy-in and support.

Additionally, Pulse research shows that projects within high-performing organizations have significantly more engaged project sponsors than projects within low-performing organizations. Specifically, 79 percent of projects within high-performing organizations have active project sponsors, compared to less than half (43 percent) at low-performing organizations. The research also reveals that having active project sponsors—executives who actively champion the strategic value of projects and communicate the intended benefits to stakeholders—leads to more successful projects (Figure 5).

The results of a key driver analysis are more significant, which reveals that an engaged project sponsor is the most significant driver of project success. Specifically, a 5 percent increase in the average number of projects that have an active sponsor increases the average number of projects meeting goals and business intent by 2 percent. This single factor can have a dramatic impact on the success of the organization, as more successful projects put fewer dollars at risk.

◼ ASSESS AND DEVELOP TALENT WITH A FOCUS ON FOSTERING LEADERSHIP SKILLS

According to research with PMI's Global Executive Council, managing complex projects requires project managers who are able to establish the vision, mission and expected outcomes in a way that is broad enough to be complete yet simple enough to understand. It also requires the skill to align the team to that vision. These are project managers who have become project executives with the leadership skill and business acumen to drive success. Additionally, PMI's research on talent management shows that organizations that report significant or good alignment of their talent management to organizational strategy average a significantly higher percentage of projects meeting original goals and business intent compared to organizations with moderate or weak alignment (Figure 6).

Alignment of Talent Management to Organizational Strategy

| Significant/Good Alignment | **72%** |
| Moderate/Weak Alignment | **58%** |

Figure 6: Percentage of projects meeting original goals and business intent.

The key strategies that assist in ensuring a successful alignment are: **Foster exceptional leadership skills** and **assess and develop your talent**

Foster exceptional leadership skills

Project or program managers with appropriate skills, knowledge and experience effectively manage projects and programs of all degrees of associated complexity. PMI's *Pulse of the Profession™ In-Depth Report: Talent Management* illustrates the three skill sets required for the successful management of projects, otherwise known as the "The Talent Triangle": technical project management skills, leadership skills, and strategic and business management skills (Figure 7).

Figure 7: "The Talent Triangle" illustrates the skill sets of the next generation of project managers.

"An organization's ability to navigate complexity depends upon its ability to manage its talent."

~ **Terry Cooke-Davies, PhD**
   Group Chairman, Human Systems
   International

PMI's research further shows that among the three skill sets within "The Talent Triangle," leadership skills have a direct influence on the success of project managers and projects:

● **75 percent of organizations rank project manager leadership skills as most important for the successful navigation of complexity in projects.**

Additionally, 66 percent of organizations rank leadership skills as most important for the early success of project managers and 71 percent of organizations rank leadership skills as most important for the long-term success of project managers.

PMI's research on complexity with its Global Executive Council defined exceptional leadership as being most adept at managing emotions, acting courageously, maintaining presence, inspiring teammates and building a culture of accountability, trust and continuous improvement.

Among successful organizations, leadership development is one of the areas of talent management most aligned to organizational strategy. In fact, 70 percent of organizations that have aligned their talent management to organizational strategy report that leadership development is one of their talent management programs most aligned to organizational strategy (compared to only 37 percent of organizations with weak alignment of talent to strategy). Aligning talent management to organizational strategy leads to better project success (see Figure 6 on page 13).

Four out of five high performers (81 percent) report that the most important acquired skills for project managers to successfully manage projects that are highly complex are leadership skills (Figure 8).

Most Important Skills to Successfully Manage Highly Complex Projects
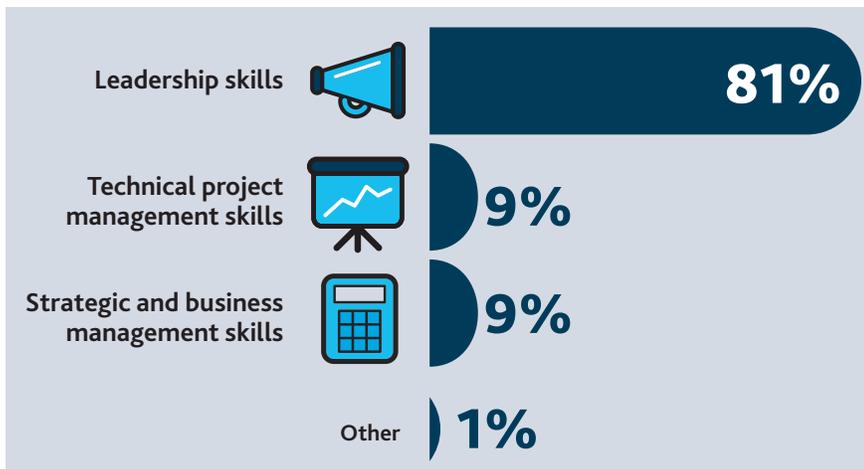
Figure 8: Skills most important for successfully managing highly complex projects.

These critical leadership skills include advanced skills in negotiation, persuasion and collaboration as well as the experience and skill set to deal with ambiguity, one of the most defining characteristics of complexity in projects:

> For complex projects, mastery of traditional dimensions of project management such as cost, schedule, and performance is necessary but insufficient. With international partnerships, decentralized teams, and working alliances among government, industry, universities, and nonprofit organizations all increasingly common, complex projects also require leaders with advanced skills in areas such as negotiation, persuasion, and collaboration. (Hoffman and Kohut)[10]

These findings strongly suggest that project management talent with highly developed leadership skills can considerably manage projects and programs that have high degrees of complexity.

Assess and develop your talent

It is no surprise that experienced project leaders drive more successful projects and that is particularly true of complex projects. Subject matter experts recommend assessing project manager experience and talent before assigning project leaders to projects that are highly complex in order to ensure success.

- **Step 1: Conduct a resource gap analysis comparing available resources with those needed for a complex project.** A resource gap analysis assesses the resources, talent, software, alliances, processes and practices readily available to successfully complete a project or program. Experts recommend conducting this important analysis, particularly for projects with higher levels of complexity, to ensure critical business objectives are met. Our research on complexity shows that organizations that perform this analysis average 71 percent of their projects meeting their original goals and business intent—significantly higher success rates than those organizations that do not complete this assessment (67%).

- **Step 2: Conduct a skills assessment to aid in assignment of project managers.** It seems intuitive that organizations should match the skills of a project manager to a project that is highly complex. Yet our research shows that less than one third of organizations are performing this assessment for projects that are highly complex. However, organizations that conduct this analysis average significantly more projects that meet original goals and business intent compared with those that do not (72% vs. 67%).

- **Step 3: Maintain and consult a talent portfolio of project managers' skills and past experiences.** The introduction of *Aspects of Complexity: Managing Projects in a Complex World* (Editor-in-Chief Terry Cooke-Davies, PhD),[11] suggests that successful project and program managers develop the valuable skill set of leadership through years of experience.

Our research shows that organizations agree: high performers report that project manager work experience is the attribute most likely to foster successful completion of complex projects, significantly more often than natural aptitude and formal education and training. Fifty-seven percent of high performers recognize project management work experience as the attribute most likely to foster successful management and completion

of projects that are highly complex, as opposed to natural aptitude and formal education and training (Figure 9).

Project manager attributes most likely to foster successful management and completion of projects that are highly complex
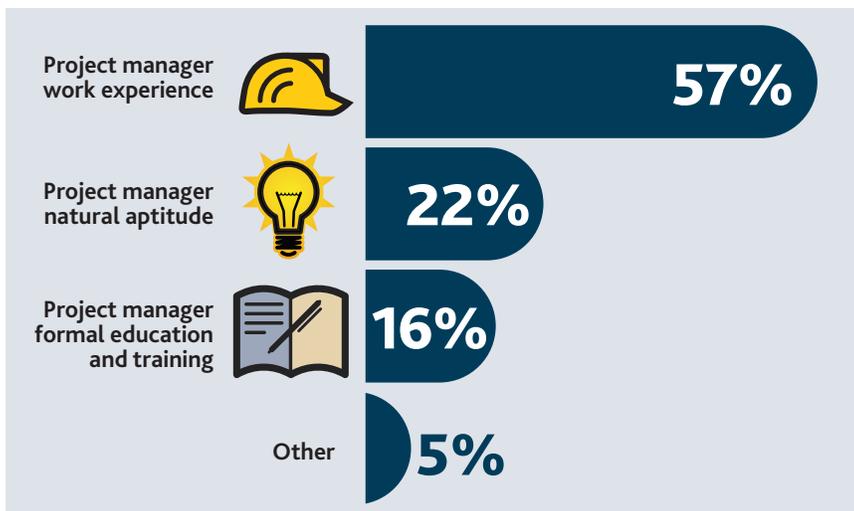
Figure 9: Over one-half of high performers recognize project management work experience as the attribute most likely to foster successful management and completion of projects that are highly complex.

Knowing the experience and skills of an organization's project managers is crucial. Experts recommend that organizations keep and frequently consult an updated inventory of project managers' skills and past experience. Doing so allows organizations to most effectively assess talent for highly complex projects, and select project managers for projects and programs that are best matched based on their skills and experience. Our research shows that organizations that consult an updated inventory of project managers' skills and past experiences average 72 percent of projects meeting original goals and business intent compared to only 68 percent for those that do not.

- **Step 4: Develop your talent.** An organization's talent is its primary competitive advantage—and effective talent management is a strategic competency.

McKinsey's "Cracking the Complexity Code" substantiates the importance of developing an organization's talent to navigate complexity, noting that, "Once a company knows where its complexity lies… it must build

"The greatest competitive advantage is a talented and adaptive workforce. The most important role for a PMO is to ensure a continuous and optimal learning system."

~ **Dr. Edward J. Hoffman**
Chief Knowledge Officer, NASA Academy of Program/Project and Engineering Leadership

the capabilities of the individuals who will assume the roles that may be pivotal to managing that complexity."

Our research shows that it is critical to develop a centralized function to ensure that project professionals receive appropriate education and professional development. In some organizations, this function is called a project academy or a project center. And further, some organizations may have this function as part of their project management office (PMO).
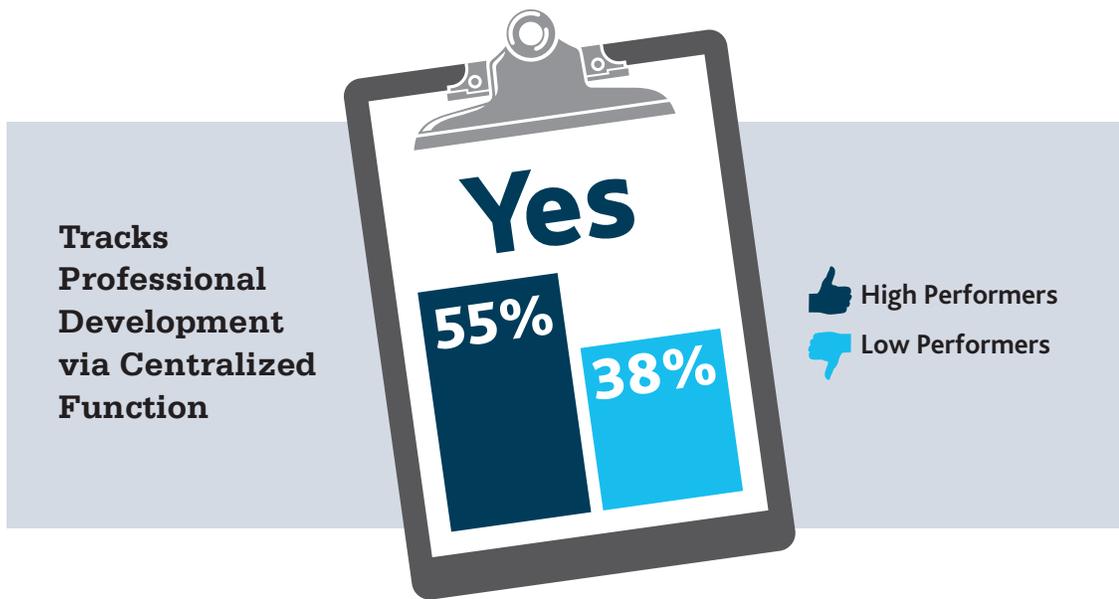
Many organizations use this centralized function to track the professional development of project managers and distribute relevant information to project teams, the organization overall, as well as the individual. Specific functions may include:

- Advocating for the knowledge requirements of project managers
- Aligning projects with organizational strategy
- Promoting sustainable organizational capability
- Defining concepts and vocabulary for the project community
- Promoting communities of lifelong learning
- Aligning projects with external stakeholders

Our research on complexity shows that organizations that have this centralized function average 72 percent of projects that meet original goals and business intent compared to only 66% for organizations that do not have this in place.

High performers recognize the critical need for a centralized function to ensure that project professionals receive appropriate education and professional development. In fact, they are significantly more likely than low performers to have this function in place (Figure 10).

These strategies for aligning talent management to organizational strategy (fostering exceptional leadership skills, assessing talent and developing talent) allow only 66% for organizations to better select project managers for all projects, including those that are highly complex.

Tracks Professional Development via Centralized Function

Yes

55%

38%

👍 **High Performers**

👎 **Low Performers**

Figure 10: High-performing organizations are significantly more likely to have in place a centralized function that supports project manager development.

80%

Highly-effective communicators

Minimally-effective communicators

52%

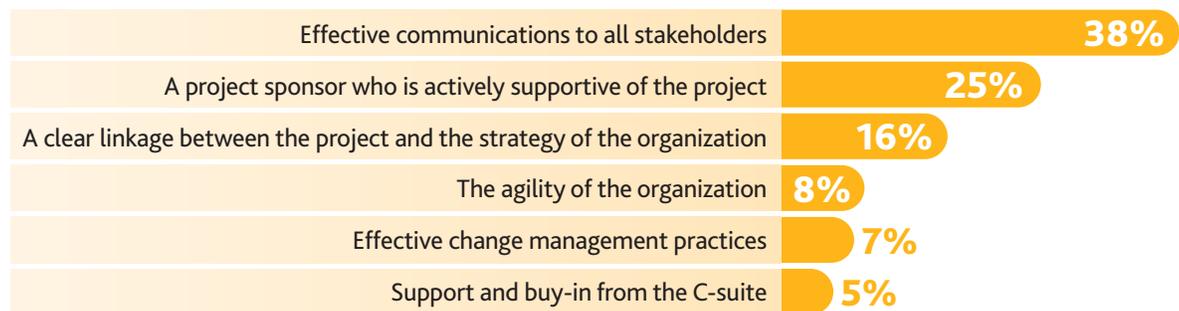**Figure 11:** Effective communications have a direct effect on project success rates.

■ COMMUNICATE EFFECTIVELY WITH ALL STAKEHOLDER GROUPS

Organizations that are highly effective communicators average a significantly higher percentage of projects meeting original goals and business intent compared to organizations that are minimally effective communicators (Figure 11). The key strategy here is communicating effectively to all stakeholders.

As revealed in PMI's *Pulse of the Profession™ In-Depth Report: The Essential Role of Communications*, the failure of one out of two projects that fails is related to poor communications. If failure is a result in a project with a high level of complexity and the characteristic high budget, the risk for the organization is immense. Organizations that recognize the impact of effective communications to all stakeholders on the success of complex projects average success rates of 71 percent which is significantly higher than their counterparts. Organizations that place high importance on superior communications experience more successful projects.

High performers report effective communications to all stakeholders, more than any other factor, as having the greatest impact on highly complex projects (Figure 12), and place more importance on effective communications than low performers (38 percent versus 25 percent). This suggests that high-performing organizations recognize that placing such a high degree of importance on effective communications, and consistently ensuring that the communications are done, effectively addresses the added complexity of multiple stakeholders.

Factors reported by high performers as impacting the success of complex projects

Effective communications to all stakeholders	**38%**
A project sponsor who is actively supportive of the project	**25%**
A clear linkage between the project and the strategy of the organization	**16%**
The agility of the organization	**8%**
Effective change management practices	**7%**
Support and buy-in from the C-suite	**5%**

Figure 12: High performers recognize effective communications to all stakeholders has the greatest impact on highly complex projects.

Findings from PMI's research with its Global Executive Council further justify the essential need for effective communications for projects that are highly complex. Superior communications as detailed by these experts in their fields include seeking diverse perspectives, tailoring communications to the audience, multi-dimensional communications, promotion of project objectives and ability to influence multiple stakeholders.

These subject matter experts believe that these highly developed communications skills and behaviors enable project managers to better manage diverse internal and external stakeholders who are often a hallmark of complexity in projects, leading to more successful projects, and ultimately, risking less money.

Organizations ranked "effective communications to all stakeholders" as the factor having the greatest impact on the success of projects that are highly complex.

SPOTLIGHT: IN FINANCIAL SERVICES, COMPLIANCE CREATES COMPLEXITY

Additional record-keeping and reporting requirements can add multiple stakeholders and ambiguity to any project. But what if one of those stakeholders is a federal commission with the authority to subject your organization to enormous financial penalties or—at worst—shut you down entirely?

Within the financial sector, the possibility of severe consequences for improper record-keeping or reporting is an everyday reality, with the onset of recent U.S. federal regulations such as the Dodd-Frank and the Sarbanes-Oxley (SOX) Act. As a result, financial services organizations view these regulations with the utmost seriousness.

"We've formed whole teams and whole divisions dedicated to making sure that we are compliant," said a marketing manager in a global mortgage lending bank. "The head of our bank is completely dedicated to this—he doesn't want us to just meet the requirement, he wants us to surpass it."

As a result, the bank has dedicated vast resources to storing documents and making sure that they are retrievable, as well as creating an entire compliance and risk organization tasked to ensure that the bank's employees are following the law.

In order to deal with this level of complexity, project managers need to pay a fine attention to detail and learn how to "interpret the spirit of the law, not just the letter of the law," said a marketing manager in a global mortgage lending bank. "Integrity is key. And communication is important… and then you also have to work with your internal team to convey the importance of this and to make sure they understand that everyone's job is on the line."

John Burbank, a project manager in a large asset management firm, said that strong communications skills were paramount in handling complex projects that involved federal regulations.

"You have to have the business understanding; you have to have the IT understanding; you have to have the ability to explain highly complex things in a very simple way to make sure everybody understands them—kind of the innate ability to understand people's backgrounds and their understandings so you [can] bring them in on the same page," said Mr. Burbank.

For Bailie Foss, a project manager in a Fortune 100 financial services company, his organization's compliance department provides a line of defense against a potentially damaging regulatory action. But, as a result, he must keep them engaged throughout the project life cycle in order to ensure successful deployment.

"We have to demonstrate to [the compliance department] that our requirements have been approved by the necessary stakeholders, and that we've worked with our information and compliance partners… If they don't give the thumbs up, we don't get to [deploy]," said Mr. Foss.

"Dealing with multiple stakeholders and communicating effectively with them is important to project success in today's financial regulatory environment,"said Matthew Handi, Project Management Specialist in a large insurance firm.

"You're dealing with a whole range of different types of people. Instead of technical (IT) managers, you're certainly dealing with lawyers, people interpreting

the regulations—constant feedback between those folks—and that leads to sometimes changing course within the middle of the project—either their interpretation of the regulation changed, or they were able to successfully lobby so that a portion of the regulation is delayed, or something else," said Mr. Handi.

However, regardless of whether government compliance or another factor is creating complexity in a project, increased focus on strong project management principles can help practitioners reach successful completion of their projects.

"One of the things we do is more monitoring for highly complex projects. For example, we need to monitor closely highly complex government projects through frequent status reports. And when you are creating a plan for a highly complex project, you have to ensure that you have clearly defined milestones and to be sure you are checking what has been accomplished against those milestones. And anything which is a deviation from a defined milestone has to be corrected by assigning more resources," said Sanjay Sharma, an IT Manager in a financial services firm.

CONCLUSION

Regardless of the degree of complexity, standardized project management practices, a strong talent base, and effective communications are necessary for project and program success. Our research demonstrates that the differential for successfully navigating complexity is seen between high and low performing organizations, not between general and complex projects.

The way forward is to successfully navigate complexity by focusing on specific capabilities, which can transform complexity into dexterity:

- **Create a culture of project and program management with engaged project sponsors**

- **Assess and develop talent with a focus on fostering leadership skills**

- **Communicate effectively with all stakeholder groups**

Turning complexity into dexterity allows organizations to improve their project success rates, risk fewer dollars, and stay ahead of the competition.

ABOUT THIS REPORT

Research for PMI's *Pulse of the Profession™ In-Depth Report: Navigating Complexity* was conducted in July 2013 among 697 project management practitioners with three or more years of project management experience and who are currently doing professional project, program, or portfolio management work on a full-time basis. Additional in-depth telephone interviews were conducted for the purpose of obtaining deeper insights into practitioner opinions and examples of situations illustrating the nature of complexity and tactics for its mitigation.

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2   Booz Allen Hamilton. *Redefining Program Management for the Unique Challenges of Complex Programs.* 2013.

3   Defined as organizations where more than 75 percent of projects are highly complex.

4   Defined as organizations where less than 25 percent of projects are highly complex.

5   PMI's Global Executive Council is a community of decision makers, subject matter experts and influencers who believe that shared learning, along with program and project management, can bring about real change and improve business results. The Council contains representatives from approximately 80 globally recognized and influential organizations, ranging from financial institutions and IT to aerospace, defense and energy.

6   PMI's practice guide for navigating complexity will be released late 2013/early 2014.

7   Suzanne Heywood, Jessica Spungin, and David Turnbull. "Cracking the Complexity Code." *McKinsey Quarterly*, May 2007.

8   High performers are organizations that achieve 80 percent or more of projects on time, on budget and meeting original goals.

9   Low performers are organizations that achieve 60 percent or fewer projects on time, on budget and meeting original goals.

10   Edward J. Hoffman and Matt Kohut. NASA's Journey to Project Management Excellence. November 2012. http://www.nasa.gov/sites/default/files/709495main_NASA_Journey_to_PM_Excellence.pdf

11   Terry Cooke-Davies, PhD, editor-in-chief. *Aspects of Complexity: Managing Projects in a Complex World.* Contributing editors: Lynn Crawford, DBA, John R. Patton, PMP, Chris Stevens, PhD, and Terry M. Williams, PhD. Project Management Institute, 2011.

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