Managing Organizational Complexity:
How to Optimize the Governance of Programs and Projects to Improve Decision Making

By Richard J. Heaslip, PhD • Programmatic Sciences LLC
# Table of Contents

**Complexity in Modern Organizations** ................................................................. 3  
  - Understanding organizational complexity ............................................. 3  
  - Three primary sources of complexity .................................................. 4  
  - The five-complexities framework ......................................................... 4  

**The Origins and Growth of Organizational Complexity** .......................... 6  
  - Primary governance committees and the “two-party” governing system .... 6  
  - The proliferation of secondary governance and review committees ........ 7  
  - The impact of organizational complexity on decision-making agility .... 8  
  - The impact of organizational complexity on project and program managers 10  

**Assessing the Organizational Complexity Faced by a Team** ............. 11  
  - Reducing organizational complexity .................................................. 13  
  - Managing organizational complexity .................................................. 14  
    - The role of a project manager ......................................................... 14  
    - The role of a primary governance committee ................................ 15  
    - The role of a program manager .................................................... 16  

**A “Three-Party” System for Managing Organizational Complexity** ...... 17  
  - Benefits of the three-party system .................................................... 18  

**Closing Perspectives** .................................................................................... 19  

**References** ................................................................................................... 20
Complexity in Modern Organizations

Project management can be a difficult job for a variety of reasons. Project managers may be responsible for projects that are huge—projects that have so many moving parts that the slightest misalignments send operational plans into a spin. They may work on projects that are unprecedented—projects in which activities cannot be guaranteed to produce the outcomes or benefits desired. They may be assigned projects in fields that are evolving—projects in which end products will need to deliver value in an unpredictable environment. Each of these projects shares a common trait. They are complex. They pursue complex goals and, as a consequence, are likely to face complex issues. To be a project manager is difficult because it is your responsibility to navigate, manage, and solve very different kinds of complexity to ensure that your projects deliver the intended benefits.

Most project managers are not daunted by these challenges, however. They recognize that operational, outcome-based, and environmental challenges are inherent to projects. They cannot be avoided. In fact, great project managers seem to relish the challenge of managing the projects’ intrinsic complexities.

There are, however, other kinds of complexity that must also be managed—complexities that are seemingly extrinsic to projects. These are complexities that must be navigated when project managers need to earn the endorsement of internal governance committees and key stakeholders before implementing or adapting the projects’ strategies and plans. Project managers report that negotiating approvals for a change in strategy or plans can sometimes be a daunting task. Stakeholders and governance committees are “gates” through which many of a project’s problem-solving solutions must pass. Navigating a complex gauntlet of stakeholders and their governance committees to gain endorsement of a team’s response to operational, outcome, or environmental complexities can, by itself, be a very complex challenge.

Much has been written about a project manager’s need to engage with organizational stakeholders (see, for example, Trentim, 2013). This paper explores the challenges faced by project and program managers who must manage complex projects and programs within organizational systems that are themselves complex. It explores why organizations struggling to improve the management of complexity intrinsic to projects and programs too often take actions that increase complexity that is extrinsic to those endeavors. And it provides new perspectives on how to control, navigate, and reduce project and program complexity.

Understanding organizational complexity

Describing and understanding the impact of complexity on projects and organizations can be a complex endeavor unto itself. That, unfortunately, is the nature of complexity. Dictionary.com (n.d.) defines complex as the state of being “so complicated or intricate as to be hard to understand or deal with.” However, navigating complexity can be made easier. Like beauty, complexity lies in the eye of the beholder.

To better understand complexity and how to navigate it requires that project and program managers make it more comprehensible. It requires that they be able to appreciate and explain its root causes, so that their organizations can better recognize and control its emergence. It requires that they develop the right tools to manage it. Complexity management frameworks are useful for this purpose (Cooke-Davies, 2011; Maylor, Turner, & Murray-Webster, 2013; PMI, 2014; Remington & Pollack, 2008).
Three primary sources of complexity

The framework described in Navigating Complexity: A Practice Guide (PMI, 2014) provides valuable insight about the kinds of complexity encountered by project teams. It observes that project teams encounter three major categories of complexity—complexities that are based on human behavior, system behavior, and ambiguity. The complexities faced by organizational projects and programs arise as a consequence of one or more of these three types of complexity.

1. Complexity based on human behavior results from “the interplay of conducts, demeanors, and attitudes of people” (PMI, 2014, p. 11). Human behaviors that are varied, unpredictable, and uncontrollable make project management more difficult. They lead to complex issues because stakeholders sometimes misunderstand or disagree, which leads them to express views or take actions that are unexpected.

2. Complexity based on system behavior results from the need for projects and programs, or their components, to interact dynamically with “systems” that exist within their environment. Such systems might include governance committees, functional departments, business management groups, or even other projects and programs. When projects or programs are connected to—or dependent upon—such systems, their interactions can produce unexpected results. They can lead to complex issues that need to be managed by project and program managers or the people with whom they work.

3. Complexity based on ambiguity results from “not knowing what to expect or how to comprehend a situation” (PMI, 2014, p. 20). It results from uncertainty about what will happen and how one will need to respond to it. Ambiguity may lead to complex issues, for example, because it can prevent projects and programs from delivering their intended benefits, and it can make the identification of “appropriate next steps” much more difficult.

The framework described in Navigating Complexity (PMI, 2014) enables project and program managers to recognize that managing projects in complex organizational settings requires the navigation of all three kinds of complexity.

The five-complexities framework

A second framework that has been useful for improving the management of project and program complexities was described in Managing Complex Projects and Programs: How to Improve the Leadership of Complex Initiatives Using a Third Generation Approach (Heaslip, 2014). This framework seeks to associate complexities with their tangible causes (things, events, or people) to facilitate the assignment of professional responsibilities for managing them. The five-complexities framework recognizes these sources of complexity:

- **Operational complexity** is associated with defining, scheduling, and completing activities in a project or program plan. Managing operational complexity is a primary responsibility of a project manager trained in the principles, practices, tools, and techniques of professional project management. Operational complexity increases with the number of tasks that must be completed within a project or program and its organization’s portfolio.
■ **Outcome complexity** arises when a project or program depends on activities that do not have predictable results. Managing outcome complexity may be the primary responsibility of project or program managers or stakeholders who have subject matter knowledge specific to the outcome being pursued. Outcome complexity increases as projects or programs pursue more novel, unprecedented activities and goals.

■ **Environmental complexity** arises from an environment that is unstable over the time period that a project or program is being pursued. Because it originates from external sources, it usually cannot be controlled by the project or program manager. Responsibility for navigating environmental complexity often lies with the sponsoring organization’s governing committees, since they are best positioned to monitor and influence the environment external to the project, and to enable teams to function properly in light of it.

■ **Stakeholder complexity** arises from a project’s or program’s reliance on stakeholders for support and the uncertainty that it will be given. Responsibility for managing stakeholder complexity lies with project or program managers, team members, and other individuals within the sponsoring organization, because every individual who is important to the endeavor is a stakeholder who has the potential to influence other stakeholders. However, managing stakeholder complexity is often considered to be a principal responsibility of project and program managers because they are highly sensitive to the competing interests of those who interact with their teams.

■ **Organizational complexity** is associated with trying to align the views and secure the endorsements of organizational committees with distinct roles, responsibilities, perspectives, and priorities. It is the complexity that arises when projects or programs must obtain the agreement of several independent governance and review committees as part of an organization’s decision-making process. It can be influenced and managed by many stakeholders. However, it is different from stakeholder complexity because it emerges from associations of stakeholders who gather intermittently, make potentially significant but often unpredictable decisions, and then disperse. It must, therefore, be managed differently than stakeholder complexity. Managing organizational complexity is often considered a principal responsibility of project and program managers charged with ensuring that their teams efficiently navigate the organization’s decision-making processes.

The five-complexities framework is unlike other frameworks because it encourages the independent study of how organizational complexity is created, its impact on decision making, and methods for managing it. Organizational complexity engenders all three of the complexities identified in *Navigating Complexity: A Practice Guide* (PMI, 2014). It results from ambiguity associated with human behaviors that determine system behaviors within an organization. The intersection of the complexities identified in *Navigating Complexity* with the five-complexities framework aids in understanding the origins and growth of organizational complexity and its potential impact on an organization’s decision-making processes.
The Origins and Growth of Organizational Complexity

It is perhaps easy to understand the origins of organizational complexity. Organizations often use governance and review committees to help manage projects and programs. However, the recommendations made by these committees are not always aligned with those of other committees or those of project or program teams. Sometimes that leads to complex problems for a project or program team.

Organizational complexity might therefore be viewed as an unavoidable consequence of pursuing projects or programs in bureaucratic organizations. But how much organizational complexity is acceptable?

Primary governance committees and the “two-party” governing system

It is (unfortunately) easy to overlook the growth of organizational complexity; it often happens surreptitiously. When questioned about their organizations’ management systems, it is common for project and program managers to explain the governance of their projects in fairly simplistic terms: Their projects and programs have been authorized by a “primary” governance committee that has defined their endeavor’s overarching goals, approved its approach (strategies and plans), and provided it with support (resources). The committee has delegated management responsibilities to selected project or program managers and their teams. The teams, in turn, have been empowered to work somewhat autonomously to pursue the goals that were approved. Together, primary governance committees and the teams monitor progress and results of each project or program. Over time they identify, propose, authorize, and implement any changes to strategies and plans that might become necessary to ensure delivery of the project’s or program’s intended value.

When described in this way, individual programs or projects appear to be managed via a “two-party” system that is composed of a governance committee and its authorized project or program team (as illustrated in Figure 1.)

Most project and program managers affirm that this is the basic system under which their teams work. They imply that their teams operate under an almost contractual relationship with their governance committees. In exchange for a team’s commitment to operate according to its organization’s management constraints, that team is authorized to pursue its assigned goals somewhat independently. On the surface, it is not a particularly complex system.

After further discussions, however, it usually becomes clear that the two-party system is an overly simplified depiction of the oversight systems of most projects and programs today. Project and program managers and their teams are now typically responsible for interacting with several committees—secondary governance and review committees that are responsible for providing input or authorization for specific elements of a project’s or program’s plan. The existence of secondary governance and review committees increases organizational complexity significantly.

Figure 1: The “two-party” project oversight system.
The proliferation of secondary governance and review committees

Secondary governance and review committees are typically created to improve the oversight of projects and programs. Most often, they are formed or sponsored by senior executives who are members of a project’s primary governance committee and who are, therefore, responsible for monitoring the progress, understanding the needs, and analyzing the results of their organization’s projects and programs. Usually, secondary committees are expected to provide senior executives with assistance in performing each of these tasks. Common types of secondary governance and review committees are shown in Table 1.

<table>
<thead>
<tr>
<th>Committee Type</th>
<th>Oversight Role</th>
<th>Primary Complexity-Management Focus¹</th>
</tr>
</thead>
</table>
| **Operational** | Scheduling and resourcing  
Assuring efficiency | Operational |
| **Technical** | Technology development  
Capability development  
Specification review  
Quality control  
Assuring benefits delivery  
Phase-gate management | Outcome |
| **Business** | Portfolio prioritization  
Resource prioritization  
Managing alliances and partnerships  
Decision analysis and support | Environmental |
| **Specialty** | Customer/client management  
Regulatory agency interactions  
Payer interactions  
Research collaborations  
Securing external (expert) advice | Outcome or Environmental |
| **Mixed-function** | Cross-functional investments  
Initiatives or collaborations with mixed purposes. | Varies, depending on initiative |

Table 1: Common examples of secondary governance and review committees.

¹ For a full discussion of how secondary governance committees contribute to the management of each kind of complexity, see Managing Complex Projects and Programs: How to Improve Leadership of Complex Initiatives Using a Third-Generation Approach (Heaslip, 2014).
Secondary committees are most often used to help organizations manage elements of the project that are complex. For example:

- Line function operational committees ensure that project teams have fully considered the operational impact of project proposals.
- Technical committees provide input on outcomes achieved.
- Business committees review the impact of team proposals on the organization’s business environment.

Clearly, secondary governing and review committees provide value. They ensure that project and program teams have regular access to expert stakeholders who can help them navigate and manage complexity, and they provide venues for teams to garner support for their proposals. In doing so, secondary governance and review committees can be highly effective in facilitating the management of operational, outcome, and environmental complexities. Unfortunately, however, there is also a significant downside to the formation of secondary governance and review committees—they dramatically increase organizational complexity.

**The impact of organizational complexity on decision-making agility**

Consider the example of a pharmaceutical company whose program team was responsible for developing a new drug. While defining or modifying its clinical development strategy and plans, that team was asked to review its proposals with:

- Three line function operational review committees—to ensure its proposed plan could be fully supported (to help manage operational complexity);
- A medical review committee—to assess the rigor of its clinical study design and its proposed clinical endpoints (to help manage outcome complexity);
- A regulatory review committee—to ensure that the study will meet current and future requirements for regulatory submissions (to help manage environmental complexity);
- A legal committee—to confirm that the team is protecting its future rights to proprietary information and discoveries that might be made (to manage environmental complexity);
- A cross-functional development committee—to ensure that it has clearly defined its proposed phase-gate milestones (to manage outcome complexity);
- A portfolio review committee—to ensure the project’s use of resources is consistent with the organization’s strategic priorities (to manage environmental complexity); and, finally,
- The primary governance committee to confirm that the views of the entire organization have been considered, that all complexities have been managed acceptably, and to obtain final approval.

The interactions of the program team with its committees are numerous—and potentially complex—as shown in Figure 2. Each interaction has the potential to generate unexpected results in the form of new recommendations and or constraints. However, this may just be the tip of the iceberg. Governance committees
often make recommendations and decisions that affect other committees. The potential interactions of each of these committees with other committees are even more numerous (and complex) and they increase exponentially with the number of committees. The eight secondary governance and review committees and one primary governance committee described above have the potential to produce 36 different inter-committee interactions\(^2\)—too many to depict clearly in Figure 2.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{governance_review_committees.png}
\caption{Governance and review committees for a pharmaceutical program.}
\end{figure}

Having multiple secondary committees may significantly impede decision-making agility. Each interaction between a program team and its governance or review committees has the potential not only to produce unanticipated outcomes in the form of recommendations, imposed constraints, or conditional agreements, but also to conflict with the recommendations, decisions, and constraints from other committee interactions.

The need to align recommendations, agreements, and constraints dramatically increases uncertainty and complexity related to decision making. It sometimes results in the need to proceed through secondary committee meetings iteratively. And in common organizational environments, where meetings are held infrequently and sequentially, it can dramatically slow decision making. The introduction of secondary governance and review committees to improve the management of operational, outcome, and environmental complexities can paradoxically result in an offsetting increase in organizational complexity. The net effect on organizational decision making may not always be positive. Moreover, the introduction of secondary committees can also profoundly affect the roles and responsibilities of project and program managers.

\(^2\) In a committee structure, there will be \([n*(n-1)/2]\) potential inter-committee interactions, where \(n\) is the number of committees (PMI, 2014, p. 18).
The impact of organizational complexity on project and program managers

Project and program managers consistently observe that increasing the number of secondary governance and review committees (increasing organizational complexity) changes their jobs in fundamental ways. They note, for example, that increasing the number of secondary committees dramatically increases the time that they spend creating documents and presentations.

To effectively assist in the management of project or program complexity, secondary governance and review committees must be well informed of the issues faced by a project or program team. They must fully understand the operational, outcome-based, and/or environmental issues that the team is managing. But secondary committees (like primary governance and review committees) often cannot monitor these issues in real time. As a consequence, they often rely on project and program managers to inform (or remind) them of current project strategies, plans, and issues through background documents and presentations. However, producing documents and presentations is very time consuming for program or project managers and their teams. It must be done well, because poorly informed committees too often make counterproductive recommendations. And project and program managers report that the time they spend satisfying each secondary committee’s individual needs for information and analyses diminishes their focus on other priorities related to managing the time, cost, and quality of the project, or ensuring benefits realization for the program.

Project and program managers also observe that an increase in organizational complexity can disempower project or program management practitioners. As secondary committees proliferate and become more deeply entrenched in an organization’s management structure and culture, they become more independent—and more inclined to assume a governing posture. When that happens, it becomes more likely that they will withhold their endorsement of team recommendations, or influence projects’ and programs’ executive sponsors to withhold support. The result can be an erosion of the autonomy of project or program teams and project or program managers and a diminished recognition of the project or program manager’s role in the decision-making process. As the number of secondary governance and review committees grows, it becomes increasingly important that project and program managers establish strong complexity-management partnerships with their executive sponsors. It also becomes necessary that project and program managers engage their executive sponsors more directly in negotiating solutions to conflicts that arise with secondary governance and review committees.

In aggregate, the effects of increased organizational complexity on a project or program manager’s roles and responsibilities may be quite significant. They cause project and program managers to focus more on the management of committee-based decision-making processes, and less on the independent management of issues. They cause managers to spend more time personally managing organizational (external) complexity and correspondingly less time managing their projects’ operational or outcome (internal) complexities. And they influence the competency profile of an “ideal” project or program manager.

The challenge, it seems, is to define how best to reap the intended benefits of secondary review committees while minimizing their negative consequences. In other words, how can one best assure that operational, outcome, and environmental complexities can be managed while minimizing the introduction of organizational complexity.
Assessing the Organizational Complexity Faced by a Team

To successfully manage organizational complexity requires that one clearly understand its sources. For many organizations, the best first step is to build an “organizational complexity map” that enables examination of the governance and review committees that interact with a given program or project team. One such map was shown in Figure 2. Complexity maps enable organizations to determine which committees have the potential to contribute to a project’s or program’s organizational complexity.

A second beneficial step is to formally determine the intended authority of each of the committees that interacts with the project or program team. The authority of each committee may be determined by clearly defining whether that committee is primarily intended to have governing responsibility or only review responsibility.

- A committee with governing responsibility may be defined as one whose approval of team proposals is required as part of implementing or changing an endeavor’s strategy or plans. Teams usually interact with governing committees to obtain approval of their strategies and plans, or to periodically reconfirm the committee’s continued support of their previously approved strategies and plans.

- A committee with review responsibility may be defined as one that examines team proposals with the primary purpose of exchanging status information, subject matter knowledge, and insight with the team. Review committees may support or object to team proposals; however, their formal approval of team strategies and plans is generally not required.

Identifying the intended purpose of an organization’s secondary governance and/or review committees is an important second step in the management of organizational complexity, because a committee’s scope of authority can profoundly affect its contribution to organizational complexity.

Governing committees tend to increase organizational complexity more than review committees because projects and programs must seek their formal approval. Approvals, however, are often conditional. When projects or programs obtain the approval of a governing committee, it is often based on assumptions that were made when the approval was granted. But the views expressed or constraints imposed in a subsequent meeting with another (second) governing committee can change team assumptions. They can trigger the need for re-examination and revalidation of agreements made with the first governing committee. The introduction of multiple governing committees may thereby create more iterative approval processes—and iterative committee-based approval processes make decision making more cumbersome; they can impede decision-making agility.

The third step in understanding organizational complexity is to formally examine the complexity-management intent of each committee. As described above, it can be observed that governing and review committees are generally introduced to facilitate the management of specific complexities (issues) faced by project and program teams. In practice, however, committees rarely focus on only one type of complexity to the complete exclusion of others. Committees primarily responsible for the management of environmental complexity are always cognizant of the operational constraints and uncertain outcomes that their projects are facing.
Their management of environmental complexity usually takes operational and outcome complexities into consideration. Committees with an operational focus may be similarly aware of the constraints that exist within their organizational environments and how outcome uncertainty might affect future plans. Technical (outcome-focused) committees are always mindful of their need to work within environmental and operational constraints.

To assess the complexity-management purpose of each committee, it is helpful to examine to what extent that committee focuses on (1) enabling the pursuit of projects or programs by providing appropriate approvals or support, versus (2) helping a project or program manager to manage the project’s or program’s operational challenges, versus (3) helping a project or program manager to manage his or her responses to outcomes of team activities. Assessing the purpose of each committee allows for examination of overlaps in the content reviewed by each committee. An example of the outputs from such an exercise (based on the drug development example mentioned above) is shown in Figure 3, where the complexity management scope and authority of a program’s secondary governance and review committees have been added to the organizational complexity map.

Figure 3: The complexity management scope and authority of a pharmaceutical program’s secondary governance and review committees.

It is common to observe that secondary committees have developed overlapping complexity management roles, even when they have been formed with the primary purpose of managing an individual form of complexity. An overlapping focus of secondary committees makes the management of organizational complexity all the more difficult for a project or program manager. It increases the likelihood that secondary committees will adopt different points of view about a given project or program issue, and that the project or program manager will need to seek alignment of those points of view through multiple interactions with those committees.
overlapping focus presents challenges to project and program managers, whose successful management of complexity depends on their ability to ensure that complexity is managed in a fully integrated way, or to project and program managers expected to ensure that their committees have reached consensus.

The challenge is to determine how best to ensure that organizational complexity does not in and of itself impede success. One might propose that there are two possible approaches:

- Reduce organizational complexity whenever it is possible.
- Find ways to more effectively manage organizational complexity.

### Reducing organizational complexity

Building an organizational complexity map is a valuable first step in trying to reduce organizational complexity, because it helps organizations to recognize how the gradual expansion of secondary committees may have impacted their decision-making processes. It also facilitates the examination of how organizational complexity can be reduced by limiting the number, the governance authority, and the governance scope of secondary committees with which project teams interact.

- **Limit the number.** The most direct way to reduce organizational complexity is to reduce the number of secondary committees with which a team must formally interact (i.e., remove committees from a team’s organizational complexity map). Reducing the number of committees can have the immediate effect of reducing the number of background documents and presentations that a team must prepare, and the number of review or approval steps that are parts of its formal decision-making process. It also reduces the likelihood that a team’s decision-making processes will be unexpectedly (and perhaps inappropriately) influenced as a result of interactions between its various secondary committees. It thereby reduces the likelihood that conflicting secondary committee opinions will require that the team pursue formal (committee-based) resolutions that are iterative.

Sometimes organizations find, after reviewing a given team’s organizational complexity map, that they can easily reduce the number of secondary committees to which the team is accountable. They might determine, for example, that certain committees do not need to meet formally with a given project or program team, or that the functions of separate committees could be managed by a single (or perhaps blended) secondary committee. In these cases, teams can be relieved from the requirement to meet with so many committees. Reviewing the complexity map of an individual team encourages organizations to offer relief on a circumstance-specific basis, after considering the kinds of complexity being faced within a given project or program, or the insight and experience of the team’s members.

- **Limit the governance authority.** A second way to reduce organizational complexity is to reduce the governance authority of a project or program team’s secondary committees. As described above, authorizing secondary committees to govern project or program teams increases the likelihood that those teams will have to proceed through multiple iterations of the decision-making process before aligning its governance committees on a universally acceptable version of its proposals. By limiting secondary committees to a reviewing (but not governing) authority, project and program teams can obtain the benefit of their secondary committee members’ expertise without being held to a strict
standard for formally returning to those committees for endorsement of proposals made by other secondary committees. Limiting a secondary committee’s authority to a reviewing role ensures that the committee will act more as a knowledge- and opinion-sharing body than an oversight body.

When limiting a secondary committee to reviewing authority, an organization places responsibility for resolving that committee’s concerns in the hands of the project or program manager and another governance committee. The organization empowers the project or program manager to proceed through an organization’s governance process without formal approval of the secondary committee, but with the expectation that any concerns of the secondary committee will be raised and addressed. Conditions that increase the success of this approach will be further discussed in the next section, which explores the complexity-management responsibilities of program and project managers.

■ **Limit the governance scope.** A third way to reduce organizational complexity is to clearly define and reduce the scope of responsibility of those secondary committees with governing responsibility. As previously observed, it is common for secondary governance and review committees to have scopes of interest that span more than one type of complexity (see Figure 3). When secondary review committees take it upon themselves to assume governing responsibility for the management of more than one kind of complexity, secondary committees often assume redundant or overlapping complexity management roles. Sometimes that is important and appropriate, but at other times it is not. When it is not, organizational complexity can be reduced by more clearly limiting the scope of governance of a secondary committee. By this approach, for example, the operational committee may be conferred governing authority for the commitment of resources, but only reviewing authority with respect to a team’s strategic approach.

Limiting the number, the governance authority and the governance scope of a project’s or program’s secondary committees may result in a simpler organizational complexity map for that program or project team. It would be expected to result in a less complex organizational system, and less ambiguity about organizational decisions that are associated with the behaviors of those who staff organizational committees. In this way, it may serve to mitigate all three of the fundamental types of complexity: human behavior, system behavior, and ambiguity (PMI, 2014).

**Managing organizational complexity**

Research suggests that many organizations can improve their management of organizational complexity by more clearly defining the complexity management responsibilities of their project managers, program managers, and primary governance committees (Heaslip, 2014).

**The role of a project manager**

*A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (PMI, 2013a) provides a comprehensive description of the well-accepted roles and responsibilities of project managers. It defines standard practices and processes that should be used by project managers and teams to define project goals and to ensure that their projects are effectively initiated, planned, executed, monitored and controlled, and closed.

Most professional project and program managers agree that the standard practices, processes, tools, and techniques of project management in the *PMBOK® Guide* can help project teams to manage and even avoid operational uncertainty (Heaslip, 2014). They observe that the *PMBOK® Guide* provides detailed guidance
on steps that project managers should take to maximize their project’s operational readiness, minimize its operational uncertainty, and optimize operational efficiency. In doing so, the PMBOK® Guide provides project managers with knowledge that is critical for the navigation of operational complexity. When that knowledge is coupled with key performance competencies (that support its application) and personal competencies (that define the behaviors, attitudes, and characteristics of effective project managers) project managers become highly effective managers of operational complexity (PMI, 2007). They help their teams navigate organizational complexity by providing a clear perspective on how the insights of various secondary committees can be brought together to solve a project’s operational issues. They can also serve as each secondary committee’s “representative” in meetings with other secondary committees—ensuring that the views of all secondary committees are represented in each meeting. In so doing, project managers mitigate organizational complexity by stimulating a more collaborative, holistic resolution of operational issues. Project managers who assume such a role would be more explicitly recognized for their contributions in managing both operational and organizational complexities.

Some organizational stakeholders observe that project managers can also help their teams to navigate organizational complexity by helping to manage outcome uncertainty. Indeed, project managers who have the knowledge to do so might be equally capable of ensuring the effective, integrated management of operational, outcome, and organizational complexities. They would be highly valuable to organizations pursuing large, outcome-dependent projects and programs. The management of outcome complexity differs from the management of operational complexity in an important way, however. It requires knowledge, experience, and skills that are beyond the scope of the PMBOK® Guide and other standards of project management. A project manager’s ability to manage outcome complexity may therefore depend upon his or her acquisition of knowledge and experience related to the specific outcomes being pursued. For example, a project manager running a drug development trial for the pharmaceutical company referenced above may have the operational knowledge required to complete a clinical trial efficiently, but not the medical knowledge to assess and manage its outcomes.

Organizations managing complex projects often seek to develop project managers’ knowledge of their projects’ targeted outcomes. Indeed, many are successful; however, others find it challenging to identify operationally skilled project managers who are also capable of managing outcome complexity and the organizational complexity associated with it.

The role of a primary governance committee

The executives who sit on a primary governance committee (and especially those who are designated as executive sponsors) are usually well positioned and empowered to assist in the management of organizational complexity. As the sponsors of secondary committees, these executives have significant influence over committee behaviors. They are especially well positioned to manage organizational complexity that may be associated with a secondary committee’s overstepping its governance authority or its intended scope of responsibility. In their executive roles, the members of governance committees are most effective in facilitating the navigation of environmental complexity (complexity that originates, for example, in the business environment) and the organizational complexity that is associated with it.

It is tempting to assert that primary governing committees could also take a leadership role in managing organizational complexity related to outcome-based issues. It is not unusual for the executives on primary governing committees to have experience in managing technical issues that determine project and program outcomes. Indeed, some primary governing committees are effective in that role. (It is a common responsibility
of governance committee members working within the true two-party governance system depicted in Figure 1.)

One should not be surprised, however, to learn that sponsors and primary governance committees often have difficulty leading the management of outcome complexity—especially in organizations that have numerous secondary governing and review committees. Those secondary committees were often formed precisely because members of the primary governance committee did not have the time, the focus, or the expertise to manage complexity without assistance. As a consequence, many organizations find that they cannot rely solely on primary governance committee members to consistently manage organizational complexity related to outcome-based complexity.

The role of a program manager

The Standard for Program Management (PMI, 2013b) observes that programs are different from projects—they must be managed in a manner that optimizes their abilities to readily adapt to the uncertainty of their outcomes. This need requires the development and assignment of program managers whose skills are different from those of project managers (Partington, Pellegrinelli, & Young, 2005). It requires the development of managers who have “goal-centric adaptive skills that enable the agile adjustment of a program’s approach so as to improve the delivery of intended benefits” (PMI, 2013b, p. 145). It requires the selection of program managers who have knowledge, performance history, and personal competencies in managing the specific outcomes that will be faced within a program.

The performance domains and supportive processes described in The Standard for Program Management should be utilized to focus on the skills required for managing outcome complexity. Program management performance domains focus on the program manager’s pursuit of program outcomes that support an organization’s desired strategy and its pursuit of specific program benefits. They describe how program managers should engage stakeholders and governing committees, and how they need to manage the unique (and sometimes uncertain) progression of a program’s lifecycle. Program management supportive processes describe activities that can be expected to facilitate the delivery of benefits. When coupled with relevant subject matter expertise, The Standard for Program Management would be expected to provide program managers with knowledge that is critical to the successful navigation of outcome complexity and the organizational complexity that is associated with it.

Program managers can improve an organization’s navigation of organizational complexity by assuming an “integrator’s” role similar to that described for project managers—by integrating the insights of various secondary committees on a program’s outcome-based issues, improving the management of outcome complexity, and assuming personal responsibility for managing the organizational complexity that is associated with it.

Assigning the program manager responsibilities for the simultaneous management of outcome complexity and its associated organizational complexity makes sense to many project management practitioners and their organizations. However, it does raise another important question: How can organizations optimally leverage the leadership skills of executives and project and program managers to ensure that organizational complexity is managed in a coordinated way?
A “Three-Party” System for Managing Organizational Complexity

Optimizing the management of organizational complexity that is derived from operational, outcome, and environmental complexities requires that executives, program managers, and project managers have professional relationships that are highly collaborative. It requires that they work together to assure that solutions to all complex issues are examined holistically—that solutions to outcome-based issues can be supported operationally, that solutions to operational issues do not compromise the pursuit of outcomes (benefits), and that solutions to either of these issues can be appropriately supported. To achieve this, executives, program managers, and project managers need to work together in a “three-party” system that is pictured in Figure 4 (Heaslip, 2014).

In the three-party system:

- Project managers assume a primary leadership role in integrating and communicating the operational views of an initiative’s secondary committees. They help teams and organizations to address any organizational issues (complexity) that may prevent alignment of operational views and the resolution of operational issues.

- Program managers assume a primary leadership role in integrating and communicating the outcome-related views of secondary committees. They help teams and organizations to address organizational issues that can impede the alignment of outcome-focused views and the resolution of outcome-based issues.

**Figure 4**: Use of a “three-party” system for the collaborative management of complexity.
The governing committee and executive sponsor ensure that proposed solutions to operational and outcome-based issues can be appropriately supported within the organization's environment. They assure that programs and projects are appropriately "enabled" by the organization, and that the organizational issues associated with environmental (external) complexity is appropriately navigated.

Within the three-party system, project managers, program managers, and executive sponsors are expected to work collaboratively to manage issues that result from organizational complexity. Together, they can improve the navigation of organizational complexity by ensuring that organizational issues are managed in an integrated, holistic way.

The three-party system ensures that leaders with appropriate expertise are engaged in the management of organizational complexity that is caused by complex operational, outcome-based, or environmental issues. Each of these leaders is expected to ensure that the perspectives of secondary governance and review committees are appropriately examined whenever changes to strategy or plans are being considered. The complexity-management perspectives of each project's or program's secondary committees are thereby represented in decision-making forums by professionals who have specific knowledge of the relevant operational, outcome-based, and governance issues.

The principal difference between the three-party system and more common two-party system (which relies on primary governance and project management for the management of organizational complexity) is the assignment of a program management practitioner who is more specifically focused on managing outcome complexity and the organizational complexity that is associated with it.

**Benefits of the three-party system**

Organizations that have used the three-party system report that it is effective in improving the management of complexity in programmatic endeavors that are outcome dependent and technically complex. They observe that the system's purposeful assignment of distinct complexity-management responsibilities to project managers, program managers, and executives—and its explicit recognition that these three leadership parties will contribute collaboratively in the management of organizational complexity—provides assurance that leaders with appropriate knowledge and insight will be available to participate in decision-making forums. The inclusion of these parties in the decision-making process is expected to improve the agility and quality of complexity-related decision making (Heaslip, 2014).

The effectiveness of a three-party system has been demonstrated, for example, in the pharmaceutical industry, where drug development program managers may be expected to have medical knowledge that enables the understanding of clinical outcomes important to benefits delivery, whereas project managers are expected to be experts in managing the operational elements of a clinical trial. Working closely together, pharmaceutical project and program managers ensure that operational and outcome-based issues are navigated in an integrated way. They jointly engage with their secondary governance and review committees to address organizational complexity, and with their executive sponsors to ensure that their initiatives are responsive to the complex external pressures of a regulated and competitive business environment. Within the pharmaceutical industry, the assignment of specific complexity management responsibilities to project and program managers increases decision-making agility by assuring that the perspectives of various secondary governance committees can be well represented in all meetings of an organization's governance and review committees.
Closing Perspectives

Many professional project and program managers observe that their organizations are pursuing projects and programs that are increasingly large, unprecedented, and complex. They also observe that their organizations, in an attempt to manage the operational complexity associated with large projects and growing portfolios, or the outcome complexity associated with innovative projects, have relied more and more on the contributions of secondary governance and review committees. In doing so, they have improved their abilities to manage operational and outcome complexities; however, they have also increased their need to manage organizational complexity.

This paper has examined how one might improve the management of organizational complexity by reducing organizational complexity and ensuring that the complexity-management responsibilities of project managers, program managers, and executives are more explicitly defined. It has examined how:

- Project managers can assume a leadership role in managing operational complexity and the outcome complexity that is within their scope of knowledge and experience;
- Program managers can be viewed as specialists in the management of outcome complexity; and
- Organizational executives can be viewed as specialists in the management of environmental complexity.

Moreover, it has explored how two- and three-party systems can be used to define the complexity management roles and responsibilities of project managers, program managers, and executives.

Perhaps, most importantly, this paper has emphasized how each of these three types of leaders should contribute to the management of organizational complexity by ensuring that governance and review committees are provided with expert perspectives critical to the holistic management of operational, outcome-based, and environmental issues. Armed with these perspectives, it can be expected that the recommendations of secondary committees will be more consistent with the complexity management needs of the entire organization.

It is important for project managers, program managers, and executives to appreciate the importance of managing organizational complexity. A failure to manage it effectively may lead organizational subcommittees to make recommendations that address one form of complexity while perhaps negatively impacting another. Such recommendations too often result in the need for organizations to conduct repeated reviews of the recommendations that teams or committees make in response to operational, outcome-related, or environmental issues. They too often reduce decision-making agility and harm team performance. The efficient management of organizational complexity is, therefore, critical to the performance of many organizations.

The central role of project and program managers as managers of complexity positions them well to assume important leadership roles in their organizations. It provides them with opportunities to contribute directly to the success of their initiatives, and to teach their organizations how management systems can be used to improve complexity management, enhance organizational performance, improve decision making, and deliver success.
References


