As the speed of change in the business environment has accelerated over the years, organizations are continuously striving to stay competitive in the marketplace. They are shifting strategies, driving innovation, releasing new products and services, expanding into new global markets, reorganizing management structures, and so on. These actions are commonly managed through large strategic initiatives that are ultimately translated into projects. While many major projects are driven by strategic initiatives, others are a result of operational needs and demands. Furthermore, irrespective of whether or not your organization has generated profits, you will undertake projects to comply with ever-changing technology, health, safety, environmental, and other mandates. Thus, projects have become the lifeblood of every organization to respond to change, and project management has been adopted as a formal process to complete these projects “better, faster, and cheaper.” Today, it is one of the hottest topics in business. As a management process, project management has reached—or even surpassed—the heights of total quality management and six sigma. Figure 1-1 shows the advent of project management (represented by a Gantt chart, PERT, critical chain, PRINCE, etc.) juxtaposed with the other major business and management theories and techniques of the past century.

The focus of project management has always been on managing individual projects to achieve scope, time, and cost targets. As organizations reach higher levels of maturity in managing projects as disparate entities, they shift their focus to managing them collectively as project portfolios using a formal project portfolio management (PPM) process. This transition seems to
Figure 1-1  Project management and other management theories (Resch, 2011)
occur when the organization realizes that projects are investments, not expenditures. Investments require sustainable returns over the long haul. They must align with the strategy and goals of the organization providing the resources—both monetary and human. Most important, they must create value for the organization’s owners as well as other key stakeholders (conjointly referred to as stakeholders hereafter). Project managers and sponsors may be more interested in their project cost targets, but executive managers are more focused on creating collective returns for the stakeholders from various project investments. They want to ensure that organizational resources are allocated to the best investments. Therefore, it has become paramount that projects are managed under a portfolio with a well-defined investment strategy that will help the organization create long-term sustainable value for the stakeholders. The purpose of this chapter is to define a project portfolio, introduce the portfolio management process, and set the stage for the book. In this chapter, you will also learn about my intent in writing the book and the audience I have in mind.

**WHAT IS A PROJECT PORTFOLIO?**

*A project portfolio is a collection of strategically aligned, value-generating projects that help achieve organizational goals.*

I will discuss this definition in detail in Chapter 2, but before going further, we need to establish a few basics. Any project portfolio by definition contains projects. But a “true” portfolio has projects that: 1) are aligned with the strategy of the organization sponsoring the portfolio, 2) help the organization achieve its goals, and 3) ultimately generate value for the stakeholders. This means that every project in the portfolio must, at a minimum, meet these requirements. The candidate projects for the portfolio must be evaluated for their alignment with the organization’s strategy and goals and value creation potential, among other characteristics. This exercise is generally called “business case” analysis. Projects that meet the portfolio requirements showing a strong business case will stay in the portfolio and receive investment. As projects in the portfolio go through their respective life cycles, they are reevaluated periodically to ensure that they continue to meet the portfolio requirements. If they do not, their scope/time/cost targets may be revised or they are terminated.
WHAT IS PROJECT PORTFOLIO MANAGEMENT?

Project portfolio management—simply referred to as portfolio management—is a complex process that starts at the very top of the enterprise. It helps you convert the enterprise strategy into desired results. It is a key step in the overall strategy execution process (Figure 1-2). The external business environment is constantly changing. It may be a general shift in the economic conditions, or it may be changes driven by competition, customer needs, technology breakthroughs, new markets, regulatory controls, or a myriad of other causes. The changes may even be internal to the organization such as bloating bureaucracy and deterioration of employee morale. In response to the changes, the executive managers revise the enterprise strategy and formulate organizational goals. In the case of visionary leaders, transformational strategies and goals are introduced proactively. To achieve the desired results, new business initiatives are created. Programs and projects are the building blocks of these initiatives. They produce products and services that ultimately help achieve the organizational goals by creating value. Through a portfolio, the PPM process offers a vehicle to turn the strategy into value. PPM collectively brings coherence to implementing the business initiatives. It ensures that the right organizational resources are allocated to the right project priorities at the right time. PPM can be applied at any level of the enterprise. The principle is the same. Consider any organizational unit, for example, a division or a function. It must have its own strategy and goals. The PPM process will help you translate its strategy into value through projects at that organizational unit.

Whether you are a profit-driven, nonprofit, or government entity, your stakeholders expect the organizational resources to be invested in the right projects to deliver maximum value for them. They also expect you to invest in the right mix of projects balancing the benefits-cost-risk equation. PPM is tantamount to management of project investments to deliver value for your stakeholders. It translates to efficient allocation of organizational resources to the right project priorities. It involves evaluation, prioritization, and selection of projects integrated with investment decision checkpoints. The checkpoints include the initial invest/no-invest as well as the ongoing continue/cancel decisions, collectively called go/no-go decisions, spanning the life cycle of each project in the portfolio. The process behind the decision-making framework is the backbone of PPM.
**Figure 1-2**  Role of PPM in strategy execution
WHY PORTFOLIO MANAGEMENT?

Successful organizations are those that are able to bring innovation to the market fast, alter their course swiftly to adapt to changes, leverage technology to gain competitive advantage, and manage risk effectively in today’s uncertain world. This translates to first making the right strategic choices, investing in the right projects that align with those choices, and completing them successfully for the desired outcomes. All this at super speed! Portfolio management is about effectiveness (doing the right thing or selecting the right projects for investment), whereas project management is about efficiency (doing it right or implementing the projects faster, cheaper, and better). For PPM to be successful in your organization, you must first have a strong project management process in place. This is why, as mentioned at the outset, organizations typically initiate a PPM process as they reach higher project management maturity. The interconnectedness between the two processes will become clearer as we move through the book. Furthermore, if your projects are collectively managed under a program umbrella, an effective program management process will also be a requisite for a successful portfolio.

Project Iceberg

Organizations at the lower project management maturity spectrum manage individual projects focusing only on the well-known project triple constraint that includes scope of work, schedule, and cost. You may have completed a project meeting this constraint and concluded it was successful. But it is not truly successful if you delivered an inferior product or left the customer unhappy. On the other hand, let’s say you not only met the constraint but also delivered a superior product and delighted the customer. This may not turn out to be a success for your organization, however, if no shareholder value was created in the long run. Then, what if you created enormous wealth for them, but in the process, damaged the environment, made fatal safety mistakes, destroyed employee morale, or violated laws or ethics? So the important question is whether the project ultimately produces value for the concerned stakeholders without destroying value for others.

PPM considers the project triple constraint just the tip of the iceberg (Figure 1-3). It helps you plow into the iceberg and assess a project from various facets, so you make the right investment that generates value for all the key
stakeholders. Moreover, an enterprise-wide coherent PPM process provides you with an overarching strategy to manage the various icebergs in your organization. By assessing, monitoring, and managing the project icebergs collectively, PPM navigates your organization in the right direction for the distant future.

**Figure 1-3  Project iceberg**

How can your organization benefit from portfolio management?

As I alluded at the outset, today’s organizations are evolving from project management maturity to portfolio management maturity. If your organization has already reached maturity in project management practice, you are more likely to complete your projects meeting the scope, schedule, and cost targets. But this does not necessarily mean that the project deliverables or outputs have indeed helped you generate value for your stakeholders and achieve your organizational goals. It is entirely possible that you selected and invested in a project not (or poorly) aligned with the organizational goals in the first place. Or, perhaps the original organizational goal the project was supposed to serve has changed before project completion. Apart from alignment, the value creation potential of the project may have been weak (or even nonexistent) to begin with or turned weak before the project was completed.
Organizational Project Portfolio Management: A Practitioner’s Guide

These scenarios are somewhat characterized by a “right solutions to wrong problems” syndrome resulting in a waste of organizational resources. Invest in enough of such projects, and watch your competitiveness evaporate in no time, potentially leading to extinction of your organization. The following paragraphs illustrate how your organization can benefit from PPM.

Organizational Change Management

Rapid changes in the economy, markets, technology, and regulations are forcing organizations to formulate new strategies or fine-tune the current ones more frequently than ever. As these strategies are translated into new initiatives supported by new programs and projects, portfolio management offers a framework to manage the change effectively. It helps you make the right investment decisions to generate value for stakeholders. It provides you with the right tools to rapidly alter the course of action in response to fast changes in the environment.

Clear Alignment

A well-designed and managed formal portfolio management process ensures that projects are aligned with the organizational strategy and goals at all times. New project ideas are evaluated for their alignment with the strategy and goals, and no projects are funded unless there is clear alignment. In addition, the degree of alignment is continuously monitored as the selected projects go through their individual life cycles. If an ongoing project no longer shows strong alignment, it may be terminated and the resources allocated to other higher priority projects.

Value Creation

Portfolio management helps you deliver value to your stakeholders by managing project investments through a structured and disciplined process. The justification for the projects is clearly identified by quantifying the expected benefits (both tangible and intangible) and costs. Only those projects that promise high value and rank high against the competing ones throughout their life cycles are funded. Portfolio management gives you a bigger bang for your investment buck in the long run because you are managing the investments in a systematic fashion.
Value Balancing

For a profit-driven company, the organizational goal may be to generate the maximum financial returns possible for the owners or shareholders. But if the projects selected for investment are based solely on financial value generation potential, interests of other key stakeholders may be compromised. PPM will help you create a balance among the projects to deliver not only financial value but other value forms as well.

Long-Term Risk Management

When projects are initiated and implemented without the portfolio framework, project sponsors and managers typically focus on the short-term risks related to the completion of the project and do not pay enough attention to the long-term risks and rewards. Furthermore, they are oblivious to the collective risk profile of the project investments. Under a portfolio structure, the risk-reward equation is examined for projects individually as well as collectively in the context of the overall business. By diversifying the investments and balancing the portfolio, you are able to create a proper mix of projects of different risk profiles and manage the risks more effectively.

Termination of Projects

Just because a project initially shows a strong business case does not necessarily mean it should continue to receive funding through its completion. Projects that no longer hold a strong business case as they go through their life cycles should be terminated. This helps you focus on those projects that will generate value and kill others, thereby maximizing the value of the portfolio as a whole. In most organizations, once a project receives authorization and enters into the implementation phase, it will most likely continue to receive funding until its completion. Terminating projects is a taboo in most organizations. It is a highly political and emotional issue for many decision makers and executives. Portfolio management helps make the project termination decisions more objective and less political or emotional.

Better and Faster Decision Making

Portfolio management brings more focus to the decision-making process making it faster and more effective. An integral part of PPM, portfolio and
project governance provides a formal structure and process for making go/no-go project investment decisions. It places the responsibility of decision making in the hands of independent parties—rather than the project sponsors with possible self-interest—that can evaluate competing projects more objectively using the same measurements, metrics, and standards.

**Reducing Redundancies**

It is not uncommon in relatively large organizations to face a situation where the “left hand doesn’t know what the right is doing.” Organizational resources are sometimes wasted on different projects trying to produce the same output. The PPM process helps you eliminate or reduce redundancy yielding significant savings to the organization. When the portfolio management process is standardized across the whole enterprise, projects become more transparent and adequate checks and balances can help you detect redundancies early.

**Better Communications**

Many organizations have “silos” around each function that block effective communication, a critical ingredient of success for cross-functional projects. PPM is a mechanism that opens the channels of communication for people from various business and technical functions. Silos also undermine innovation that is critical to organizational success in today’s hypercompetitive environment. PPM breaks the silo barriers creating opportunities for people to learn new insights from each other and become more innovative.

**Efficient Resource Allocation**

One of the biggest challenges for any organization is the efficient allocation of resources—both monetary and human. While every manager claims that she would like to see the biggest bang for her buck, only a few organizations have proper systems in place to prioritize her projects based on their return on investment. Allocation of the right people to the right projects at the right time is an even bigger challenge. You can rarely find a detailed inventory of the human resources vs. the project needs, that is, supply vs. demand. The situation becomes even worse when the project resources also have administrative and other operational responsibilities. One of the advantages of
portfolio management is that it provides the structure and tools for efficient advance planning, needs prioritization, and resource allocation.

**Consistent Performance and Growth over Time**

One of the key portfolio management processes is the evaluation of projects for their financial value-generating merit. This involves forecasting the future cash flows of every project and its outputs over its life cycle. Cash flow analysis for the entire portfolio over future time increments enables you to estimate any investment gaps and corresponding projects to match the growth targets of the organization. The portfolio thus can offer consistent long-term growth and performance for the organization.

**WHO NEEDS PORTFOLIO MANAGEMENT?**

Every organization that wants to manage change through effective strategy formulation and execution needs portfolio management. If you aim to achieve your organizational strategy using new business initiatives supported by multiple projects that compete for the same resources, you can benefit from portfolio management. PPM is the main vehicle that helps you achieve organizational goals through projects. Irrespective of whether you are a profit-based enterprise, a nonprofit entity, or government, the portfolio provides the mechanism to achieve your goals. A profit-driven organization may establish a portfolio of projects that is aimed at profit growth, market share increase, process improvement, etc., whereas a nonprofit entity or government agency may initiate a portfolio of projects geared towards increasing customer satisfaction or reducing costs. The goals and metrics of success may be different, but the principles of portfolio management are the same. Fundamentally, the more project-centric your organization is, the stronger the need for portfolio management. It gives you more focus in making the right project investments and maximizes returns—financial or otherwise.

It is commonly believed that PPM is only for projects sponsored at the enterprise level or at a relatively high level in the enterprise such as a business unit. But in fact any organizational unit in the enterprise can take advantage of PPM. Wherever there are projects, and priorities need to be determined for allocating money and people, the PPM process can be applied. Any organizational unit with a budget, projects, resources, and the decision-making authority on how it wants to allocate its resources may serve as the “parent”
of the portfolio that it supports. I like to call these units portfolio sponsoring organizations or PSOs. At the highest level, you may have an enterprise portfolio for which the enterprise itself is the PSO (Figure 1-4). The component projects of this portfolio are designed to achieve the enterprise goals. Moving down the hierarchy, you may have a portfolio for your own organizational unit, which may be a business unit, division, or a function. The component projects of your PSO are directly aligned to your own organizational unit’s goals, which are presumably in alignment with those of the larger enterprise. Generally, at higher levels of the organization, the portfolio consists of large projects requiring relatively huge investments. They have more visibility simply because they are within the purview of executive management. The impact of the projects in the portfolio is considerably higher, because they are driven by the enterprise strategy and goals. The lower-level portfolios contain projects that are relatively small in size, with less direct impact on the enterprise’s strategic goals. These projects may be tied more to the enterprise’s tactical and operational goals, while being aligned to the strategy of their own PSO. There is no need to have a portfolio for every organizational unit unless there is a clear business case to support it. It depends on the unit’s goals, overall investment available, number of projects to be executed, size of the resources to be shared, etc.

Is Project Portfolio Management for Discretionary Projects Only?

When you consider projects as investments, it may imply that they include only discretionary projects. But that raises the question of what is truly nondiscretionary. Operations managers would argue that most of their projects, aimed at basic infrastructure and process improvements and commonly referred to as “keep the lights on” projects, are operational necessities and therefore nondiscretionary. This helps the project sponsors stay under the radar to avoid the rigorous analysis and justification that PPM requires of discretionary projects. A deeper analysis would reveal, however, that there is also a choice on these types of projects as to where you want to spend your resources. Therefore, a formal PPM process can be applied to what are generally considered nondiscretionary projects. The true nondiscretionary projects are those that are mandated by the government related to safety, health, environment, finance, IT, etc. Since PPM has the responsibility of efficient allocation of human resources, it requires that all projects, discretionary or
Figure 1-4 Portfolios at different organizational levels
otherwise, be linked to the portfolio. This is critical when the same resource pool is utilized for projects as well as routine operational support.

**What Role Can Project Portfolio Management Play in Professional Service Firms?**

One question that I am frequently asked in my teaching and consulting practice is how portfolio management can help professional service firms, such as those that provide IT, architectural, engineering, design, advertising or other types of services. The reason behind this question is that for a given client, the firm may be managing multiple projects, which collectively may be considered a portfolio. But this is not a “true” portfolio for the service firm because it is owned and managed by the client. The task of creating value lies with the client. The new project investment choices and the continue/cancel decisions on the ongoing projects are also under the control of the client and not the service provider, although the latter may have some input into it. True, the client owns and manages the portfolio, and the service firm is simply helping them implement the projects. But you can apply the portfolio management principles and tools to your business in selecting the industries and clients you want to work with and projects you want to implement for them in accordance with your organizational strategy, goals, portfolio of services you offer, and so on. A structured, formal portfolio management can help you select the right industries, customers, and projects to focus on your organizational goals and help you gain long-term competitive advantage. Furthermore, apart from the projects performed for the external clients, you always have internal business initiatives related to cost reduction, process improvement, infrastructure enhancement, employee training, and so on, which most likely require the same resources that are shared on external projects. Portfolio management can help you manage these priorities more effectively.

**WHAT IS THE STATUS OF PORTFOLIO MANAGEMENT TODAY?**

Whereas common terminology and methodology are emerging in project management, there are no universally accepted standards in portfolio management at this time. Even the definition of a project portfolio seems to be
different in various organizations. Portfolio management is a relatively new concept, especially in the technology sector. The Project Management Institute published the first edition of its global standard for portfolio management in 2006. Recognizing the need for certified professionals in PPM, it launched the Portfolio Management Professional (PfMP\textsuperscript{SM}) credential in early 2014.

PPM has been practiced for a long time in the pharmaceutical industry, consumer products industry, and product development-driven organizations, albeit mostly in an ad hoc fashion. Its roots are in capital budgeting and product portfolio management. The former refers to planning of major capital investments involving physical assets, infrastructure, computer systems, etc. The idea is to assess the investment worthiness of these projects, since they involve major financial commitments. Product portfolio management, as the name implies, is managing a portfolio of products. It is concerned with the development and introduction of new products with a cohesive strategy to manage their benefit-cost-risk equation. It is considered a subset of PPM (Kendall and Rollins, 2003), wherein you apply the PPM principles to manage a product portfolio.

Many of the project assessment tools used in portfolio management today are similar to those used in capital budgeting and product portfolio management. Examples of such tools include financial models, scoring models, bubble diagrams, spider charts, etc. Their application, however, to project portfolios in a systematic fashion has been limited. Portfolio management software tools are becoming widely available now, but the cost seems to be relatively high. Recent trends include cloud-based tools with a choice of “pay as you go” or software-as-a-service. Mobile applications are starting to emerge. Project management offices (PMOs) have become common especially in the IT industry. Advanced PMOs have taken the responsibility for facilitating the PPM process.