

Chapter 1

Demystifying Program Management

Even though program management is a widely used and accepted approach to managing product, service, and infrastructure development efforts, the program management practice is not well understood. It has been established as a management discipline for many decades, but uncertainty still exists concerning *what* it is; *why* many companies utilize program management to develop their products, services, and infrastructure capabilities; and *how* it is applied within an organization (see Preface for product, service, and infrastructure capability definitions).

The confusion surrounding program management has a lot to do with its roots, which are in the United States aerospace and defense industries, where it was one of the best kept secrets for decades. Only in the 1980s did program management begin its expansion to the commercial sector, but, even then, the expansion was limited. As people moved from the private sector to the commercial sector, they brought with them program management practices and terminology. Sometimes true program management practices took root in a company; however, other times only the *term* program management took root and was then used to describe *project* management practices. The situation is not much different today than it was in the 1980s. Confusion between program management and other disciplines and processes used to develop products, services, and infrastructure capabilities, such as project management and portfolio management, still exists in many companies, classrooms, and works of literature.

The intention of this first chapter is to remove the mystery surrounding the program management discipline. This is accomplished through the presentation of a concise definition of program management, along with a set of six defining characteristics. We provide a clear distinction

between program management and other disciplines and processes that people often confuse—namely project management, portfolio management, and product management. We seek to clarify program management for all members of an organization, from senior executives to individual contributors and help them comprehend the following:

- The definition and set of characteristics of program management
- How program management differs from project, portfolio, and product management
- The link between program management, project management, and business strategy

Understanding these topics is crucial for anyone considering the introduction of the program management discipline within an organization or for anyone needing a better understanding of how to use the program management function within their organization to gain improved business results.

THE “MYSTERY” OF PROGRAM MANAGEMENT

It is safe to say that a fair amount of confusion about program management currently exists in many companies and industries. Take, for example, the following short list of questions we have encountered while discussing program management with practitioners, consultants, academicians, and senior managers:

- What exactly *is* program management?
- Is program management just another name for project management?
- Are program management and portfolio management the same thing because both involve managing multiple projects?
- Isn't a program manager a “super-project manager”?
- Do we need program management if we excel in project management?

Most likely, you have your own set of questions that are—at least in part—motivating you to read this book.

The mystery surrounding program management is perpetuated by a number of factors, including the following:

- Even though many program managers and others familiar with program management have moved to commercial industries from

the private sector, the program management knowledge base has remained in the management structure of the original industries that developed it (see box titled, “On Origins of Program Management”).

- The term program management has become widely used, or more correctly, misused to define many things such as process improvement, maintenance of business, and continuous and repetitive work activities.
- There is very little literature available that accurately describes the program management discipline. Sometimes the topic of program management is found in modern literature that discusses project management, product development, or infrastructure development, but usually it is only discussed in broad and ambiguous terms.

These factors all contribute to the confusion that exists about program management. In the remainder of this chapter we will provide clarity on the subject, beginning with a concise definition of program management.

On Origins of Program Management

Quality management books commonly state that the Japanese implemented quality and strategic (long-term) programs long before the United States. On the civilian side, it wasn't until the early 1980s that the lack of quality management methods led to difficulty in the United States' ability to compete, which led to the development of quality, project, and program management.

However, the U.S. military argues that they developed and implemented these concepts before the Japanese and that there is evidence of it documented in directives and standards of the U.S. military following the end of World War II. It is believed that these management concepts were used to assist in the formation and organization of the first program office in 1957, then called the Special Project Office (SPO), within the U.S. Department of the Navy. The SPO was established to manage the development of an underwater ballistic missile launch system. Indeed, the structure of the missile launch system program mirrors the program management structures utilized today—a series of interrelated projects (launcher, missile, guidance, installation, navigation, operations, and test) collectively and coherently managed as a program. In the early 1970s, the program management discipline became popular across the U.S. Department of Defense, and the SPO became the first program management office.¹

On July 1, 1971, the doors of the Defense Management School, later called the Defense Systems Management College (DSMC), opened at Wright-Patterson Air Force Base to admit the first students enrolled in the twenty-week program management course.² The original mission of the DSMC was

to conduct advanced courses in study of program management and assemble and disseminate information concerning program management. In 1993, the name was again changed to the Defense Acquisition University (DAU) to reflect a new mission and broader scope of academic study and research in program management.³ Today, thousands of military and military support personnel graduate from DAU annually.

Until the 1980s, the program management discipline and the DSMC that resided within the military and defense industries were well-kept secrets. During this time period, companies that maintained both defense and commercial businesses, such as Boeing, Lockheed, and other aerospace companies, began migrating the program management discipline and management model from their military divisions to their commercial divisions. Program management proved to be very effective in the management of complex product development efforts. Today, the program management discipline and its practices continue to expand throughout many commercial and private industries.

PROGRAM MANAGEMENT DEFINED

A common, universally accepted definition of program management does not exist. If you research the definition through multiple sources, you'll most likely come away with somewhat different definitions—similar in some aspects but different in others. The definition that best describes our practical experiences in managing programs is the following:

“Program management is the coordinated management of interdependent projects over a finite period of time to achieve a set of business goals⁴”

This definition describes the highly effective and well-proven model of program management as a primary business function by which new products, services, or infrastructure capabilities are conceived, developed, and brought to market.

The key words in the definition of program management stated above are *coordinated management*, *interdependent projects*, *finite period*, and *business goals*. Bringing a new product to market, or a new infrastructure capability on line, requires the work of many functions—such as hardware engineering, software engineering, mechanical engineering, marketing, manufacturing, and testing. Programs, therefore, are organized into a program core team (PCT) and a set of highly cross-discipline project teams. **Coordinated management** of multiple projects means that the activities of each project team are synchronized through the

framework of a common life cycle executed at the program level by the PCT. Steven Wheelwright and Kim Clark properly articulated the need for effective cross-functional management, as follows:⁵

Outstanding development requires effective action from all of the major functions in the business. . . . From engineering one needs good designs. . . .from marketing, thoughtful product positioning, solid customer analysis, and well-thought-out product plans; from manufacturing, capable processes. . . . But there is more than this. Great products and processes are achieved when all of these functional activities fit well together. They not only match in consistency, but they reinforce one another. In short, outstanding development requires integration across the functions.

For program management, cross-functional coordination and integration has to be extended to include *cross-project* coordination and integration. Each program is made up of multiple projects, each of which is most likely cross-functional in nature. Mary Willner, a validation manager for Intel said,

With one set of desired business results for the program, coordination extends beyond just schedule coordination; it also requires coordination to ensure the stated business objectives are met. If compromises are required (for example, cost, feature, schedule), its resolution is managed as a coordinated effort across the interdependent projects.

As the term implies, **interdependent projects** are those that have a mutual dependence on the output of other projects to achieve success. Commonly, the interdependencies come in the form of deliverables that are the tangible outputs from one project team that become the input to another project team or teams. Program management ensures that the dependencies between the multiple projects are managed in a concerted manner.

A **finite period** means that a program is a temporary undertaking, having a point of beginning and a point of ending. A program is of limited duration, a one time venture that begins with clearly defined business objectives and ends when the objectives are attained. The finite period concept in our definition is very important because some other definitions of programs imply that programs have an ongoing nature.

Accomplishment of the stated **business goals** is the overriding objective of a program and the ultimate responsibility of the program manager.

For example, in product development, a key goal of a program is usually to deliver the product to the market on time. In a competitive environment, time to market is arguably the most closely tracked metric by both the program manager and senior management. We don't dispute that delivery of the right product at the right time is critical, especially because we have had plenty of personal experiences in which that was the primary measure of our success; however, delivery of the product is only the mechanism to realize the true business goals—such as capturing additional market share; increasing profit through sales and gross margin growth; and strengthening brand value through quality, features, and customer support.

Program Management Definition

Program management is the coordinated management of interdependent projects over a finite period of time to achieve a set of business goals.

PROGRAM MANAGEMENT CHARACTERISTICS

Now that the definition of program management has been addressed in detail, we will present the six primary characteristics, or pillars, that help describe the true nature of program management as a unique business function:

- Program management is strategic in nature.
- Program management provides a focal point for ownership and accountability for business results.
- Program management aligns functional objectives to business objectives.
- Program management is cross-project and multi-disciplined.
- Program management enables horizontal collaboration.
- Program management requires a capable business leader—the program manager.

Program Management Is Strategic in Nature

The program management discipline helps to ensure that a program is closely aligned to, and directly supports, the achievement of a business's strategic objectives (see Chapter 3). In effect, it is used to direct the

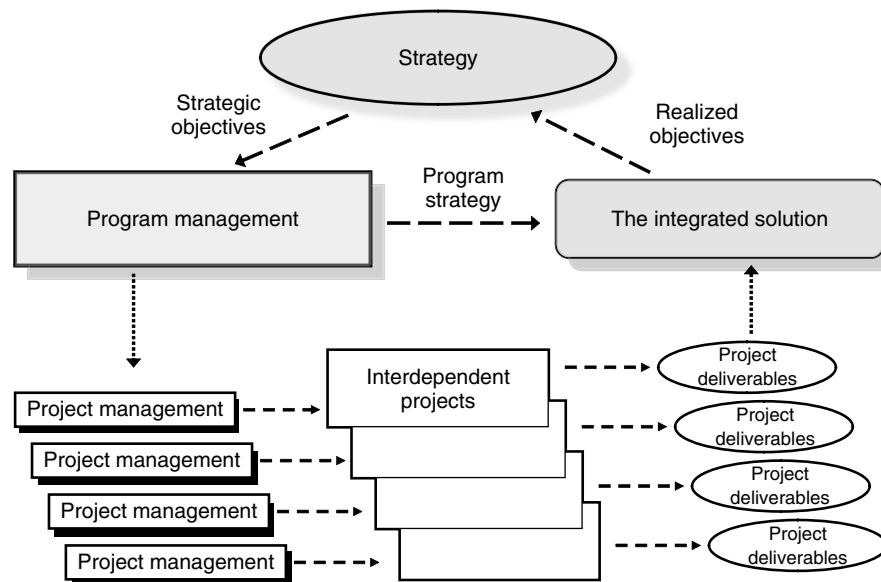


Figure 1.1 The strategic nature of program management.

activities involved in the implementation of strategy (see box titled, “Turning Strategy into Action at Intel”). Figure 1.1 illustrates the link between program management and business strategy.

The program management function links execution to strategy by integrating the deliverables and work flows of multiple interdependent projects to develop and deliver an integrated product, service, or infrastructure capability. This integrated solution becomes the means by which the strategic objectives are achieved.

Turning Strategy into Action at Intel

Intel Corporation identified a strategic objective to converge computing and wireless communication technologies into a single product solution. Legacy solutions involved a microprocessor to handle computing and a separate component, or add-in card, for wireless communication for its personal laptop computer. Intel’s strategy to achieve this technology convergence objective involved the development of a new family of microprocessors that combine the two technologies. The market now knows the resulting product as the Centrino™ family of microprocessors.

Intel uses the program management discipline to direct the activities involved in implementing strategy. In the example above, a program manager

is responsible for the development and launch of each new Centrino microprocessor into the market. In doing so, he or she is responsible for executing the strategy in the form of a product development and launch, which in turn is the means to achieve the strategic objectives of the business. Therefore, development and delivery of the product becomes the means to achieve the business results intended. Centrino, in fact, was also the means to achieve another Intel strategic objective—to expand beyond the microprocessor and deliver platform solutions to its customers. Centrino was Intel's first commercialized and branded platform product and its first move toward platform program management.

Program Management Provides a Focal Point for Ownership and Accountability for Business Results

In many organizations that do not utilize the program management model, ownership and accountability of the product, service, or infrastructure development effort is shared by the functional managers of the business as the product moves through the development life cycle. Generally, project ownership and accountability passes from research during the concept phase to marketing during the feasibility phase, to engineering during the planning and prototyping phases, to manufacturing during the production readiness phase, and, finally, to marketing for product launch. Passing of the ownership baton can work in a perfectly conceived, planned, and executed project but quickly breaks down when problems begin to surface and personal accountability is required on the part of one or more of the functional managers. With a program management model, there is no debate or subjectivity about who owns and is accountable for the business success or failure of the program; the program manager assumes the full responsibility throughout the development life cycle.

Program Management Aligns Functional Objectives to Business Objectives

Each functional organization within a company normally has a set of objectives to achieve as an organization. But what happens if these functional objectives do not support, or worse yet, are in direct conflict with the strategic business objectives of the company? This dilemma is a difficult problem facing many businesses today and is known as

agency theory.⁶ Agency theory occurs when functional managers design objectives that provide the greatest benefit for their organization but consider the strategic objectives of the company secondary.

The program management discipline can be used to reduce the effects of agency theory by aligning functional objectives to corporate or business unit objectives—remembering that products, services, and infrastructure capabilities are the *means* to achieve business objectives. The functional objectives become a crucial part of the overall success of programs, which, in turn, are a crucial part of achieving the overriding business objectives of the firm.

Program Management is Cross-project and Multi-disciplined

Programs, by design, are cross-project in nature, as multiple projects are coherently and collectively managed to achieve the program output. Additionally, the projects that make up a program are normally centered on a single discipline within an organization, such as software development, hardware development, customer support, and manufacturing. To reconcile the cross-project, multi-discipline nature of programs, many organizations employ a matrix structure to span the various functions needed to effectively develop a product, service, or infrastructure capability. The program management discipline is the link that sews the matrix together and enables the cross-project teams to perform cohesively. Organizationally, program management provides the opportunity to manage development efforts across the traditional line structure of an organization, contributing to faster decision making and improved productivity.

Program Management Enables Horizontal Collaboration

A new model has emerged where knowledge work is digitized, disaggregated, distributed across the globe, produced, and reassembled again at its source.⁷ Team collaboration can now occur in real time and without regard to geographical boundaries or distances. Companies that are thriving in this new business model are the ones that are successfully integrating horizontal collaboration of work. A key learning that has emerged is that program management is an effective business model for managing the horizontal collaboration, and for integrating the output of

specialized knowledge workers into total solutions. The program management discipline enables this horizontal collaboration.

Program Management Requires a Capable Business Leader—The Program Manager

Managing a program is a complex undertaking. It requires much more than planning, tracking, and controlling the work of a cross-functional team. The program manager serves as the catalyst for converting ideas into products, services, and infrastructure capabilities that, when delivered or implemented, become the means to achieve a set of business objectives. The program manager is someone who thinks and acts like a general manager (GM), or a CEO of a small company. In doing so, the program manager has two primary roles, as follows: to manage the business on his or her program and to lead a set of highly interdependent project teams throughout all phases of the program life cycle (PLC) (see Chapter 12). Companies that use the program management discipline as intended understand that these roles require a unique set of core competencies, skills, and personality traits. In Chapter 13 we describe the skills needed within the four program management core competency areas, which include business and financial, market and customer, leadership, and process and project management acumen.

DIFFERENTIATING BETWEEN PROGRAM AND PROJECT MANAGEMENT

Two distinct trends have played a key role in the emerging need to succinctly distinguish between program management and project management. First, there is a recognized need within business management to improve the link between business strategy and operational execution. Second, there is an increasing trend toward larger and more complex product, service, and infrastructure development efforts. These trends are fully comprehended in the program management model and give rise to its increased usage as a critical business function.

Program management and project management are related but distinctly different disciplines. It is important for everyone within an organization to understand the distinction between the two to link project

output to business strategy and integrate the efforts of multiple project teams to achieve a common set of business goals.

Summary of Program and Project Management Differentiation

Table 1.1 provides a high-level summary of the *important* differences between program and project management. The primary differentiator is the core area of focus. Program management is strategic in nature and focused on the business success of the program, while project management is tactical in nature and focused on the successful execution and delivery of one subsystem, or element, of the integrated solution. All other factors in the summary (alignment, responsibility, management dimension, risk management, work effort, processes, skills, and capabilities) are subfactors of the primary differentiator.

We refer to project management as tactical in nature based on the Project Management Body of Knowledge (PMBOK) and the dominant industrial practices. PMBOK is a very respectable standard—de jure U.S. national standard and de facto global standard. Per PMBOK, project management is about management of a single, individual project, whose primary focus is accomplishment of the triple-constraint goals (time, cost, and quality).⁸ We use this view as a benchmark to compare program and project management.

Alignment of Objectives—Strategic Versus Tactical

Program management is *strategic* in nature and focused on *business* success; however, project management is *tactical* in nature and focused on *execution* success. More importantly, the program manager must ensure that, from concept to launch, the program remains in alignment with, and in support of, the strategic objectives set forth by senior management. This includes alignment with the organization's strategic plan, its product portfolio and road map, and the business-related objectives such as financials, market penetration, and technology advancement. The project manager, in turn, is responsible for ensuring the work and resulting deliverables of the project team are in alignment with and in support of the program objectives.

Table 1.1 Program and project management differentiation summary

<i>Differentiating Factor</i>	<i>Program Management</i>	<i>Project Management</i>
Strategic vs. Tactical	Strategic in nature, focused on business success	Tactical in nature, focused on execution success
Alignment of Objectives	Alignment of execution to business strategy	Alignment of deliverables to triple constraints (time, cost, and quality)
Scope of Responsibility	Successful delivery of the right product, service, or infrastructure capability at the right time	Successful delivery of project deliverable(s) per triple constraints
Vertical vs. Horizontal Responsibility	Manages horizontally across the functional projects involved in the program	Manages vertically within a single project
Work Effort	Assures the cross-project work effort remains feasible from a business standpoint	Assures work effort generates desired deliverables on time, within budget, and at required performance levels
Management of Risk	Concerned with cross-project risk affecting the probability of program and business success	Concerned with single-project risk affecting the probability of project and technical success
Life Cycle Involvement	Involved in all phases of the development life cycle, from definition to end of life	Primarily involved in the planning and implementation phases of the development life cycle
Process Orientation	Ensures consistent use of common processes by all project teams	Ensures effective and efficient implementation of processes on a single project team
Skills and Capabilities	Breadth of business, leadership, customer/market, and project management skills	In-depth project management and functional specific technical skills

Scope of Responsibility

On a broader scale, the program manager must assume the responsibility for the attainment of the combined objectives from each of the functional project teams used to deliver the product, service, or infrastructure capability. This may include marketing, hardware development, software development, mechanical development, manufacturing, validation, testing, and customer support.

In a nutshell, the program manager's job is the successful delivery of the right product, service, or infrastructure capability at the right time. This requires management of the interdependent issues across the multitude of projects. For example, if the hardware development project team encounters a quality issue that will impact the timing of its deliverable to the manufacturing project team, the program manager must determine if it's better to delay the deliverable (and the work of the manufacturing project team) or reduce the quality target. This is a cross-project issue to be solved at the program level. In contrast, a project manager is responsible for the scope of work within his or her project only.

Vertical Versus Horizontal Responsibility

Figure 1.2 demonstrates the concept of vertical project management and horizontal program management; both program and project managers are responsible for the effort and deliverables but in different dimensions. The project manager directly manages the effort and work flow

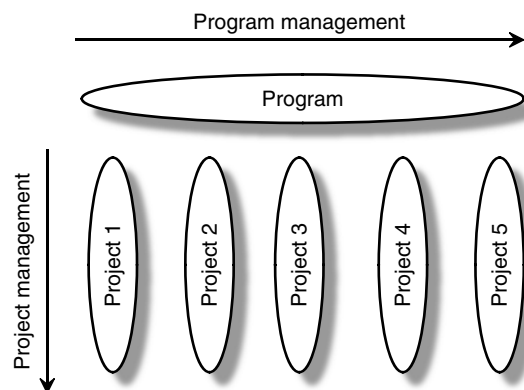


Figure 1.2 Horizontal and vertical management of a program.

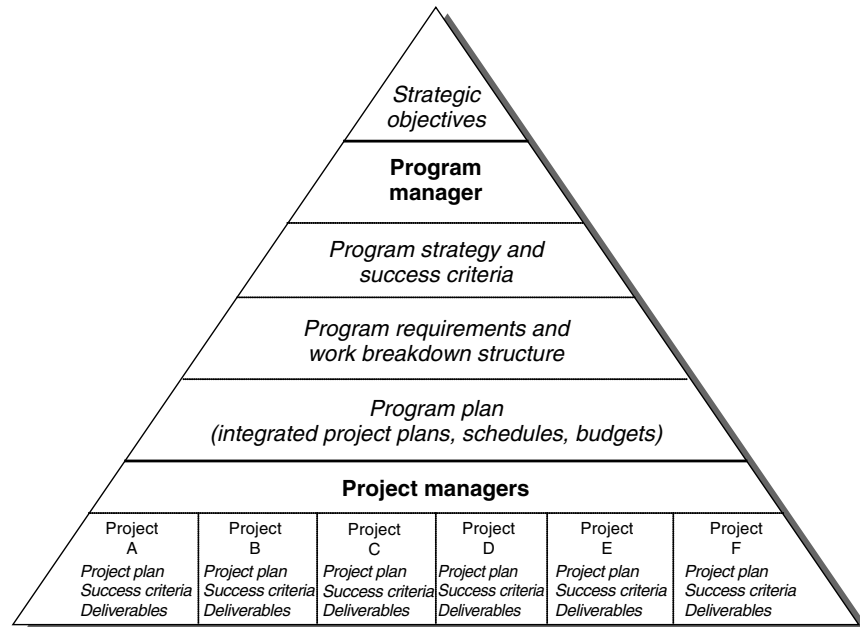


Figure 1.3 The program hierarchy.

within his or her project team. This is called **vertical responsibility**. Project managers are directly held accountable for the plans, schedules, objectives, deliverables, risks, and quality levels as they pertain to their respective projects. In contrast, the program manager manages horizontally across the functional projects involved on the program and is held accountable for the integrated plans, schedules, deliverables, risks, and overall quality output of the multiple projects.

Work Effort

The program manager assures that the cross-project work effort remains in alignment with the strategic objectives and is feasible from a business standpoint by focusing *across* the functional groups to ensure that the deliverables, timing, and other interdependencies between the groups are met in accordance with the overall program plan and schedule (Figure 1.3). By contrast, the project manager assures that work effort generates deliverables on time, within budget, and at required performance levels.

Risk Management

Both the program and project managers are responsible for identifying and managing risk on a development program but do so differently. Project risk management involves identifying and managing risks that may affect the technical success for a single functional project. Program risk management involves identifying and managing cross-project risks that may affect the overall business success of the development program.⁹ (See Figure 5.2 in Chapter 5 for an illustration of this concept.)

Life Cycle Involvement

Life cycle in this context pertains to all of the phases a product, service, or infrastructure capability will transition through from the time of its inception to its eventual phase out. By virtue of the program management model, the program manager is involved in all phases of the life cycle. This includes the definition, planning, implementation, launch, and sustain phases. Project managers are typically involved only in the planning, implementation, and, occasionally, the initial launch or go-live phases of the life cycle.

Process Orientation

The distinction between program and project management comes in how the processes and procedures are established for and executed on a program. The program manager is responsible for ensuring that company processes and procedures are established for the program and that they are consistently used by all project teams. The project manager is responsible for effective and efficient implementation of the processes and procedures established by the company, as well as those established by the managers of functional organizations.

Skills and Capabilities

The breadth and depth of skills and capabilities is also a differentiating element between program and project management. Project managers must have in-depth knowledge of the domain they represent and experience in project management. In comparison, program managers must have a working knowledge of the intricacies of each of the functional

projects involved with the program, such as marketing or software development. Program management core competencies must also include business, leadership, customer/market, and project management skills to effectively lead a development effort (see Chapter 13).

DIFFERENTIATION BETWEEN PROGRAM AND PORTFOLIO MANAGEMENT

At times, confusion also exists between program management and portfolio management. One of the causes of this confusion may be that they are both commonly broadly defined as the management of multiple projects. But this is where the similarity ends. In the following section, we provide a brief characterization of portfolio management for readers who are not familiar with the process. We then describe the key distinctions between portfolio management and program management.

Characterizing Portfolio Management

The senior management team of an organization utilizes the portfolio management process to synthesize current and future collective intelligence of the organization. They use it to select, prioritize, fund, and resource the portfolio of products, services, or infrastructure opportunities that will best achieve the attainment of the strategic objectives. In synthesizing the intelligence of the organization, various key factors about the business and business environment must be analyzed to obtain the right mix and number of opportunities. Such factors may include the following:¹⁰

- Company strategic objectives
- Customer wants, needs, and usage requirements
- Competitive intelligence
- Current and future technology capability of the enterprise
- Risks and potential rewards
- Resources and other assets available to plan and implement the portfolio of products, services, or infrastructure capabilities

The portfolio management process, by necessity, crosses all company disciplines that are pertinent to the successful development of the portfolio for products, services, or infrastructure capabilities. The objective

of the portfolio effort is to ensure that the company is working on the opportunities that offer the highest probability for attractive financial and strategic returns at the lowest possible risk. Opportunities are ranked and prioritized based upon a set of criteria that represents *value* to the organization. Resources are then allocated to the highest value and most strategically significant products, services, or infrastructure opportunities. Low-value opportunities must be cut, returned for redefinition, or put on hold until adequate resources are available.

Summary of Program and Portfolio Management Differentiation

Table 1.2 provides a high-level summary of the important differences between program management and portfolio management. The primary differentiator is that portfolio management is a decision-making *process*, while program management is a key management *function* within an organization. All other factors in the summary (determining and obtaining value, management of risk, and management of resources) are subfactors of the primary differentiator.

Process Versus Function

Senior management of an enterprise utilizes the portfolio management *process* to evaluate, prioritize, select, and resource new products, services or infrastructure ideas that will best contribute to the attainment of the strategic objectives of the business. The program management *function* is used to determine the business and execution feasibility of a selected idea; the idea then turns into an actionable plan that is successfully executed and delivered as a tangible product, service, or infrastructure capability.

Determining and Attaining Value

The heart of the portfolio management process is the ability of the senior management team to determine the business value of a product, service, or infrastructure opportunity. Therefore, the portfolio management process identifies the critical factors that determine opportunity value.¹¹ Common factors may include the following:

- Alignment to strategic objectives
- Technology and commercial risk

Table 1.2 Program and portfolio management differentiation summary.

<i>Differentiating Factor</i>	<i>Program Management</i>	<i>Portfolio Management</i>
Process v. Function	A management <i>function</i> utilized to determine the business and execution feasibility of a selected idea. The idea then turns into an actionable plan that is successfully executed and delivered to the customer	A <i>process</i> utilized to evaluate, prioritize, select, and resource new ideas that best contribute to the attainment of the strategic objectives of an organization
Determining and Obtaining Value	Focused on ensuring that the business value is attained for a single opportunity throughout the development and market introduction process	Focused on determination of the business value of all existing opportunities of the organization
Risk Management	Management of risk across all disciplines involved in the development of a single product, service, or infrastructure capability	Determination of the business and technical risk of each opportunity concept, balancing risk and return for the aggregate portfolio of opportunities
Resource Management	Staffing the PCT, ensuring the project teams are adequately staffed throughout the development life cycle	Aligning resources to opportunities that provide the greatest strategic value to a business

- Financial reward or return
- Estimated market segment share
- Technology advancement

Once the business value is determined for an opportunity within the portfolio and it is selected for funding and resource allocation by the senior management team, the opportunity (in the form of a product, service, or infrastructure concept) is assigned to the program management function within the enterprise. The program managers are then responsible for

turning each of the portfolio ideas into a tangible product, service, or infrastructure capability and *delivering* the value.

Managing Risk

The senior management team manages portfolio risk from both macro and micro perspectives. Macro-level risk management of a portfolio involves determining the overall risk level of the aggregate opportunities within the portfolio and then determining the right balance based upon the risk tolerance of the organization. A key element of the portfolio management process is balancing the portfolio risk against the potential reward.

Figure 1.4 illustrates an example of portfolio risk versus reward. Risk is assessed as high, moderate, or low, and financial value is assessed in terms of return on investment (ROI) of the program. The size of the bubbles represents the relative development budget of the investment for each capability. The senior management team must also balance

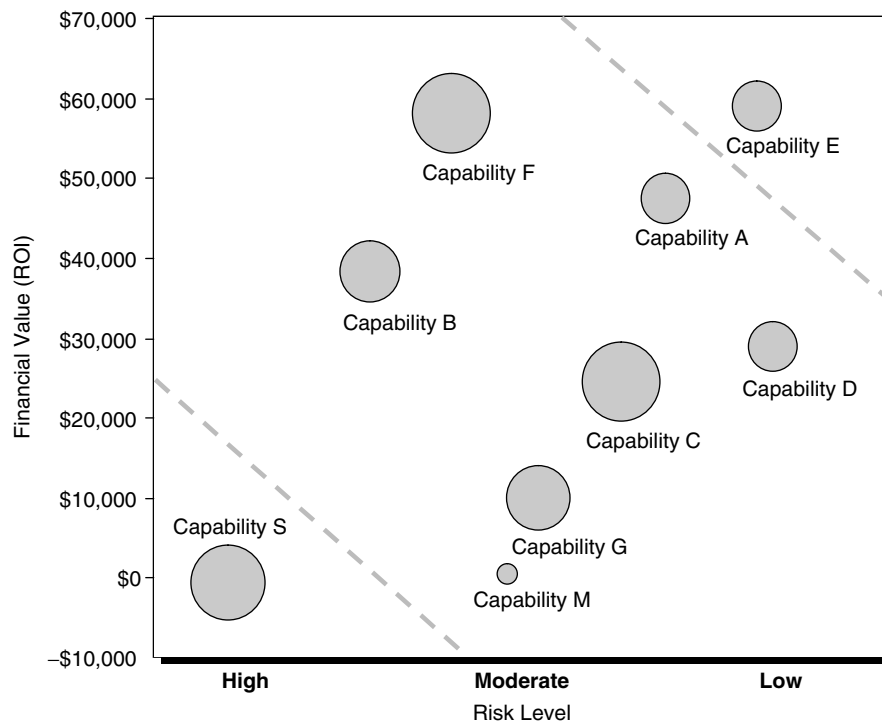


Figure 1.4 Portfolio risk versus reward.

the potential risk exposure for each opportunity against the determined business value on a micro level.

Once a product, service, or infrastructure opportunity is approved and funded, the program manager becomes responsible for the risk/reward ratio of that single opportunity.

Resource Management

Businesses typically have more ideas than human and non-human resources available to carry them out. As a result, resources become overcommitted and weighed down by an overwhelming list of opportunities to pursue. Portfolio resource management involves aligning resource demand to capacity and assigning resources to products, services, or infrastructure opportunities that provide the greatest value to a business. The end result of a well-executed portfolio management process is a balance between high-value opportunities and the number of available resources to execute the opportunities.

Efficient and effective resource management is needed for the development of an opportunity throughout its life cycle. This becomes the responsibility of the program manager and the functional managers of the organization. For the value of an opportunity to be realized, the program designed to deliver it must be adequately staffed.

DIFFERENTIATING BETWEEN PROGRAM MANAGEMENT AND PRODUCT MANAGEMENT

The terms *program management* and *product management* are sometimes used interchangeably, which leads to confusion between the roles of the program manager and product manager. Indeed, they are both responsible for the success of a program; the difference being that the product manager ensures the product remains viable from a market perspective while the program manager ensures the entire program is successful in achieving the business objectives.

Summary of Program and Product Management Differentiation

Table 1.3 illustrates that program and product management are symbiotic but are two distinctly different disciplines. The primary differentiator is

Table 1.3 Program and product management differentiation summary.

<i>Differentiating Factor</i>	<i>Program Management</i>	<i>Product Management</i>
Business v. Product Champion	Business champion responsible for achieving specific business objectives	Product champion responsible for identifying the customer needs that the product is meant to satisfy
Organizational Affiliation	A program manager is part of the general business or program management office organization	A product manager is a member of the marketing organization
Area of Focus	Product definition and feasibility, program planning, execution, launch and post-launch support	Market and customer research, new product planning, new product launch, and post-launch support
Specialist v. Generalist	Cross-discipline generalist providing strategic and business guidance to the development team	Marketing specialist providing marketing guidance and direction to the development team

that a product manager is the product champion, while the program manager is the business champion on a development program. All other factors in the summary (organizational affiliation, primary areas of focus, and specialist versus generalist) are subfactors of the primary differentiator.

Organizational Affiliation

The primary role of the product manager, who is normally part of the marketing organization, is to size, segment, and target key market opportunities. He or she does this by utilizing his or her unique understanding of the customer to identify unfulfilled needs and new market opportunities.¹² The program manager, by contrast, usually reports to a GM or the program management office and often is viewed as the bridge between marketing and development. The program manager utilizes the information generated by the product manager to ensure the right product is developed and delivered to the markets that the business services. In most instances that we have observed, the product manager is a member of the PCT, which the program manager leads.

Primary Areas of Focus

The main areas of focus for the product manager include market and customer research, new product planning, new product launch, and post-launch product management.¹³ Probably the most critical direct interaction between the program manager and the product manager is during the product definition and product proposal phase. During this phase, the product and program manager, along with engineering, define a viable differential value proposition for the product. It is the responsibility of the program manager to ensure that this proposed value proposition has a high probability of achieving the strategic objectives for the business. The product manager, in turn, is responsible for ensuring the value proposition meets customer needs. When the product manager and the rest of the team are confident in the value proposition, the program manager will proceed with submitting the product proposal to senior management for approval.

Specialist Versus Generalist

The product manager is the marketing specialist and product champion with the primary role of identifying the customer needs that the product is meant to satisfy. He or she provides marketing guidance and direction to the development team,¹⁴ typically in the form of a market requirements document, which is the foundation for the creation of the product requirements document by the engineering specialists. The product manager may serve as the functional project manager who represents the marketing function on a program.

By contrast, the program manager is a generalist whose key role is the business champion for a product development program. The program manager is ultimately responsible for the overall success of the new product in the market and for achieving the specific business objectives pertaining to the program. He or she ensures success through the efforts of the product manager and other members of the PCT.

DIFFERENTIATING BETWEEN PROGRAM MANAGEMENT AND MANAGEMENT OF MULTIPLE PROJECTS

In this section, we compare and contrast program management as the management of *interdependent* projects with the management of multiple

independent projects. Interdependent projects within a program are aimed toward the achievement of a common business objective, where the successful completion of deliverables from one project is needed for the success of the other projects—if one project fails, they all fail. Program management ensures the dependencies between the multiple projects are managed concertedly.

Multiple independent projects, however, do not share a common objective; rather, they are each aimed at achievement of separate business objectives. Each project is stand-alone and can be managed by a common project manager with no apparent impact on one another—the success or failure of one project does not affect the other projects.

To illustrate the difference between managing multiple projects and managing a program, let's look at two training course development examples. The first scenario is the development of multiple “how to” remodeling courses by a home improvement retail center. The second is the development of a systems administration curriculum by a for-profit university. In both scenarios, the work performed to develop the courses is similar and can be accomplished through good project management practices. The difference is in *how* the collective set of courses is managed.

The primary objective for the how-to remodeling courses is to increase merchandise sales by strengthening the homeowner's competency and confidence in this area. The courses to be developed are the following:

- Plumbing basics
- Electricity basics
- Ceramic floor installation
- Wallpaper hanging

In this case, the courses are entirely independent of one another because each course is focused on a unique area, and there are no interdependencies between them. Therefore, each course development can be set up as a stand-alone project that independently contributes to the business objectives. Figure 1.5 illustrates the independent nature of these four projects. Development of the four courses can be managed separately with different project managers.

The primary business objective for the systems administration curriculum is to increase enrollment revenue by offering compelling, certified, and competitive courses for customers to obtain an associate's degree

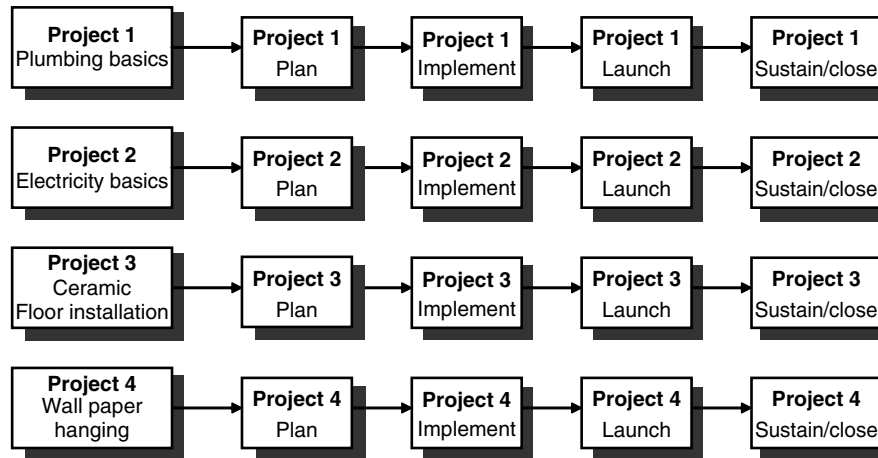


Figure 1.5 Independent course development projects.

in systems administration. The program consists of multiple courses, including the following:

- Introduction to networks
- Network administration
- Database design and development
- Visual basic programming

In this case, the courses are highly interdependent. The curriculum cannot achieve certification without the successful development of all courses, and the program cannot generate enrollment revenue without certification.

Because of the interdependent nature, each course development effort should be managed as a single project within a larger curriculum development program. The program should be managed by a program manager who is responsible for achievement of the business objective—increased enrollment revenue through deployment of the systems administration curriculum.

Managing multiple interdependent projects requires the integration of project planning, execution, and sustaining activities at the program level, as shown in Figure 1.6.

As illustrated, if even one project team does not deliver their respective course, the cross-project integration that occurs at the program level will

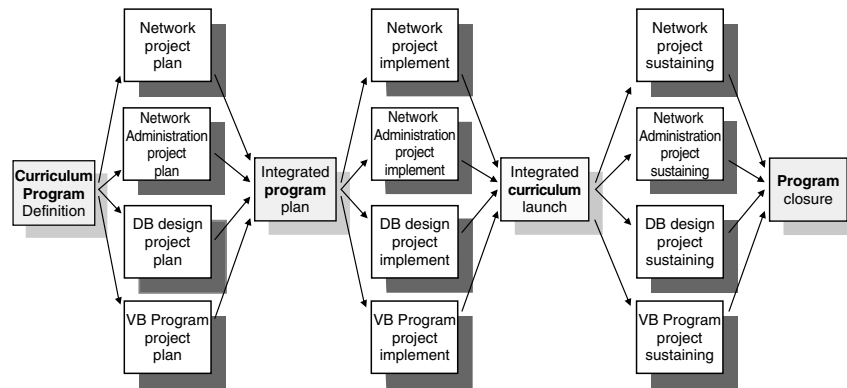


Figure 1.6 Example of a curriculum program with interdependent projects.

be unsuccessful. When this occurs, the program as a whole will fail and the business objective driving the need for the program will be unmet.

THE “MYSTERY” OF PROGRAM MANAGEMENT REVISITED

This chapter begins by stating that there is a fair amount of confusion about program management and also provides a short list of questions from practitioners, consultants, academicians, and senior managers. We revisit these questions below and include answers based on the context of this chapter.

What exactly Is Program Management?

Program management is the coordinated management of interdependent projects over a finite period of time to achieve a set of business goals.

Through the coordinated management of the interdependent projects and focus on achieving business results, program management provides the following business value:

- Ensuring that project execution is closely aligned to and supports the achievement of a business’s strategic objectives
- Providing better development efficiency and decision making within the program team to achieve rapid time to money
- Improving customer satisfaction with well-defined communication channels and communication messaging with customers

Is Program Management Just Another Name for Project Management?

Program management is *not* just another name for project management. The primary differentiator between program and project management is the core area of focus, as follows: Program management is strategic in nature and focused on the business success of the program, while project management is tactical in nature and focused on the successful execution of tasks and deliverables within the classic triple constraints of time, cost, and quality.

Are Program Management and Portfolio Management The Same Thing because Both Involve Managing Multiple Projects?

Program management and portfolio management are *not* the same. They differ in that portfolio management is a decision-making *process*, while program management is a key management *function* within an organization. A business will have a portfolio of programs that will be selected, prioritized, and resourced by senior management. The program managers and their teams then deliver the intended business value for each program within the portfolio through the definition, planning, implementation, and launch of products, services, or infrastructure capabilities.

Isn't a Program Manager a "Super-Project Manager"?

A program manager is *not* a "super project manager." A program manager is a business leader who needs business, leadership, customer/market, and process and project management skills (see Chapter 13). Program management offers a single point of accountability for the business results of a development program. A project manager is tactically focused and needs in-depth project management and functionally specific technical skills.

Do We Need Program Management If We Excel in Project Management?

The answer to this question is business specific and depends upon how project management is used within the business. We offer the following guidance:

- If your development efforts are tactical and focused on execution, then you *do not* need program management.
- If your development efforts are low in complexity, with few interdependencies, then project management methods will suffice.
- If your development efforts are tactical and you need to focus more on strategic and business success, then program management is a viable business model to pursue.
- If your development efforts are growing in complexity and you are struggling with the management of many cross-team interdependencies, then you *do* need program management.

When considering these options, keep in mind that the complexity of the company's products, services, and infrastructure capabilities are important factors in the decision to use program management. As we cover in Chapter 4, industry benchmarking, research, and personal experience shows us that a project management-only approach is only sustainable to fairly low levels of project complexity. In cases of higher complexity, program management brings value by integrating the work output of multiple highly interdependent projects to deliver products, services, or infrastructure solutions that contribute to the bottom line of a company.

SUMMARY

The intent of Chapter 1 is to identify and remove the mystery surrounding program management. The chapter begins with an explanation of why program management gets confused with other disciplines, with a concise definition of “the coordinated management of interdependent projects over a finite period of time to achieve a set of business goals.” To shed more light on what program management is and is not, we describe the distinguishing factors between program management and project management, portfolio management, management of multiple projects, and product management. This comparison is focused on the six primary characteristics or pillars.

Understanding and deploying the six pillars of program management will help program managers to improve business results through the achievement of a business's strategic objectives, positive contribution to the bottom line, and increased customer satisfaction.

The Principles of Program Management

- ▼ Similarly aligned projects are linked into programs that are tied to the business strategy of the organization to realize the power of program management
 - ▼ Program management is a focal point for ownership and accountability of business results
 - ▼ Program management is strategic in nature and focused on business success; project management is tactical in nature and focused on execution success
 - ▼ The program manager manages horizontally across the functional projects involved with the program, while the project manager manages vertically within a single functional project.
 - ▼ Program management aligns functional objectives to business objectives through the development process—products, services, and infrastructure capabilities are the *means* to achieve business objectives
 - ▼ Program management is cross-project and multidisciplined
 - ▼ Program management requires a capable business leader whose core skills go beyond technical aspects and include business, leadership, and program and project management process competencies to effectively lead new development programs
 - ▼ Portfolio management is a planning and decision-making process to select the optimum portfolio value, while program management is the function that ensures the portfolio value is attained
 - ▼ A product manager is a marketing specialist whose primary role is product champion, and a program manager is a generalist whose primary role is business champion and master integrator
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