

REINVENTING PROJECT MANAGEMENT

The
DIAMOND APPROACH
TO SUCCESSFUL GROWTH
AND INNOVATION

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CHAPTER

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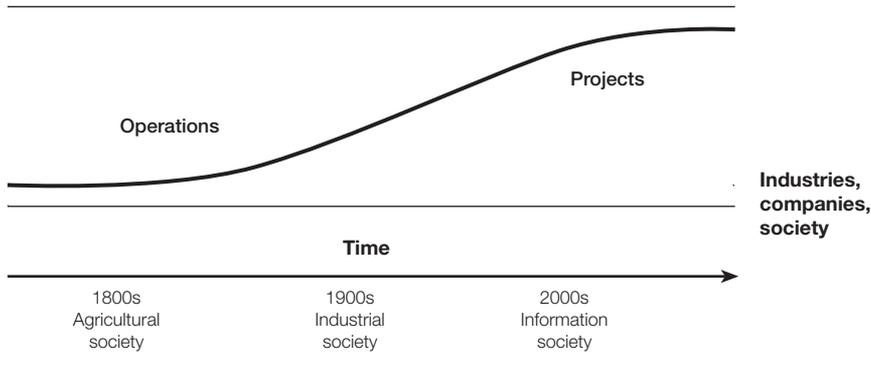
WHY YOUR BUSINESS SUCCESS DEPENDS ON PROJECTS

GENERALLY SPEAKING, you can divide your organization's activity into two categories: operations and projects. *Operations* involve repetitive, ongoing activities, such as manufacturing, service, and production, whereas *projects* involve unique, one-time initiatives, such as launching new products, new organizations, or new ventures, improving existing products, and investing in the company's infrastructure. Projects drive business innovation and change; in fact, the only way organizations can change, implement a strategy, innovate, or gain competitive advantage is through projects. Furthermore, if you think about it, every operational process began as a project that put things in motion.

With high demand for growth and innovation, the share of operations in most organizations is declining and the share of projects is on the rise (see figure 1-1). This trend began in the early 1900s, and it is accelerating in almost every organization and industry: not only do product life cycles become shorter, but also customers today demand greater variety and more choices, forcing companies to offer more products in almost every market. For example, in 2003 GM offered eighty-nine models, selling an average of fifty thousand cars per model; in the 1950s, in contrast, a single model would sell in the millions.¹

In addition, market globalization is forcing businesses to respond to local demands and to low-cost competition around the world. Moreover, the information technology (IT) and Internet revolution is not slowing

FIGURE 1-1

The increasing share of projects

down. Even in stable industries such as banking and insurance, organizations must continuously invest in new IT infrastructure to keep up with growing demand and competition. Each of these trends intensifies the project activity in almost every organization and industry.

Ironically, during most of the twentieth century many organizations focused on improving their operations but not their projects. This trend began with the scientific management principles of Frederick Taylor, which greatly influenced the evolution of efficient mass production systems.² The efforts to improve operational efficiency continued for decades with more recent concepts such as just in time, lean manufacturing, reengineering, supply-chain management, and six sigma.

Although operational efficiency remains important, there is a limit to how much you can improve. With time, at least in theory, all companies can reach a similar level of efficiency. For example, think about quality. In the 1980s, high quality was considered an important source of competitive advantage. Not any more. Customers now take quality for granted, rather than view it as a unique advantage. High quality has become a must, and essentially a license to do business. A similar case can be made for organizational efficiency.³

No business enterprise can survive if it is focused only on improving its operations. The next untapped candidate for significant improvements in a company's pursuit of competitiveness is the project activity of the organization. Projects are the engines that drive innovations from idea to commercialization. But projects are also the drivers that make organizations better, stronger, and more efficient. And because most organizations

accelerate toward a project-based world, shouldn't you ask yourself how your organization is doing with its projects? Are you doing a better job than your competitors?

This situation presents a tremendous opportunity. It is time to unleash the underutilized potential that exists in projects. The premise of this book is that organizational success depends more and more on projects. The good news is that because all organizations—commercial companies, government agencies, educational institutions, and charitable funds—have projects, managers at all levels can play a critical role in turning project management into an organizational competitive asset. The time has come to recognize that *project management is everyone's business*.

For the purpose of this book we define a project as *a temporary organization and process set up to achieve a specified goal under the constraints of time, budget, and other resources*. Project management is the *set of managerial activities needed to lead a project to a successful end*.⁴

The Bad News: Most Projects Still Fail

As the data proves, most projects fail to meet their goals. They do not meet time and budget goals, do not meet their business objectives, or both. Consider the following:

- The Standish Group found that in 2000 only about 28 percent of IT projects were successful. The rest were either total failures or failed to meet business requirements.⁵
- The Standish Group also estimated that of the \$382 billion spent in 2003 on IT projects in the United States, \$82 billion was a total waste. One-third of the projects that either failed or did not meet business requirements had overruns of 200 to 300 percent.⁶
- Robert Cooper's studies on new-product development showed that about 46 percent of all resources were allocated to projects that were canceled or failed to yield an adequate financial return. Only one of four products that entered development became a commercial success.⁷
- A study conducted in 1998 by the Bull Computer Corporation in the United Kingdom found that 75 percent of IT projects missed their deadlines, 55 percent exceeded their budgets, and 37 percent did not meet project requirements.⁸

For fifteen years we have collected data on more than six hundred projects in the business, government, and nonprofit sectors in various

countries and have documented hundreds of project case studies. (See appendix 1 for a description of our research. Later appendixes include some of our research instruments.) Some 85 percent of the projects we studied failed to meet time and budget goals, with an average overrun of 70 percent in time and 60 percent in budget.⁹

Why Even Well-Managed Projects Fail

You may think that projects fail because of poor planning, lack of communication, or inadequate resources; but as the evidence suggests, failure is often found even in well-managed projects that are run by experienced managers and supported by highly regarded organizations. Consider the following:

Denver International Airport was initiated in 1989 to take over Denver's Stapleton Airport, which had outgrown its maximum capacity.¹⁰ But the project suffered an extensive delay of sixteen months and an enormous cost overrun of \$1.5 billion. As it turned out, one component—the automatic bag-handling system—had a higher risk than the project's other elements, but it was treated as a standard, well-proven subsystem, just like any other part of the project.

The Segway personal transportation system was expected to change the way people traveled, particularly in big cities.¹¹ With high sales expectations, its builders prepared a substantial infrastructure for mass production. Although the product was well designed and fun to ride, it did not fulfill its business forecasts; sales were short of predictions and, in retrospect, the extensive investment in production capabilities seemed unjustified.

NASA's Mars Climate Orbiter (MCO) was supposed to circle the planet Mars and collect weather data as well as act as a relay communication station to a second vehicle, Mars Polar Lander. MCO was launched by NASA as planned on December 11, 1998, but after nine and a half months in space, its signal was lost just as it began its final insertion maneuver. The failure was later described as a technical error due to a failure to use metric units in the coding of one of the ground software files.¹²

These projects took place in different industries, were aimed at different markets, and used different technologies. Yet they had one thing in common. They all had highly talented and dedicated managers, the best professional teams, the latest project management tools, and total support from top management. It seemed that each of these projects had every ingredient needed to succeed, but all of them failed to meet their expectations; when managers finally understood what went wrong and why, it was too late to fix the problem. The common theme to all of these failures was that executives as well as project teams failed to appreciate up front the extent of uncertainty and complexity involved (or failed to communicate this extent to each other) and failed to adapt their management style to the situation. The full story of these projects will be told later in the book.

These projects are not unique. We can find similar situations in every organization, where well-managed projects fail to deliver on their promises and end up in disappointment.

Why We Need a New Framework and a New Approach

Many executives believe that if they come up with the right strategy or business plan, their project teams will “get it done” and execute the strategy as directed. As we have observed, top managers frequently look at project budgets as a cost, not an investment, and see project activities as part of operations. They rarely appoint a “chief project officer” or vice president of projects, and their project teams are left on their own with little guidance or help from the top.

Project teams often try to follow a well-established set of guidelines that has become standard in the discipline of project management (see “The Evolution of a Discipline”). Although the conventional project management body of knowledge forms a good foundation for basic training and initial learning, it may not suffice for addressing the complex problems of today’s projects. Simply asked, if you apply the standard tools and follow the rules and processes as prescribed, will your project be successful? As we have found, the answer is, not always. Often, even if you do everything by the book of conventional project management, you may still fail.

Most project problems are not technical but managerial. When technical errors cause projects to fail, it is usually management that failed to put the right system in place so that these errors would be detected in time. Such problems stem from the framework and the mind-set that drive the traditional approach to project management, rather than from a

The Evolution of a Discipline

When you look at the Pyramids, the Great Wall of China, the Greek Pantheon, and even Stonehenge, you realize that projects have been an important part of every civilization. Yet not until modern times did companies begin organizing work around projects; and when tools, techniques, and methods became standard across industries, a new discipline—project management—emerged.

As a formal discipline, project management as we know it was born in the middle of the twentieth century. The Manhattan Project, which built the first atomic bomb during World War II, exhibited the principles of organization, planning, and direction that influenced the development of standard practices for managing projects. During the cold war, large and complex projects demanded new approaches. In programs such as the U.S. Air Force's intercontinental ballistic missile (ICBM) and the Navy's Polaris missiles, managers developed a new control procedure called program evaluation and review technique (PERT). This approach evolved simultaneously with the critical path method (CPM), which was invented by DuPont for construction projects. These methods led to current network scheduling charts, which became the standard planning and control tools.¹³ Such charts describe the project plan as a logical network of sequential activities, with allocated times for each activity.

Like any discipline or profession, project management includes rules, procedures, and tools used by all practitioners around the world. Accordingly, professional associations have been formed to disseminate and share the knowledge and experience of the profession. The premier organization, the Project Management Institute (PMI), was

lack of process or practice. The critical questions are these: Can we help project teams make the right assessment before presenting their project proposals to top management? Can we show executives how to ask the right questions and foresee danger before they make a commitment to a project and before it is too late? And can we guide project teams in adapting their project management style to the circumstances, environment, and task? It seems that managers at all levels need a new framework and a new language to communicate with each other about projects. Our goal in this book is to offer such a framework, which represents a new and more realistic approach to project management.

founded in 1969 and has since done a remarkable job in building the guide to the Project Management Body of Knowledge (PMBOK), which has become the de facto standard of the discipline.¹⁴ Other associations, such as the International Project Management Association (IPMA) of Europe, have done similar things in other parts of the world.

The Traditional Way to Manage Projects

Typically, you begin project planning by creating a scope statement, which defines the work that needs to be done. The scope is then divided into elements of work, called *work packages*, which are built hierarchically in a tree structure called a *work breakdown structure* (WBS). From there, you build an *organizational breakdown structure* (OBS) and a network scheduling chart; then you allocate the required resources, develop the budget, and lay down many other parts of the project plan.

Every project plan must include, at a minimum, a scope statement, a WBS, an OBS, a schedule, and a budget. Some also include a risk management plan to assess what can go wrong and plan what to do about it. The ultimate objective of a conventional project plan is to complete the project on time, within budget, and according to requirements.

But project management is also a process, and so the PMI has defined nine major knowledge areas or managerial processes: scope, integration, cost, time, quality, risk, procurement, human resources, and communication. Those processes are then divided into forty-one subprocesses.¹⁵ The PMI has recently developed a model of organizational project management maturity (OPM3), built according to these areas to assess an organization's level of standardization in project management.¹⁶

Why Traditional Project Management Often Fails

The standard, formal approach to project management is based on a predictable, fixed, relatively simple, and certain model. It is decoupled from changes in the environment or in business needs; once you've created the project plan, it sets out the objectives for the project, and the project manager must execute the plan using a "management-as-planned" philosophy.¹⁷ After the project is launched, progress and performance are assessed against the plan, and changes to the plan should be rare and, if possible, avoided.¹⁸ Consider the following two major drivers of project management:

- **The triple constraint.** Project managers see their jobs as successful when they are able to complete the project on time, within budget, and within performance goals (or requirements). This has famously been named the *triple constraint* (or “iron triangle”) of project management. Deviations from the triple constraint are seen as negative signals that must be prevented or corrected.
- **One size fits all.** Many executives and managers assume that all projects are the same, thus suffering from the “project is a project is a project” syndrome.¹⁹ They expect to succeed by simply following a standard set of activities as outlined in conventional project management books, none of which currently includes guidelines for distinguishing among projects and for selecting the right approach for a project.²⁰

In their struggle to keep projects on track, executives and teams get frustrated when they try to fulfill unrealistic expectations of stability. Worse, in their effort to focus the project on the triple constraint, project teams often lose sight of the business rationale behind their projects: that they must satisfy a customer and achieve business results, and not just meet project requirements. And when they try to follow a standard set of rules for all projects, they often employ the wrong approach for their specific project.

The classical drivers of project management are no longer sufficient in the current business environment. The traditional model fits only a small group of today’s projects. Most modern projects are uncertain, complex, and changing, and they are strongly affected by the dynamics of the environment, technology, or markets. Virtually every project we studied underwent unpredictable changes, and none of the projects was completed exactly as planned. Furthermore, as we found, projects differ in many ways, and one size does *not* fit all. To succeed, you must adjust your project to the environment, the task, and the goal, rather than stick to one set of rules.

In most projects you can no longer assume that your initial plan will hold until the project ends. Changes *will* take place and plans will have to be adjusted to the change. Sometimes you cannot even build a complete plan for your entire effort. Instead, you must establish a small pilot program to create small-scale prototypes, and include interim milestones to resolve important unknowns before you can commit to the full project, or you must separate an unpredictable component from the rest of your project and treat it completely differently than the bigger, more reliable task. The extent of unpredictability, contingency, and change will be different for different kinds of projects. None of these realities is included in the classic project management textbooks or guides.

A Better Way to Manage: Toward an Adaptive Project Management Approach

Based on our research, we suggest changing the paradigm of project management and accepting things as they are. In this book we develop a new approach and a new formal model to help managers understand what project management is all about. The new approach is based on a success-focused, flexible, and adaptive framework. We call it the *adaptive project management approach*, and it differs from the traditional approach in several ways, as shown in table 1-1.

According to the adaptive approach, projects are not just a collection of activities that need to be completed on time. Instead, projects are business-related processes that must deliver business results. Many projects are not predictable or certain. Rather, they involve a great deal of uncertainty and complexity, and they must be managed in a flexible and adaptive way. Planning is not rigid, fixed, or shaped once and for all; instead, it is adjustable and changing, and as the project moves forward, replanning is often appropriate or even unavoidable.²¹ And project management styles must adapt to the specific project and its requirements.

Although this approach represents a shift in thinking, it is inevitable if you want to meet today's organizational challenges. While no framework

TABLE 1-1

From traditional to adaptive project management

Approach	Traditional project management	Adaptive project management
Project goal	Getting the job done on time, on budget, and within requirements	Getting business results, meeting multiple criteria
Project plan	A collection of activities that are executed as planned to meet the triple constraint	An organization and a process to achieve the expected goals and business results
Planning	Plan once at project initiation	Plan at outset and replan when needed
Managerial approach	Rigid, focused on initial plan	Flexible, changing, adaptive
Project work	Predictable, certain, linear, simple	Unpredictable, uncertain, nonlinear, complex
Environment effect	Minimal, detached after the project is launched	Affects the project throughout its execution
Project control	Identify deviations from plan, and put things back on track	Identify changes in the environment, and adjust the plans accordingly
Distinction	All projects are the same	Projects differ
Management style	One size fits all	Adaptive approach; one size does <i>not</i> fit all

can provide all the answers, we believe that every organization can significantly improve its business results and achieve more home runs from its projects if it applies the approach described in this book.

We do not suggest, however, that you should eliminate the traditional approach. Rather, the adaptive approach builds on it. Many elements of traditional project management will continue to be essential. Together, this book's chapters present a theoretically sound, research-based, broadly valid, and practical approach for dealing with today's dynamic and uncertain projects. Following we summarize its major principles.

Creating the Business-Focused, Success-Oriented Project

This book presents a new multidimensional model for assessing and planning project success beyond the triple constraint.²² It is based on the idea that "what you measure is what you get" and on investment benefit analysis. It also assumes that the project leader is responsible for achieving all the metrics of project success.

Our model considers the strategic as well as the tactical aspects of project performance in the short *and* the long term, and it considers the points of view of different project stakeholders, including customers and businesses. Once adopted, the new model will affect the planning and execution of projects and will focus everyone's attention on more than just meeting time and budget goals.

Specifically, the new success criteria involve at least five dimensions (or metrics):

- Project efficiency: meeting time and budget goals
- Impact on the customer: meeting requirements and achieving customer satisfaction, benefits, and loyalty
- Impact on the team: satisfaction, retention, and personal growth
- Business results: return on investment, market share, and growth
- Preparation for the future: new technologies, new markets, and new capabilities

Each metric may have several submeasures, and it may differ from project to project in detail, intensity, importance, and other aspects. In some cases you will have to define other specific criteria for your project, but overall these metrics provide a workable framework for dealing with organizational and business needs. This framework is presented in detail in chapter 2.