PART
# One

# Introduction to the IT Pillars Model

CHAPTER 1

# IT Fundamentals

Information technology (IT) is a label that is used in many ways in today's increasingly technically focused world. Such wide and varied usage of the "information technology" or "IT" label can lead to confusion and unnecessary complexity. For that reason, I begin this book with an explanation of the context in which I am addressing IT.

IT is more than a function within a business and more than a technical discipline. As noted in the Preface, IT may be characterized as "the study, design, development, application, implementation, support or management of computer-based information systems, particularly software applications and computer hardware."[1]

Parsing even further into the formal definition of IT, the Merriam-Webster dictionary defines "information" as "knowledge obtained from investigation, study, or instruction," and "technology" as "the practical application of knowledge, especially in a particular field." Information may also be characterized as data, or "raw symbols," that have been given meaning by relational connections.[2]

Reading into the formal definitions of IT, one interpretation is "the practical application of information in commerce and industry." This is the definition that I will use throughout this book for IT.

This is but one way of contextualizing IT—while the term can take a variety of meanings, it is important to ground any IT-related conversations in a common definition and understanding of IT itself.

Beyond any formal definition, however, IT may be characterized as having three "components": People, Process, and Technology. Put another way, the practical application of information in commerce involves three components: (1) People, or the individuals and teams involved in work; (2) Process, or the manner in which certain tasks and activities are accomplished; and (3) Technology, or the systems and tools utilized to accomplish work.

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While the purpose or role of IT may vary across industries, companies, and geographies, a lowest common denominator may be that of IT serving as an "enabler," or a vehicle for facilitating action. There may well be exceptions to this characterization, but IT regularly serves as an aid or a tool that facilitates an activity, such as, for example, processing order transactions quickly or processing large volumes of data efficiently and accurately.

As noted in the Preface, confusion can arise related to the differences between the labels of information technology (IT) and information systems (IS). My focus in this book is on IT—specifically on optimizing and assessing how various components of IT support and function with broader business strategies and operations.

IT represents a large market—global spending reached $3.9 trillion in 2009.[3] Despite the size of the global market, a large number of project examples indicate that few IT projects actually succeed or turn out well.[4] These dynamics—a large market with poor delivery results—underscore the need for this book and the IT Pillars Model (IPM).



## OPTIMIZING AND ASSESSING IT

As noted in the Preface, the Merriam-Webster dictionary defines "optimize" as making something as "effective or functional as possible," and "assess" as to "determine its importance or value." This book is focused on optimizing and assessing IT.

In order to generate an IT assessment and an idea of what "optimized" might look like, a goal, or desired end state, for how IT should work across an organization is needed. In other words, we need to define our target in order to properly assess and optimize IT.

While the goal of IT may vary across companies, one common theme heard from chief information officers across a large number of surveys sponsored by the Center for Information Systems Research (CISR) of the Massachusetts Institute of Technology (MIT) is that their most important concern is "alignment with business strategy."[5] Part of the IPM entails evaluating how well the goals of an IT organization align with the rest of a business's operations.

An overarching goal of the IPM, and of this book, is to seek simplicity. IT can be a complex field and topic—a focus of mine is to distill the important, or "vital," aspects of IT out of the otherwise often complex IT landscape. To paraphrase Oliver Wendell Holmes, there is power in "simplicity on the other side of complexity."

At a high level, the processes of optimizing and assessing IT involve a small number of important steps. These eight steps include:

1. *Define the goal.* Define the desired end state of the IT function.
2. *Assess the situation.* Assess the current IT function against the desired end state.
3. *Quantify the situation.* Translate the assessment of the current IT function into quantitative terms.
4. *Identify the gaps.* Determine where gaps exist between the desired IT end state and the current situation utilizing the quantified IT assessment
5. *Determine a plan to bridge the gaps.* Build a plan to bridge the gaps between the current situation and the desired end state of the IT function.
6. *Quantify the benefits of bridging the gaps.* Translate the plan to bridge the gaps into quantitative terms.
7. *Execute the plan to bridge the gaps.* Move forward and implement the plan to fill the gaps
8. *Repeat these steps.* Reassess the IT function in the future and begin the optimization process again

Figure 1.1 illustrates the steps involved in optimizing and assessing IT.



## INTRODUCING THE IT PILLARS MODEL

The IPM is a framework for easily assessing and optimizing IT. The focus is on simplicity and driving value. As a variety of models and frameworks have been used across the field of IT, I focus here on the specifics underlying the IPM. I cover what is in scope and, in Chapter 2, how this model relates to a number of other IT models and frameworks.

Put simply, the IPM evaluates the components of people, process, and technology against three "pillars," or areas of focus for IT. By evaluating a company's IT operations using the IPM, it is possible to both assess the IT function and identify areas for possible optimization.

The IPM gets its name from three IT pillars. These pillars are (1) Strategy, (2) Project Management, and (3) Operational Excellence. In this context, a pillar refers to a fundamental principle or foundational idea. These three pillars, taken together, cover the typical areas of interest and focus for IT.

Figure 1.2 presents a summary view of the IPM.

For easy reference, each of the cells in the matrix is numbered. I cover the meaning and relevance of each of the cells and refer back to the numbered cells on a regular basis over the course of this book.

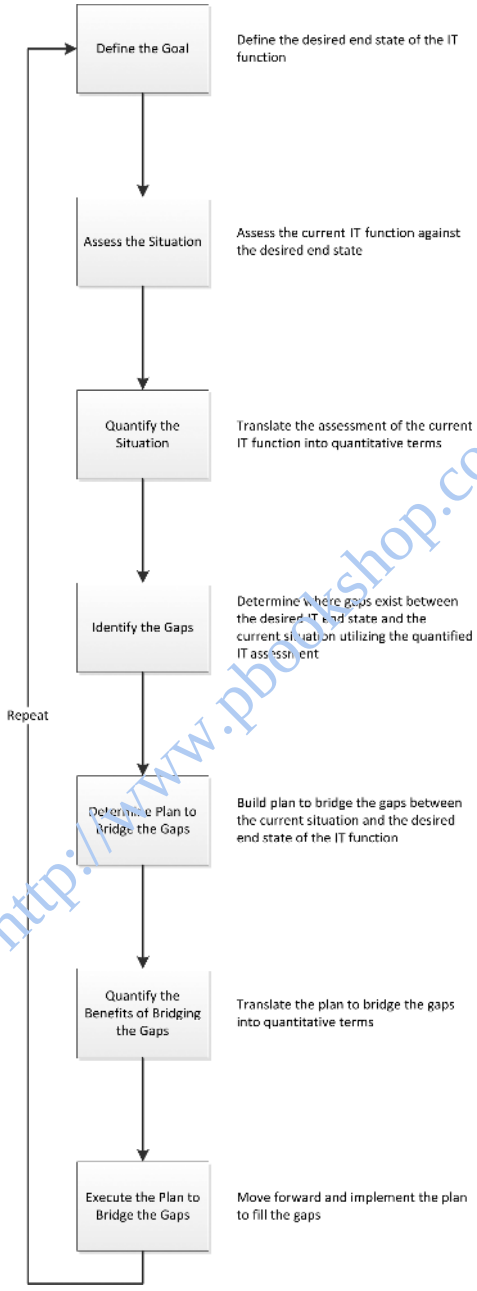


**FIGURE 1.1** Steps for Optimizing and Assessing IT

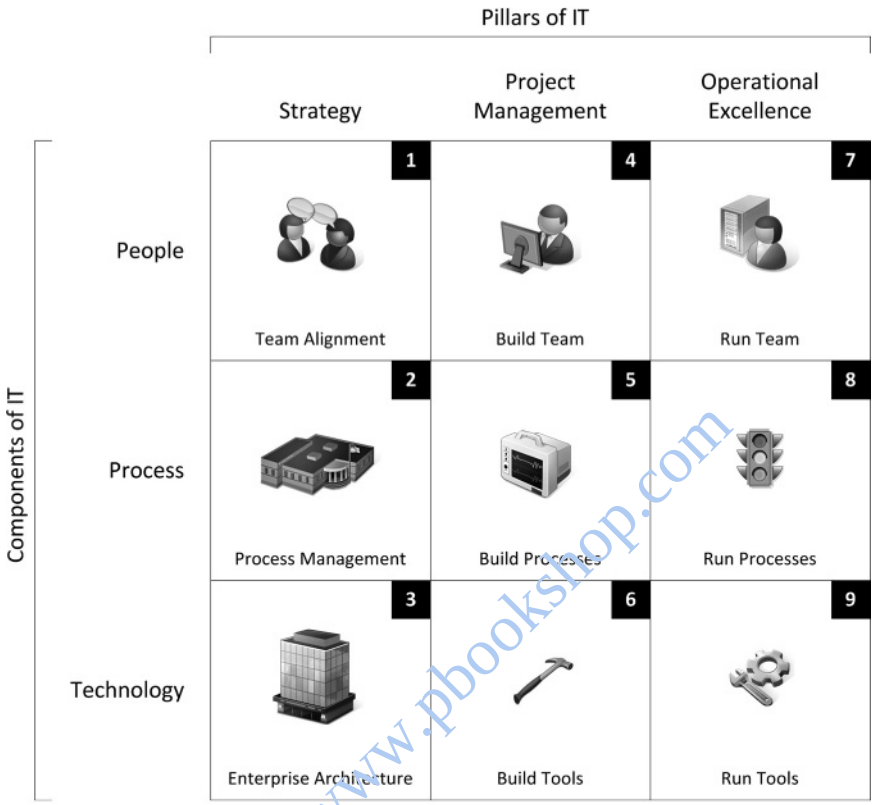


**FIGURE 1.2** IT Pillars Model



Strategy relates to how IT services are designed. The focus here is on the long term and includes areas such as enterprise architecture and enterprise systems. Project Management addresses how IT services are built and produced. This pillar focuses on the development, or "build," environment for IT service delivery. The third pillar, Operational Excellence (also referred to as Op Ex), relates to how IT services are delivered to clients. This pillar focuses on the production, or "run," environment for IT service delivery.

The three IT pillars are evaluated against the three components of People, Process, and Technology in the IPM. "Component" in this context refers to a part of a larger entity—a pillar in this case.

The People component of the IPM relates to the human element of IT. This component addresses the issue of "who" in the IT landscape. Process, as a component of the IPM, addresses the issue of how "things get done" in the IT landscape. Put another way, the Process component focuses on how

specific tasks and units of work are accomplished. The third component of the IPM, Technology, relates to the concept of tools in the IT landscape. The Technology component is focused on what (and how) specific tools are used and employed across IT.

## Strategy

The first of the three pillars of IT, Strategy, is focused on longer-term considerations than are the other two pillars, Operational Excellence and Project Management. The Strategy Pillar addresses topics of long-term IT interest, such as enterprise architecture and enterprise technology strategy.

The components of the Strategy Pillar are highlighted in Figure 1.3.

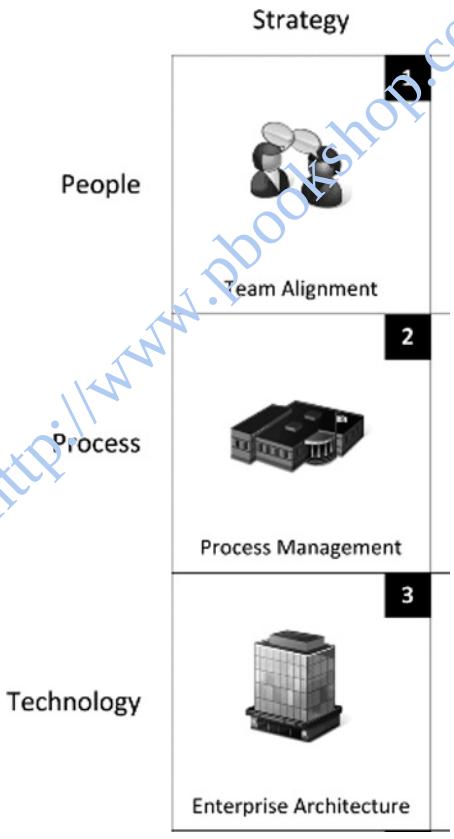


**FIGURE 1.3** Focus on Three Components of Strategy

**People** The issue of overall IT team alignment is addressed in Cell #1 in Figure 1.3 at the intersection of the People component with the Strategy Pillar. Items including IT functional and leader alignment and organizational structure are covered in Cell #1.

**Process** The broad topic of Process Management is addressed in Cell #2 in Figure 1.3. Cell #2, at the intersection of the Process component and the Strategy Pillar, deals with the important considerations associated with long-term process management across the enterprise.

**Technology** Enterprise architecture and enterprise systems, among other topics, are addressed at the intersection of the Technology component and the Strategy Pillar, shown as Cell #3 in Figure 1.3. The long-term shape, scale, and scope of the enterprise's IT function are covered in Cell #3.



### Project Management

Project Management is focused on developing and building IT services. This is the second of the three pillars of IT as shown in Figure 1.4.

The activities and considerations associated with producing and building IT services fall in the Project Management Pillar. While Operational Excellence might be thought of as IT "run" activities, Project Management may be thought of as IT "build" activities.

**People** The "build team," found in Cell #4 at the intersection of the People component and the Project Management Pillar in Figure 1.4, addresses the People component of the IT Project Management Pillar.

Considerations such as organizational structure and team experience are addressed in Cell #4.

**Process** The set of processes underlying the Project Management Pillar, referred to here as "build processes," are focused on in Cell #5 of Figure 1.4. It is here, where the Process component overlaps with the Project Management Pillar, that the processes associated with IT design, build, test, and deploy are addressed.

**Technology** The tools associated with IT Project Management, or "build tools," are covered in Cell #6 of Figure 1.4. The Technology component of Project Management is concerned with the nature and type of build, project management, and data management tools that are employed.




**FIGURE 1.4** Focus on Three Components of Project Management

### Operational Excellence

Operational Excellence, the third of the three pillars of IT, is focused on delivering services to clients. IT activities related to production systems and revenue generation fall within this category. The three components of Operational Excellence are shown in Figure 1.5.




**FIGURE 1.5** Focus on Three Components of Operational Excellence

**People** The People component of the Operational Excellence Pillar, labeled Cell #7 in Figure 1.5, is concerned with the "run team." The run team is the team of people who are accountable and responsible for delivering IT services in a production environment.

Aspects covered in this cell of the IPM include the team structure, team experience breadth and depth, and outsourcing choices, among others.

**Process** Cell #8 in the IPM, as shown in Figure 1.5 at the intersection of the Process component and the Operational Excellence Pillar, is focused on IT service delivery and support. The processes associated with IT run/production are addressed in Cell #8.

**Technology** Cell #9 from Figure 1.5 covers the tools associated with IT run/production. This cell deals with the Technology components of Operational Excellence. Service management tools and technology stack reference models are addressed in this cell.

## SUMMARY

The fundamental elements covered in this chapter serve as the basis for the remainder of this book. In addition to the core concepts covered in Chapter 1, a number of additional aspects of assessing and optimizing IT are covered over the course of the book, including measures, metrics, and indicators as well as reporting.

Assessing the performance of IT through the utilization of measures, metrics, and indicators is an extension of the IPM. This topic is covered separately later in this book.

Reporting, or the presentation of relevant and focused data and information, beyond the scope of the IPM matrix is covered later in this book. The reporting focus of this book is the IPM matrix itself, which is populated with "scores" for each of the cells for an enterprise. A series of reports in addition to the IPM is presented later in this book.