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JIHANE ROUDIAS

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For my parents for the education they gave me,
and for my brothers,
with special thanks to my little brother,
Anas Roudias, for his unconditional
listening and support.

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A special thanks to my editor, Jeanne Glasser Levine, for making this endeavor possible, and to all the professors I had for their coaching and encouragement during my study and research.

A special thought for people living with HIV AIDS all over the world, who are confronted with illness, and usually stigma and discrimination.

To modestly support raising awareness of youth with HIV AIDS, eliminating stigma and discrimination, and contributing to closing the gap by 2030; a part of the author revenues from the sale of this book will be given to UNAIDS.

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Jihane Roudias is a monitoring and evaluation analyst in the United Nations Development Program, Morocco Country Office (UNDP).

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Preface

The PMBOK Guide, the PRINCE2 method, and the Scrum method are the three most popular and internationally recognized standards in project management.

To be effective, project managers can—depending on the project nature—combine those instruments to deliver effective and efficient projects. In fact, the PMBOK Guide and PRINCE2 share the same project processes, and they can be complementary. The Scrum method, which is the most popular agile process, is highly recommended for software projects. PMBOK is a guide that underlines ten knowledge areas in its fifth edition that project managers have to master. PRINCE2 is a method that has seven principles that project managers can follow to implement their projects and deliver their expected outputs.

This book informs project managers how to combine those international standards to successfully manage projects and gives practical advice about how to anticipate and manage difficulties in each project's process. It also discusses the importance of project risk management and the significance of effective monitoring and evaluation systems that enable the management to monitor the project performance and make informed decisions at the right moment.

Introduction

All of us manage personal projects, and some of us have to manage professional projects. At the professional level, projects we have to manage can apply to the public or the private sector. Indeed, it can be a military project, a public sector project, an international development project, a humanitarian project, an agriculture project, an industrial project, a service project, a software project, or something else.

Whatever the project is, it follows the same processes.

At the international level, there are three major certifications for project management.

There is the PMP, which the American system uses; the PRINCE2, which the UK system uses; and the Scrum method, which is highly recommended for software projects.

PMP is short for Project Management Professional and is a professional certificate from the Project Management Institute (PMI). It is a U.S.-based non-for-profit organization focused on project management.

PRINCE2 is short for PRojects IN Controlled Environments and is a project management methodology previously owned by the UK's Cabinet Office. It is the UK de facto standard for project management developed by the government and used by both the public and the private sectors. PRINCE2, among other best practices, is now owned by AXELOS, a new joint venture company in the UK.

Scrum is a lightweight agile project management framework that has been used to manage complex product development since

the early 1990s. Used mainly for software development, it describes an iterative and incremental approach for project work. Scrum is a framework within which project managers can employ various processes and techniques, and within which they can address complex adaptive problems, while productively and creatively delivering products of the highest possible value.

The difference between those instruments is that the PMBOK Guide is prescriptive knowledge, whereas PRINCE2 is a descriptive methodology. The PMBOK Guide answers *how* questions; PRINCE2 answers *what*, *when*, and *whom* questions. Scrum is an iterative and incremental agile software development framework for managing product development. It can be used in all kinds of software development: for developing complete software packages, for developing only some parts of bigger systems, and for customer or internal projects.

PMBOK and PMP are better known in the United States, Canada, and the Middle East, whereas PRINCE2 is better known in the UK, Europe, and Australia.

The PMBOK Guide and PRINCE2, however, are not competitors.[1] The similarity between the two instruments is that they share the same processes.

[1] If you look at PMBOK Guide 5th Edition, page 2, "This standard is a guide rather than a specific methodology. One can use different methodologies and tools (e.g., agile, waterfall, PRINCE2) to implement the project management framework." And there's a similar statement in the official PRINCE2 manual, pages 230 and 231, which mentions the PMBOK Guide. Therefore, these two standards are not competitors; they are complementary to being able to manage projects successfully.

1

What's a Project?

In this chapter, you will learn the following:

- The fundamentals of a project
- The role of the project manager

Project Definition

As defined by the Project Management Institute (PMI), a *project* is a temporary group activity designed to produce a unique product, service, or result. It is temporary. It has a beginning and an end, so there's a defined scope and resources. The end of a project is reached when the project delivers its expected outcomes or when it is no longer relevant. The need of the project no longer exists.

A project is unique in the sense that it is not a routine operation, but a specific set of activities designed to accomplish a singular goal. Therefore, a project involves a team that often includes people who don't usually work together—sometimes from different organizations and across multiple geographies.

A project can create the following:

- A product that can be an end item (for example, a hybrid car) or a component of another item (for example, a hybrid engine)
- A capability to perform a service (that is, a business function that supports another function)

- A result such as an outcome or a document (for example, a public policy evaluation that delivers results that can be used to readjust the policy)

Projects are also the means by which organizations introduce change. Organizations that don't change are likely to stagnate or die.

Projects deliver products. The product might be a new computer system that the organization will use to achieve change, or it might be more efficient work practices. You can measure these outcomes in the form of benefits, as you can see in Figure 1.1. The total benefits that can be realized from a project must be more than the cost of the project and the cost of operating in the project document. Otherwise, the project does not deliver a return on investment (ROI).

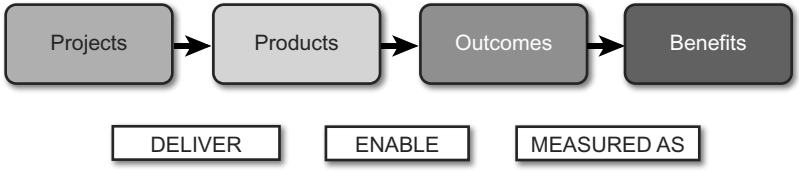

Figure 1.1 A project as a way to introduce change.

PRINCE2 defines a project as "a temporary organization that is created for the purpose of delivering one or more business products according to an agreed Business Case."[1]

A Business Case is one of the documents that exists in a PRINCE2 project. It includes information such as the reasons for the project, the benefits, cost and time information, and ROI calculation.

There are many examples of projects. Here are some examples:

- Changing the law by introducing the obligations of the Kyoto Protocol on climate change
- Effecting a change in the structure, staffing, or style of an organization

[1] PRINCE2 project definition

- Developing software for an improved business process
- Constructing a building or infrastructure
- Expanding sales into a new geographic market
- Implementing a new business process or procedure

All must be expertly managed to deliver the on-time, on-budget, and expected results, learning, and integration that organizations need.

Five Characteristics of a Project

Projects differ, but they have some commonalities. Table 1.1 presents some characteristics of a project.

Table 1.1 Project Characteristics

Change	Projects are a way to introduce change. *Example:* A new sales website will change how clients purchase items.
Temporary	There is always a specific start and end to a project, and it should cease once the mandatory products are created. Ongoing maintenance of a product occurs after the project and is not considered part of the project. *Example:* The production of a software to manage sales.
Cross-Functional	A project engages people from different seniority and business departments that work together for the period of the project. *Example:* To develop sales software, people from marketing and sales departments should work closely with the IT department.
Unique	Every project is unique. *Example:* Building a fiftieth school is different from building the forty-ninth one. The location is different, the design is different, and there are different categories of students.

Uncertainty	Parts of the project are unique, which brings uncertainty. The project manager is not 100% sure how this is going to work out. *Example:* The owners might keep changing their minds about the components and functionalities of the sales software.

What's Project Management?

According to the PMI, *project management* is the application of knowledge, skills, and techniques to execute projects effectively and efficiently.

Project management is a strategic competency for organizations, enabling them to tie project results to business goals and better compete in their markets. It brings a unique focus shaped by the goals, resources, and schedule of each project. The value of that focus is proven by the rapid, worldwide growth of project management.

Project management is accomplished through the processes under the five process groups: initiation, planning, execution, monitoring and controlling, and closing. Those will be discussed later in the section, "What Are the Project Management Approaches?"

Those process groups are not project phases.

What's a Project Phase?

Project phases are divisions within a project where extra control is needed to effectively manage the completion of the output. Project phases are normally completed sequentially; however, they can overlap in some cases.

The need and the number of phases and the degree of control depend on the size, complexity, and potential impact of the project.

The project phases are an element of the project life cycle.

According to PMBOK Guide 5th Edition, the process groups are not project phases. It is possible to conduct all process groups within a phase. Because projects are separated into distinct phases or subcomponents, such as concept development, feasibility study, design, prototype, and test, the process groups are normally repeated for each phase or subcomponent.

What's a Project Life Cycle?

The *project life cycle* can be mapped according to PMBOK in the following structure, whatever its size or complexity (see Figure 1.2).

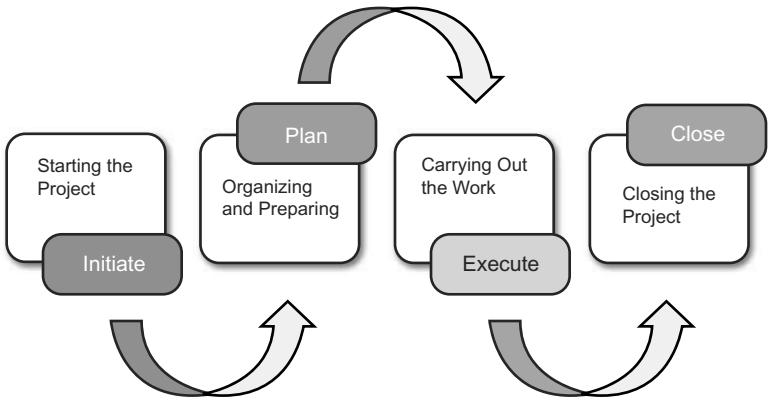

Figure 1.2 Project life cycle.

The characteristics related to the project life cycle are important to remember when managing a project:

- Cost and staffing levels are low at the beginning, peak as the work is implemented, and drop rapidly as the project draws to a close.

- Stakeholders' influences and risks are greatest at the beginning of the project. Those factors decrease afterward.
- The ability to influence the final characteristics of the project's product or output, without significantly affecting cost, is highest at the start of the project and decreases afterward.

What Are the Project Management Approaches?

There are many project management approaches. According to the PMI, the project processes are guided through five stages:

- Initiating
- Planning
- Executing
- Monitoring and Controlling
- Closing

PRINCE2 is a structured approach that was introduced in 1996. Process-based for project management, it provides an easily tailored and scalable method for the management of all types of projects. Each process is defined with its key inputs and outputs together, with the specific objectives to be achieved and the activities to be carried out.

The agile approaches are based on the principles of human interaction management and founded on a process view of human collaboration. The agile approaches include Scrum (software development), which is a holistic approach to development that focuses on iterative goals set by the product owner through a backlog. The delivery team develops the backlog through the facilitation of the Scrum master.

You can use the Scrum method in all kinds of software development.

Project managers can choose the appropriate approach according to the nature of their projects; however, whatever the adopted approach, they should carefully consider the overall project objectives and expected results, timeline, cost, scope, and quality, in addition to the roles and responsibilities of all participants and stakeholders' interests.

Who Are Project Managers?

The role of the project manager is to achieve project objectives within the targets set for time, cost, quality, scope, benefits, and risk.

According to the PRINCE2 approach, the project manager is the person in charge of organizing and controlling a project. He selects people to do the work on the project and is responsible for making sure the work is done properly and on time. He draws up the project plans that describe what the project team will actually be doing and when they expect to finish.

Projects managers have to be well organized, passionate, and goal-oriented. They should be able to understand what projects have in common and be aware of their strategic role in how organizations succeed, learn, and change.

Project managers are change agents according to the PMI. They make project goals their own and use their skills and expertise to inspire a sense of shared purpose within the project team.

They enjoy the organized adrenaline of new challenges and the responsibility of driving business results.

According to the PMBOK Guide 5th Edition, in addition to any area-specific skills and general management proficiencies required for the project, effective project management requires that the project manager possess the following competencies:

- **Knowledge—**Alludes to what the project manager knows concerning project management
- **Performance—**Alludes to what the project manager is capable of accomplishing while applying his project management knowledge
- **Personal—**Alludes to how the project manager behaves when implementing the project or related activity

Individual effectiveness includes attitudes, core personality characteristics, and leadership, which provides the aptitude to guide the project team while accomplishing project objectives and balancing the project constraints. Project managers should have interpersonal skills including leadership, team building, communication, ability to influence and motivate, decision making, political and cultural awareness, negotiation, trust building, conflict management, and coaching. Effective project managers require a balance of ethical, interpersonal, and conceptual skills that help them analyze situations and interact appropriately.

Project management deals with planning, delegating, monitoring, and controlling the project; in other words, it's the administration of the project. Project managers should be able to work well under pressure and should feel comfortable with change and complexity in dynamic environments. If not, they won't be good project managers and won't deliver the project's goals and expected outcomes in the defined requirements of cost, quality, and time.

Project managers should be able to shift readily between the big picture and the small-but-crucial details, knowing when to concentrate on each. They should be able to adapt their communication according to the project stakeholders. When a project manager is with the project stakeholders, he should be strategic and talk according to the big picture; when he is with the project team, he can talk about the details.

Likewise, a project manager should know how to speak according to the stakeholders' interests and avoid technical speeches. He or she should know how to cultivate the people skills needed to develop trust and communication among all of a project's stakeholders: its sponsors, those who will make use of the project's results, those who command the resources needed, and the project team members.

Project managers are always improving their own and their teams' skills through lessons-learned reviews at project completion.

Project managers are found in every kind of organization, as employees, managers, contractors, and independent consultants. With experience, they may become program managers (responsible for multiple related projects) or portfolio managers (responsible for selection, prioritization, and alignment of projects and programs with an organization's strategy).

Project managers are in increasing demand worldwide. Indeed, organizations have been directing more of their energy into projects rather than routine operations, as the rhythm of economic and technological change has accelerated.

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