

Using the PMBOK® Guide To Improve Project Management Performance

The “PMBOK Code Cracker”

Project Manager Playbook™



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PMBOK® Guide- The Accepted Standard for Project Management

PMI's *A Guide to the Project Management Body of Knowledge*, or *PMBOK® Guide*, is the ANSI Standard that defines accepted concepts, processes, tools, and techniques for managing projects. The information contained in the PMBOK® Guide provides a common language for project management used by companies around the world.

The PMBOK is not a project management methodology. However you can use the PMBOK to help you formulate a project management methodology that will work for your company with your project types. You will be using the information in the PMBOK throughout the Project Manager Playbook™ series of courses to create or enhance your own project management methodology. Using the PMBOK in this way will enable you to improve project management performance for the way you do business.

The purpose of this document is to give you a brief overview of the PMBOK and how it is organized. We created this overview because many people find the PMBOK very difficult to understand. Once you grasp how it is organized, you can better assimilate the information for your benefit. Let's begin!

How the PMBOK® Guide is organized

The PMBOK is organized in the following way:

- 12 Chapters
- 7 Appendices
- Glossary
- Index

Each chapter is discussed in more detail in the following sections.

Looking through Chapters 1- 3 – Section I

The first three chapters of the PMBOK® Guide make up Section I, "The Project Management Framework." You may find that parts of this section are confusing, specifically the information on relationships between **Processes** and **Knowledge Areas**. It will take more than one read through to understand how all the processes interact with each other in the course of a project. You will

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do activities in the PMBOK® Basics course to understand the relationship between the knowledge areas and the Project Management processes. You will also correlate how this relates to the way you do projects in your company. Instead of getting all flustered by trying to make sense of the PMBOK, work through the activities as it will become much clearer how you can use this information to improve your project management performance.

In the first section of the PMBOK is some very useful **Context** information. This defines precisely how and where project management fits in the grand scheme of modern management science. It will help you to make sense too of how it fits in with other management practices in your company. You will also start to see how improving your project management performance will improve your company's overall performance.

The PMBOK® Guide defines project management as an integrative endeavor in which different management actions interact. That is to say, projects are organized and carried out using an established process, from beginning to end and are organized into five process groups:

Step	Project Process Groups
1	Initiating
2	Planning
3	Executing
4	Controlling
5	Closing

Five Project Management Process Groups

When you reflect on how you do projects, you can easily identify that you: start a project (initiating), you do some series of activities to plan the project (planning), you do the work of the project (executing), you periodically assess how your project is going (controlling), and you complete the project (closing). What you do during those stages of your project to manage the progression of the project is what is covered in the remaining chapters of the PMBOK.

Looking through Chapters 4-12 – Section II

Chapters 4 through 12 make up Section II, which addresses each of the defined project management **Knowledge Areas**. These Knowledge Areas comprise the majority of the PMBOK. They represent the fundamental practices of what you do to manage a project. The nine knowledge areas are:

Knowledge Area
1. Integration
2. Scope
3. Time
4. Cost
5. Quality
6. Human Resources
7. Communication
8. Risk
9. Procurement

Each of the five project management process groups (initiating, planning, executing, controlling and closing) use a series of project management activities defined in each knowledge area. The PMBOK calls the project management activities, described in the knowledge area chapters, “processes.” The dual use of the term “process” makes the structure of the PMBOK rather confusing at first. For clarity, we will refer to the five steps for doing project management as the five project management *process groups*. The knowledge area processes, we will refer to as *processes*.

Each *process* in the knowledge areas is made up of inputs, tools and techniques, and outputs. This conceptual format is actually very useful. Inputs are deliverables. Tools and techniques are applied to these deliverables resulting in outputs which, in turn, become deliverables as inputs to other processes.

The figure on the next page shows how the five project management *process groups* relate to the knowledge area *processes*.

The Concept of Life Cycles

The PMBOK® Guide defines two **Life Cycles**, which are important concepts to understand. They are the:

- Project Management Life Cycle
- Project Life Cycle

The Project Management Life Cycle

Regardless of the type of project or the phase of a project, the Project Management Life Cycle will contain the same five project management process groups of Initiation, Planning, Executing, Controlling, and Closing. The Project Management Life Cycle remains consistent within every project.

Project Management Life Cycle = Five Project Management Process Groups

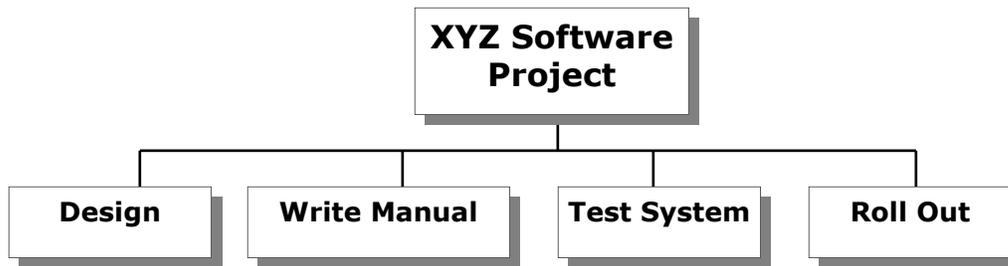
The Project Life Cycle

The Project Life Cycle defines the beginning and end of a particular project. For example, the Project Life Cycle for the construction of a new goal post might be: Phase 1 is design, Phase 2 the actual construction and Phase 3 final test and turnover to the customer. In technology, a Project Life Cycle might be just the design of the infrastructure; that design might then be handed over to a contractor to implement. The trick to understand here is that the Project Management Life Cycle repeats itself within each phase of the project; initiating, planning, executing, controlling and closure are repeated for Phase 1, 2 and 3.

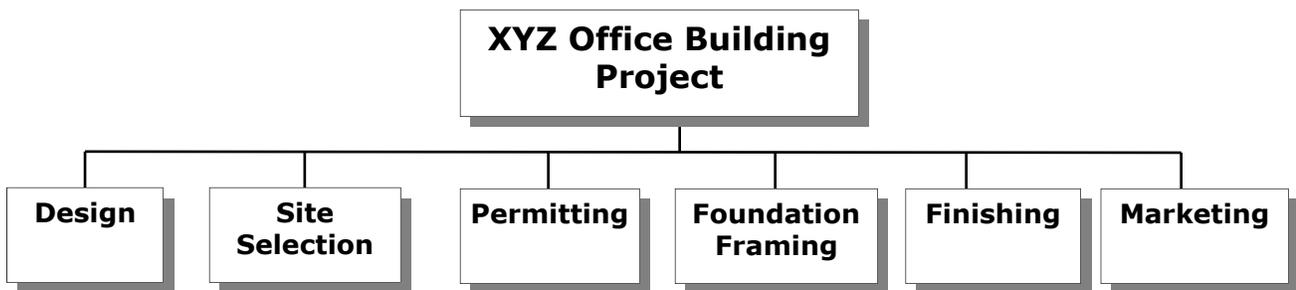
The number of phases within a Project Life Cycle is dependent on the specific project. Some projects could have three or four phases in their Project Life Cycles while others could have six, eight or more. See page 7 for two illustrations of different project types and their project life cycles.

This Project Management Life Cycle actually exists within every Project Life Cycle. This means that you initiate, plan, execute, control and close each phase. Most project managers and project stakeholders focus on the Project Life Cycle for planning and tracking purposes.

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Project Life Cycle for a Simple Software Development Project



Project Life Cycle for a Building Construction Project

Project Life Cycle Examples

Project Management Knowledge Areas

There are nine defined knowledge areas in the PMBOK® Guide. Each addresses a specific key project management discipline. For example, Chapter 5 of the PMBOK® Guide addresses the knowledge area of **Project Scope Management**, where you learn the accepted standards, tools and techniques used to:

- Develop the Project Charter
- Develop the Scope Statement
- Develop the Scope Management Plan
- Develop the Work Breakdown Structure (WBS)
- Manage formal acceptance of the completed work
- Manage Scope Change Control

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The methodology addressed in each of the knowledge areas is presented as processes. To continue with our Chapter 5 example, the PMBOK® Guide defines Project Scope Management as a set of five processes:

- **Initiation:** The process designed to produce the Project Charter
- **Scope Planning:** The process designed to produce the Scope Statement
- **Scope Definition:** The process designed to produce the WBS
- **Scope Verification:** The process designed to ensure formal acceptance of the completed work
- **Scope Change Control:** The process designed to effectively manage and control Scope changes

The nine knowledge areas are presented in PMBOK® Guide Chapters 4 through 12 as follows:

- **Chapter 4: Project Integration Management** - Defines the three major processes used to integrate all the component pieces of a project into a whole
- **Chapter 5: Project Scope Management** - Defines the five major processes used to carefully define, execute and control the scope of a project
- **Chapter 6: Project Time Management** - Defines the five major processes used to carefully characterize project activities, identify their interdependencies, schedule their performance, and control the project schedule
- **Chapter 7: Project Cost Management** - Defines the four major processes used to plan project resources, estimate costs and budgets, and control project costs
- **Chapter 8: Project Quality Management** - Defines the three major processes used to plan, guarantee, and control project quality
- **Chapter 9: Project Human Resource Management** - Defines the three major processes used to plan project organization, staff acquisition, and project team development
- **Chapter 10: Project Communications Management** - Defines the four major processes used to develop a communication plan, distribute information, report project performance, and perform administrative closure

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- **Chapter 11: Project Risk Management** - Defines the six major processes used to identify and quantify project risks, as well as to develop responses and control responses to project risks
- **Chapter 12: Project Procurement Management** - Defines the six major processes used to plan, solicit, select, administer, and close out contracts with project suppliers and sub-contractors

Following through with your process: Inputs, Tools and Techniques, and Outputs

Chapters 4-12 of the PMBOK® Guide are presented in an identical format. Each chapter begins with a brief overview of every process within the knowledge area, and then presents a more detailed explanation of each process within the knowledge area. Each detailed explanation is presented in three parts, which include a set of:

1. Inputs
2. Tools and Techniques
3. Outputs

Inputs: The ingredients for your recipe

Each major process begins with a set of inputs. These are the factors that initially go into the particular process - the documents, information, procedures, policies, supporting detail, etc. You may view these inputs as the ingredients necessary to successfully perform the process.

If the process at hand was to assemble a six foot sub for your tailgate party, then the inputs might be sub roll, sliced cheese, sliced meats, condiments. These inputs may have been the outputs of other processes such as baking your own sub roll.

Tools and Techniques: All that you need for your kitchen

Following inputs comes a set of tools and techniques. These tools and techniques are the project management methodologies and systems, such as network diagramming, earned value analysis, simulations, templates, negotiations, etc.

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In our 6-foot sub making example; tools and techniques might include slicing techniques, assembly methods, spillage analysis, condiment analysis, negotiating onion placement, etc.

Outputs: Assembled Sub, let the tailgate party begin!

As a result of applying tools and techniques an output is produced. Outputs are deliverables - the tangible results from each major process.

In the sub-making example, the output would be the 6-foot assembled sub. This sub might become an input to getting food for your tailgate party.

The thirty-nine processes

Within the nine Knowledge Areas, there are a total of thirty-nine (39) processes. Each of these processes contains a set of inputs, a set of tools and techniques, and a set of outputs. The precise number of items in each set varies.

To give you an example, in Chapter 7 of the PMBOK: Project Cost Management, **Cost Budgeting** is identified as one of four major Cost Management processes. Below is a run-down of what is included in each set for this process:

Inputs to the Cost Budgeting process are listed as:

- Cost Estimates
- Work Breakdown Structure
- Project Schedule

Tools and Techniques are listed as:

- Cost Estimating Tools and Techniques

Outputs are listed as:

- Cost Baseline

From this example, you can see that the purpose of the Cost Budgeting process is to ultimately produce the Cost Baseline. In order to develop this Cost

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Baseline, Cost Estimating tools and techniques are used. Cost Estimates, Work Breakdown Structure, and Project Schedule, or the inputs, are needed to use for reference. Where did these come from? They are the outputs of other processes. So you can see that each step, or set, in the process is reliant on the other in order to produce the desired outcome, deliverable, or output.

The Inter Play between the Project Management Process Groups

The illustration on page 5 shows the relationship between the Knowledge Area Processes and the Project Management Process Groups. The PM Process Groups are iterative and integrative by nature. That is to say, many processes groups (initiating, planning, executing, controlling, and closing) are revisited many times before a project is complete. Because of this, there is no distinct boundaries between the five project management process groups (also called the Project Management Life Cycle phases).

For example, the process group “planning” may need to be revisited at any time during **Executing and Controlling**. Executing and controlling process groups are essentially performed at the same time. The **Closing** processes are used many times during the project as individual work packages are completed and accepted.

As a result of all of this, the process groups in the Project Management Life Cycle are expected to overlap. The illustration on Page 5 shows the iterative, back-and-forth, interplay between phases/processes.

The PMBOK serves as a guide to create or enhance a project management methodology that can be used by your company to improve the way you manage projects. Use it as a reference to increase your ability to bring project in on time, within budget and in line with the requirements of the customer.

Throughout the series of courses in the Project Manager Playbook™ program you will use the PMBOK as your guide to create the way that you will do project management. The approach you create will be based on your innate strengths as a project manager, the project types you work on, and the requirements of your organization. Your Project Manager Playbook™ will be a set of best Project Management practices that work best for YOU.