

# A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Sixth Edition

## Errata—3<sup>rd</sup> Printing

**NOTE:** The following errata only pertain to the **first and second printing** of the *PMBOK® Guide—Sixth Edition*. In order to verify the print run of your book (or PDF), refer to the bottom of the copyright page (which precedes the Notice page and Table of Contents). The *last* numeral in the string beginning "10 9 8" etc. denotes the printing of that particular copy. Minor editorial changes have been made to the text and figures. Notable corrections are listed below.

### Part 1 A Guide to the Project Management Body of Knowledge (PMBOK® Guide)

| <u>Page</u> | <u>Correction</u>                                                                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 75, 76      | Figs 4-2 and 4-3. Removed bullet for <i>benefits management plan</i> as input for business documents.                                                                                                                                                 |
| 98, 99      | Figs 4-8, 4-9. Removed bullet for <i>source selection criteria</i> as input for project documents.                                                                                                                                                    |
| 105         | Fig 4-10. Added bullet for <i>voting</i> as tool & technique for decision making.                                                                                                                                                                     |
| 138         | Fig 5-4. Added bullet for <i>autocratic decision making</i> as tool & technique for decision making.                                                                                                                                                  |
| 179         | Fig 6-3. Added bullet for <i>alternatives analysis</i> as tool & technique for data analysis.                                                                                                                                                         |
| 180         | Section 6.1.1.3. Moved the following bullet to Section 6.1.1.4:<br>◆ Guidelines and criteria for tailoring the organization's set of standard processes and procedures to satisfy the specific needs of the project                                   |
| 183         | Fig 6-6. Changed bullet under the inputs for project management plan from scope management plan to <i>schedule management plan</i> .                                                                                                                  |
| 192         | Fig 6-10. Changed labels to read <i>FS with 2 Weeks (Lead)</i> and <i>SS with 15 Days (Lag)</i> . {By removing the dash, this eliminates possible confusion as to whether the figure is representing a positive or negative value for leads or lags.} |
| 195         | Fig 6-12. Added bullet for <i>voting</i> as tool & technique for decision making.                                                                                                                                                                     |
| 235         | Fig 7-2. Added bullet for <i>alternatives analysis</i> as tool & technique for data analysis.                                                                                                                                                         |

### Part 2 The Standard for Project Management

| <u>Page</u> | <u>Correction</u>                                                                                                              |
|-------------|--------------------------------------------------------------------------------------------------------------------------------|
| 566         | Fig 3-1. Under Knowledge Area for Project Stakeholder Management, changed process name to <i>Plan Stakeholder Engagement</i> . |
| 617         | Section 5.2.2. Added bullet for <i>change log</i> to project document examples.                                                |

## 4.1 DEVELOP PROJECT CHARTER

Develop Project Charter is the process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. The key benefits of this process are that it provides a direct link between the project and the strategic objectives of the organization, creates a formal record of the project, and shows the organizational commitment to the project. This process is performed once or at predefined points in the project. The inputs, tools and techniques, and outputs of the process are depicted in Figure 4-2. Figure 4-3 depicts the data flow diagram for the process.

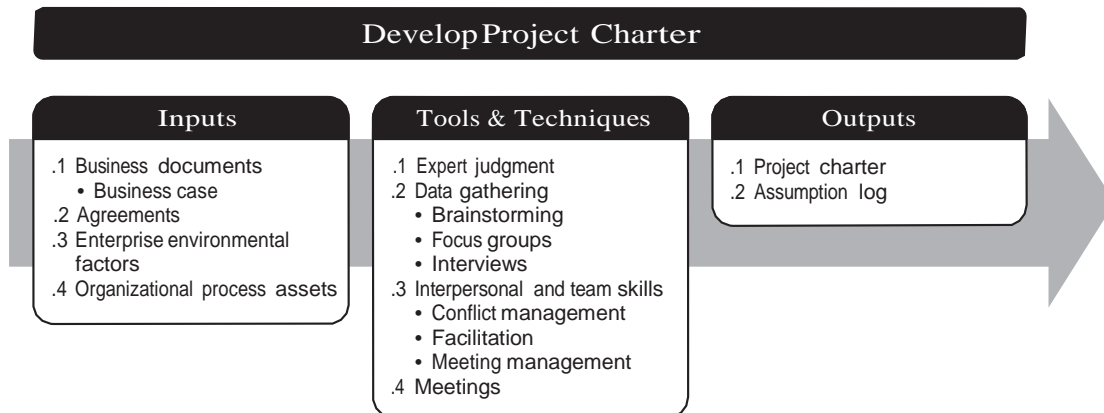


Figure 4-2. Develop Project Charter: Inputs, Tools & Techniques, and Outputs

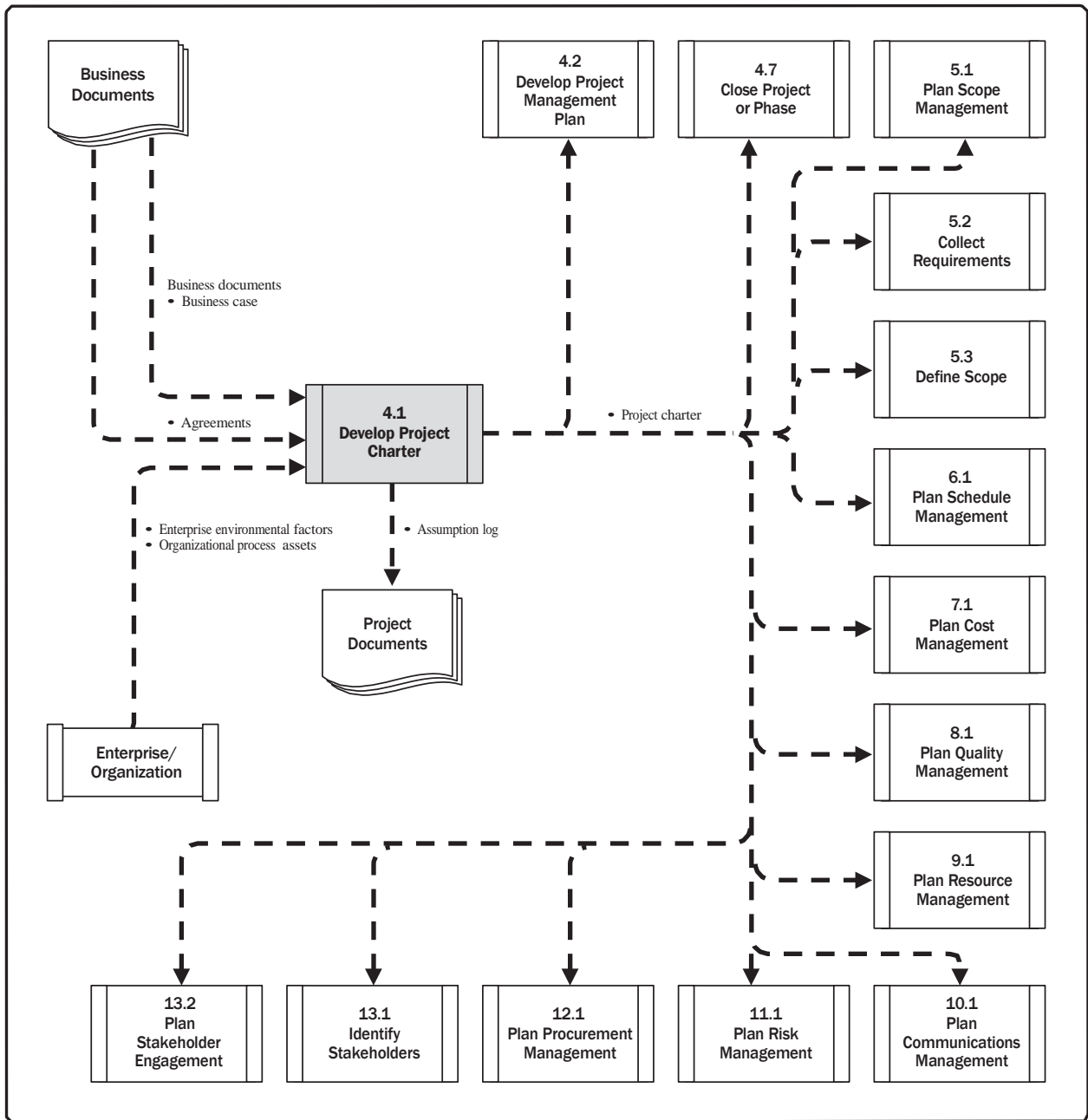


Figure 4-3. Develop Project Charter: Data Flow Diagram

## 4.4 MANAGE PROJECT KNOWLEDGE

Manage Project Knowledge is the process of using existing knowledge and creating new knowledge to achieve the project's objectives and contribute to organizational learning. The key benefits of this process are that prior organizational knowledge is leveraged to produce or improve the project outcomes, and knowledge created by the project is available to support organizational operations and future projects or phases. This process is performed throughout the project. The inputs, tools and techniques, and outputs of the process are depicted in Figure 4-8. Figure 4-9 depicts the data flow diagram for the process.

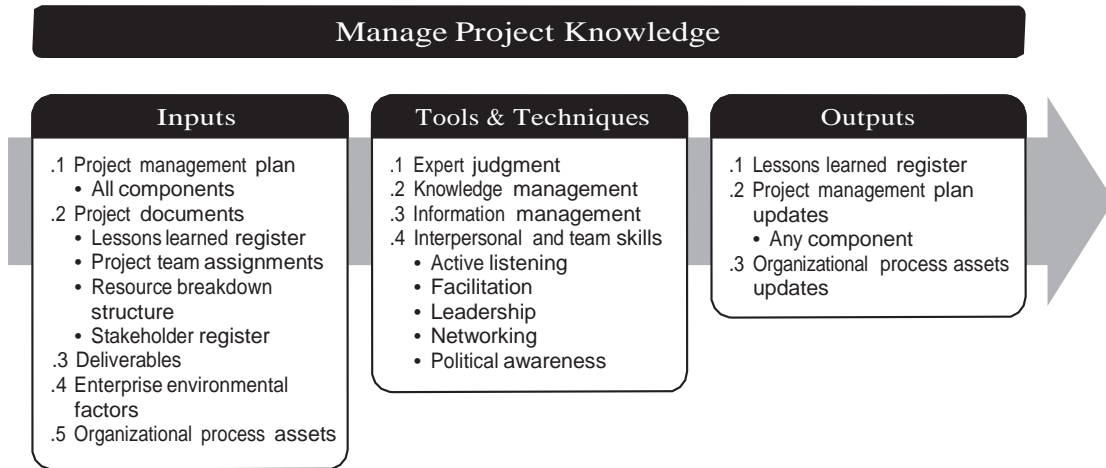


Figure 4-8. Manage Project Knowledge: Inputs, Tools & Techniques, and Outputs

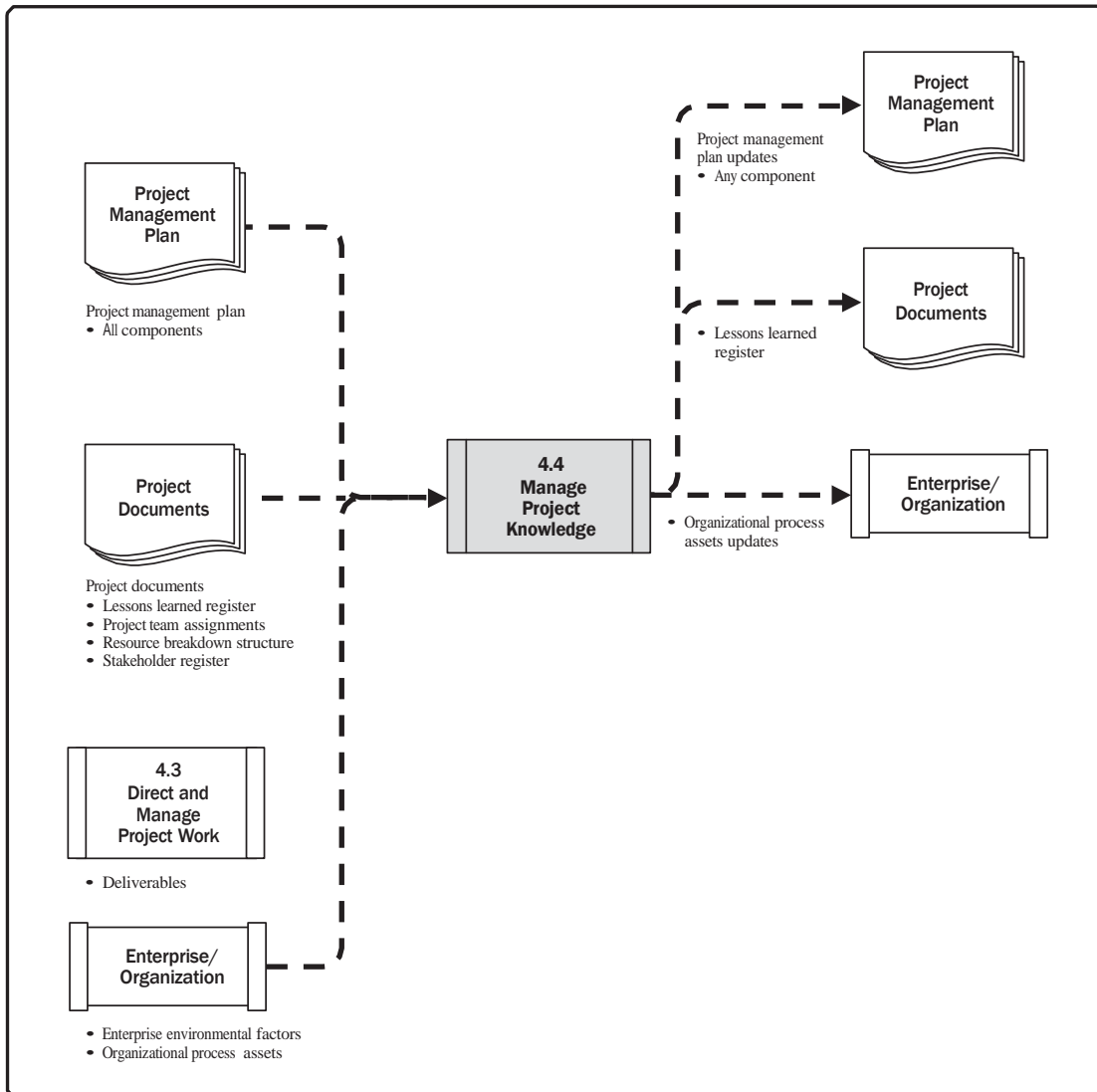


Figure 4-9. Manage Project Knowledge: Data Flow Diagram

#### 4.4.3.2 PROJECT MANAGEMENT PLAN UPDATES

Any change to the project management plan goes through the organization's change control process via a change request. Any component of the project management plan may be updated as a result of this process.

#### 4.4.3.3 ORGANIZATIONAL PROCESS ASSETS UPDATES

All projects create new knowledge. Some of this knowledge is codified, embedded in deliverables, or embedded in improvements to processes and procedures as a result of the Manage Project Knowledge process. Existing knowledge can also be codified or embedded for the first time as a result of this process; for example, if an existing idea for a new procedure is piloted in the project and found to be successful.

Any organizational process asset can be updated as a result of this process.

### 4.5 MONITOR AND CONTROL PROJECT WORK

Monitor and Control Project Work is the process of tracking, reviewing, and reporting the overall progress to meet the performance objectives defined in the project management plan. The key benefits of this process are that it allows stakeholders to understand the current state of the project, to recognize the actions taken to address any performance issues, and to have visibility into the future project status with cost and schedule forecasts. This process is performed throughout the project. The inputs, tools and techniques, and outputs of the process are depicted in Figure 4-10. Figure 4-11 depicts the data flow diagram for the process.

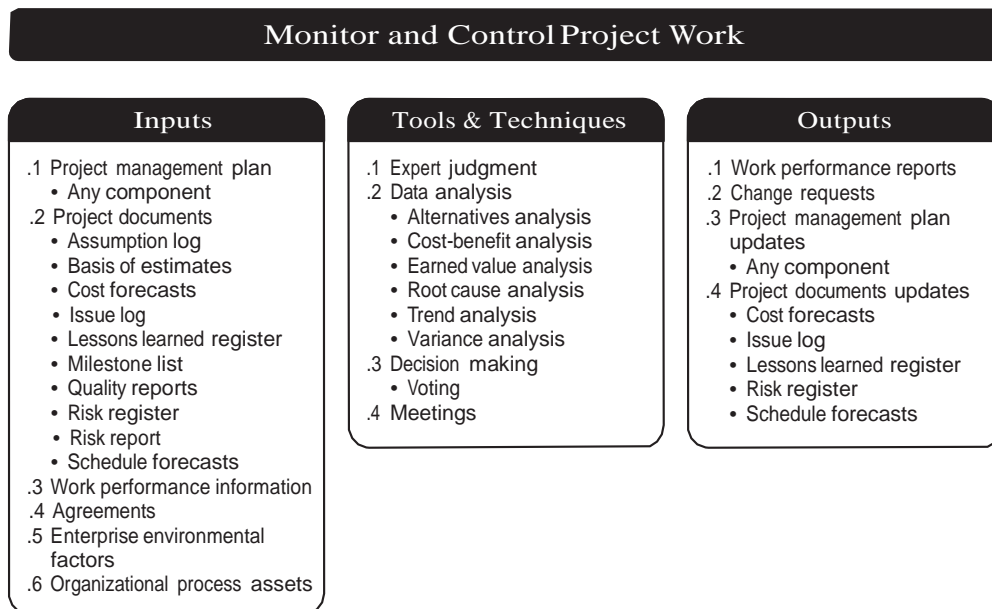


Figure 4-10. Monitor and Control Project Work: Inputs, Tools & Techniques, and Outputs

## 5.2 COLLECT REQUIREMENTS

Collect Requirements is the process of determining, documenting, and managing stakeholder needs and requirements to meet objectives. The key benefit of this process is that it provides the basis for defining the product scope and project scope. This process is performed once or at predefined points in the project. The inputs, tools and techniques, and outputs of this process are depicted in Figure 5-4. Figure 5-5 depicts the data flow diagram of the process.

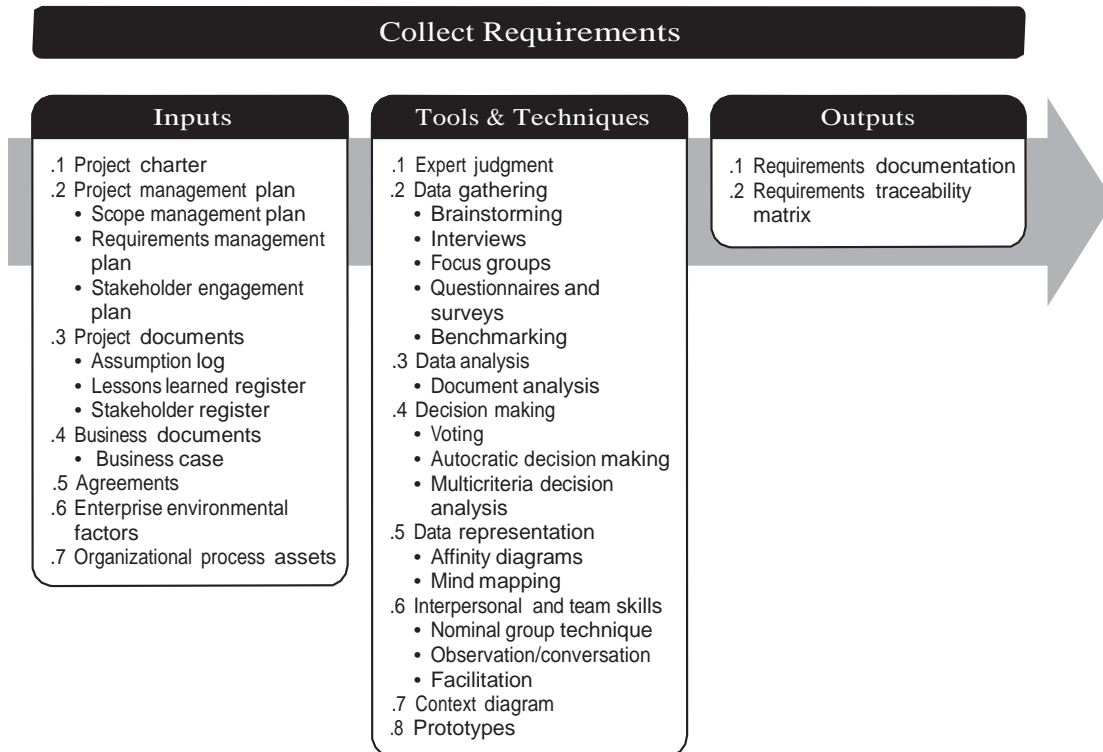


Figure 5-4. Collect Requirements: Inputs, Tools & Techniques, and Outputs

## 6.1 PLAN SCHEDULE MANAGEMENT

Plan Schedule Management is the process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. The key benefit of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project. This process is performed once or at predefined points in the project. The inputs, tools and techniques, and outputs of the process are depicted in Figure 6-3. Figure 6-4 depicts the data flow diagram for the process.

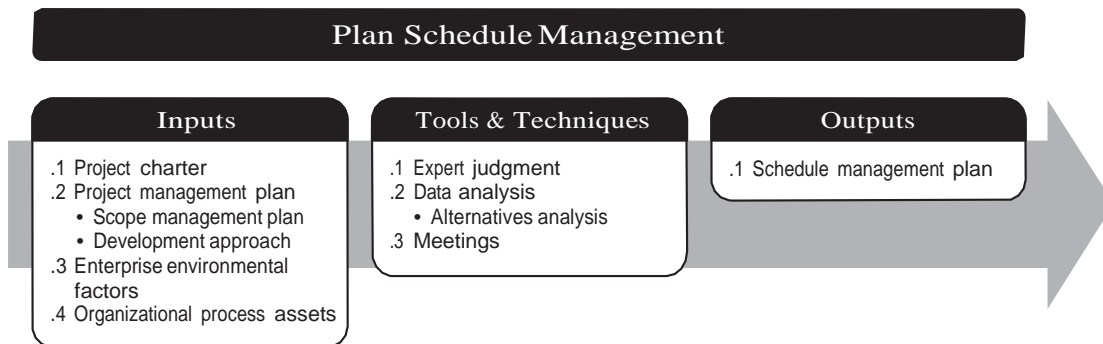


Figure 6-3. Plan Schedule Management: Inputs, Tools & Techniques, and Outputs

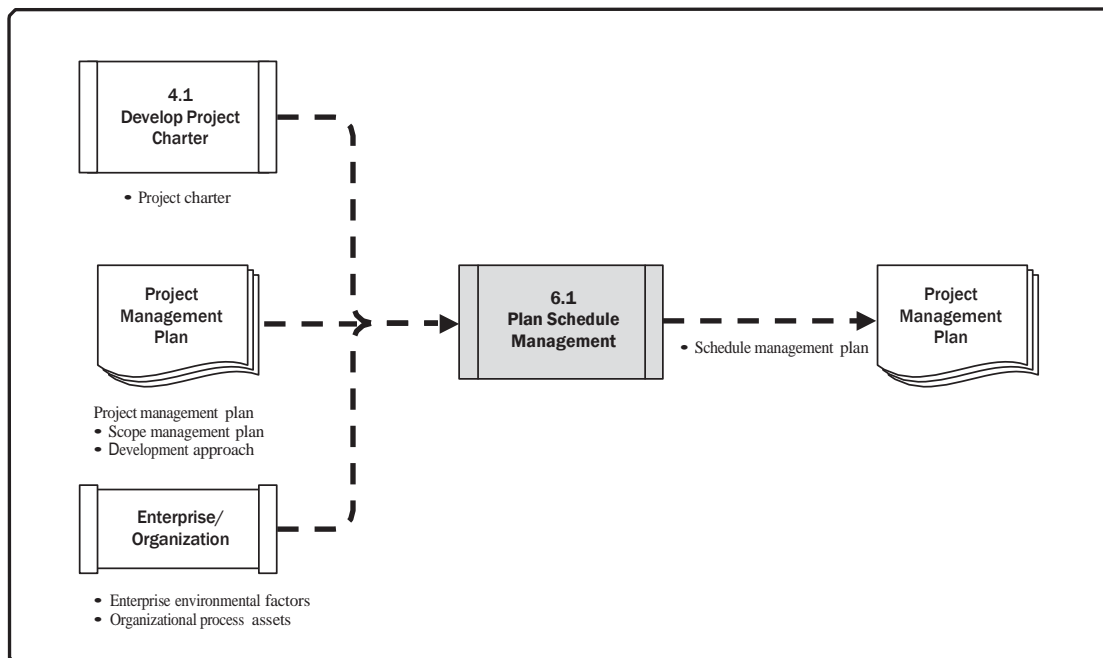


Figure 6-4. Plan Schedule Management: Data Flow Diagram



## 6.1.1 PLAN SCHEDULE MANAGEMENT: INPUTS

### 6.1.1.1 PROJECT CHARTER

Described in Section 4.1.3.1. The project charter defines the summary milestone schedule that will influence the management of the project schedule.

### 6.1.1.2 PROJECT MANAGEMENT PLAN

Described in Section 4.3.2.1. Project management plan components include but are not limited to:

- **Scope management plan.** Described in Section 5.1.3.1. The scope management plan describes how the scope will be defined and developed, which will provide information on how the schedule will be developed.
- **Development approach.** Described in Section 4.2.3.1. The product development approach will help define the scheduling approach, estimating techniques, scheduling tools, and techniques for controlling the schedule.

### 6.1.1.3 ENTERPRISE ENVIRONMENTAL FACTORS

The enterprise environmental factors that can influence the Plan Schedule Management process include but are not limited to:

- Organizational culture and structure,
- Team resource availability and skills and physical resource availability,
- Scheduling software, and
- Commercial databases, such as standardized estimating data.

### 6.1.1.4 ORGANIZATIONAL PROCESS ASSETS

The organizational process assets that can influence the Plan Schedule Management process include but are not limited to:

- Historical information and lessons learned repositories;
- Existing formal and informal schedule development, management- and control-related policies, procedures, and guidelines;
- Guidelines and criteria for tailoring the organization's set of standard processes and procedures to satisfy the specific needs of the project,
- Templates and forms; and
- Monitoring and reporting tools.

## 6.2 DEFINE ACTIVITIES

Define Activities is the process of identifying and documenting the specific actions to be performed to produce the project deliverables. The key benefit of this process is that it decomposes work packages into schedule activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work. This process is performed throughout the project. The inputs, tools and techniques, and outputs of this process are depicted in Figure 6-5. Figure 6-6 depicts the data flow diagram of the process.

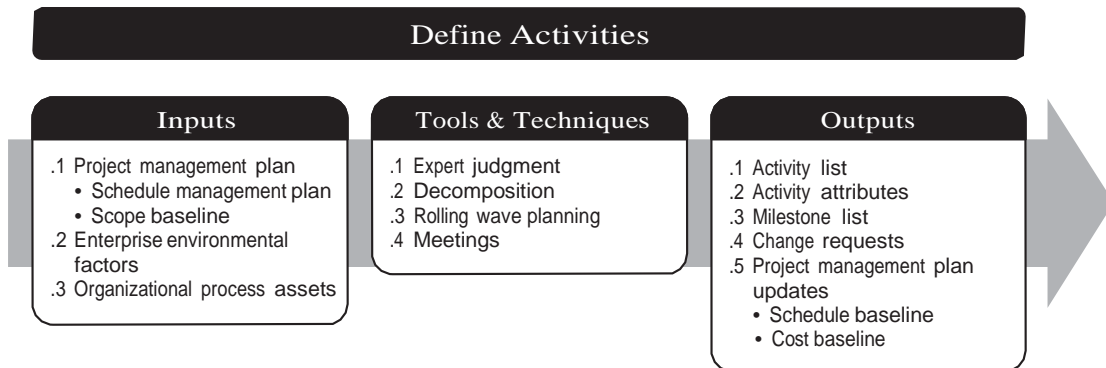


Figure 6-5. Define Activities: Inputs, Tools & Techniques, and Outputs

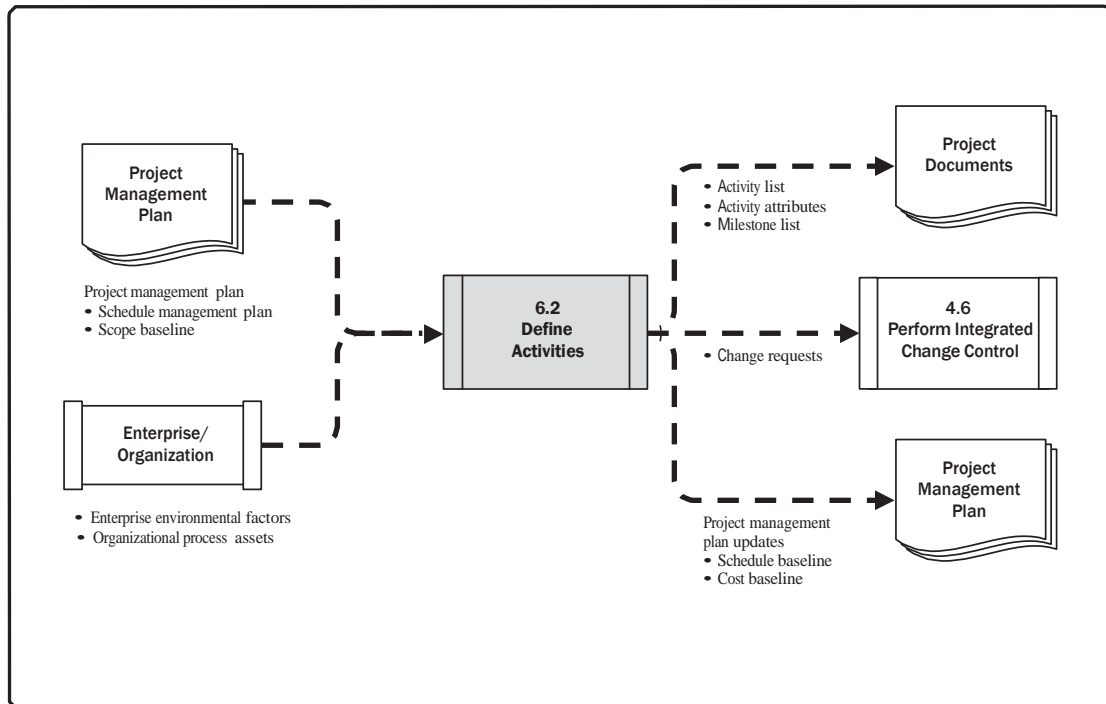


Figure 6-6. Define Activities: Data Flow Diagram

**External dependencies.** External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside of the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.

**Internal dependencies.** Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, there is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

### 6.3.2.3 LEADS AND LAGS

A lead is the amount of time a successor activity can be advanced with respect to a predecessor activity. For example, on a project to construct a new office building, the landscaping could be scheduled to start 2 weeks prior to the scheduled punch list completion. This would be shown as a finish-to-start with a 2-week lead as shown in Figure 6-10. Lead is often represented as a negative value for lag in scheduling software.

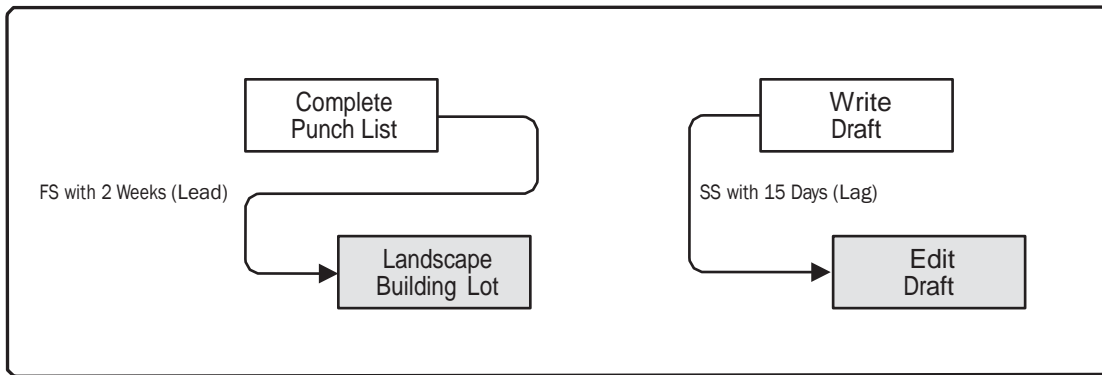


Figure 6-10. Examples of Lead and Lag

## 6.4 ESTIMATE ACTIVITY DURATIONS

Estimate Activity Durations is the process of estimating the number of work periods needed to complete individual activities with estimated resources. The key benefit of this process is that it provides the amount of time each activity will take to complete. This process is performed throughout the project. The inputs, tools and techniques, and outputs of this process are depicted in Figure 6-12. Figure 6-13 depicts the data flow diagram of the process.

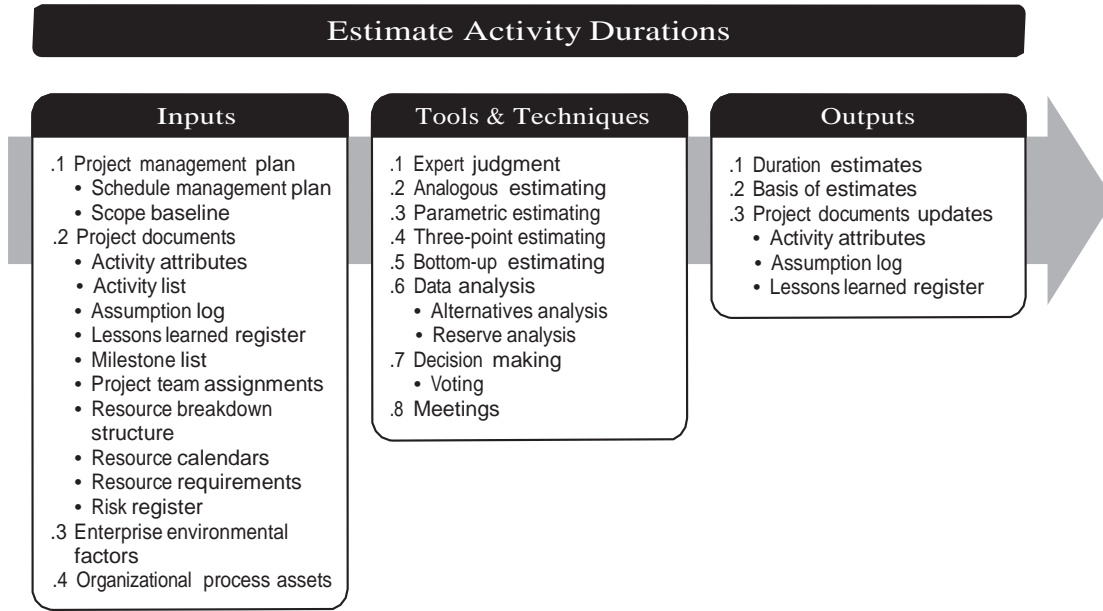


Figure 6-12. Estimate Activity Durations: Inputs, Tools & Techniques, and Outputs

## 7.1 PLAN COST MANAGEMENT

Plan Cost Management is the process of defining how the project costs will be estimated, budgeted, managed, monitored, and controlled. The key benefit of this process is that it provides guidance and direction on how the project costs will be managed throughout the project. This process is performed once or at predefined points in the project. The inputs, tools and techniques, and outputs of this process are depicted in Figure 7-2. Figure 7-3 depicts the data flow diagram of the process.

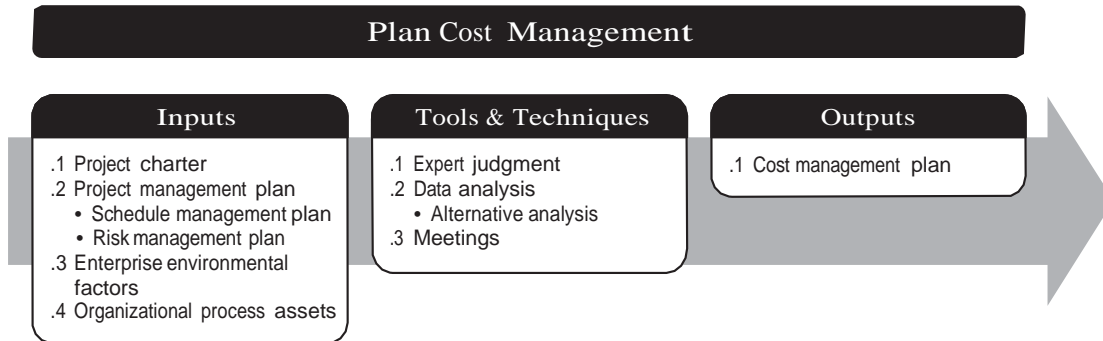


Figure 7-2. Plan Cost Management: Inputs, Tools & Techniques, and Outputs

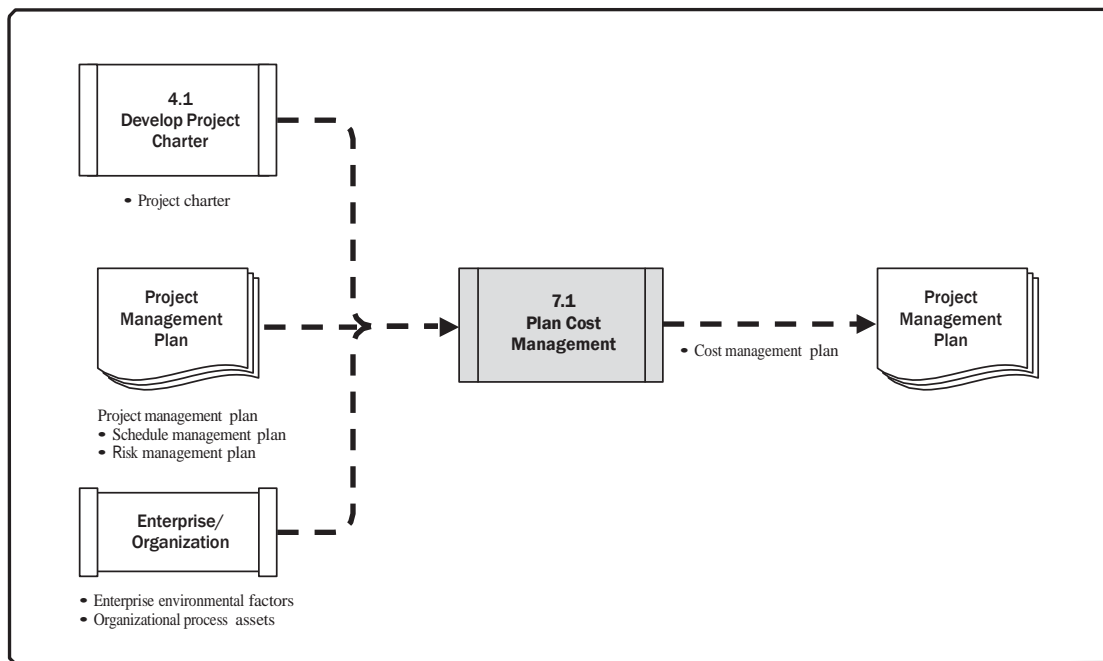


Figure 7-3. Plan Cost Management: Data Flow Diagram

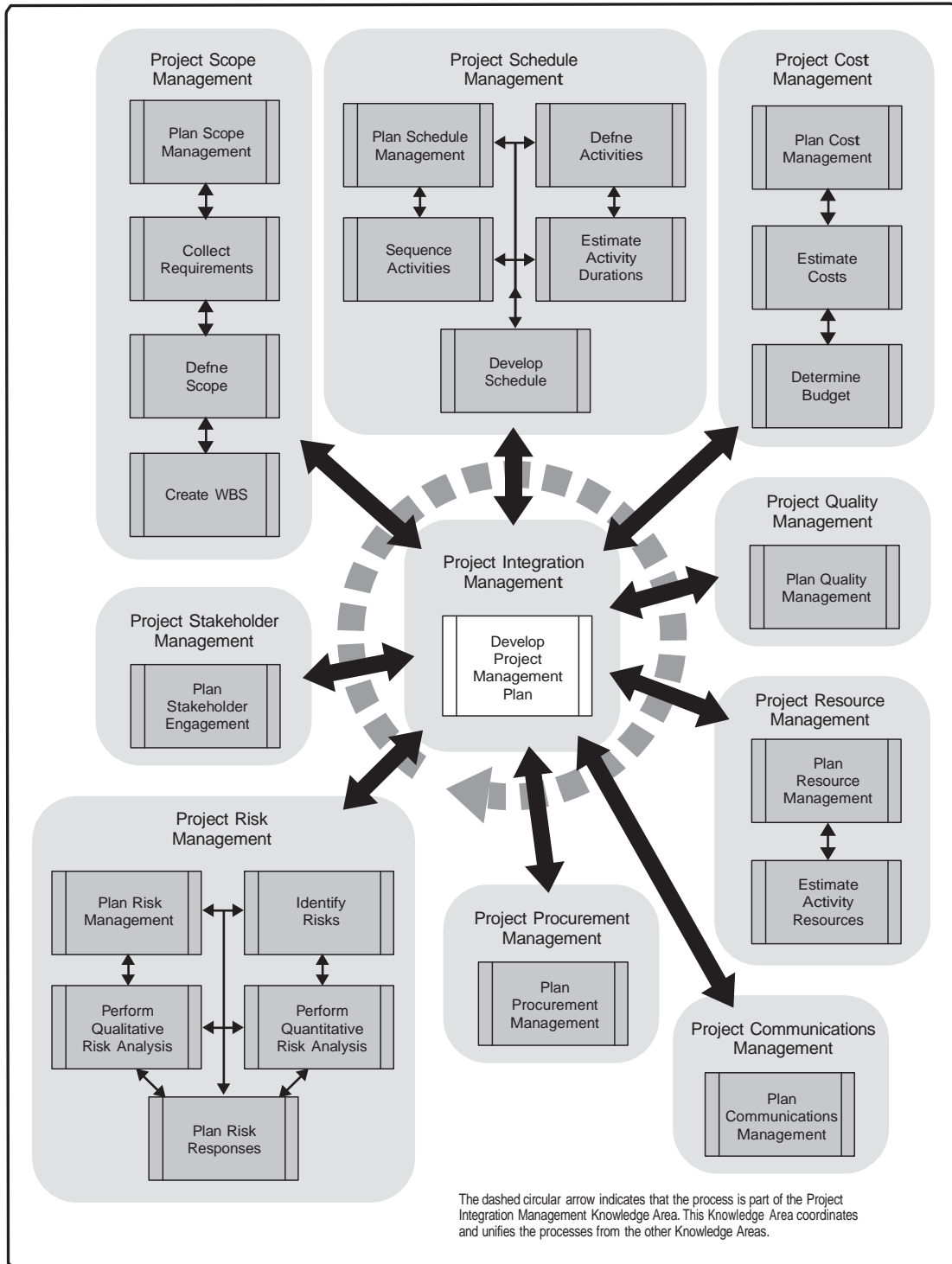


Figure 3-1. Planning Process Group

### 5.2.1 PROJECT MANAGEMENT PLAN COMPONENTS

Examples of project management plan components that may be inputs for this process include but are not limited to:

- Change management plan,
- Configuration management plan,
- Scope baseline,
- Schedule baseline, and
- Cost baseline.

### 5.2.2 PROJECT DOCUMENTS EXAMPLES

Examples of project documents that may be inputs for this process include but are not limited to:

- Basis of estimates,
- Requirements traceability matrix,
- Risk report, and
- Change log.

### 5.2.3 PROJECT MANAGEMENT PLAN UPDATES

Any component of the project management plan may be updated as a result of this process.

### 5.2.4 PROJECT DOCUMENTS UPDATES

Any formally controlled project document may be changed as a result of this process. A project document that is normally updated as a result of this process is the change log. The change log is used to document changes that occur during a project.