

Project Planning and Control Methods

Lecture #3

Project Integration Management (Initiating and Planning)

Amin Alvanchi, PhD

Construction Engineering and Management



Outline

2

- Introduction
- Initial step: Develop project charter
- Project management plan

Introduction

3

- Project Integration Management includes the processes and activities needed to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups.
- Different project areas of knowledge interact with each other. Examples:
 - Risks identified affect contingency cost and project time
 - Any changes made to the project scope necessitate revised project risk plan, project cost and project time
 - Any updates in the quality inspection plan affects project scope
 - A revised project human resource structure can affect project communication plan

Introduction

4

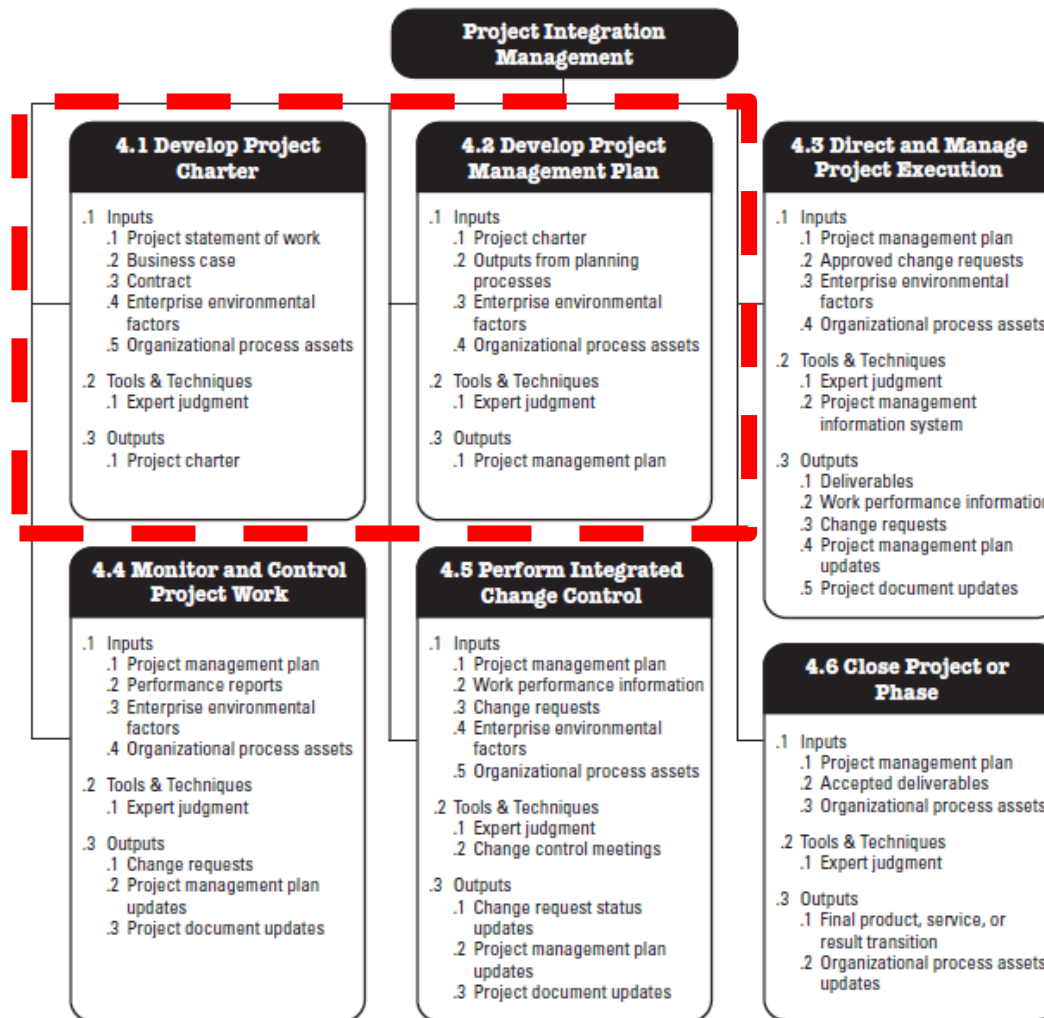


Figure 4-1. Project Integration Management Overview

Initial step: Develop project charter

5

- A document that formally authorizes a project or a phase and outlines the requirements that satisfy the stakeholders' needs and expectations.

- Development of project charter is the first step after project approval (e.g., contract is signed for external projects)
- At the initial stage we are going to have a top-bottom View to the project!

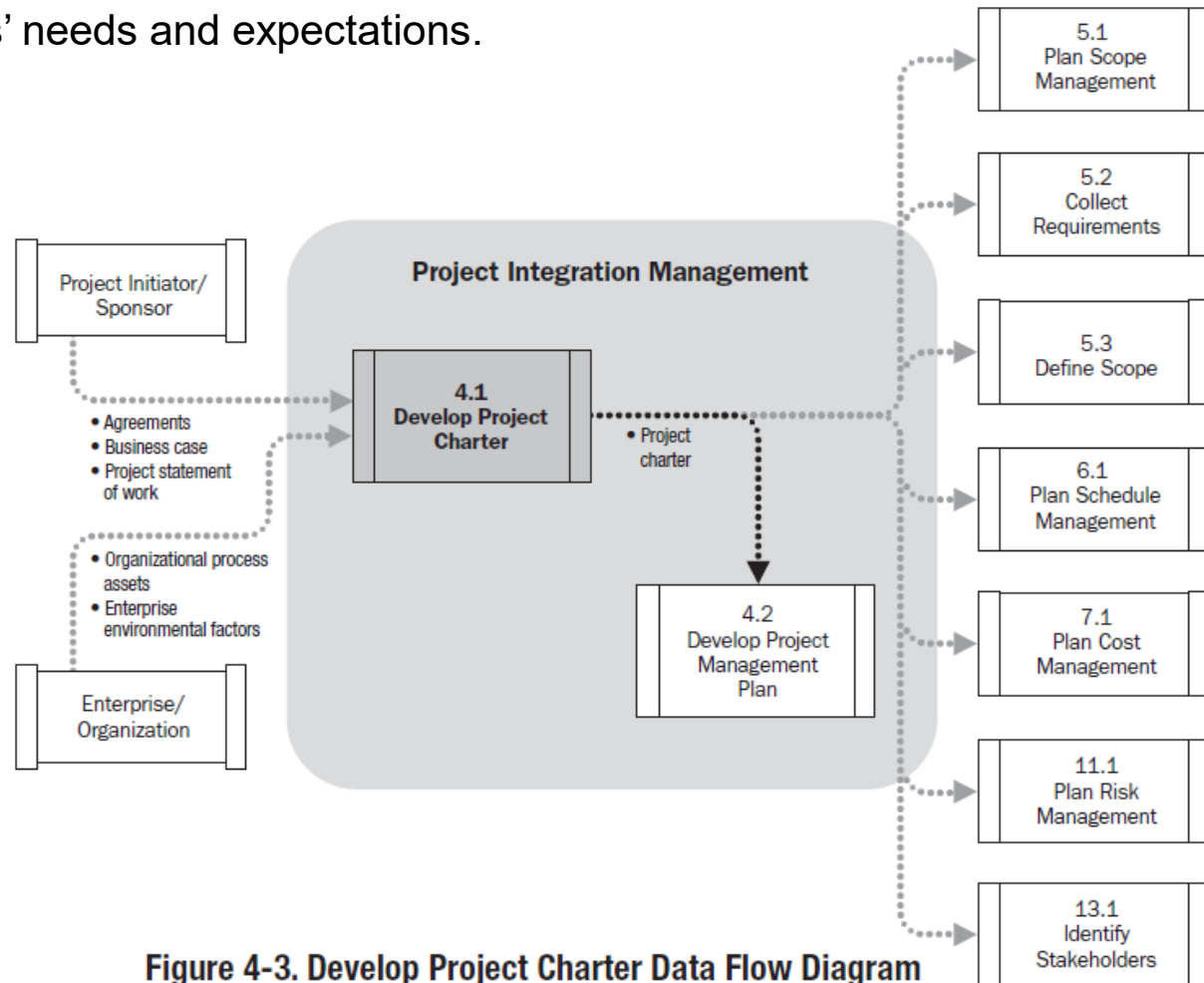


Figure 4-3. Develop Project Charter Data Flow Diagram

Initial step: Develop project charter

6

- Project charter outputs:
 - ▣ Project purpose or justification,
 - ▣ Measurable project objectives and related success criteria,
 - ▣ High-level requirements,
 - ▣ High-level project description,
 - ▣ High-level risks,
 - ▣ Summary milestone schedule,
 - ▣ Summary budget,
- Example [1](#), [2](#), [3](#), [4](#), and [5](#) (these are some actual examples, not necessarily ideal ones)

Initial step: Develop project charter

7

 **A)** Among 5 different PM processes where does project charter stand?

B) We are defining an internal project inside the organization, do we need a project charter?

C) We have a contract with a client which included all aspects of the project, do we need a project charter?

Home assignment – project charter

8



Consider an MSc. thesis as a project. At the initial stage you are going to have a high level view to your project and prepare a *project charter* for it. If you already have determined your project title, consider it for developing your project charter. If you do not have a title, pick an arbitrary one including (but not limited to):

- Impacts of main project stakeholders on underground train projects
- Sustainability in construction projects
- Project management applications in construction
- Safety management impacts on construction projects

(Due in one week)

Project management plan

9

- The project management plan (PMP) is a document reflecting highlights of all project plans in different areas (e.g., scope, time plan, cost plan)
- Project management plan development is our main tool to assess integration and consistency of different plans prepared in different areas of knowledge by different project specialist.

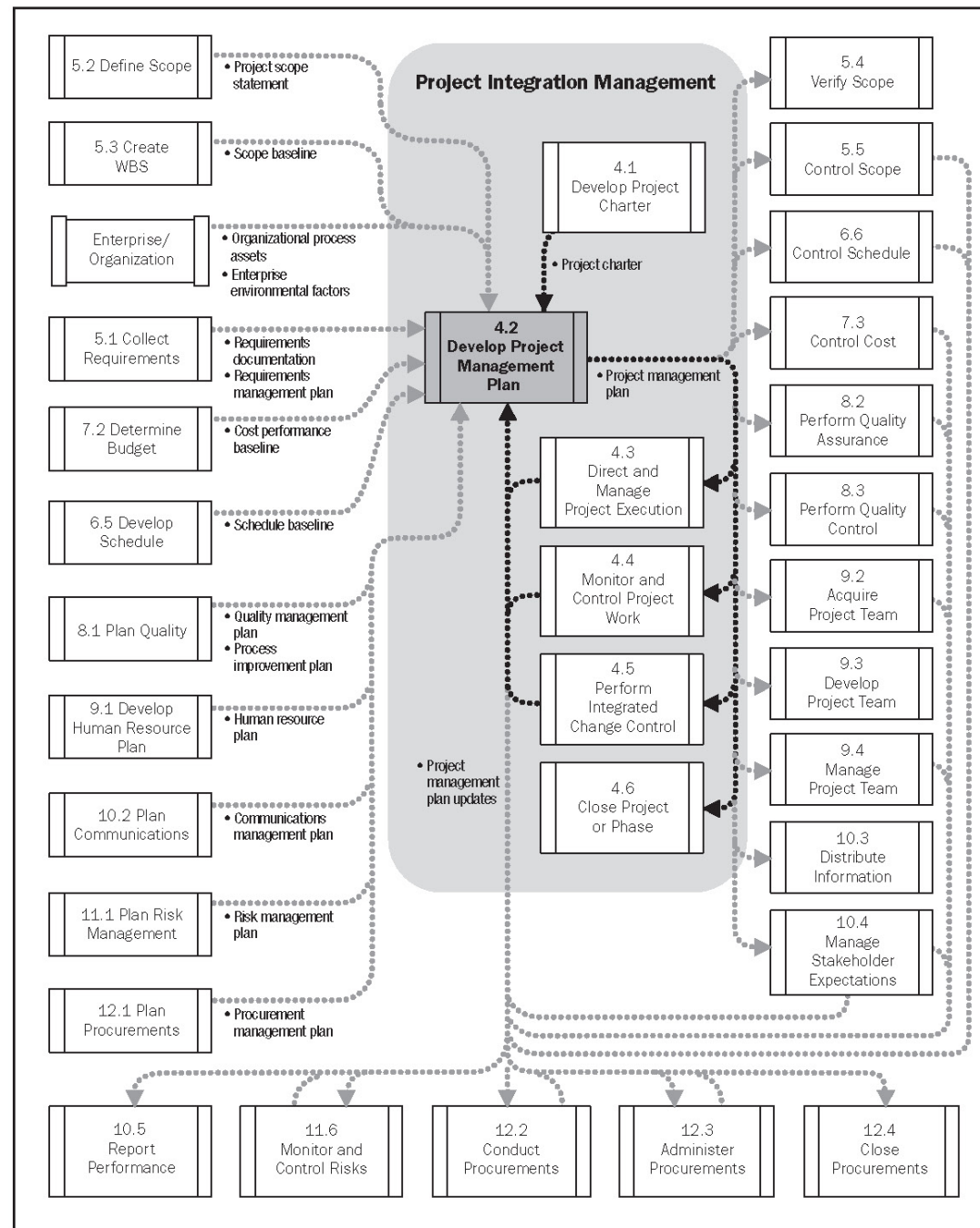


Figure 4-5. Develop Project Management Plan Data Flow Diagram

Project management plan

10

- Documenting the actions necessary to define, prepare, integrate, and coordinate all subsidiary plans.
- The project management plan is developed through a series of integrated processes until *project closure*.
- Based on the project size and complexity the project management plan can be either summary level or detailed, and can be composed of one or more subsidiary plans.
- Kick off meeting - where different project's team members involved in different project's aspects sit and discuss their plans before project execution (implementation) begins and after or during developing subsidiary plans - is a useful tool for developing project management plan

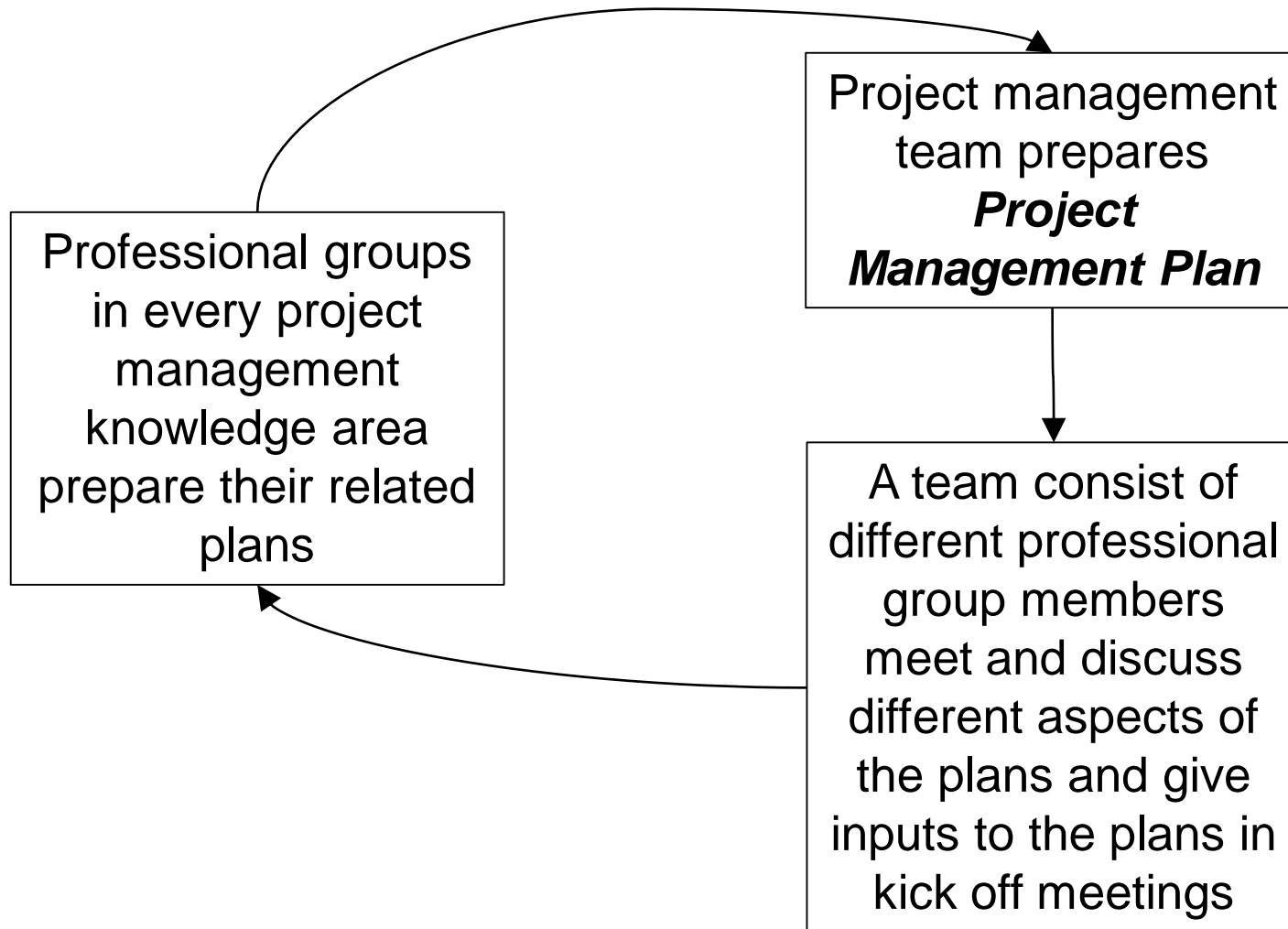
Project management plan

11

- We are going to make sure no subsidiary plan contradicts to the others, examples:
 - All *procurement* material can be purchased in the market and all outsourcings can be done (there are sub-contractors to provide the!) as per *scope* plan!
 - All *scheduled procurement* are doable within *time* frame considered
 - *Quality* and *safety* plans stay within the *budget* planned
 - All vendors and sub-contractors have *quality* and *safety* certifications required by the owner as per determined in *stakeholder management* plan!
 - Are all owner's time and budget limitations included in the schedule and budget plans

Project management plan

12



Project management plan

13

- Project management plan may consists of: (Example [1](#), [2](#) and [3](#))
 - Project baselines:
 - Schedule baseline
 - Cost performance baseline
 - Scope baseline
 - Subsidiary plans:
 - Scope management plan (introduction to Chapter 5),
 - Requirements management plan (Section 5.1.3.2),
 - Schedule management plan (introduction to Chapter 6),
 - Cost management plan (introduction to Chapter 7),
 - Quality management plan (Section 8.1.3.1),
 - Process improvement plan (Section 8.1.3.4),
 - Human resource plan (Section 9.1.3.1),
 - Communications management plan (Section 10.2.3.1),
 - Risk management plan (Section 11.1.3.1), and
 - Procurement management plan (Section 12.1.3.1).
 - Stakeholder management plan (Section 13.2.3.1)

Reference

14

- PMI (2013) “A Guide to the Project Management Body of Knowledge” Project Management Institute, Inc: Pennsylvania 19073-3299 USA, Chapter 4.



Thank you!