

# **Project Management for Software Development**

**Department of Software for Computer Systems**

# Project Management [Prac.Works]

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# Project Management

**Contents**

## 1.Introduction of Project Management

### Prac.Works

(1-1)What is “Project Management”

(1-2)Necessity of “Project Management”

(1-3)Modern Project Management Model(PMBOK Project Management Body Of Knowledge

(1-4)Course Texts

### Lab.Works

(1-5)Introducing Project Management Tools:ProjectLibre

(1-6)Develop Your Own Project

Materials are here



# Project Management [Prac.Works]

## 1.Introduction of Project Management (1-1)What is “Project Management”

Project management means planning and managing a project in detail to ensure its **success**.Specifically, we clarify “by when and to what stage,” and work backwards from there to build a process that will lead to project success.

In order to build and manage processes, there is a "PMBOK" (Project Management Body Of Knowledge) that systematically compiles knowledge in project management. It was created by a non-profit organization called PMI (Project Management Institute) headquartered in the United States, and is generally used as a reference for project management.

# Project Management [Prac.Works]

## 1.Introduction of Project Management (1-2)Necessity of “Project Management”

Characteristics of software development projects

- Project success...Protect Quality (“Q”), Cost (“C”), and Delivery date (“D”)
- Many stakeholders with different interests are involved in the project.

Typically, a software development project has many stakeholders, each with different interests. The larger the project, the more people involved.

Project management is necessary to control the interests of many stakeholders and achieve goals (“QCD”). A project manager is similar to an orchestra conductor or captain of a ship.

# Project Management [Prac.Works]

## 1.Introduction of Project Management

### (1-3)Modern Project Management Model(PMBOK)

- A systematic compilation of knowledge in project management. It was created by PMI (Project Management Institute) headquartered in the United States.
- The PM method has been **modeled and standardized**, instead of the **traditional PM based on personal skills** such as the intuition of veteran employees.
- Composed of **10 knowledge areas** and **5 process groups** (01-#1)
- All each process has **Inputs**, **Tools and Practices**, and **Outputs** .(01-#2)
- **TAILORING**:There is no need to strictly follow the PMBOK; instead, update the PMBOK according to the characteristics of each project and develop management method specific to each project.



# Project Management [Prac.Works]

## 1.Introduction of Project Management

### (1-4)Course Texts

#### THE BASIC LITERATURE

- 1.A Guide to the PROJECT MANAGEMENT BODY OF KNOWLEDGE(PMBOK Guide) Sixth Edition. Project Management Institute, Inc., 2017. (PDF)
- 2.Jennifer Greene, Andrew Stellman. Head First PMP, O'Reilly Media, Inc.,2018
- 3.Harold Kerzner. Project Management: A Systems Approach to Planning, Scheduling, and Controlling, WILEY John Wiley & Sons,Inc., 2009 (PDF)
- 4.Jeff Sutherland. Scrum: The Art of Doing Twice the Work in Half the Time, Jeff Sutherland and Scrum, Inc., 2014. (PDF)
- 5.ProjectLibre Official Documentation:

#### THE ADDITIONAL LITERATURE and ONLINE RESOURCES:

- 1.Andy Crowe. PMP Exam Prep: How to Pass on Your First Try, [www.Velociteach.com](http://www.Velociteach.com)
- 2.Frederick P. Brooks Jr..The Mythical Man-Month: Essays on Software Engineering, Addison-wesley Publishing Company, 1975. (PDF)
- 3.Kory Kogon, Suzette Blakemore and James Wood. Project Management for the Unofficial Project Manager, BenBella Books, Inc., 2015 (PDF)
- 4.Gene Kim, Kevin Behr and George Spafford. The Phoenix Project: A Novel About IT, DevOps, and Helping Your Business Win, IT Revolution Press, 2013
- 5.Project Management Institute <https://www.pmi.org/>
- 6.ProjectLibre <https://www.projectlibre.com/>

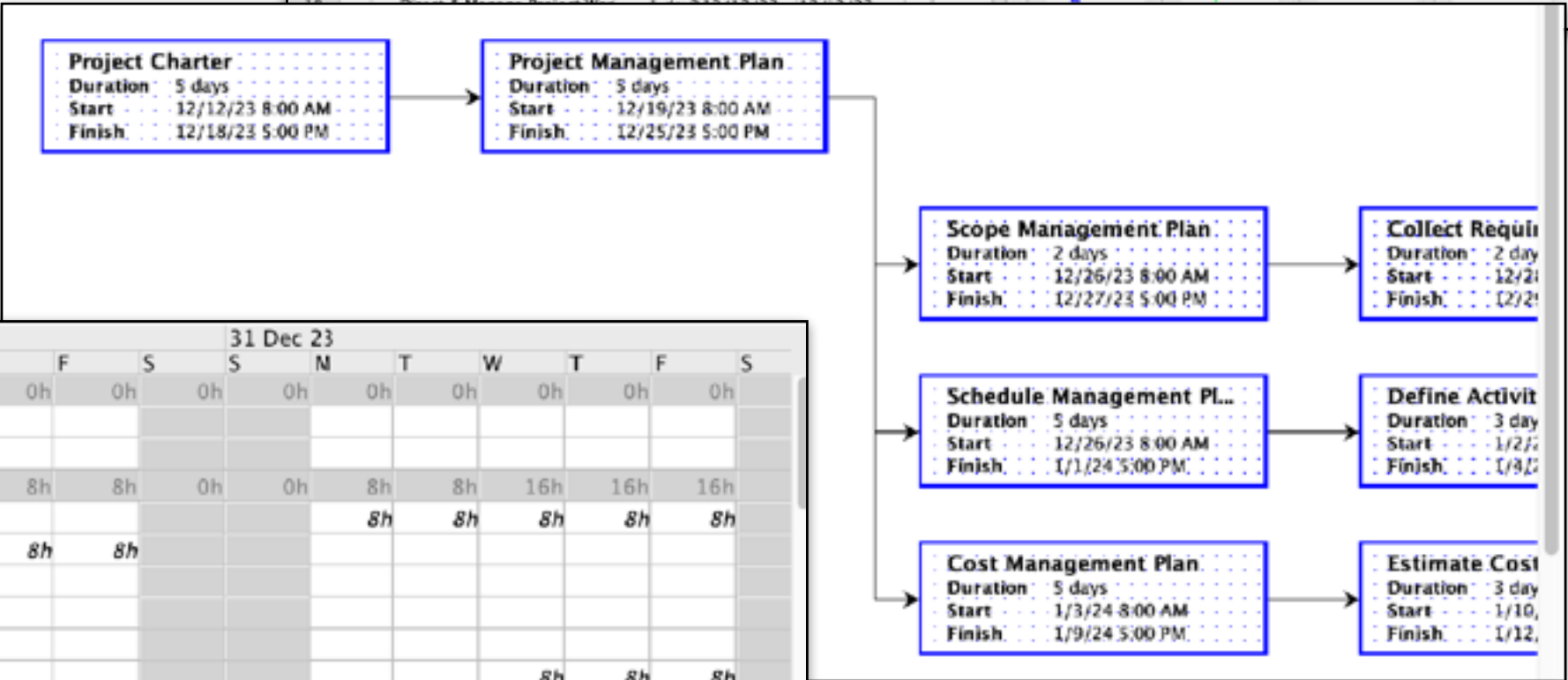
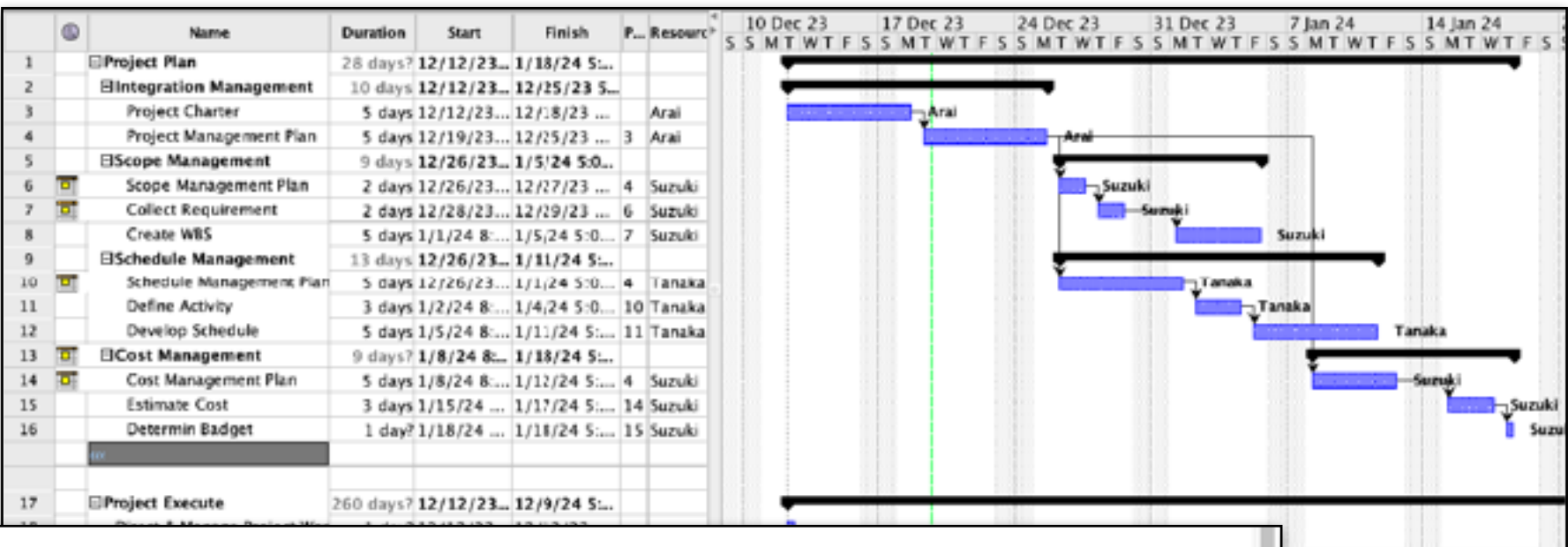
# Project Management [Lab.Works]

## 1.Introduction to Project Management

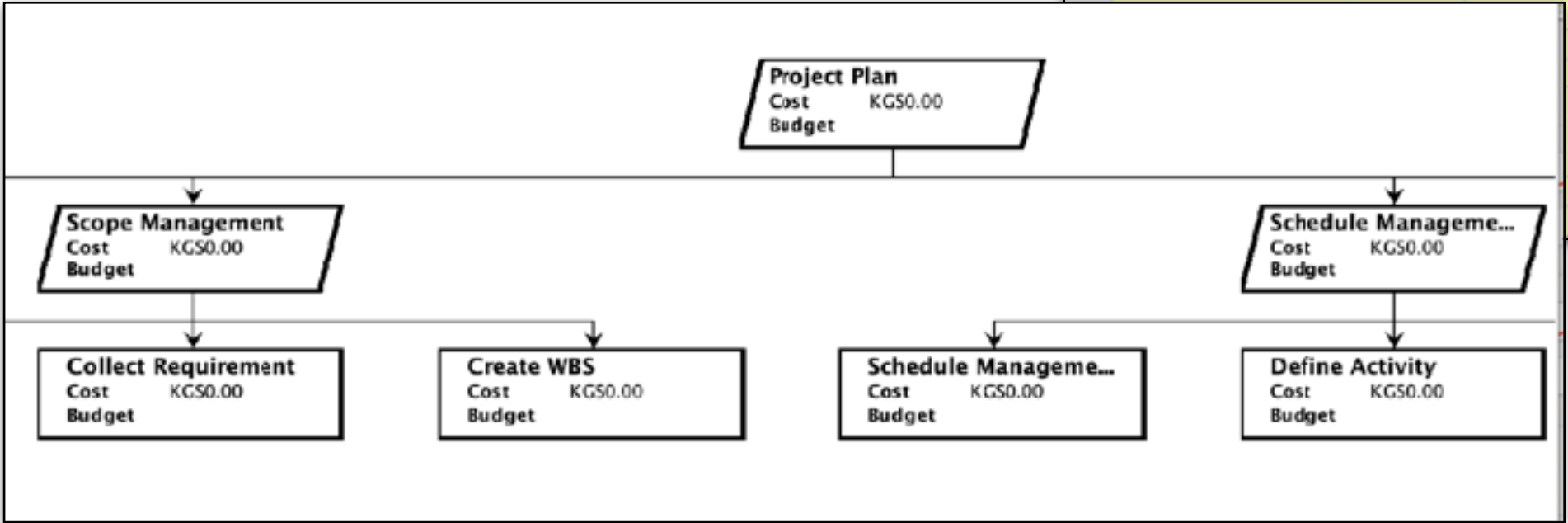
### (1-5)Introducing Project Management Tools:ProjectLibre

The following functions are commonly used and will be used in this class.(01-#3,01-#4)

- (1) Gant chart
- (2) Activity network diagram
- (3) Resource usage
- (4) WBS



		23							31 Dec 23						
		M	T	W	T	F	S	S	M	T	W	T	F	S	S
1	Arai	8h	0h	0h	0h	0h	0h	0h	0h	0h	0h	0h	0h	0h	0h
	Project Charter	8h													
	Project Management F	8h													
2	Suzuki	0h	8h	8h	8h	8h	0h	0h	8h	8h	16h	16h	16h		
	Create WBS	0h	8h	8h	8h	8h	0h	0h	8h	8h	8h	8h	8h		
	Collect Requirement	0h	8h	8h	8h	8h	0h	0h	8h	8h	8h	8h	8h		
	Scope Management PL	0h	8h	8h	8h	8h	0h	0h	8h	8h	8h	8h	8h		
	Estimate Cost	0h	8h	8h	8h	8h	0h	0h	8h	8h	8h	8h	8h		





# Project Management [Lab.Works]

## 1.Introduction to Project Management (1-6) Develop Your Own Project

Develop your own project with the following conditions, you will use it as material for future classes.

Items	Conditions	Remarks
Project Period	6 months or more	
Stakeholder	Client (User, End user, Management), Service Provider, Hardware vendor, Developer (App Dep., Infra Dep., Operation Dep., Management )	
Number of Personnel of Developer	30 people or more	
Example Project	1)Digitaize University, 2)e_Commerce, 3)Retail(SuperMarket), 4)Transport(bus,train)	

# Project Management

## Contents

## 2. Integration Management

### Prac.Works

(2-1) About Integration Management

(2-2) 4.1 Develop Project Charter

(2-3) 4.2 Develop Project Management Plan

(2-4) 4.6 Perform Integrated Change Control

Serial number of this material

Serial number of PMBOK 6th edition

### Lab.Works

(2-5) Develop Project Charter of your own project

(2-6) Develop Project Management Plan of your own project

# Project Management [Prac.Works]

## 2. Integration Management

### (2-1) About Integration Management

Integration Management is the central area that manages the progress of the entire project. It integrates and coordinates the other nine knowledge groups and their processes. It consists of the following process.

- **4.1 Develop Project Charter**
- **4.2 Develop Project Management Plan**
- 4.3 Direct and Manage Project Work
- 4.4 Manage Project Knowledge
- 4.5 Monitor and. Control Project Work
- **4.6 Perform Integrated Change Control**
- 4.7 Close Project or Phase

There are many processes in PMBOK,  
so will explain important processes only.

# Project Management [Prac.Works]

## 2. Integration Management

### (2-2)4.1 Develop Project Charter

Project charter is a document that clearly describes the **purpose**, **goals**, **scope**, **roles** and **responsibilities** of the project participants. As a project progresses, we provide basic guidelines to ensure that all parties involved have a unified understanding, smooth communication, and progress management.



# **Project Management [Prac.Works]**

## **2. Integration Management**

### **(2-2)4.1 Develop Project Charter**

The example of main contents are as follows. In [Lab.Works], you will develop project charter of your own project.

- (1) Project title and description
- (2) Business needs and requirements
- (3) Project manager, members and stakeholders
- (4) Project objectives and goals
- (5) Project schedule and milestones
- (6) Constraints and Assumptions
- (7) Deliverables
- (8) Expected risks and hazards
- (9) Budget
- (10) Project sponsor lists

# Project Management [Prac.Works]

## 2. Integration Management

### (2-2)4.1 Develop Project Charter

Sample Project Charters are as follows,

#### Sample Project Management Plan (including Project Charter)

##### Table of Contents

1. Project definition
  - 1.1. Project purpose
  - 1.2. Project characteristics
  - 1.3. Project Completion Criteria
  - 1.4. System positioning and development scope
  - 1.5. Business function overview
  - 1.6. System configuration overview
  - 1.7. Network configuration overview
2. Project development policy and goals
  - 2.1. Development policy/goal
  - 2.2. Development policy/goals (internal)
3. Assumptions/Constraints
4. Project deliverables
5. Overall system development plan
  - 5.1. Process definition
  - 5.2. Master schedule and milestones
    - 5.2.1. Master Schedule

Project Charter Template							
PROJECT TITLE		Employee and Rewards recognition Application		DESCRIPTION		Automate and simplify rewards and recognition program with easy to-use and customizable cloud-based solution.	
BUSINESS NEED			CORE TEAM MEMBERS		KEY STAKEHOLDERS		
Build a cost-effective rewards and recognition program that is scalable, customizable, and meets your company's goals.			Name	Role	Name	Role	
Improve organization ability to attract and recruit high quality talent and compete in the Market			Mark Tim	Project Manager	Microsoft	Sponsor	
Component of healthy Workplace			Vijay Kshyap	Team Leader	Investors	Shareholders	
Element of Performance Management			Neelam	Business Analyst	Users	Users	
Overall create healthy workplace and retention of quality talent			Nina	Graphic Designer			
OBJECTIVES							
To create a friendly environment and healthy place where resources would enjoy working in the organization and maintain long term professional relationship							
To recognize resource for their commendable and high quality service and commitment							
Automate and simplify your rewards and recognition program with our easy-to-use and customizable cloud-based solution.							
GOALS			SUMMARY PROJECT STATUS				
The goal of the project is to retain and hire high quality resources. Set standards for employees so they have concrete goals to reach and encourage resources to set goals that are Specific, Measurable, Attainable, Relevant and Timely – that provides employees a clear path to follow and gives their supervisors established metrics to measure progress.			Project Start Date:			2021-04-15	
			Project Completion Date:			2021-09-15	
			Overall process Impacts:			New Customizations or Changes	
			Potential Financial Budget:			\$100,000,000	
SCOPE		OPPORTUNITY	MILESTONES		STATUS	DUE	DONE
The scope is to create a new Employee and Rewards recognition full fledged Application where user and supervisor measure their respective progress		Currently, Microsoft employee recognition portal doesn't help to measure progress neither encourages high quality resources. Microsoft foresees an opportunity to improve their HR processes so that they can attract the best talent available in the Market	Requirement Gathering		In Progress	2021-04-17	NA
			Current Business Process Analysis		In Progress	2021-04-26	NA
			Project Presentation		Not Started	2021-06-25	NA
			Future Business innovations		Not Started	2021-07-25	NA
			Performance Analysis		Not Started	2021-08-04	NA
			Final Application Delivery		Not Started	2021-09-05	NA
CONSTRAINTS			ASSUMPTIONS				
1) Time Constraint 2) Budget Constraint 3) Resource Constraint			1) We assume that the above estimation is based on the consideration that would be no major changes				
			2) We assume resources be available as required else there would be delay in overall deliveries				
			3) We assume stakeholders active participation else there would be a delay in deliveries				
DELIVERABLES							

<https://pmstudycircle.com/project-charter/>

(02-#1)Sample-Project Management Plan1.docx

# **Project Management [Prac.Works]**

## **2. Integration Management**

### **(2-3)4.2 Develop Project Management Plan**

Project management plan is based on the project charter. In Project Management Plan, plan when it will be completed and how it will be executed.

Project management plan consists of the management plans that are developed during the planning process in other knowledge areas.

# **Project Management [Prac.Works]**

## **2. Integration Management**

### **(2-3)4.2 Develop Project Management Plan**

An examples of the written content in Project Management Plan are as follows. If you develop the plans of each knowledge areas, indicate them here, or if you do not develop them, define the management method here.

- (1) Scope Management
- (2) Schedule Management
- (3) Cost Management
- (4) Quality Management
- (5) Resource Management
- (6) Communication Management
- (7) Risk Management
- (8) Procurement Management
- (9) Stakeholder Management



# Project Management [Prac.Works]

## 2. Integration Management

### (2-3)4.2 Develop Project Management Plan

Sample Project Management Plans are as follows,

### Sample Project Management Plan

(including Project Charter)

#### Table of Contents

- 1. Project definition
  - 1.1. Project purpose
  - 1.2. Project characteristics
  - 1.3. Project Completion Criteria
  - 1.4. System positioning and development scope
  - 1.5. Business function overview
  - 1.6. System configuration overview
  - 1.7. Network configuration overview
- 2. Project development policy and goals
  - 2.1. Development policy/goal
  - 2.2. Development policy/goals (internal)
- 3. Assumptions/Constraints
- 4. Project deliverables
- 5. Overall system development plan
  - 5.1. Process definition
  - 5.2. Master schedule and milestones
    - 5.2.1. Master Schedule

#### PROJECT MANAGEMENT PLAN

#### DOCUMENT CONTROL

#### DOCUMENT INFORMATION

	Information
Document Id	[Document Management System #]
Document Owner	[Owner Name]
Issue Date	[Date]
Last Saved Date	[Date]
File Name	[Name]

#### DOCUMENT HISTORY

Version	Issue Date	Changes
[1.0]	[Date]	[Section, Page(s) and Text Revised]

#### DOCUMENT APPROVALS

Role	Name	Signature	Date
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(02-#1)Sample-Project Management Plan1.docx

<https://www.stakeholdermap.com/project-templates/project-management-plan-template.html#template>

# Project Management [Prac.Works]

## 2. Integration Management

### (2-4)4.6 Perform Integrated Change Control

Perform Integrated Change Control is the process of

- **reviewing** all change requests;
- **approving** changes and **managing** changes to deliverables, project documents, and the project management plan; and
- **communicating** the decisions.

### Why is Integrated Change Control necessary ?

As project progresses, it may happen to be different from what is initially expected, and requests for changes to the project plan or the deliverables may arise.

If you respond to these change requests without thinking, it can have a negative impact on later processes and increase risks. To avoid such problems, use this process to ensure that change requests are legitimate, what their impact is, and ensure that the project continues as usual.

# **Project Management [Lab.Works]**

## **2. Integration Management**

### **(2-5) Develop Project Charter of Your Own Project**

- Deliverables : Project Charter

# **Project Management [Lab.Works]**

## **2. Integration Management**

### **(2-6) Develop Project Management Plan of Your Own Project**

- Deliverables : Project Management Plan



# Project Management

## Contents

## 3. Scope Management

### Prac.Works

- (3-1) About Scope Management
- (3-2) 5.1 Plan Scope Management
- (3-3) 5.2 Collect Requirement
- (3-4) 5.3 Define Scope
- (3-5) 5.4 Create WBS

### Lab.Works

- (3-6) Develop Scope Management Plan of your own project
- (3-7) Collect Requirement of your own project
- (3-8) Define Scope of your own project
- (3-9) Create WBS of your own project

# Project Management [Prac.Works]

## 3. Scope Management

### (3-1)About Scope Management

Scope Management is clarifying the final product(**deliverables**) and the range (**scope**) of work, required to achieve the goals.

Its main roles are to collect requirements, create Work Breakdown Structure (**WBS**), and verify the product (deliverables).

If the scope of a project is unclear, additional work may be required later or the project may have to be redone. It consists of the following process.

- **5.1 Plan Scope Management**
- **5.2 Collect Requirements**
- **5.3 Define Scope**
- **5.4 Create WBS**
- 5.5 Validate Scope
- 5.6 Control Scope

# Project Management [Prac.Works]

## 3. Scope Management

### (3-2)5.1 Plan Scope Management

This is the phase where plans are made based on the project charter and project management plan regarding how scope management will be approached.

Once the scope management policy is decided, create the following two documents.

- **Scope Management Plan**
- **Requirements Management Plan**

Scope Management Plan is a summary of policies regarding scope definition, documentation, and verification methods.

On the other hand, Requirements Management Plan organizes the requirements from clients and describes specific action plans for members.

Each plan should be **specifically described** **when**, by **whom**, and **how** each Scope Management process will be carried out.

# Project Management [Prac.Works]

## 3. Scope Management

### (3-2)5.1 Plan Scope Management

And the term “scope” can refer to:

- **Product scope:** The features and functions that characterize a product, service, or result.
- **Project scope:** The work performed to deliver a product, service, or result with the specified features and functions.



# Project Management [Prac.Works]

## 3. Scope Management

### (3-2)5.1 Plan Scope Management

Example of Scope Management Plan and Requirement Management Plan are as follows,(03-#1)

— Example —					
Scope Management Plan Requirement Management Plan					
Project Name : <u>Project x</u>					
Responsible Person : <u>Ichiro Suzuki</u>					
	Process	Input Materials (specifically)	Tool&Techniques (specifically)	Deliberables (specifically)	Deadline    Respons ibles
1	Collect Requirement	Business document Customer requirement Customer Interview	Expert Judgement	Requirement documentation Requirement Traceability Matrix	2024/1/31    Sato
2	Define Scope	Project Charter Scope templete	Expert Judgement	Scope statement	2024/2/7    Sato
3	Create WBS	WBS template	ProjectLibre Expert Judgement	Scope baseline(WBS,Scope statement)	2024/2/15    Sato
4	Validate Scope	Scope statement Requirement documentation Lesson learnt	Review Walk through Expert Judgement	Scope baseline(WBS,Scope statement)	2024/2/29    Wata
5	Control Scope	Scope management plan Requirement management plan Change management plan Customer requirement Requirement traceability matrix	By h2h meeting once a week Participaint : A,B,C  Valiance analysis  Confirming analysis in every weekly progress meeting	Scope baseline(WBS,Scope statement)	2024/3/31    Wata





# Project Management [Prac.Works]

## 3. Scope Management (3-4)5.3 Define Scope

Define Scope is the process of developing a detailed description of the project and product. The key benefit of this process is that it describes the product, service, or result boundaries and acceptance criteria. Examples of Scope Statement are as follows,

	SCOPE STATEMENT
Project Title	Sprintzeal Learning Management System
Project Manager	John Smith
Project Sponsor	David Johnson
Project Objectives	<ul style="list-style-type: none"><li>- Develop a web-based learning management system for Sprintzeal</li><li>- Provide a user-friendly interface for students and faculty members</li><li>- Implement features for tracking student progress and performance</li><li>- Integrate the system with Sprintzeal's existing database</li><li>- Ensure the system is secure and compliant with industry standards</li></ul>
Project Deliverables	<ul style="list-style-type: none"><li>- Sprintzeal Learning Management System</li><li>- User manuals and training materials</li><li>- System documentation</li><li>- Testing and quality assurance reports</li><li>- Technical support</li></ul>
Milestones	<ul style="list-style-type: none"><li>- System design and development completed by end of Q2</li><li>- User acceptance testing completed by end of Q3</li><li>- System implementation and rollout completed by end of Q4</li></ul>
Project Constraints	<ul style="list-style-type: none"><li>- Budget of \$500,000</li><li>- Completion date of December 31, 2023</li><li>- Integration with existing Sprintzeal database</li><li>- Compliance with industry standards and regulations</li></ul>
Assumptions	<ul style="list-style-type: none"><li>- Availability of qualified development and testing resources</li><li>- Timely approval of project deliverables by Sprintzeal stakeholders</li><li>- Availability of necessary hardware and software resources</li><li>- No major changes to project requirements or objectives</li></ul>

# Project Management [Prac.Works]

## 3. Scope Management (3-5)5.4 Create WBS

Create WBS is the process of subdividing project deliverables and project work into smaller, more manageable components.

The work package is the work defined at the lowest level of the WBS for which cost and duration can be estimated and managed. The level of decomposition is often guided by the degree of control needed to effectively manage the project.

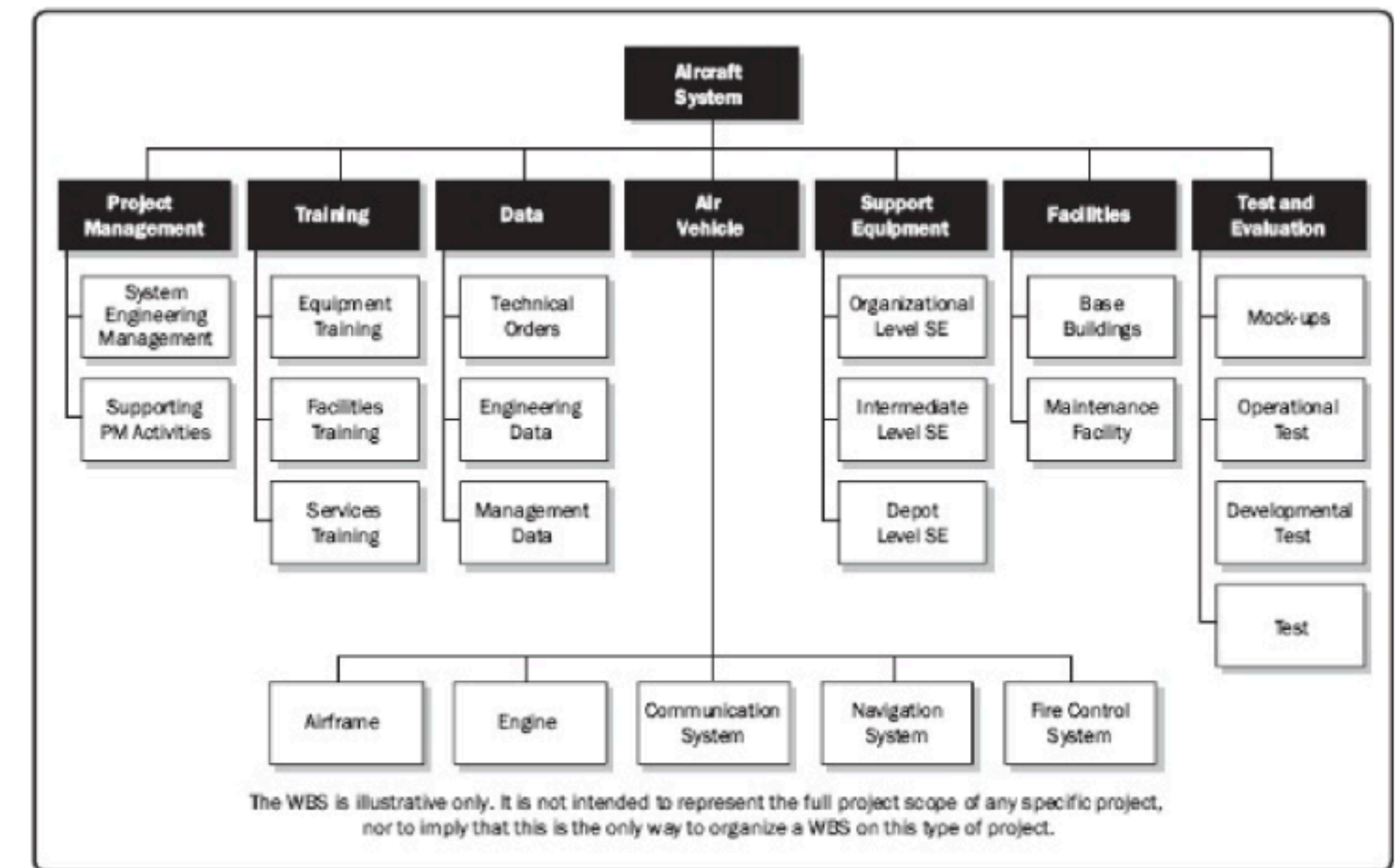


Figure 5-14. Sample WBS with Major Deliverables

From PMBOK 6th

# **Project Management [Lab.Works]**

## **3. Scope Management**

### **(3-6) Develop Scope Management Plan of your own project**

- Deliverables : Scope Management Plan and Requirement Management Plan

# **Project Management [Lab.Works]**

## **3. Scope Management**

### **(3-7)Collect Requirement of your own project**

- Deliverables : Requirements documentation



# **Project Management [Lab.Works]**

## **3. Scope Management**

### **(3-8) Define Scope of your own project**

- Deliverables : Scope Statement

# **Project Management [Lab.Works]**

## **3. Scope Management**

### **(3-9)Create WBS of your own project**

- Deliverables : WBS    using ProjectLibre

# Project Management

## Contents

## 4. Schedule Management

### Prac.Works

(4-1)About Schedule Management

(4-2)6.1 Plan Schedule Management

(4-3)6.2 Define Activities and 6.3 Sequence Activities

(4-4)6.5 Develop Schedule

### Lab.Works

(4-5)Develop Schedule Management Plan of your own project

(4-6)Define and Sequence Activities of your own project

(4-7)Develop Project Schedule of your own project

# **Project Management [Prac.Works]**

## **4. Schedule Management**

### **(4-1)About Schedule Management**

Project Schedule Management includes the processes required to manage the timely completion of the project.It consists of the following process.

- **6.1 Plan Schedule Management**
- **6.2 Define Activities**
- **6.3 Sequence Activities**
- 6.4 Estimate Activity Durations
- **6.5 Develop schedule**
- 6.6 Control Schedule

# Project Management [Prac.Works]

## 4. Schedule Management

### (4-2)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.

Schedule Management Plan should be specifically described **when**, **by whom**, and **how** each Schedules Management process will be carried out. Example of Schedule Management Plan is as follows, (04-#1)

# Project Management [Prac.Works]

## 4. Schedule Management

### (4-2)6.1 Plan Schedule Management

— Example —					
Schedule Management Plan					
Project Name : <u>Project x</u>					
Responsible Person : <u>Ichiro Suzuki</u>					
Process	Input Materials (specifically)	Tool&Techniques (specifically)	Deliberables (specifically)	Deadline	Respons ibles
1 Define Activities	Project Management Plan Environmental factors <b>Organizational process asset</b>	Expert Judgement Decomposition Meetings	Activity list Milestone list	2024/1/31	Sato
2 Sequence Activities	Project Management Plan Environmental factors Project Documents <b>Organizational process asset</b>	Expert Judgement Meetings	Project schedule network diagrams	2024/2/7	Sato
3 Estimate Activity Durations	Project Management Plan Environmental factors Project Documents <b>Organizational process asset</b>	Expert Judgement Estimating method Meetings	Activity list (including duration)	2024/2/15	Sato
4 Develop Schedule	Project Management Plan Environmental factors Project schedule network diagrams Project Documents <b>Organizational process asset</b>	Critical path method Resource optimization Lead and lag	Project schedule(baseline)	2024/2/29	Wata
5 Control Schedule	Project Management Plan Project schedule Progress report Change request	Critical path method Resource optimization Lead and lag Meetings (Confirming analysis in every weekly progress meeting)	Project management plan updates Project schedule updates	2024/3/31	Wata



# Project Management [Prac.Works]

## 4. Schedule Management

### (4-3)6.2 Define Activities and 6.3 Sequence 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.

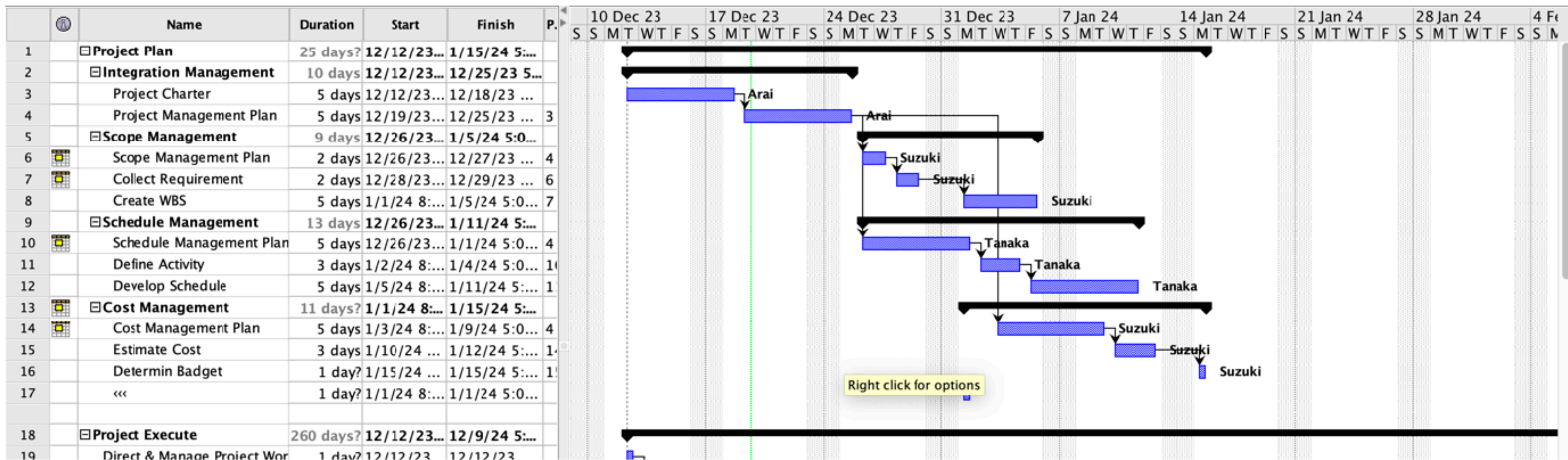
Sequence Activities is the process of identifying and documenting **relationships among the project activities**. The key benefit of this process is that it defines **the logical sequence of work** to obtain the greatest efficiency given all project constraints. This process is performed throughout the project.

# Project Management [Prac.Works]

## 4. Schedule Management

### (4-4)6.5 Develop Schedule

Develop Schedule is the process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create a schedule model for project execution and monitoring and controlling. The key benefit of this process is that it generates a schedule model with planned dates for completing project. A example schedule made with ProjectLibre is as follows,



# **Project Management [Lab.Works]**

## **4. Schedule Management**

### **(4-5)Develop Schedule Management Plan of your own project**

- Deliverables : Schedule Management Plan

# **Project Management [Lab.Works]**

## **4. Schedule Management**

### **(4-6) Define and Sequences Activities of your own project**

- Deliverables : Activity Lists and Network Diagrams    using ProjectLibre

# **Project Management [Lab.Works]**

## **4. Schedule Management**

### **(4-7)Develop Project Schedule of your own project**

- Deliverables : Project Schedule using ProjectLibre as Gant chart

# Project Management

**Contents**

## 5. Cost Management

### Prac.Works

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# Project Management [Prac.Works]

## 5. Cost Management

### (5-1)About Cost Management

Cost Management is the process **estimating**, **budgeting**, and **controlling** the costs necessary to complete the project within the budget.

Project costs are estimated by identifying the necessary resources such as personnel and equipment from the work and final deliverables, and then applying a monetary amount to them. After budgeting costs and starting a project, as part of cost control activities, we regularly **monitor** the status of expences and **take corrective action** if expences exceed the plan. It consists of the following process.

- **7.1 Plan Cost Management**
- **7.2 Estimate cost**
- 7.3 Determine Budget
- **7.4 Control Cost**

# Project Management [Prac.Works]

## 5. Cost Management

### (5-2)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.

Cost Management Plan should be specifically described when, by whom, and how each Cost Management process will be carried out. Example of Cost Management Plan is as follows, (05-#1)

Cost Management Plan Example  
In Russian document

## 5. Cost Management

### (5-3) 7.2 Estimate Cost

Estimate Costs is the process of developing an approximation of the cost of resources needed to complete project work. The key benefit of this process is that it determines the monetary resources required for the project. This process is performed periodically throughout the project as needed.

Template of Cost Estimate and Control is as follows,(05-#2)

[illegible]

# Project Management [Prac.Works]

## 5. Cost Management

### (5-4)7.4 Control Cost

Control Costs is the process of monitoring the status of the project to update the project costs and managing changes to the cost baseline. The key benefit of this process is that the cost baseline is maintained throughout the project. This process is performed throughout the project.

Regularly check your spending status, predict the outcome, and take action if cost overruns are expected.(05-#2)

# **Project Management [Lab.Works]**

## **5. Cost Management**

### **(5-5) Develop Cost Management Plan of your own project**

- Deliverables : Cost Management Plan

# **Project Management [Lab.Works]**

## **5. Cost Management**

### **(5-6) Cost Control of your own project**

- Deliverables : Cost Estimate and Control Report