Structure of this course

10 knowledge areas	5 process groups				
	Initiating	Planning	Executing	Monitoring & Controlling	Closing
1. Integration management					
2. Scope					
3. Time					
4. Cost					
5. Quality					
6. Human resource					
7. Communications					
8. Risk					
9. Procurement					
10. Stakeholder					

Test

- 1. I don't really have time for this-let's just do it your way and forget I ever brought up the problem. Which kind of conflict management style is used? A

- 2. Look Sue, Joe's already filled me in on your issue. I've considered his position, and I've decided that he's right, so I don't need to hear any more about it. C

- 3. Hold on a second, let's all sit down and figure out what the real problem is. D

  - A、 Withdraw B、 Compromise C、 Force D、 Collaborate

Which risk response technique is being used in this situation?

- 4. You read that there's a major bear problem in the spring on the cliff where you are planning to wok. You change your project start date to happen in the fall. B

- 5. You hear that it's going to rain for the first three days of your trip, so you bring waterproof tents and indoor projects for the team to work on in the meantime. C

- 6. There's always the chance that someone could make a mistake and fall off the cliff. No matter how much you plan for the unexpected, sometimes mistakes happen. D

  - A、 Transfer B、 Avoid C、 Mitigate D、 Accept

Which kind of contract is used in this situation?

- **7.** The buyer will pay the seller a total of $285,000 for 18 months of technical support services. A

- **8.** The buyer will pay for the cost of phone service and rent on the facilities, plus $4,500 per month for employees' time. Costs will not exceed $14,500 per month. D

  - A、 Firm Fixed Price Contracts (FFP)
  - B、 Fixed Price Incentive Fee Contracts (FPIF)
  - C、 Cost Plus Fixed Fee (CPFF)
  - D、 Time and materials

- **The buyer will pay for the cost of phone service, rent on the facilities, and employees, plus an additional $2500 per month. C**

Test

- 9. Which kind of classification model is used to identify stakeholders based on their power, urgency and legitimacy?

  - A、 Power/interest
  - B、 Power/influence grid
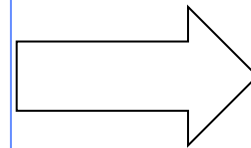 - C、 Influence/impact grid
  - D、 Salience model
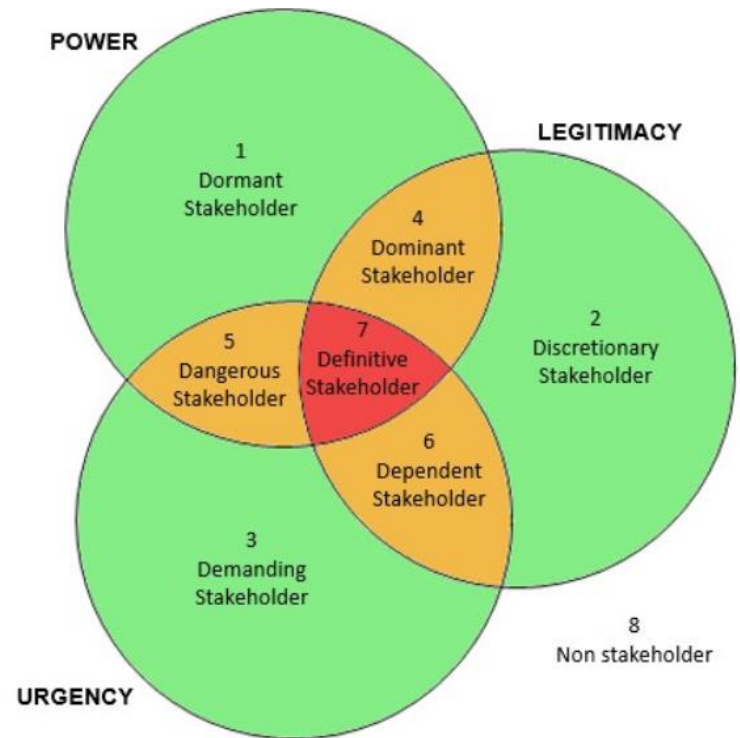
- 10. You're managing a project with two client sponsors, and you have a 10-person team reporting to you. You've been given a budget increase, which allowed you to increase your team size by 30%. How many lines of communication were added?

  - A、 66
  - B、 78
  - C、 120
  - D、 42

| You 1 |
| Team 10 |
| Sponsor 2 |
| **Total 13** |
| **Num of Lines=** |
| **13*12/2=78** |

➡

| You 1 |
| Team 10+10*30%=13 |
| Sponsor 2 |
| **Total 16** |
| **Num of Lines=** |
| **16*15/2=120** |

Assignment 1-Project Charter

- **Topic**
  - **2/3: Healing Paws Veterinary Hospital System**
  - **1/3: Others**
- **Template**
  - **3/4：The provided word template (recommend)**
  - **1/4：Sample 1 2 3, or a mixed template**
- **Standards of full marks**
  - **表达精准、完备，基本可做为范例**
  - **不存在明显问题的情况下，某些部分的表达和别人都不一样，独特。**

Assignment 1-Project Charter

- ## 1. Background
  - **multi-perspective: customer, hospital, COVID-19…**

- ## 2. Goals
  - **Problem：too similar to scope**

- Using 3 months develop a website, that includes the relative information of the specific veterinary hospital. The customers can use it for online appointments and the employees can use it for managing appointments
- The website supports several different languages
- Both doctors and customers can keep trace of the appointment
- The appointment messages should be store in Cloud and ensure the data security
- This website should keep at least 10000 people online at the same time. (Reliable)
- Develop a website with simple structure, which is true for various age groups to use.

- ## 3. Scope
  - **Project**
  - **Product**

Assignment 1-Project Charter

- **4、 Key stakeholders**
  - **Project Manager: yourself**
  - **Others: real or virtual name**
- **5. Milestones**
  - **Start or finish something ---date**

Milestones	When	What
M.1	Apr. 30 2020	Set up Project Charter - the first version
M.2	Jun.14 2020	Deliver Project Charter - the final version
M.3	Jun. 14 2020	Deliver Project Management Plan - the final version
M.4	Feb. 24 2021	Begin the first phase – Requirements Analysis
M.5	Mar. 2 2021	Deliver the Requirements Analysis document
M.6	Mar. 3 2021	Begin the second phase – Project Design
M.7	Mar. 10 2021	Deliver the Design document
M.8	Mar. 16 2021	Begin the third phase – Project Implementation
M.9	Apr. 14 2021	Deliver the first version of the system
M.10	Apr. 30 2021	Deliver the second version of the system
M.11	May. 17 2021	Deliver the third version of the system
M.12	May. 30 2021	Begin the fourth phase - testing
M.13	Jun. 10 2021	Begin the fifth phase - maintenance
M.14	Jun. 12 2021	Release the final version of the products

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Assignment 1-Project Charter

- **6. Budget**
  - **Problem: too little**
  - **Can be virtual**
- **7. Constrains, Assumptions, Risks and Dependencies**

  - **Problems: 自相矛盾，互相混淆，不够全面**
  - **同一个概念表达的方式不一样，导致其所属类型变化**
    - Cost
    - Time
    - Communication

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Assignment 1-Project Charter

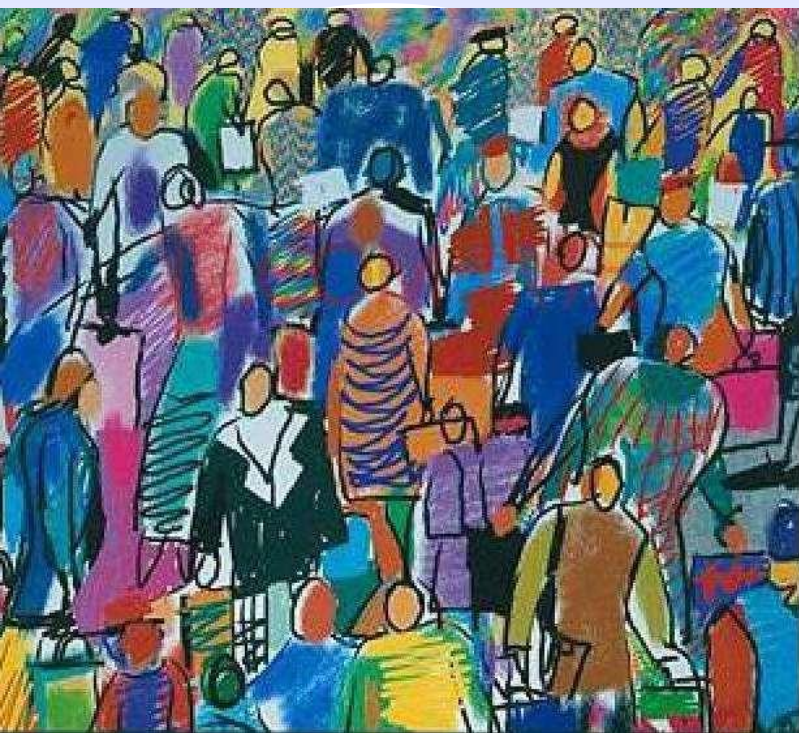|	
Constraints	• Rule: The project shall comply with all the management regulations of the company • Funding: the maximum development funding available is $5000 • Group communication: because of COVID-19, developers can only communicate online. • Framework: The system must be developed using FLASK framework.
Assumptions	• Definite goal: customers and developers have identified and aligned goals: the hospital's website is customer-centric rather than employee-centric. • Labor resource: skilled team members will be involved in the project on time. Developers can be involved throughout the project. • Communication: ensure adequate communication between technicians and product managers.

Risks and Dependencies	**Risks:**
	• Stakeholder: Project stakeholders cannot agree on a software development solution.
	• Cost: the actual cost exceeded the project budget.
	• Time: The project has been delayed. Project inventory cannot be delivered on time.
	• Team: No good technicians are available. The technicians drop out of the development work.
	• Timing of test: The customer cannot complete the test on time.
	Dependencies:
	Internal:
	    • The development of back-end logic is based on the design of the front-end interface.
	    • Each phase of development needs to rely on the solution set out in discussion with the customer.
	External:
	    • Mobile development depends on Android version and IOS platform.
	    • Server development depends on the Tencent cloud server platform.

Assignment 1-Project Charter

- **Tips for Project Charter v2:**
    - 语法
    - 格式
    - 内容避免重复
    - 新增或修改的内容用红色字体标记
    - V1满分不意味着V2也满分
    - V1的评阅可能会有遗漏，大家和前面的介绍进行对比，在V2版本中进行完善。
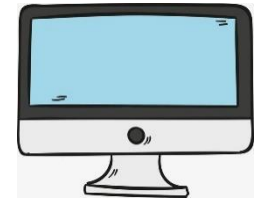
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Software Project Management

Review

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Structure of this course

10 knowledge areas	Initiating	Planning	Executing	Monitoring & Controlling	Closing
5 process groups					
1. Integration management	■	■	■	■	■
2. Scope		■		■	
3. Time		■		■	
4. Cost		■		■	
5. Quality		■	■	■	
6. Human resource		■	■		
7. Communications		■	■	■	
8. Risk		■		■	
9. Procurement		■	■	■	■
10. Stakeholder	■	■	■	■	

47 Processes

ITTO

Input

Tools & Techniques

Output

I

T&T

O

Software Project Management

Chapter2:Integration Management

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Project Management Process Group and Knowledge Area Mapping

5 process groups
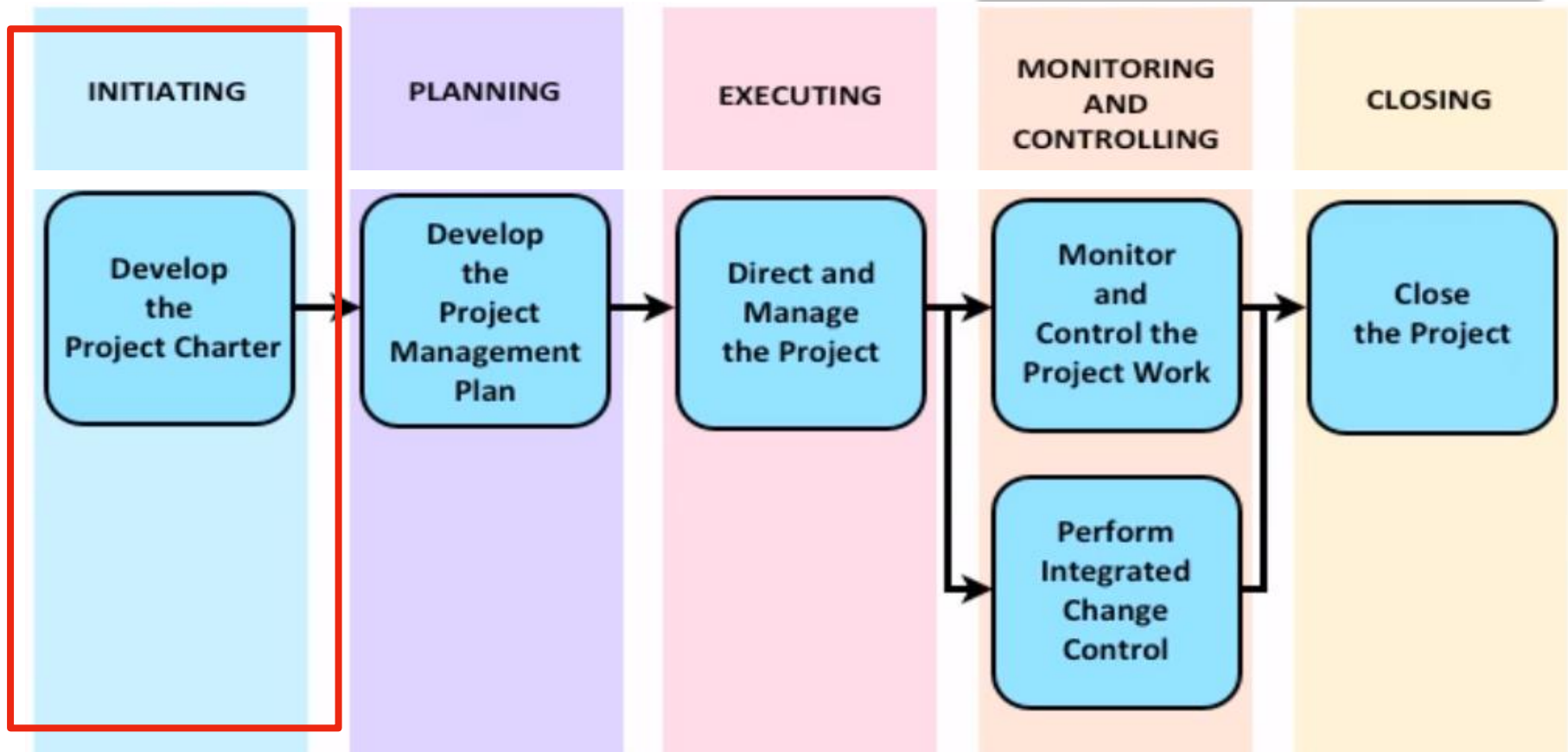
1. Integration Management

10 knowledge areas

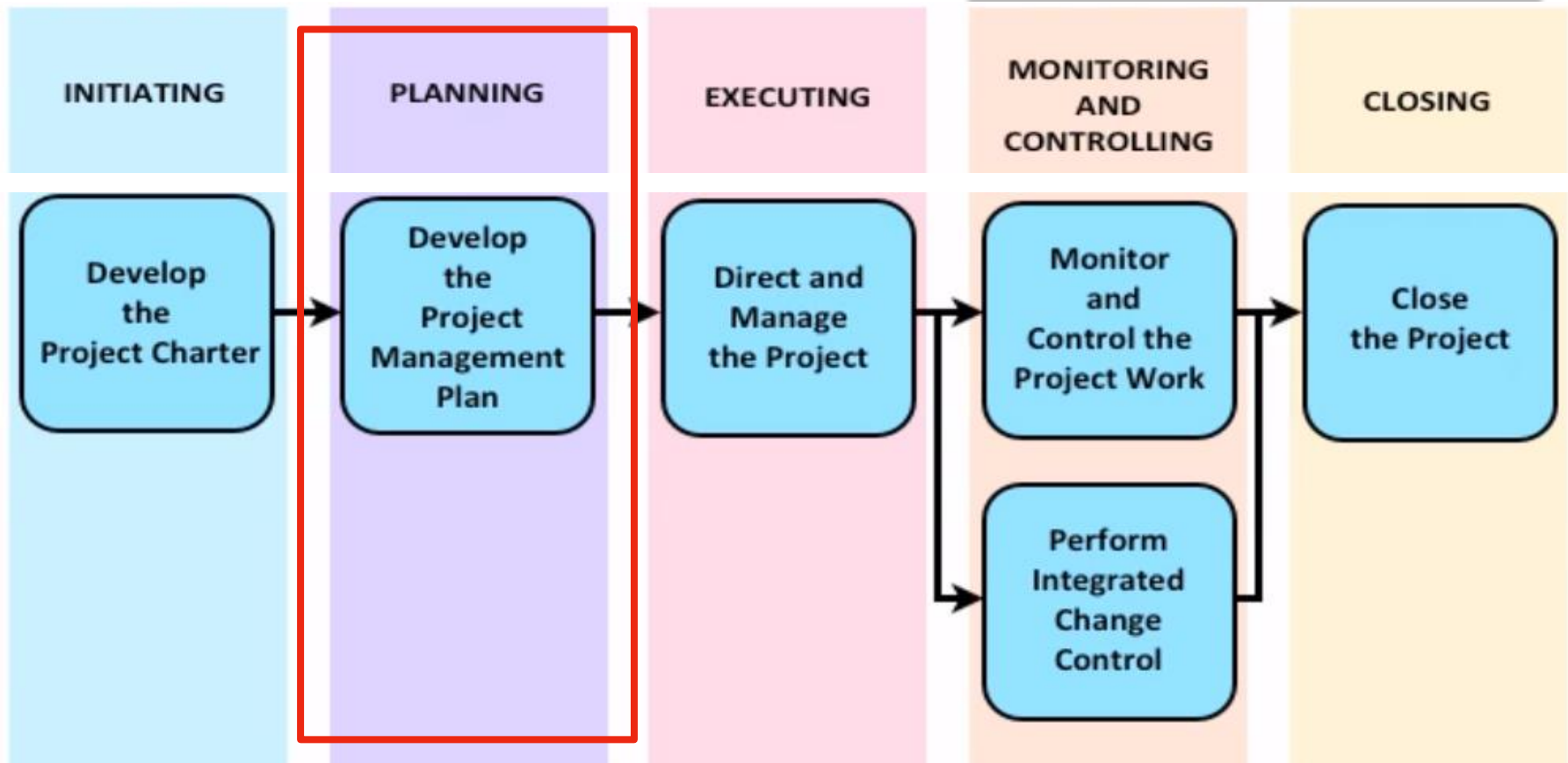| Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.6 Control Scope	
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality	
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Control Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement	

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Integration Management processes

5 Process Groups

INITIATING	PLANNING	EXECUTING	MONITORING AND CONTROLLING	CLOSING
Develop the Project Charter	Develop the Project Management Plan	Direct and Manage the Project	Monitor and Control the Project Work / Perform Integrated Change Control	Close the Project

6 Project Integration Management processes

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Develop Project Management Plan

5 Process Groups

INITIATING	PLANNING	EXECUTING	MONITORING AND CONTROLLING	CLOSING
Develop the Project Charter	Develop the Project Management Plan	Direct and Manage the Project	Monitor and Control the Project Work	Close the Project
			Perform Integrated Change Control	

6 Project Integration Management processes

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Project Management Process Group and Knowledge Area Mapping

5 process groups

1. Integration Management

10 knowledge areas

Develop Project Management Plan

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
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Section 2.2 Develop Project Management Plan

☐ Project Management Plan

The project management plan is the **document** that describes how the project will be executed, monitored, and controlled.

☐ Develop Project Management Plan

Develop Project Management Plan is the process of defining, preparing, and coordinating all **subsidiary plans** and **integrating** them into a comprehensive project management plan.
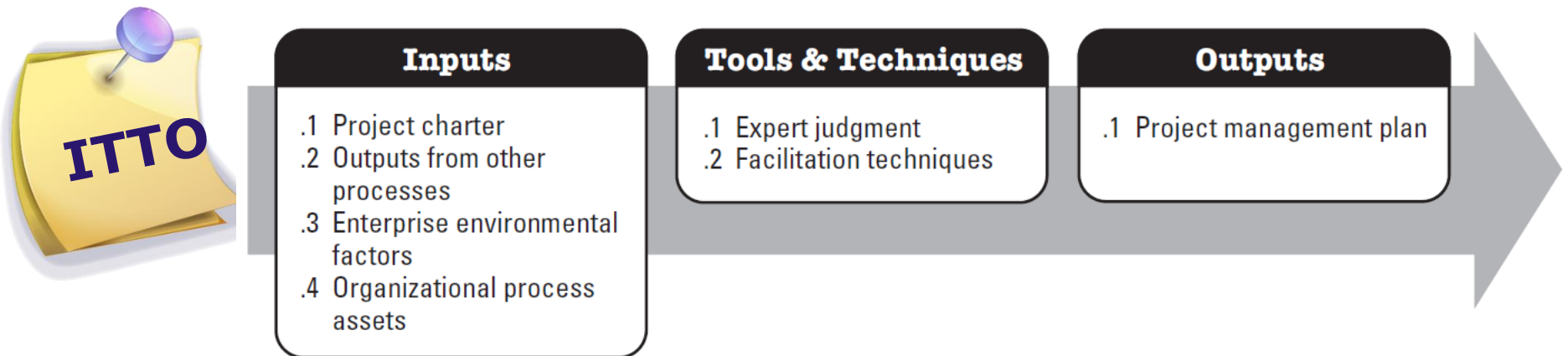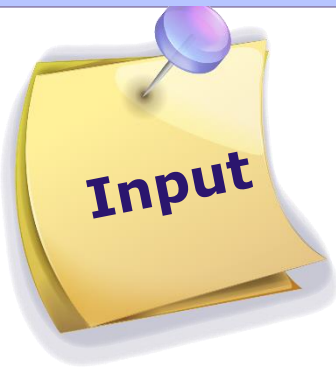
The key benefit of this process is a central document that defines the basis of all project work.

☐ **Develop Project Management Plan**

Develop Project Management Plan is the process of defining, preparing, and coordinating all subsidiary plans and integrating them into a comprehensive project management plan.
The key benefit of this process is a central document that defines the basis of all project work.

ITTO

Inputs	Tools & Techniques	Outputs
.1 Project charter	.1 Expert judgment	.1 Project management plan
.2 Outputs from other processes	.2 Facilitation techniques	
.3 Enterprise environmental factors		
.4 Organizational process assets		

Input

1. **Project Charter**
   - Output of the process of "develop project charter"
2. **Outputs from Other Processes**
   - Any baselines and subsidiary plans that are an output from other planning processes
3. **Enterprise Environmental Factors**
4. **Organizational Process Assets**

T&T

Expert Judgment

◆ *group or individual with specialized knowledge:*

　◆ *consultants*

　◆ *stakeholder*

　◆ *professional associations*

　◆ *…*

Facilitation Techniques

◆ *brainstorming*

◆ *conflict resolution*

◆ *problem solving*

◆ *meeting management*

◆ *…*

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Section 2.2 Develop Project Management Plan

Output

■ **Project Management Plan: It is the document that describes how the project will be executed, monitored, and controlled.**

■ **It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.:**

Subsidiary plans

- Scope management plan
- Requirements management plan
- Schedule management plan
- Cost management plan
- Quality management plan
- Process improvement plan
- Human resource management plan
- Communication management plan
- Risk management plan
- Procurement management plan
- Stakeholder management plan

Baseline

- Scope baselines
- Schedule baselines
- Cost baselines

Output

- **Project Management Plan: It is the document that describes how the project will be executed, monitored, and controlled.**
  - **Subsidiary plans**
  - **Baselines**

Project charter

Project management plan

Subsidiary plans

Knowledge Areas	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
Integration Management	Project Charter	Management Plan	Manage Project Work	Control Project Work 4.5 Perform Integrated Change Control	or Phase
5. Project Scope Management		5.1 Plan Scope Management Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
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Output

■ Project Management Plan-template

<Project Name> Project Management Plan

Table of Contents

Assignment 2:
Develop a Project Management Plan
(Before the final exam)

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- **5. COST MANAGEMENT**
- **5.1 Estimation**
  - <……..>
- **5.2 Budget Allocation**
  - <……..>
- **5.3 Budget Control**
  - <……..>

Cost Management Overview

INITIATING	PLANNING	EXECUTING	MONITORING AND CONTROLLING	CLOSING
	1. Plan Cost Management		4. Control Cost	
	2. Estimate Costs 3. Determine Budget			
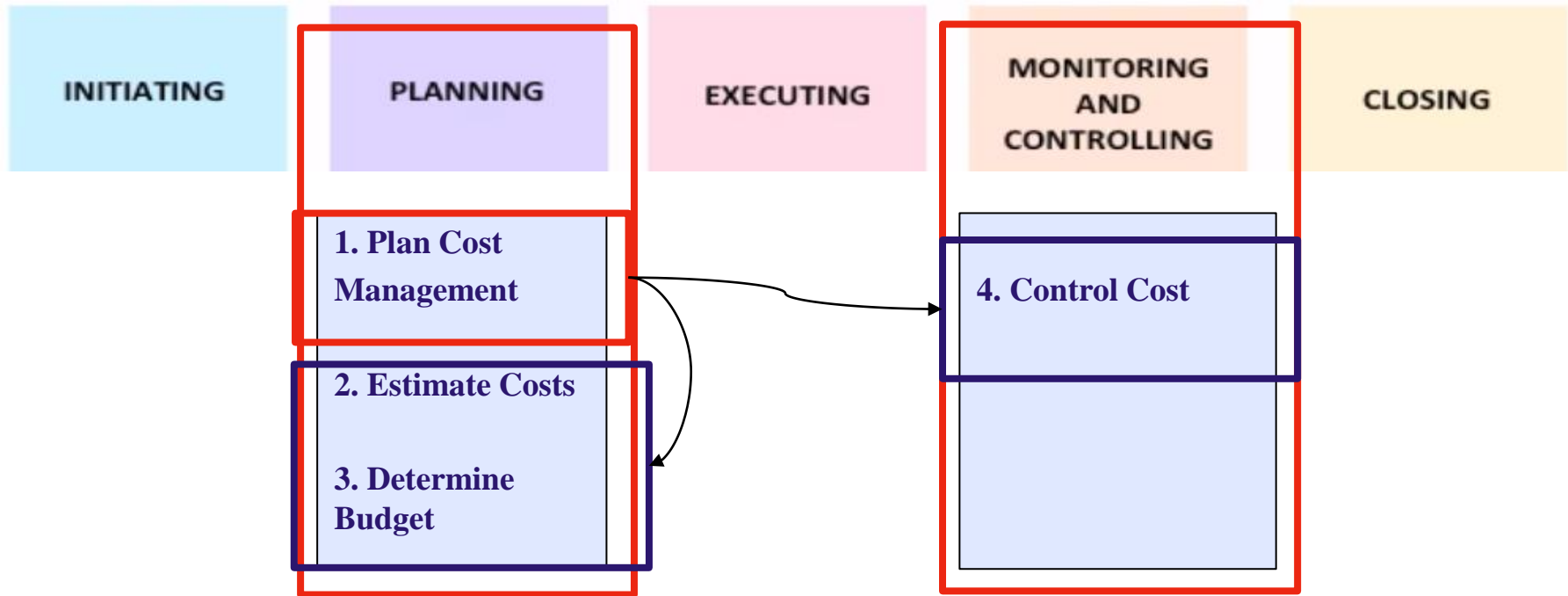
4 Cost Management processes

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- **5. COST MANAGEMENT**
  - **Plan Cost Management**
  - **5.1. Estimate Costs**
  - **5.2. Determine Budget**
  - **5.3. Control Cost**

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Section 5.1: Plan Cost Management

Units of measure — 01

Such as staff hours, staff days, for time measure; or meters, liters, for quantity measures

Level of precision and accuracy — 02

e.g. US$100.49 to US$100; Acceptance range ± 10%

Organizational procedures links — 03

WBS component Control Account

Control threshold — 04

Percentage deviations from the baseline plan

Rules of performance measurement — 05
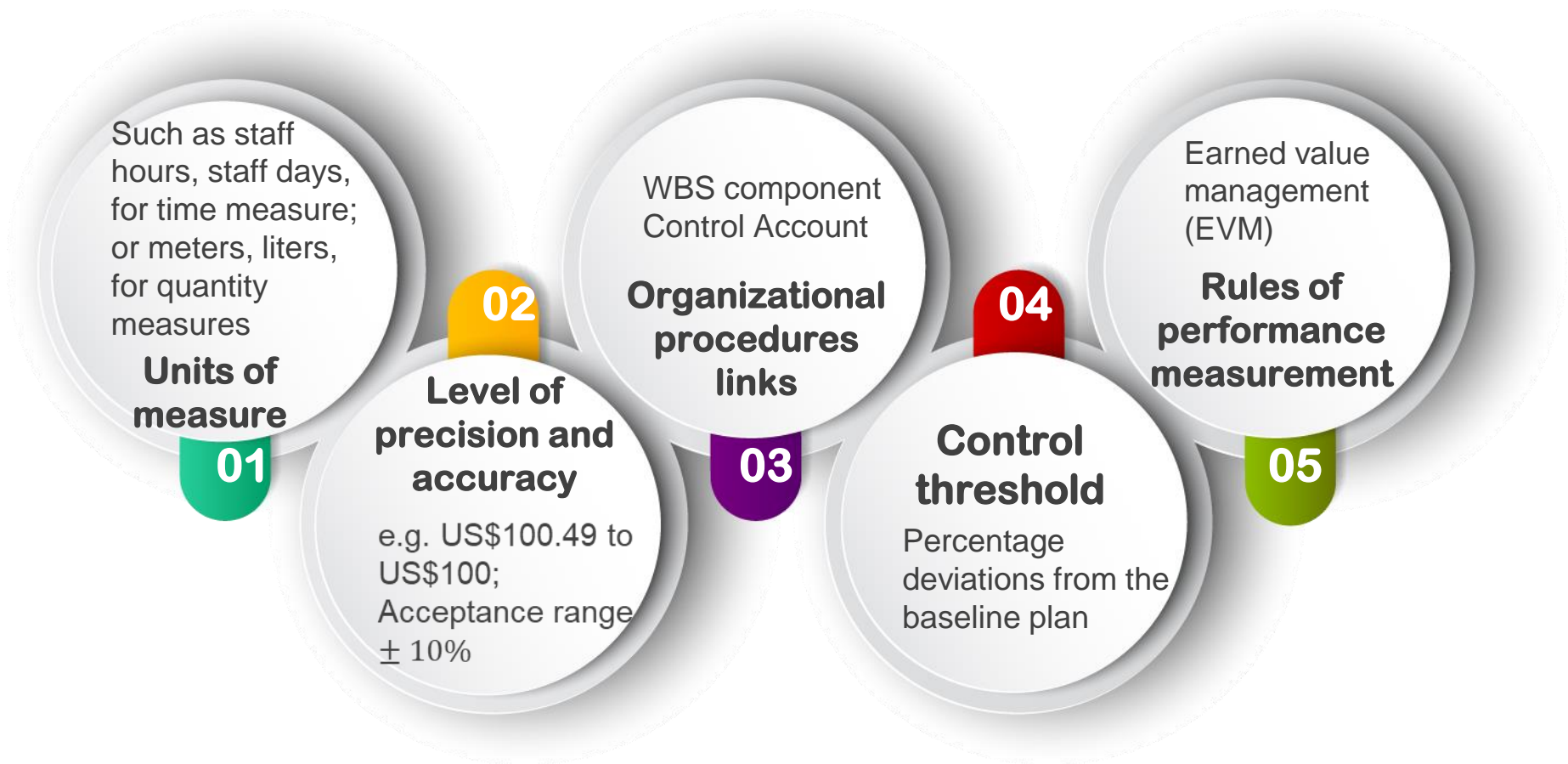
Earned value management (EVM)

Cost management plan

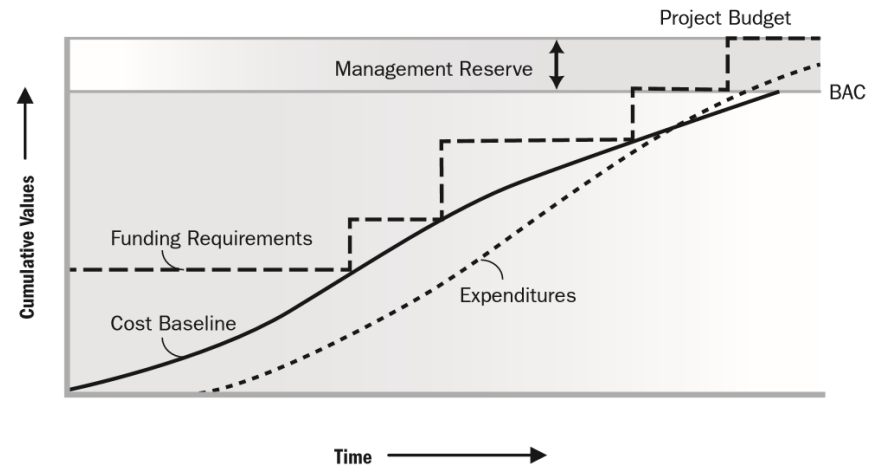# 5. COST MANAGEMENT

- **Plan Cost Management**
- **5.1. Estimate Costs:**
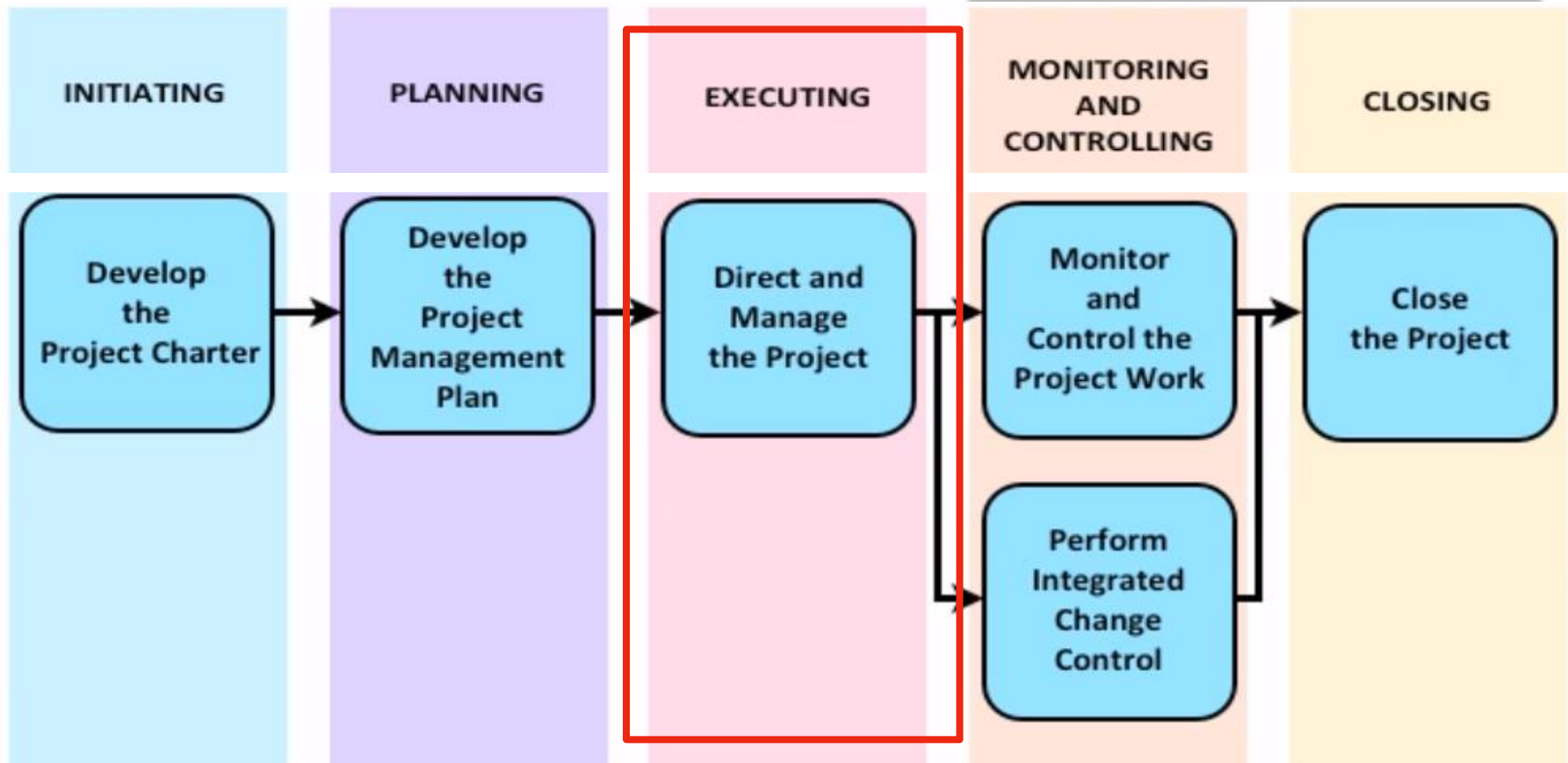 - Three-point estimating
  - …
- **5.2. Determine Budget**
- **5.3. Control Cost**
  - Earned Value Management
  - Forecasting

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5 Process Groups

INITIATING	PLANNING	EXECUTING	MONITORING AND CONTROLLING	CLOSING
Develop the Project Charter	Develop the Project Management Plan	Direct and Manage the Project	Monitor and Control the Project Work	Close the Project
			Perform Integrated Change Control	

6 Project Integration Management processes

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Input

1. **Project Management Plan**

    - Output of the process of "develop project management plan"

2. **Approved Change Requests**

3. **Enterprise Environmental Factors**

4. **Organizational Process Assets**

Section 2.3 Direct and Manage Project Work

Output

- **Deliverables**
  - any unique and verifiable product, result or capability to perform a service that is required to be produced to complete a process, phase, or project.
- **Work Performance Data**
  - work completed
  - key performance indicators
  - technical performance measures
  - start and finish dates of schedule activities
  - number of change requests, number of defects
  - …

> **2020.01.01 100W**
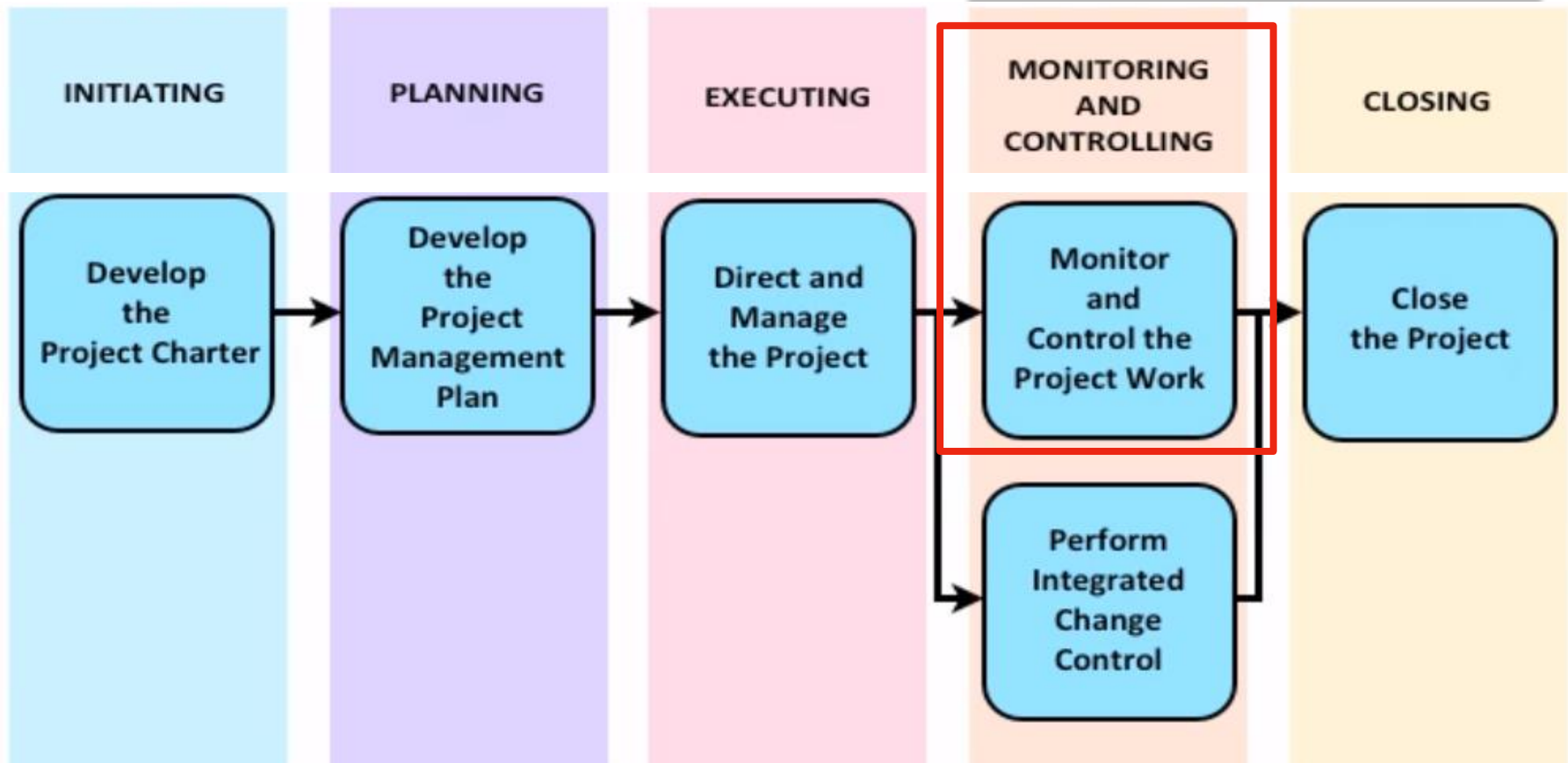> **2020.03.01 -50W**

- **Change Requests**
- **Project Management Plan Updates**
- **Project Documents Updates**

5 Process Groups

INITIATING	PLANNING	EXECUTING	MONITORING AND CONTROLLING	CLOSING
Develop the Project Charter	Develop the Project Management Plan	Direct and Manage the Project	Monitor and Control the Project Work / Perform Integrated Change Control	Close the Project

6 Project Integration Management processes

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Input

1. **Project Management Plan**
2. **Schedule Forecasts---time management**
3. **Cost Forecasts----cost management**
4. **Validated Changes**
5. **Work Performance Information**
   - **Work Performance Data?**
6. **Enterprise Environmental Factors**
7. **Organizational Process Assets**

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Output

- **Change Requests**
  - Corrective action
  - Preventive action
  - Defect repair

2020.01.01 100W
2020.03.01 -50W

Work performance data? (raw)
Work performance information?

- **Work Performance Reports**
  - status reports, memos, justifications, information notes, recommendations, and updates.

- **Project Management Plan Updates**
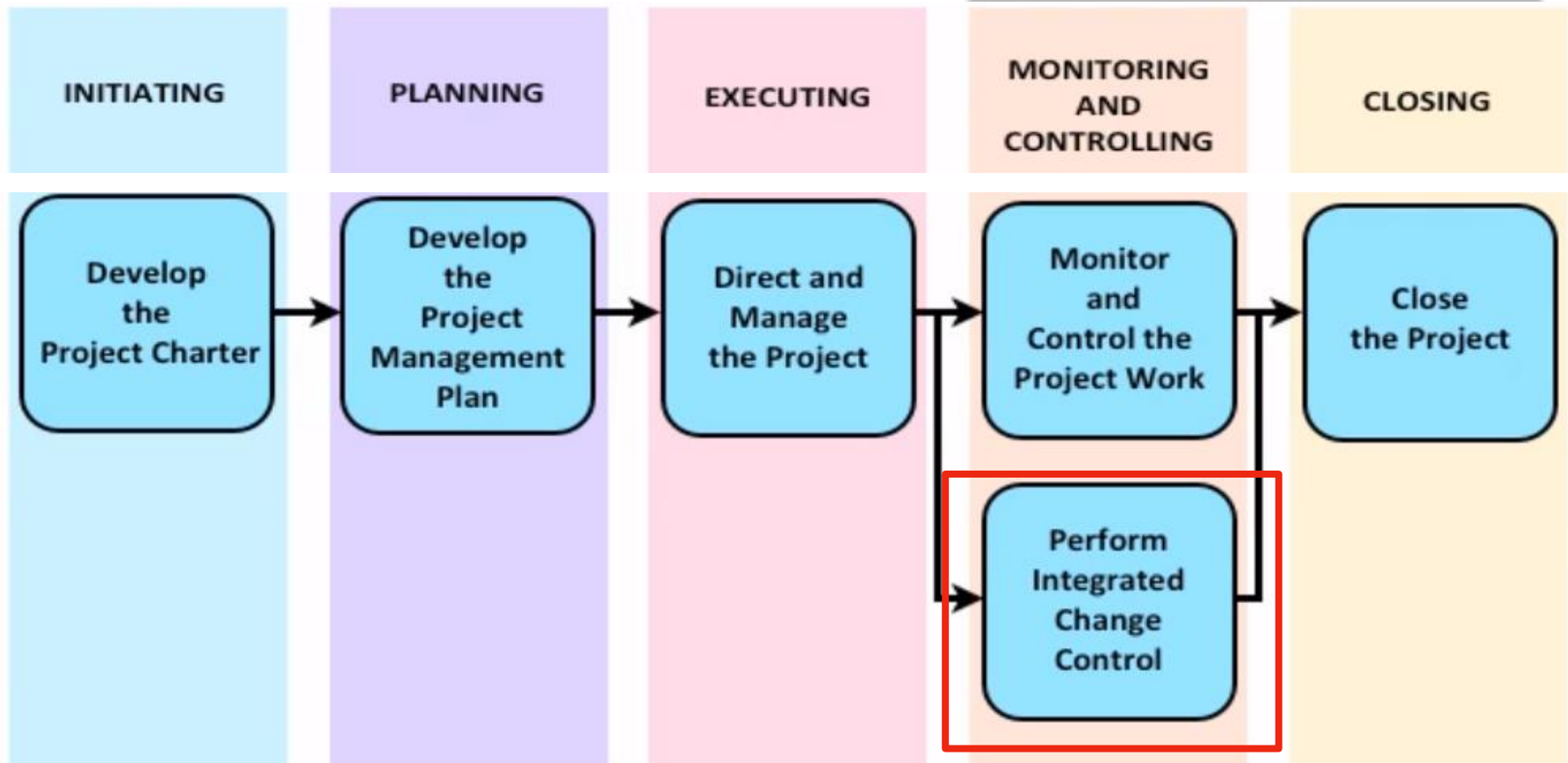
- **Project Documents Updates**

data	→	information	→	report

executing   **monitoring and controlling**

5 Process Groups

6 Project Integration Management processes

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Input
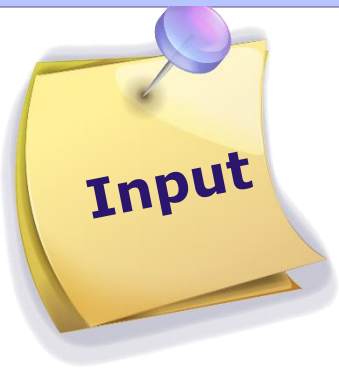
- **Project Management Plan**
- **Work Performance Reports**
  - **?**
- **Change Requests**
  - **?**
- **Enterprise Environmental Factors**
- **Organizational Process Assets**

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Output

- **Approved Change Requests**   To where?
- **Change log**
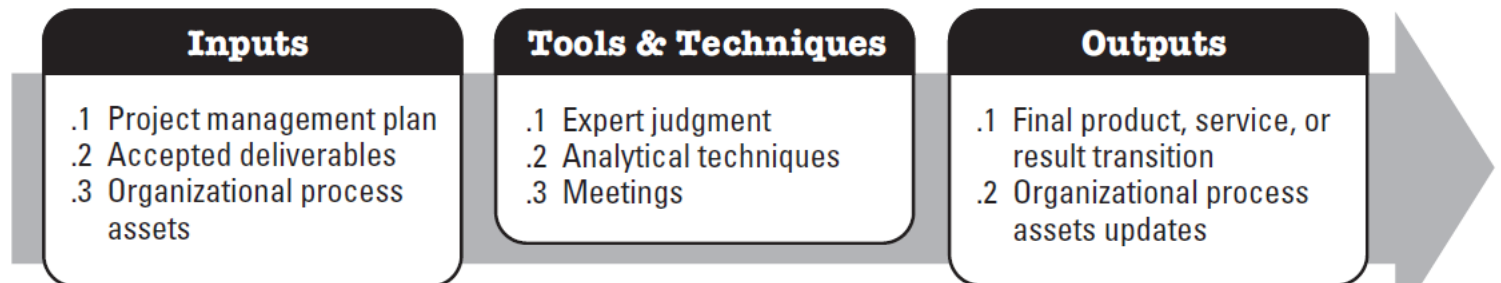- **Project Management Plan Updates**
- **Project Documents Updates**

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Section 2.6 Close Project or Phase

Close Project or Phase

- **Close Project or Phase is the process of finalizing all activities across all of the Project Management Process Groups to formally complete the project or phase.**
- **The key benefit of this process is that it provides lessons learned, the formal ending of project work, and the release of organization resources to pursue new endeavors.**

ITTO

Inputs	Tools & Techniques	Outputs
.1 Project management plan	.1 Expert judgment	.1 Final product, service, or result transition
.2 Accepted deliverables	.2 Analytical techniques	.2 Organizational process assets updates
.3 Organizational process assets	.3 Meetings	

Section 2.6 Close Project or Phase

Output

- **Final Product, Service, or Result Transition**
- **Organizational Process Assets Updates**
  - **Project files**
  - **Project or phase closure documents**
  - **Historical information**
  - **…**

CLOSE!

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