Project Management Processes

Chapter 3 of Rita

Goals of this Unit

- In Framework we describes what you need to do to do the work, whereas the project management process describes what you need to do to manage the project
- Understanding the Processes and Knowledge Areas and relations of Inputs, Tools & Techniques and outputs

The PMBOK® Guide describes the nature of project management processes in terms of the integration between the processes, their interactions, and the purposes they serve. Project management processes are grouped into **five categories known as Project Management Process Groups** (or process Groups):

(Page 76/638, PMBOK 5th edition)

- **Initiating Process Group.** Those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.
- **Planning Process Group.** Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.
- **Executing Process Group.** Those processes performed to complete the work defined in the project management plan to satisfy the project specifications.

- **Monitoring and controlling Process Group**. Those processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.
- **Closing Process Group.** Those processes performed to finalize all activities across all Process Groups to formally close the project or phase.

The Process Groups are **not** project life cycle phases. In fact, it is possible that all Process Groups could be conducted within a phase. As projects are separated into distinct phases or subcomponents, such as concept development feasibility study, **design, prototype, build**, or test, etc., all of the Process Groups would normally be repeated for each phase or subcomponent.

Role of the Knowledge Areas

A Knowledge Area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization. Following Ten Knowledge Areas are identified by PMPOK are used on most projects most of the time.

1. Integration Management	6. HR Management
2. Scope Management	7. Communication Management
3. Time Management	8. Risk Management
4. Cost Management	9. Procurement Management
5. Quality Management	10. Stake Holder Management

Quick learning by Phrase:

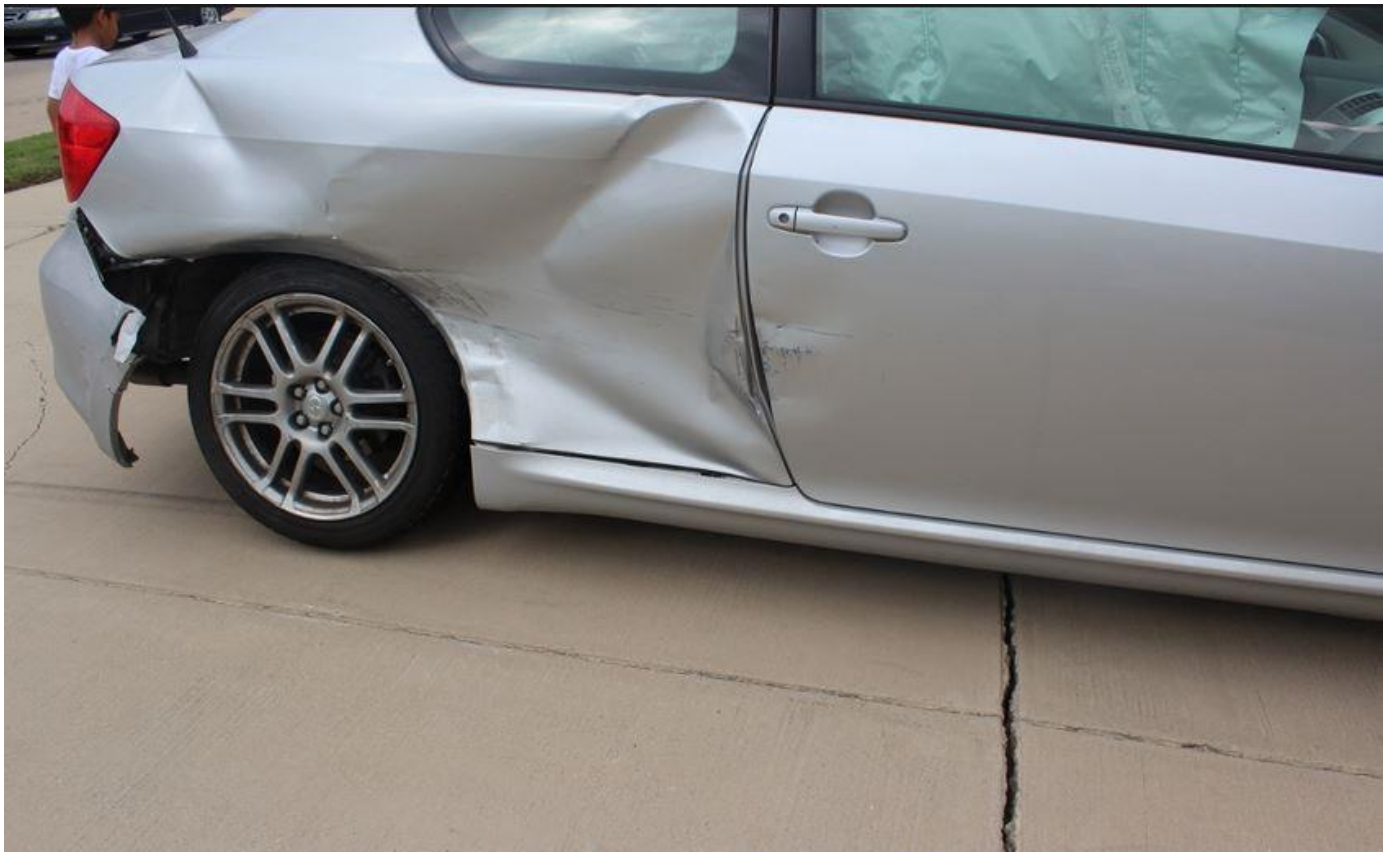
Example:

“ **B**a**B**y **ROY** of **G**reat Britain is **V**ery **G**ood **W**ife who wears **G**old and **S**ilver ”

Color	Significant digits	Multiplier	Capacitance tolerance
Black	0	1	—
Brown	1	10	±1%
Red	2	100	±2%
Orange	3	1 000	—
Yellow	4	10 000	—
Green	5	100 000	±0.5%
Blue	6	1 000 000	—
Violet	7	10 000 000	—
Grey	8	—	—
White	9	—	—
Gold	—	—	±5%*
Silver	—	—	±10%

A Phrase can help you to memorize the 10 Knowledge Areas.

“I Saw Two Cars Quickly Hit Carl’s Rear Passenger Side”



Project Management Process Group and Knowledge Area Mapping

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		5.5 Validate Scope 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	

Continue… Knowledge Area & Process Group Mapping

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	

(Page 87 chapter 3 PMBOK)

The 47 PMBOK® PROJECT MANAGEMENT PROCESSES

Phases	Groups	Knowledge Areas: Integration	Scope	Time	Cost	Quality	Human Resources	Communication	Risk	Procurement	Stakeholder	
Initiation	Initiating	1									1	2
Planning	Planning	1	4	6	3	1	1	1	5	1	1	24
Execution	Executing	1				1	3	1		1	1	8
	Mon & Contr.	2	2	1	1	1		1	1	1	1	11
Close-out	Closing	1								1		2
		6	6	7	4	3	4	3	6	4	4	47


Initiating
Planning
Executing
Monitoring & Controlling
Closing

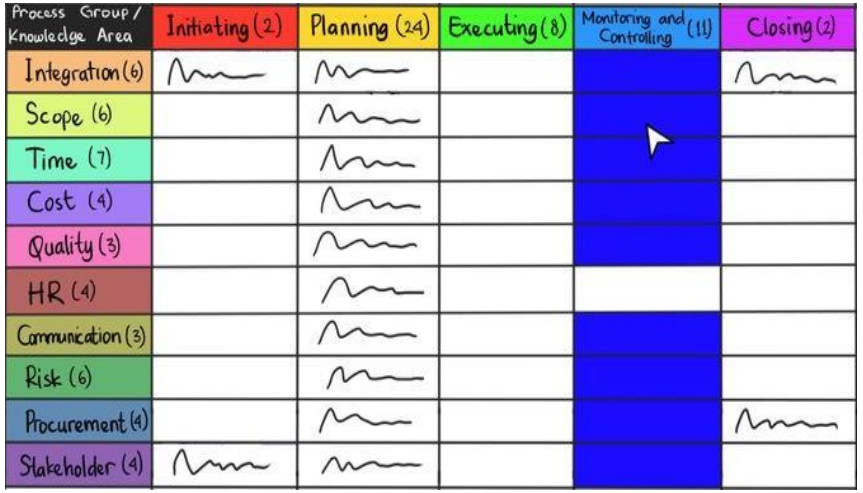

Communications
Stakeholder
Scope
Time
Human Resources
Cost
Quality
Integration
Stakeholder
Risk
Procurement
Integration
Human Resources
Procurement
Quality
Communications
Stakeholder
Integration
Stakeholder
Communications
Cost
Time
Quality
Scope
Integration
Procurement
Risk
Procurement
Integration
Risk

How to Memorize 47 Activates:

Process Group = 2, 24, 8, 11, 2

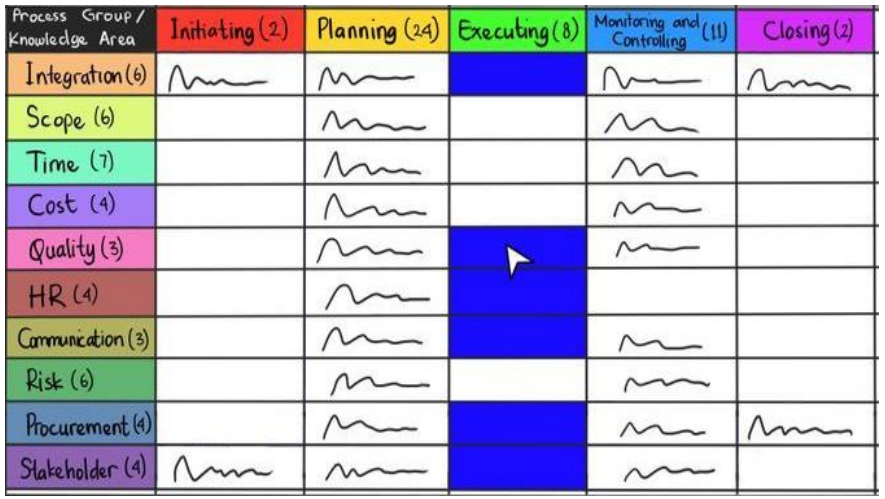
Knowledge Areas = 667 434 3644

Step 2:

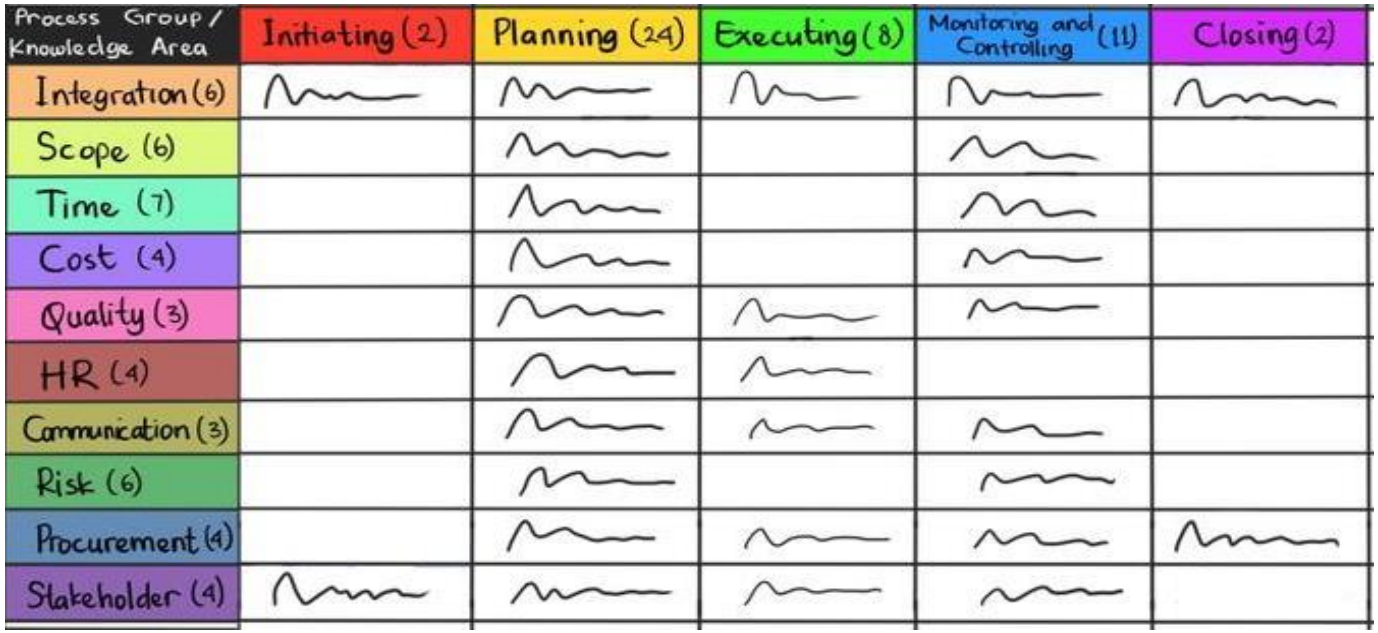


Step-1:

Step 3:



Step -5:



a). Monitoring : 11 = 9 + 2, add (1,1) in (Int, Scope)

b). Execution : 8 = 6 + 2, add (2) in HR

c). Planning: 24 = 10 + 14, add (0, 3, 5, 2, 0, 0, 0, 4, 0, 0)

	Already	(a)	(b)	(c)
PG	I, C,	M	E	P
KA	St, P, Q	I	H	Sc, T, Cost, Com, R

How do they all integrate and interact?

- The five process groups contain the 47 project management processes.
- The 47 processes are made up of activities.
- The activities need to be executed to complete the project and are the detail of the phases of the project.
- Executing the 47 processes also require knowledge and skills of the 10 knowledge areas

Project Management - 20 Steps to Success

Initiating

1. Ensure the viability of your project
2. Develop the Project Charter

Planning

3. Establish the Project Notebook/Extranet
4. Hold the Project Kickoff Meeting
5. Develop the Project Plan
   - 5.1 Develop the Scope Statement
   - 5.2 Develop the Work Breakdown Structure
   - 5.3 Define Project Activities
   - 5.4 Sequence Project Activities
   - 5.5 Estimate Project Activity Durations
   - 5.6 Develop the Project Schedule
   - 5.7 Estimate Project Costs
   - 5.8 Determine Resource Requirements
   - 5.9 Develop the Risk Response Plan

   Subsidiary Management Plans
   - 5.a Develop the Scope Management Plan
   - 5.b Develop the Schedule Management Plan
   - 5.c Develop the Cost Management Plan
   - 5.d Develop the Quality Management Plan
   - 5.e Develop the Staffing Management Plan
   - 5.f Develop the Communications Management Plan
   - 5.g Develop the Risk Management Plan
   - 5.h Develop the Procurement Management Plan

Executing

6. Execute the Project Plan
7. Carry out Quality Assurance
8. Develop your Project Team
9. Issue Status Reports
10. Manage Procurement of External Resources

Monitoring and Controlling

11. Control Project Changes
12. Manage Project Issues
13. Ensure Formal Acceptance of all Deliverables
14. Control the Project Scope, Schedule and Cost
15. Control the Project Quality
16. Report Project Performance
17. Control Project Risks

Closing

18. Document Lessons Learned
19. Close the Project
20. Celebrate Project Success

Many questions came into the mind such as:

- What are the process group and knowledge area?
- What is the difference between these two?
- Why is the PMBOK not organized as per the process group instead of knowledge area?
- Why is the knowledge area needed and how did it come up?

Process Groups

The project management process groups are a logical categorization of tasks or activities that are organized in the way that the projects are being performed. You will see the process groups are arranged in the way that the project activities happen, and the order is: initiating, planning, executing, monitoring & controlling, and closing. All these five process groups are required to complete the project. For example, to complete the project you go through the following processes:

- First of all you initiate the project, which includes developing and approving the project charter

- The second step is to create the project management plan which helps you execute various project activities

- The third stage is to execute the project. Here is where the real work is done and most of the time and money are spent

- Monitoring and controlling is a continuous process which happens throughout the project life cycle till it ends

- The last step is to close the project. Here you close all procurement contracts, update the lessons learned and release the team

(Page-61 of the PMBOK Guide fifth edition)

Knowledge Areas:

These are designed to group processes which have common knowledge characteristics. This means that knowledge areas are divided to keep the same type of skill set (or knowledge) in one group.

For example, let's say that you are in the planning process and are developing the plan for your project. In this process, to calculate the budget you will use two processes: "estimate costs" and "determine budget".

Knowledge Areas	Project Management Process Groups				
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7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	

- Now you come to the monitoring & controlling process. In this process you have to monitor the project activities to keep control of them. Here, control cost is the process to control the project costs.
- Now, look at these processes: estimate costs, determine budget, and control cost.
- The first two processes belong to the planning process group, and the third process belongs to the monitoring & controlling process group.

Now, let's have a look at these processes again. Did you find anything common among them?

Yes, they are talking about things related to the **"cost".**

Therefore, these processes are grouped together and are named the project **"cost management"** knowledge area in the PMBOK Guide, even though they belong to different process groups.

There is no logical relationship among the knowledge areas. Knowledge areas are grouped according to the skill required to manage that particular process. Moreover, there is no relationship between knowledge area and process group.

Key Notes:

- Process groups are logical categorizations of the project management processes in the way that the project moves from initiation to closing
- In knowledge areas, processes are grouped as per their similarities on the subject
- The PMBOK Guide is organized as per the knowledge areas to ease the process of acquiring the skills for professionals