ICT Project Management

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Unit 3: Project Management Process Group

3.1. Project Management Process

- ✓ In project management, there are **two main categories** that every project manager must know in order to succeed
    1. Knowledge areas and
    2. Project management process groups.
- ✓ These two categories are the backbone of the *PMBOK*® Guide.
- ✓ According to PMBOK Guide the **five process groups** in project management are distinct phases that encompass certain actions and activities necessary for successfully completing a project.
    - Initiating
    - Planning
    - Executing
    - Monitoring and Controlling
    - Closing

(Note: ***For detail explanation see on chapter-2 "2.5. Project Life Cycle and Phases")***

3.2 Roles of Major Knowledge Areas on Processes

- ✓ In the Project Management Body of Knowledge (PMBOK) the process groups are the chronological phases that the project goes through, and the **knowledge areas** occur throughout any time during the process groups.
- ✓ The process groups are horizontal, and the knowledge areas are vertical. They are the core technical subject matter of the project management profession, and they bring the project to life.

Following are the **10 Project Management knowledge areas**:

1. Project Integration Management
2. Project Scope Management
3. Project Schedule Management
4. Project Cost Management
5. Project Quality Management
6. Project Resource Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management
10. Project Stakeholder Management

Below table shows how the 10 Knowledge Areas and 5 process groups have been mapped with 49 processes. (*Roles of Major Knowledge Areas on Processes*)

Knowledge Areas	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Project Integration Management	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
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	
Project Schedule Management		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 Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
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 Implement Risk Responses	11.7 Monitor Risks	
Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

Table 1-4 from page 25, Project Management Institute, *A Guide to the Project Management Body of Knowledge (PMBOK)® Guide*, Sixth Edition, copyright 2017.

3.3 Understanding Organizational Process Assets

- ✓ Abbreviated as OPA
- ✓ According to the *Project Management Body of Knowledge* (*PMBOK Guide)*, Organizational Process Assets (OPAs) are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization.
- ✓ These assets influence the management of the project.
- ✓ Organizational process assets include any artifact, practice, or knowledge from any or all of the performing organizations involved in the project that can be used to execute or govern the project.
- ✓ The organizational process assets also include the organization's lessons learned from previous projects and historical information.
- ✓ Organizational Process Assets may include completed schedules, risk data, and earned value data.
- ✓ OPAs are inputs to many project management processes.
- ✓ Since OPAs are internal to the organization, the project team members may be able to update and add to the organizational process assets as necessary throughout the project.

Some **Examples** of OPAs are:

- Previous Project Plans
- Software Tools
- Database of Project Information
- Lessons Learned
- Knowledge Base
- Organizational policies and procedures
- Historical Information
- Project Templates

OPAs are **grouped into two** categories:

1. Processes, policies, and procedures
2. Organizational knowledge bases (or Basic Knowledge of Company)

Processes, Policies and Procedures

- ✓ The assets in this category are not updated as part of the project work.
- ✓ Processes, policies, and procedures are usually established by the project management office (PMO) or another function outside of the project.
- ✓ These can be updated only by following the appropriate organizational policies associated with updating processes, policies, or procedures.
- ✓ Some organizations encourage the team to tailor templates, life cycles, and checklists for the project. In these instances, the project management team should tailor those assets to meet the needs of the project

Organizational Knowledge Bases

- ✓ The assets in this category are updated throughout the project with project information.
- ✓ For example, information on financial performance, lessons learned, performance metrics and issues, and defects are continually updated throughout the project.

3.4 Understanding Enterprise Environment Factor

- ✓ Abbreviates as EEF.
- ✓ Enterprise environmental factors (EEFs) refer to conditions, not under the control of the project team, that influence, constrain, or direct the project.
- ✓ These conditions can be internal and/or external to the organization.
- ✓ EEFs are considered as inputs to many project management processes, specifically for most planning processes.
- ✓ These factors may enhance or constrain project management options.
- ✓ In addition, these factors may have a positive or negative influence on the outcome.
- ✓ EEFs vary widely in type or nature.
- ✓ These factors need to be considered if the project is to be effective

2 Types of EEFs:

1. **EEFs Internal to The Organization**

   The following EEFs are internal to the organization:

   - **Organizational culture, structure, and governance:** E.g. vision, mission, values, beliefs, cultural norms, leadership style, hierarchy and authority relationships, organizational style, ethics, and code of conduct.
   - **Geographic distribution of facilities and resources.** E.g. factory locations, virtual teams, shared systems, and cloud computing.
   - **Infrastructure.** E.g. existing facilities, equipment, organizational telecommunications channels, information technology hardware, availability, and capacity.
   - **Information technology software.** E.g. scheduling software tools, configuration management systems, web interfaces to other online automated systems, and work authorization systems.
   - **Resource availability.** E.g. contracting and purchasing constraints, approved providers and subcontractors, and collaboration agreements.
   - **Employee capability.** E.g. existing human resources expertise, skills, competencies, and specialized knowledge

2. EEFs External to the Organization

The following EEFs are external to the organization.

- **Marketplace conditions.** E.g. competitors, market share brand recognition, and trademarks.
- **Social and cultural influences and issues.** E.g. political climate, codes of conduct, ethics, and perceptions.
- **Legal restrictions.** E.g. country or local laws and regulations related to security, data protection, business conduct, employment, and procurement.
- **Commercial databases.** E.g. benchmarking results, standardized cost estimating data, industry risk study information, and risk databases.
- **Academic research.** E.g. industry studies, publications, and benchmarking results.
- **Government or industry standards.** E.g. regulatory agency regulations and standards related to products, production, environment, quality, and workmanship.
- **Financial considerations.** E.g. currency exchange rates, interest rates, inflation rates, tariffs, and geographic location.
- **Physical environmental elements.** E.g. working conditions, weather, and constraints.

End of Unit 3