



Project Management Process Groups



Project Management Process Groups

- ▶ Project Management Processes
- ▶ Roles of Major Knowledge Areas on Processes
- ▶ Understanding Organizational Process Assets
- ▶ Understanding Enterprise Environment Factor



Project Management Process Groups

- ▶ Project management can be viewed as a number of interlinked processes
- ▶ A **process** is a series of actions directed toward a particular result
- ▶ The project management process groups include:
 - ▶ Initiating processes
 - ▶ Planning processes
 - ▶ Executing processes
 - ▶ Monitoring and controlling processes
 - ▶ Closing processes
- ▶ Process groups can be applied to each phase of the project or to the entire project

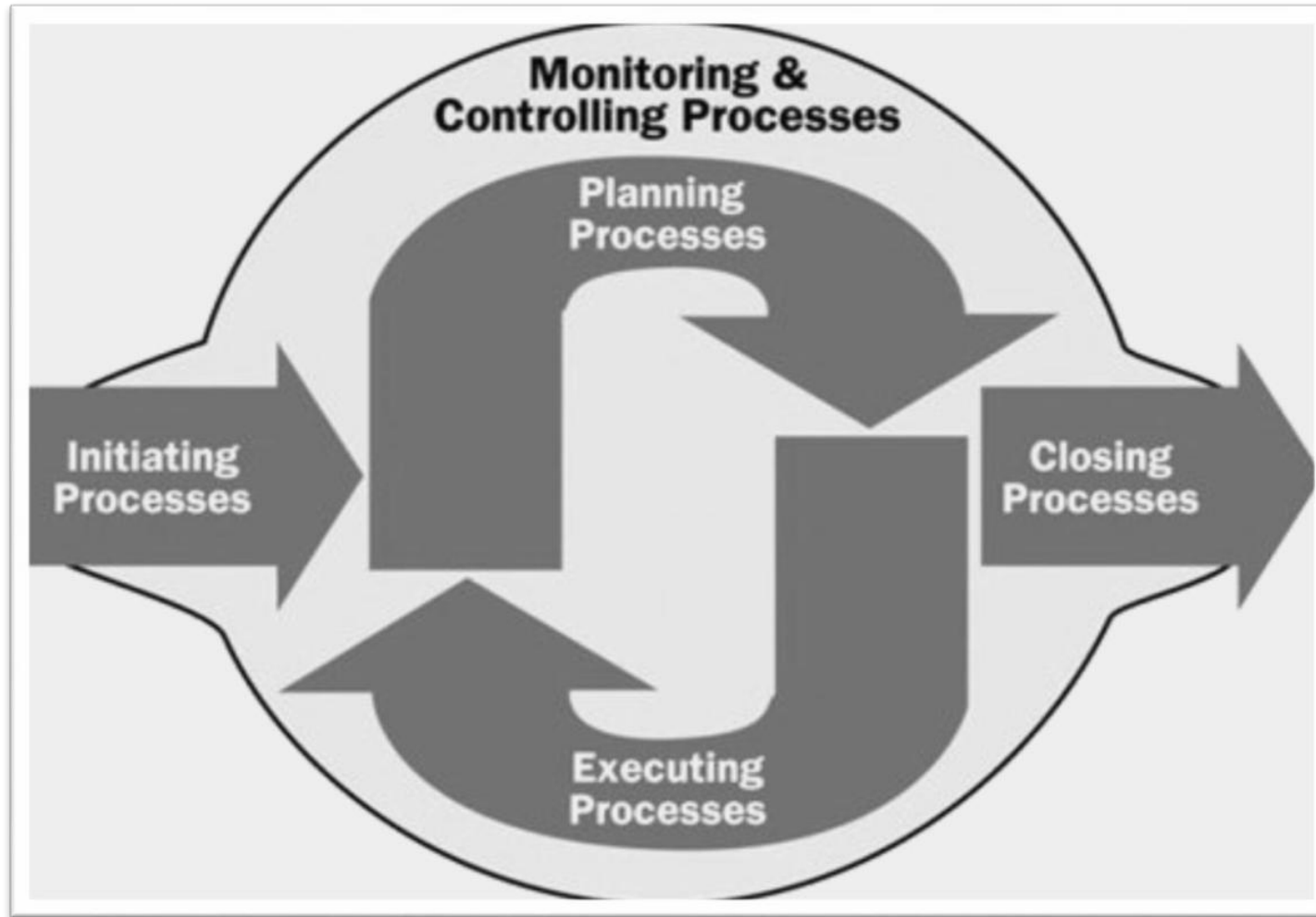


Project Processes

- ▶ Project are composed of processes.
 - ▶ A process is “a series of actions bringing about a result”.
- ▶ Project process are performed by people and generally fall into one of two categories:
 - ▶ project management processes-describe, organize, and complete the work of the project.
 - ▶ Product-oriented processes- specify and create the project’s product and typically defined by the project life-cycle.
- ▶ Project management processes and product-oriented process overlap and interact throughout the project.



Project Management Process



- ▶ Initiating Process Group
- ▶ Planning Process Group
- ▶ Executing Process Group
- ▶ Monitoring & Controlling Process Group
- ▶ Closing Process Group



Project Management Processes

- ▶ **Project management is an integrated endeavor :**
 - ▶ Project Processes
 - ▶ Process Groups
 - ▶ Processes interactions
 - ▶ Customizing project interactions
 - ▶ Mapping of project management processes

PDCA -Cycle



Initiating process

- ▶ Defining and authorizing the project or phase
- ▶ Prepare **project charter**
- ▶ Register stakeholder
- ▶ Determine if the project is worth continuing, should be redirected, or canceled
- ▶ May take place at the beginning of each phase
- ▶ Reexamine the business need for the project during every phase of the project life cycle



Planning processes

- *defining and refining objectives and selecting the best of alternative courses of action to attain the objectives that the project was undertaken to address*
 - ▶ Scope management plan
 - ▶ Define the work that needs to be done
 - ▶ Schedule management plan
 - ▶ Schedule activities related to the work
 - ▶ Cost management plan
 - ▶ Estimate cost for performing the work
 - ▶ Quality management plan
 - ▶ Product meets written specifications and intended use
 - ▶ Procurement management plan
 - ▶ Decide what resource to procure to accomplish the work
 - ▶ Revise plan during each phase for changes
 - ▶ Ensure that the project addresses organization needs



Execution processes

- ▶ **coordinating people and other resources to carry out the plan**
 - ▶ Acquiring project team and resources to carry out various plans and various tasks
 - ▶ Conduct procurement
 - ▶ Manage stakeholder expectations
 - ▶ Produce product, services, or results of the project or phase
 - ▶ Perform quality assurance

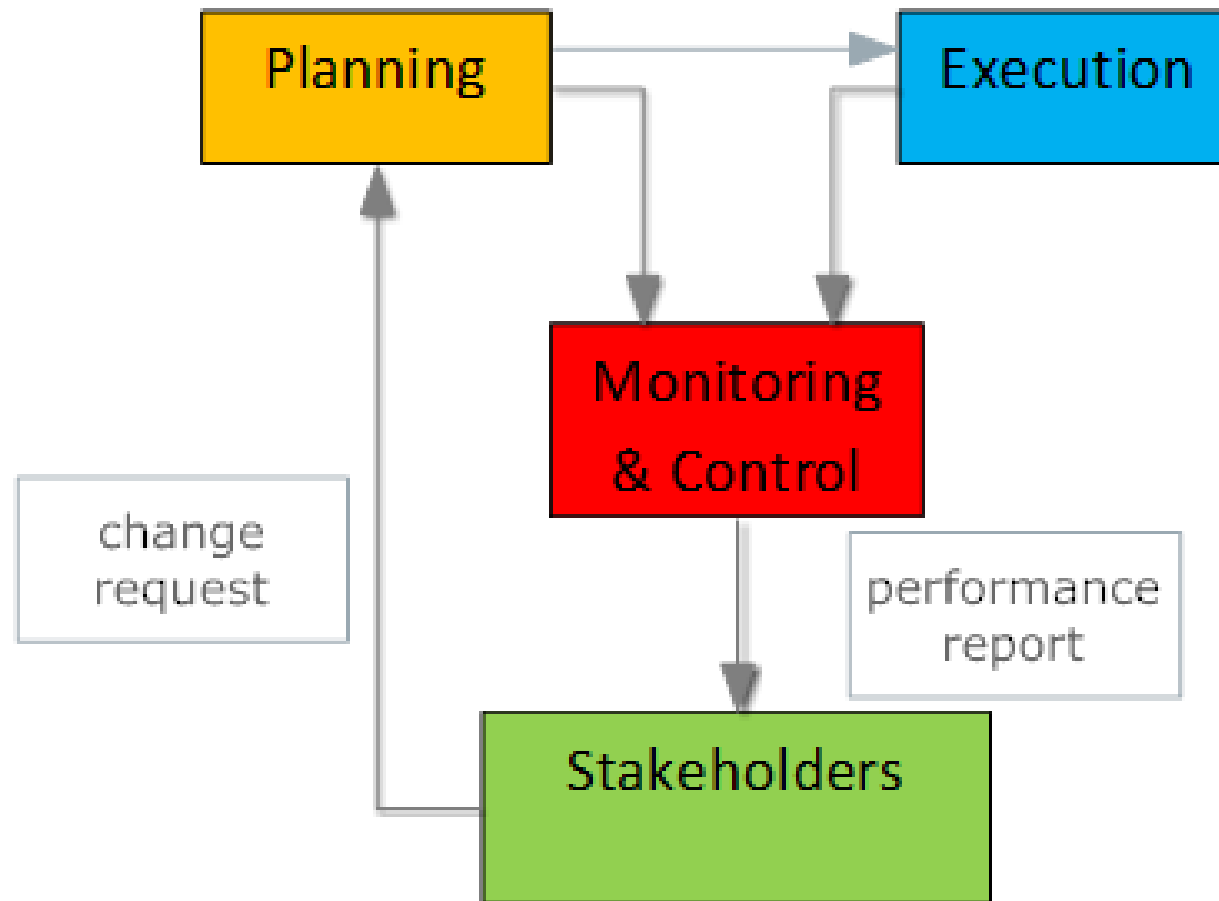


Monitoring and controlling processes

- *ensuring that project objectives are met by monitoring and measuring progress regularly to identify variances from plan so that corrective action can be taken when necessary*
 - ▶ Measure progress against all plans
 - ▶ Take corrective actions when there is deviation
 - ▶ Ensure that progress meet project objectives
 - ▶ Ensure that the project meets stakeholders' needs and quality standards
 - ▶ **Reporting performance** to stakeholders
 - ▶ Stakeholder can identify any necessary changes to keep project on track



Planning, Execution & Control



Closing processes

- ▶ formalizing acceptance of the project phase and bringing it to an orderly end.
 - ▶ End the project efficiently
 - ▶ Archiving project files
 - ▶ Closing out contracts
 - ▶ Document lessons learned
 - ▶ Receiving formal acceptance of the delivered work from customers



Process Group

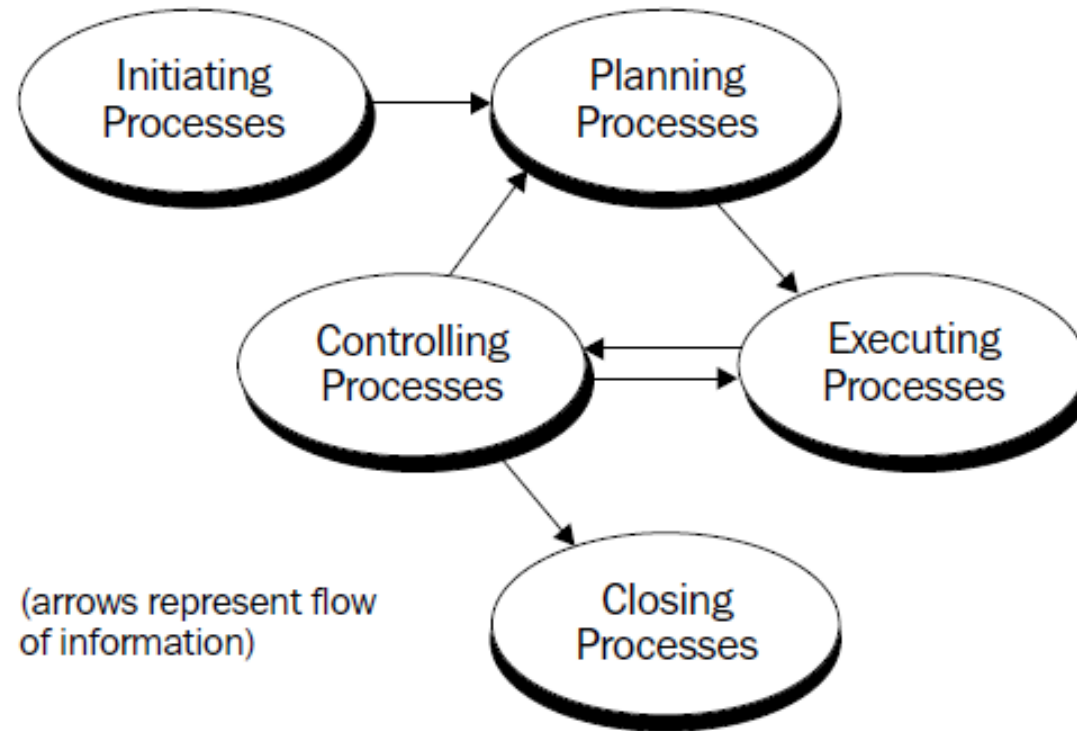


Figure 3–1. Links among Process Groups in a Phase

Process Group

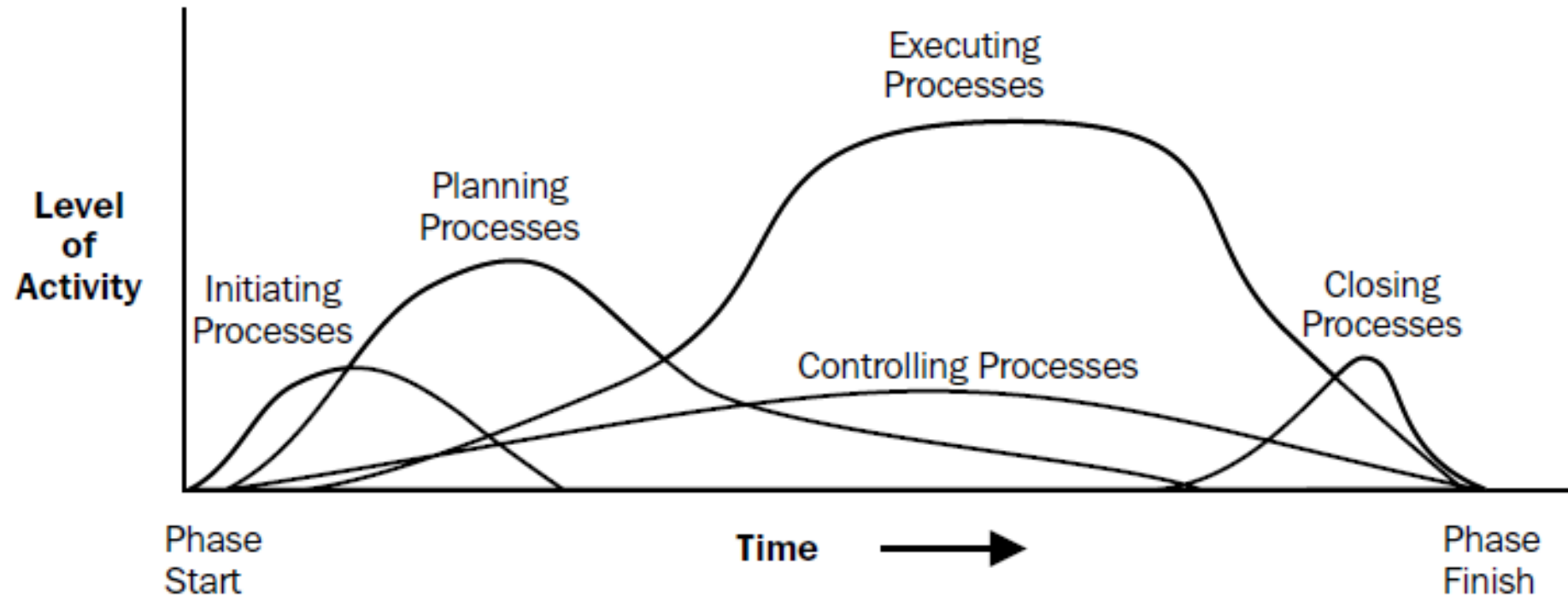


Figure 3–2. Overlap of Process Groups in a Phase

Process Group

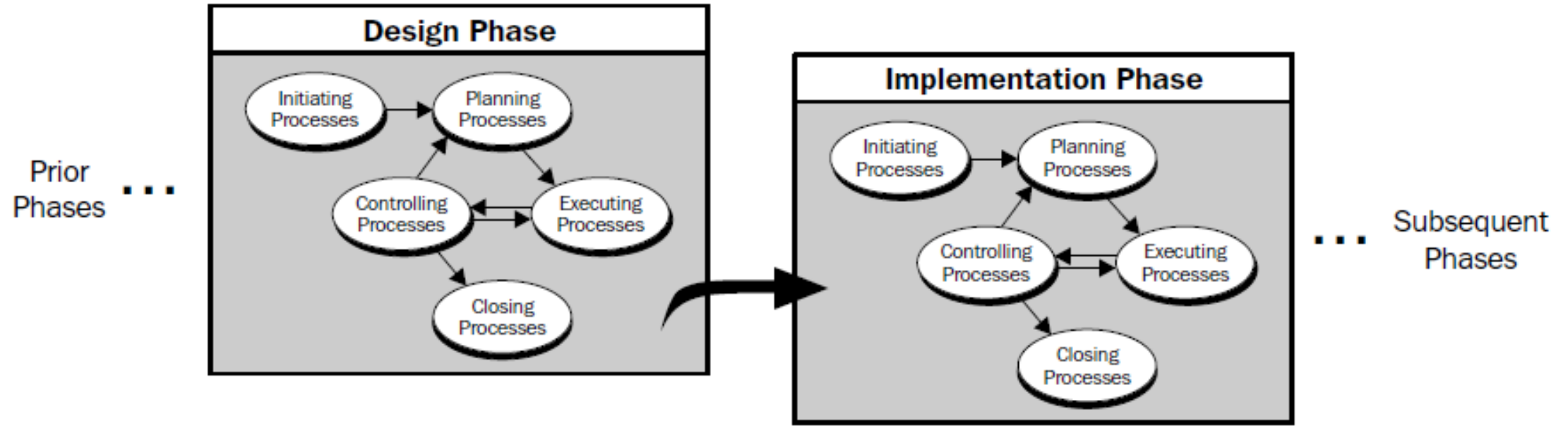


Figure 3–3. Interaction between Phases

Process Interactions

- ▶ Within each process group, the individual processes are linked by their by their input and outputs.
- ▶ By focusing on these links, we can describe each process in terms of its:
 - ▶ Inputs:: documents or documentable items
 - ▶ Tools and techniques: Mechanism applied to the inputs to create the outputs.
 - ▶ Outputs: result of the process

Process Interactions-Initiating Processes

- ▶ Initiation-authorizing the project phase is part of project scope management.

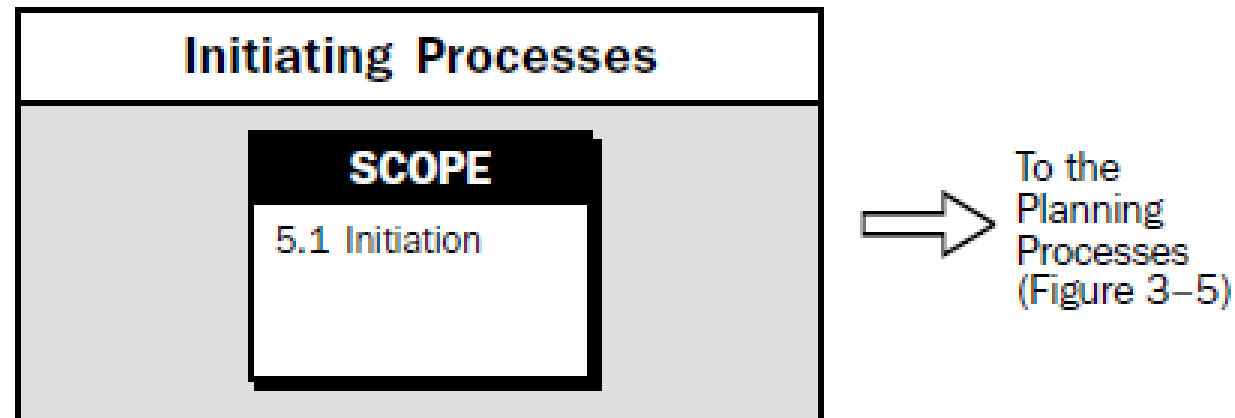


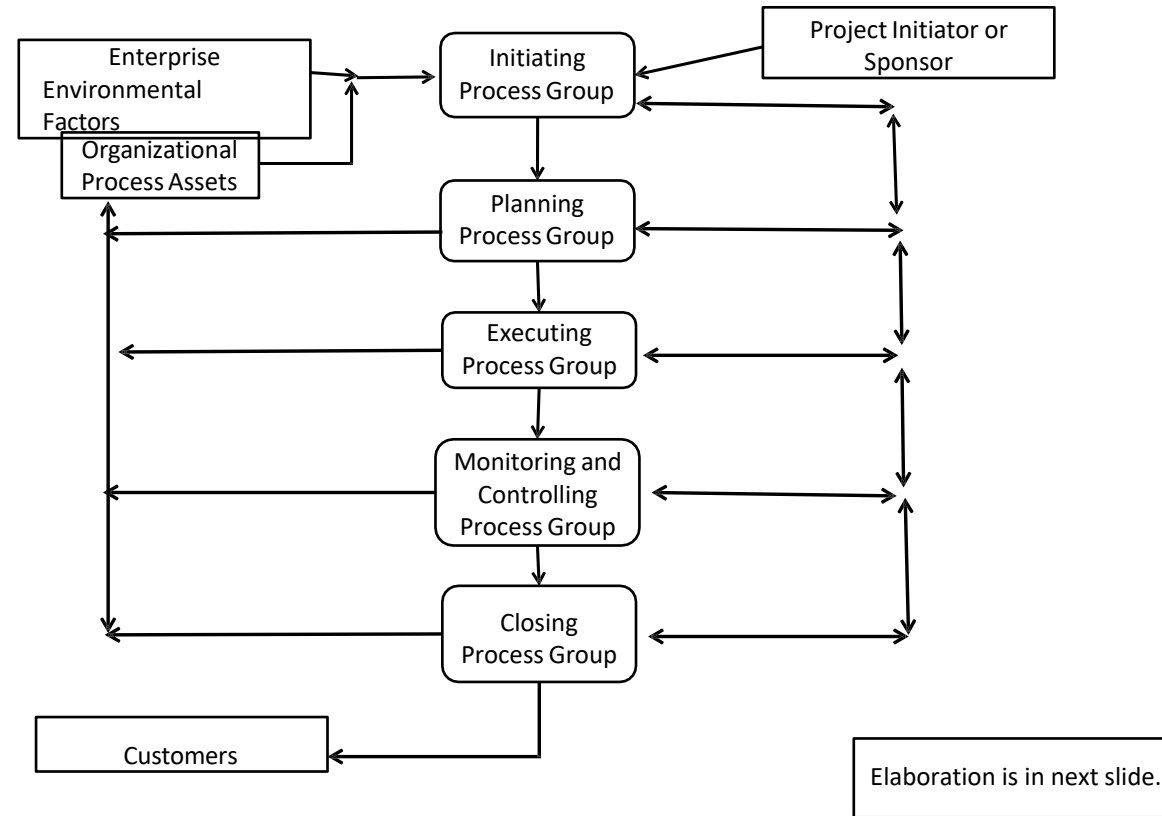
Figure 3-4. Relationships among the Initiating Processes

Project Charter

- ▶ “A document issued by senior management that provides the project manager with the authority to apply organizational resources to project activities.”
 - ▶ Project Charter Content
 - ▶ Business need
 - ▶ Project objectives
 - ▶ Project deliverables
 - ▶ Assumptions
 - ▶ Constraints
 - ▶ Key staff
 - ▶ Written authorization
-

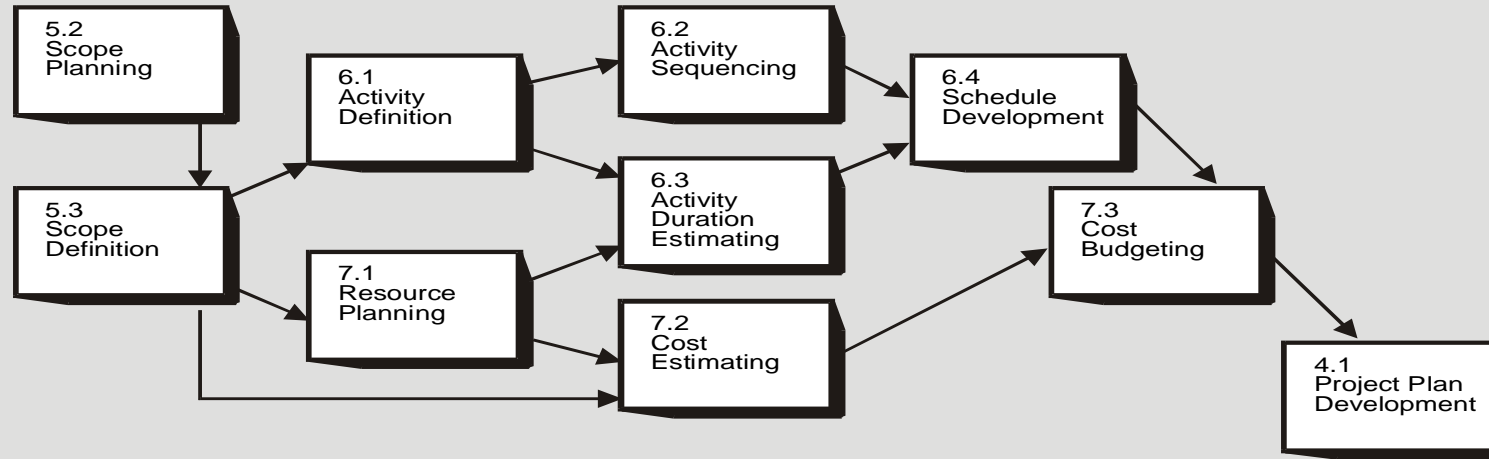


High-level process group interaction –PMI
view

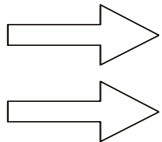


Planning Processes

Core Processes

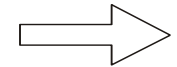


From the
Initiating
Processes
(Figure 3–4)

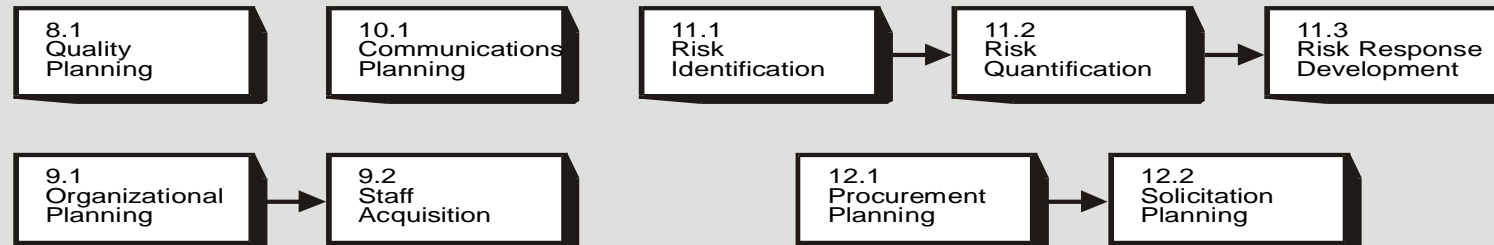


From the
Controlling
Processes
(Figure 3–7)

To the
Executing
Processes
(Figure 3–6)



Facilitating Processes



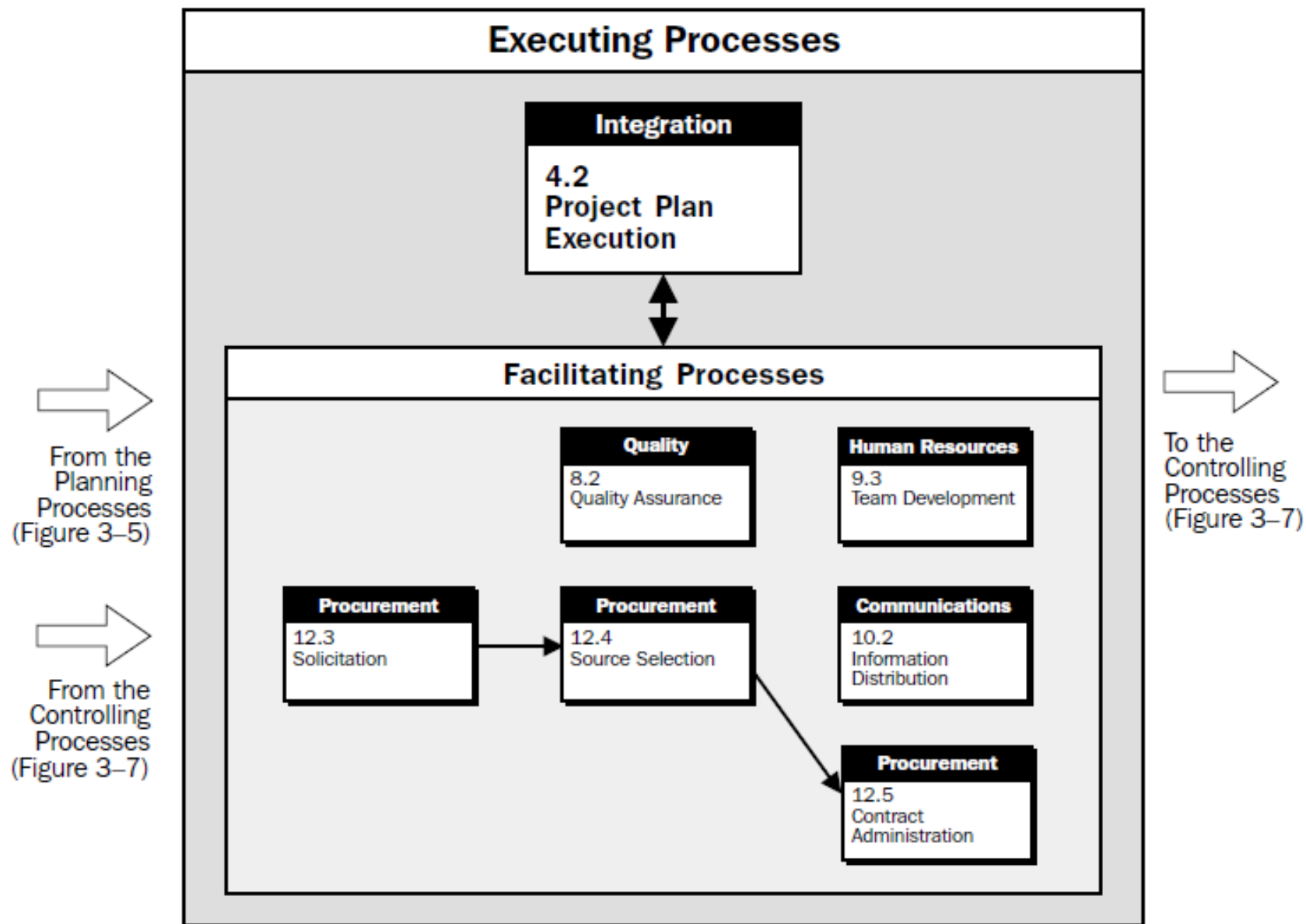


Figure 3-6. Relationships among the Executing Processes

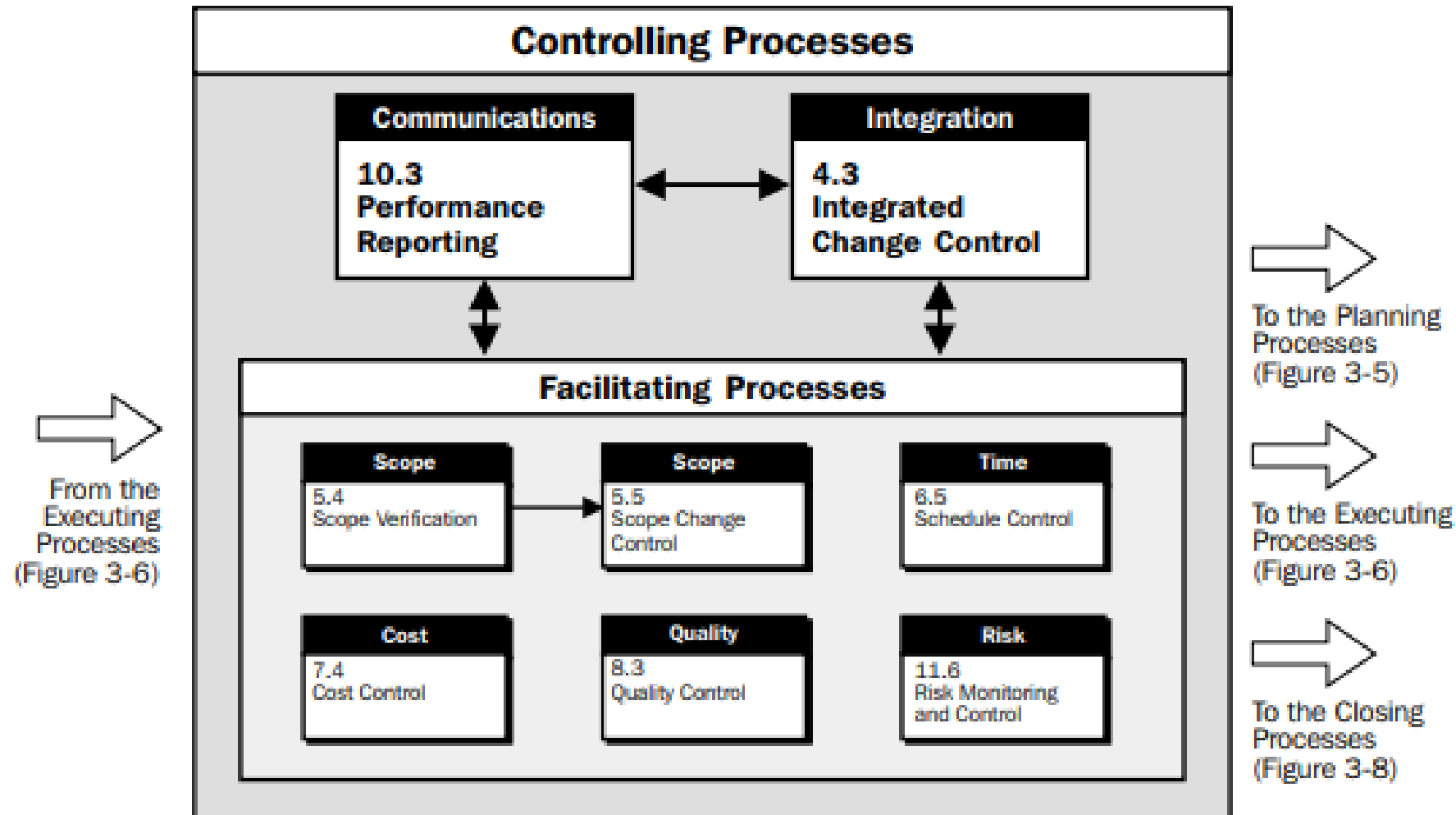


Figure 3-7. Relationships among the Controlling Processes

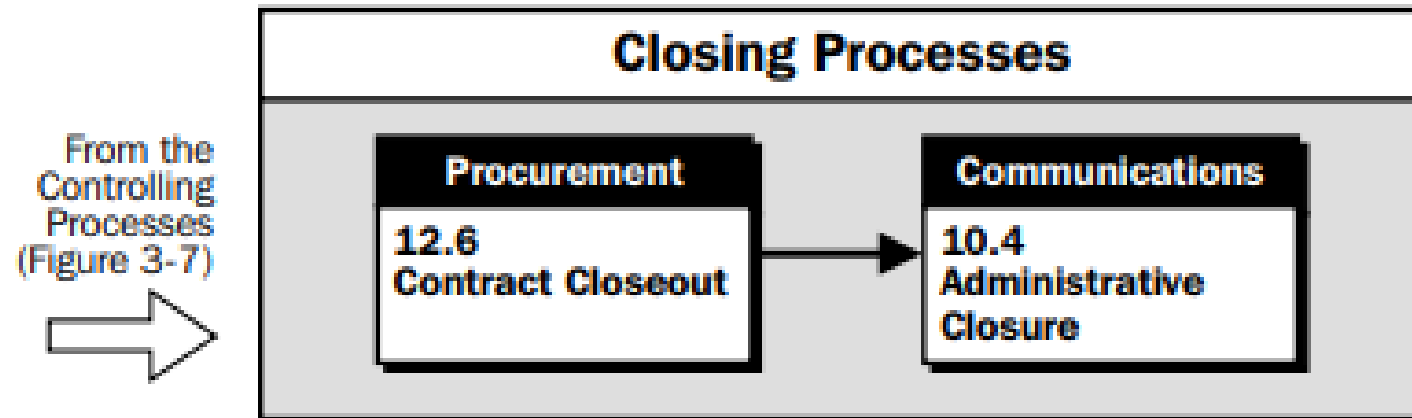


Figure 3–8. Relationships among the Closing Processes

Process Groups Knowledge Area	Initiating	Planning	Executing	Controlling	Closing
4. Project Integration Management		4.1 Project Plan Development	4.2 Project Plan Execution	4.3 Integrated Change Control	
5. Project Scope Management	5.1 Initiation	5.2 Scope Planning 5.3 Scope Definition		5.4 Scope Verification 5.5 Scope Change Control	
6. Project Time Management		6.1 Activity Definition 6.2 Activity Sequencing 6.3 Activity Duration Estimating 6.4 Schedule Development		6.5 Schedule Control	
7. Project Cost Management		7.1 Resource Planning 7.2 Cost Estimating 7.3 Cost Budgeting		7.4 Cost Control	
8. Project Quality Management		8.1 Quality Planning	8.2 Quality Assurance	8.3 Quality Control	
9. Project Human Resource Management		9.1 Organizational Planning 9.2 Staff Acquisition	9.3 Team Development		
10. Project Communications Management		10.1 Communications Planning	10.2 Information Distribution	10.3 Performance Reporting	10.4 Administrative Closure
11. Risk Project Management		11.1 Risk Management Planning 11.2 Risk Identification 11.3 Qualitative Risk Analysis 11.4 Quantitative Risk Analysis 11.5 Risk Response Planning		11.6 Risk Monitoring and Control	
12. Project Procurement Management		12.1 Procurement Planning 12.2 Solicitation Planning	12.3 Solicitation 12.4 Source Selection 12.5 Contract Administration		12.6 Contract Closeout

Figure 3–9. Mapping of Project Management Processes to the Process Groups and Knowledge Areas

Organizational Process Assets

- ▶ **Asset:** Any tangible or intangible thing that can be owned or controlled to produce value for us is called an Asset for us.
- ▶ Similarly an organization has assets in **terms of process policies and knowledge base** which becomes mature with the time.
- ▶ Organization **invests** in creating all these **process, policies and knowledge** bases so that it can help the organization wherever it is needed and thus called Organizational Process Assets.
- ▶ Organizational Process Assets has important role in project's outcome and with the time it grows and becomes more and more mature.



Organizational Process Assets

- ▶ Formal and Informal policies, procedures and guidelines that could impact how project scope is managed
- ▶ Includes policies & procedures pertaining to project scope planning & management, Historical Information of Previous project and lesson learnt
- ▶ Project Log Book (Continuous Record Keeping)
- ▶ Project Log Book from Day 1 (Continuous logs of Date, Time, Participants/Members, Key Activities, Events, Mails, Meetings, Official Visitors etc)
- ▶ Used in audits, inspections and post project evaluation
- ▶ Also common source of archive data



Organizational Process Assets categories

- ▶ **Processes and procedures:** initiating, planning, executing, monitoring, and controlling
- ▶ **Corporate knowledge base:** corporate knowledge base includes but not limited to
 - ▶ Configuration management knowledge bases (contains the versions, baselines, organization standards, policies, procedures etc)
 - ▶ Financial databases (contains information of labor hours, incurred costs, budgets etc.)



Organizational Process Assets categories

Corporate knowledge base:

- ▶ Historical information and lessons learned knowledge bases (project records, documents, project closure documentation, project performance information, and information from risk management activities from previous projects)
- ▶ Issue and defect management databases
- ▶ Process measurement databases
- ▶ Project files from past projects (scope, cost, schedule, and performance measurement baselines, project calendars etc.



Organizational Process Assets

Processes and Procedures

- ▶ Initiating and Planning :
 - ▶ Guidelines and criteria for tailoring the organization's set of standard processes and procedures to satisfy the specific needs of the project
 - ▶ Specific organizational standards such as policies (e.g. HR policies, health and safety policies, ethics policies, and PM policies) product and project life cycles and quality policies and procedures (e.g. process audits, improvement target, checklists, and standardized process definitions for use in the organization)
 - ▶ Templates e.g., risk register, work breakdown structure, project schedule network diagram, and contract templates).



Enterprise Environmental Factors

- ▶ You need different approaches to deal effectively with the cultural, political, and legal environments the project is operating within the organization.
- ▶ Enterprise Environment Factors (EEFs) include all **policies, practices, procedures, and legislations that exist both inside and outside of the organization that will impact the way you manage a project.**



Enterprise Environmental Factors

- ▶ These are very important inputs for project planning. You must know the organizational culture, norms, and policies for your project success. Here are a few examples of EEFs: Organizational culture, processes, and infrastructure; Product standards; Quality standards; Government standards; Market standards and conditions; Codes of conduct; Staffing guidelines; Reviews and training records; Work authorization systems; Political unrest; Organizational communication channels; Risk databases; Project management information systems (PMIS); etc.
- ▶ Enterprise environment factors are so important that they can enhance or reduce the project management options and positively or negatively impact the project success.



Enterprise Environmental Factors

- ▶ Culture/Infrastructure
- ▶ Tools
- ▶ Human Resource
- ▶ Personnel Policies
- ▶ Market Place Conditions



Def: Enterprise Environmental Factors

- ▶ Organizational culture, structure, and governance
- ▶ Geographic distribution of facilities and resources
- ▶ Government or industry standards (e.g., regulatory agency regulations, code of conduct, product standards, quality standards, and workmanship standards)
- ▶ Infrastructure (e.g. existing facilities and capital equipment)
- ▶ Existing human resources (e.g. skills, disciplines, and knowledge, such as design, development, legal, contracting, and purchasing)
- ▶ Personnel administration (e.g. staffing and retention guidelines, employee performance reviews and training records, reward and overtime policy, and time tracking)
- ▶ Company work authorization systems
- ▶ Marketplace conditions
- ▶ Stakeholder risk tolerances
- ▶ Political climate
- ▶ Organizations established communication channels
- ▶ Commercial databases (e.g., standardized cost estimating data, industry risk study, information and risk databases)
- ▶ Project management Information system (e.g., an automated tool, such as a scheduling software tool, a configuration management system, an information collection and distribution system, or web interfaces to other online automated systems)



Def: Organizational Process Assets

Processes and Procedures

- ▶ Initiating and Planning :
 - ▶ Guidelines and criteria for tailoring the organization's set of standard processes and procedures to satisfy the specific needs of the project
 - ▶ Specific organizational standards such as policies (e.g. HR policies, health and safety policies, ethics policies, and PM policies) product and project life cycles and quality policies and procedures (e.g. process audits, improvement target, checklists, and standardized process definitions for use in the organization)
 - ▶ Templates e.g., risk register, work breakdown structure, project schedule network diagram, and contract templates).
- ▶ Executing, Monitoring and Controlling:
 - ▶ Change control procedures, including the steps by which performing organization standards, policies, plans, and procedures or any project documents will be modified, and how any changes will be approved and validated;
 - ▶ Financial controls procedures (e.g., time reporting, required expenditure and disbursement reviews, accounting codes, and standard contract provisions);
 - ▶ Issue and defect management procedures defining issue and defect controls, issue and defect identification and resolution, and action item tracking;
 - ▶ Organizational communication requirements (e.g., specific communication technology available, authorized communication media, record retention policies, and security requirements);
 - ▶ Procedures for prioritizing, approving, and issuing work authorizations;
 - ▶ Risk control procedures, including risk categories, risk statement templates, probability and impact definitions, and probability and impact matrix; and
 - ▶ Standardized guidelines, work instructions, proposal evaluation criteria, and performance measurement criteria.
- Closing:
 - ▶ Project closure guidelines or requirements (e.g., lessons learned, final project audits, project evaluations, product validations, and acceptance criteria).

Corporate Knowledge Base

- ▶ The organizational knowledge base for storing and retrieving information includes, but is not limited to:
- ▶ Configuration management knowledge bases containing the versions and baselines of all performing organization standards, policies, procedures, and any project documents;
- ▶ Financial databases containing information such as labor hours, incurred costs, budgets, and any project cost overruns;
- ▶ Historical information and lessons learned knowledge bases (e.g., project records and documents, all project closure information and documentation, information regarding both the results of previous project selection decisions and previous project performance information, and information from risk management activities);
- ▶ Issue and defect management databases containing issue and defect status, control information, issue and defect resolution, and action item results;
- ▶ Process measurement databases used to collect and make available measurement data on processes and products; and
- ▶ Project files from previous projects (e.g., scope, cost, schedule, and performance measurement baselines, project calendars, project schedule network diagrams, risk registers, planned response actions, and defined risk impact).

