

Islamic Azad University
Science and Research Branch

Project Management
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Session 3: Project Lifecycle

Project Management

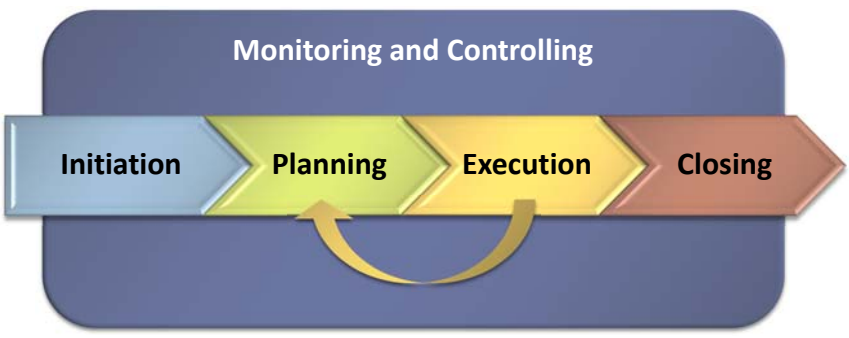
Session 3 Outline:

- Project lifecycle
- Types of lifecycle
- Project phases and gates in industrial projects

Project Lifecycle

Initiating to Closing

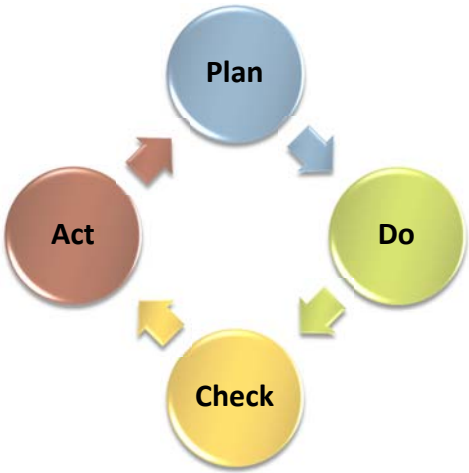
- Five stages of project management lifecycle (by PMBOK)



Project Lifecycle

PDCA

- 4 cyclic steps



Project Lifecycle

Initiating

- Led by a project sponsor
- Developing a good problem statement
- Developing appropriate scope, goals and objectives
- Identification of constraints
- Developing a project charter
- Obtaining the authority to proceed
- ...



Project Lifecycle

Planning

- Planning the work
- Developing a project management (execution) plan
- Generating a work breakdown structure (WBS)
- Developing a project schedule
- Developing a project budget
- Drafting a communication plan
- Creating a risk matrix
- Staffing



Project Lifecycle

Executing

- Working the plan
- Estimating and forecasting
- Change management
- Quality management
- Reporting
- ...



Project Lifecycle

Monitoring and Controlling

- Monitoring and controlling cost
- Monitoring and controlling time
- Applying earned value management
- Monitoring and controlling HSE
- Quality assurance and control
- ...



Project Lifecycle

Closing

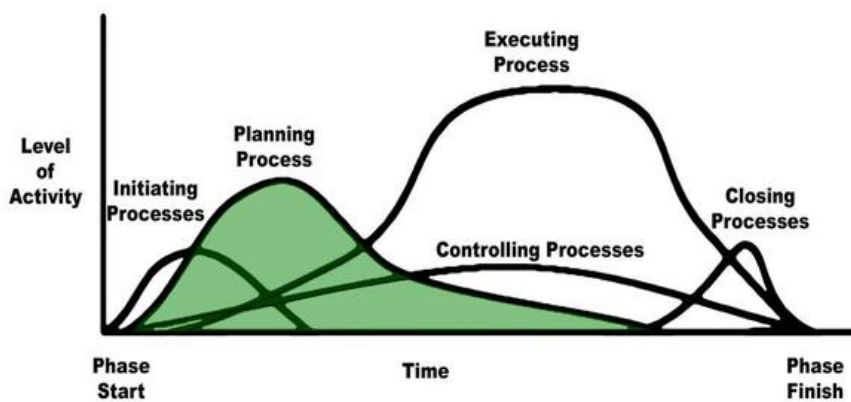
- Training customer
- Transferring documents
- Evaluation
- Recording lessons learned
- Releasing resources
- ...



Project Lifecycle

Initiating to Closing

Traditional Project Management Lifecycle



Project Lifecycle

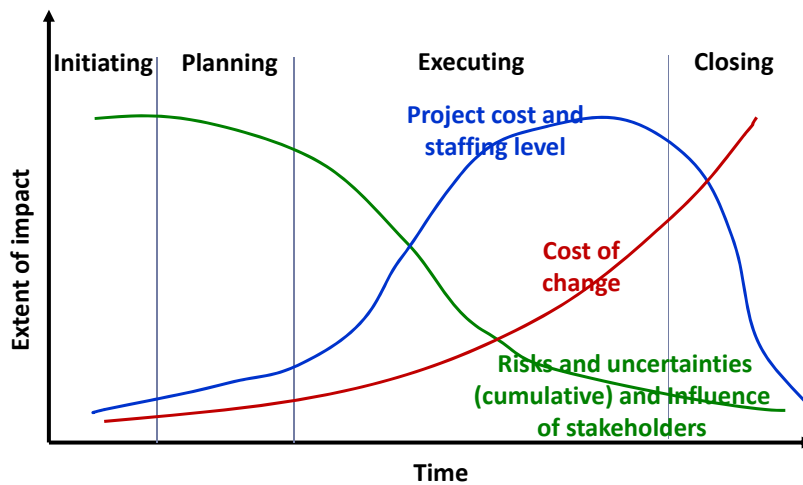
Initiating to Closing

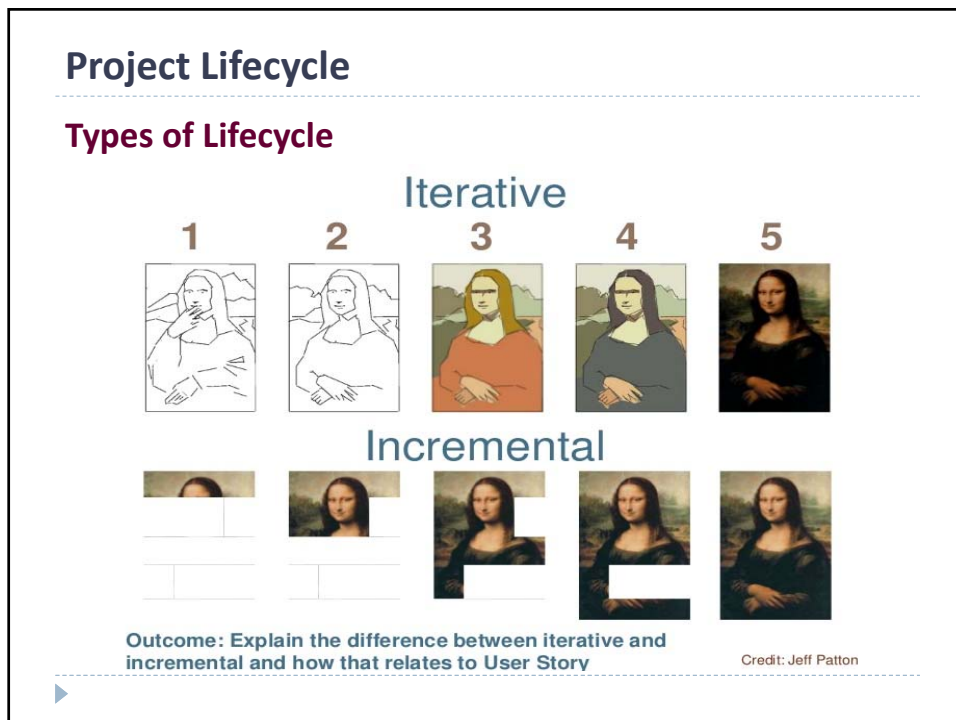
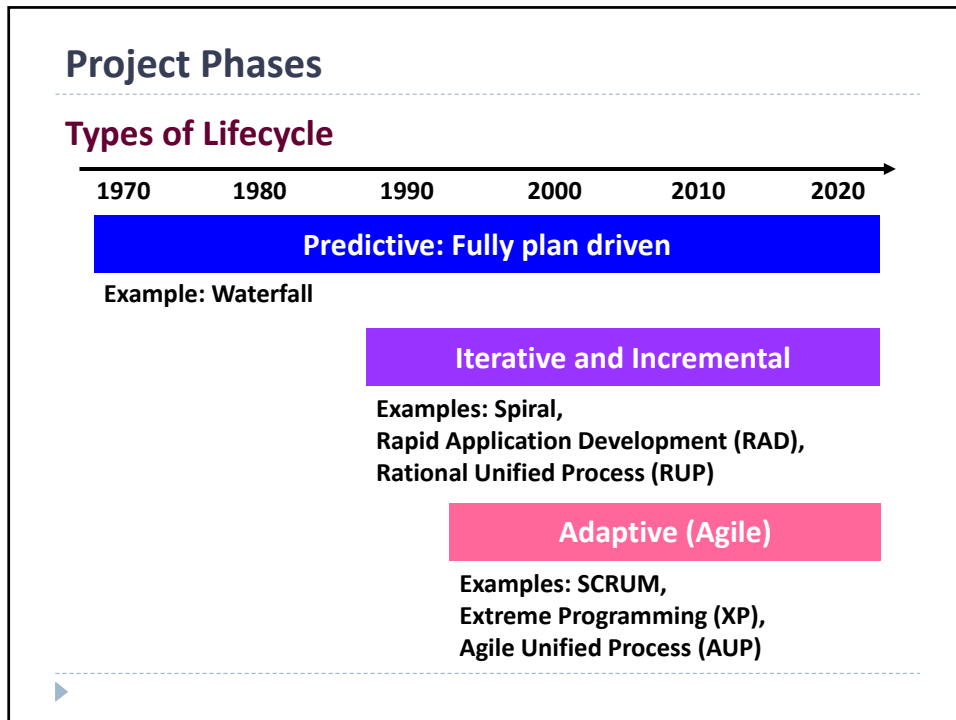
- Slow start (initial resources assigned, PM selected, program organized)
- Quick momentum in the midway
- Slow finish (many parts must come together at the end)



Project Lifecycle

Changing Factors



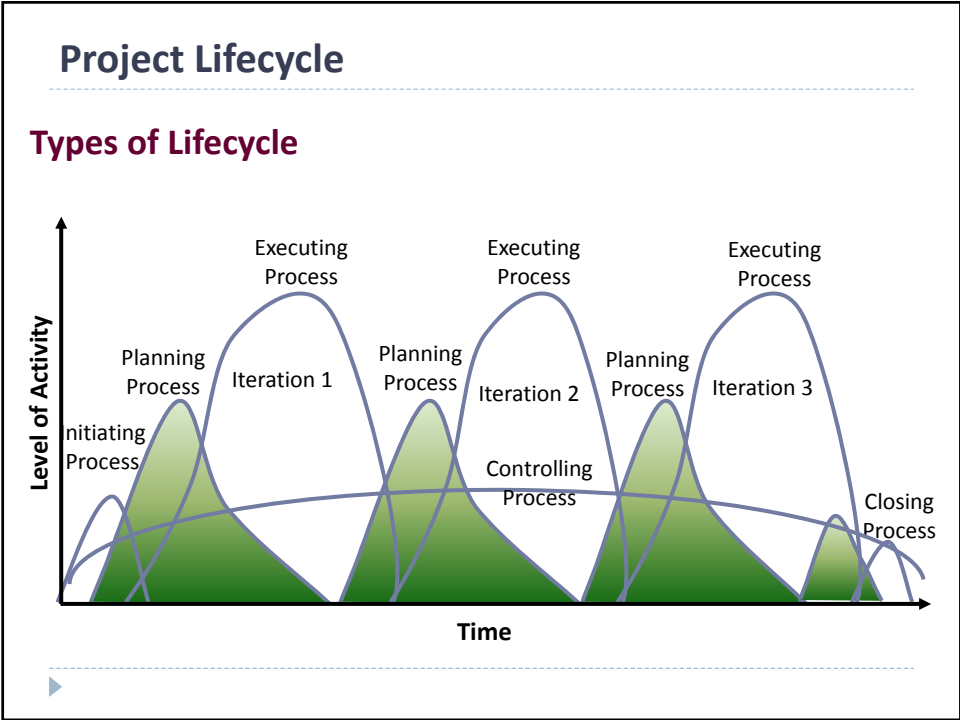


Project Lifecycle

Types of Lifecycle

- Incremental: Not making it at once
- Iterative: Not making it all right from the beginning
- Agile: Incremental + Iterative

▶



Project Lifecycle

Types of Lifecycle

Topic	Predictive	Iterative	Adaptive (agile)
Phases	Sequential, overlapping	Sequential, overlapping	Sequential, overlapping, parallel
High-Level Scope	Yes	Yes	Yes
Detailed Scope	At beginning of project	Only for each phase	Only for each phase or iteration
High-Level Planning	Yes	Yes	Yes
Detailed Planning	At beginning of project or rolling wave	Only for each phase	Only for each phase or iteration
When Used	Product is well understood	Large and complex projects	Product is not well understood, rapidly changing environments
Customer involvement	Beginning, when scope changes, and project end	Periodic	Continuous



Project Phases

Industrial Projects

- Industrial projects are complex tasks; they have to be proceeded in phases, not in one single rush. The phases are often as follows:
 - Identification
 - Selection
 - Development
 - Execution
 - Operation
- The phases have names, but the names are not consistent across industry.



Project Phases

Industrial Projects

Identification	Selection	Development	Execution	Operation
Identifying the need, Identifying various alternatives	Evaluating alternatives and selecting from them	Developing the preferred alternative	Detail design, procurement, construction, commissioning and startup	Operating the plant
FEL1	FEL2	FEL3	FEL4	Operation
Pre-DBM	DBM	EDS	EPC	Operation
Concept	Basic Engineering	FEED	Detail Eng.	Operation

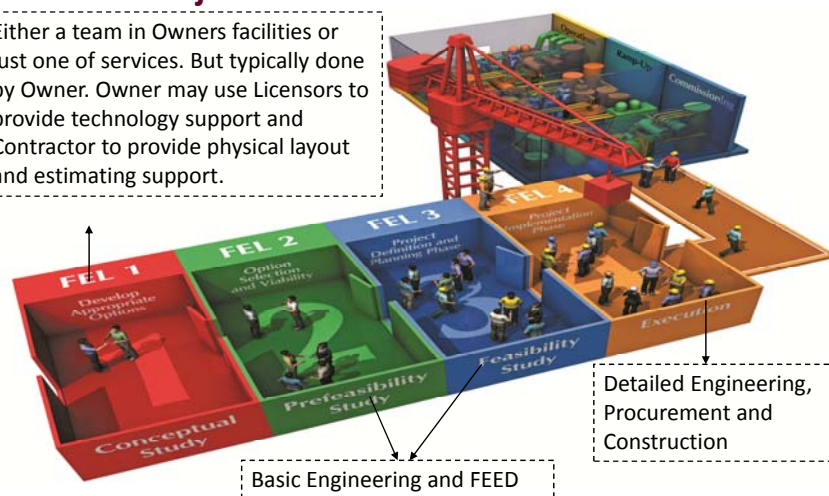
- * FEED = Front End Engineering Design
- * FEL = Front End Loading
- * DBM = Design Basis Memorandum
- * EDS = Engineering Design Specification

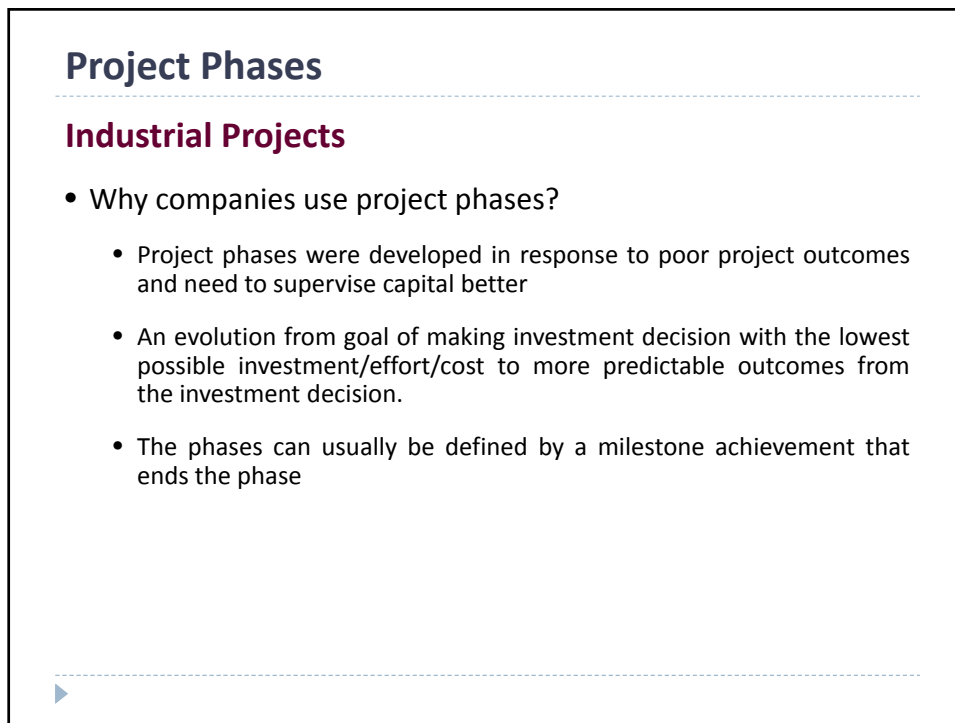
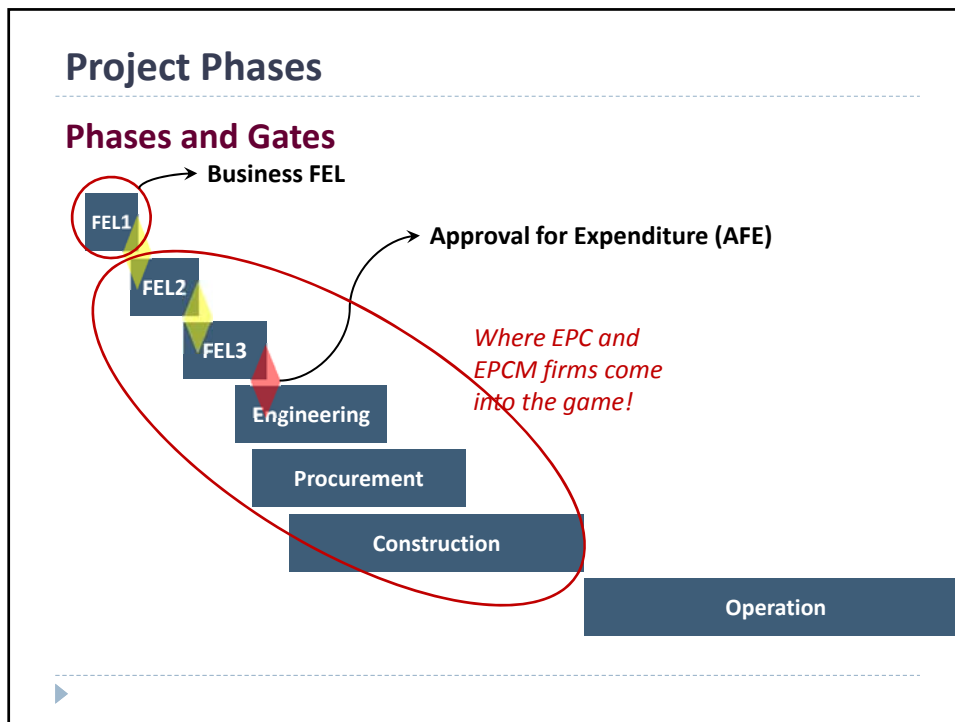


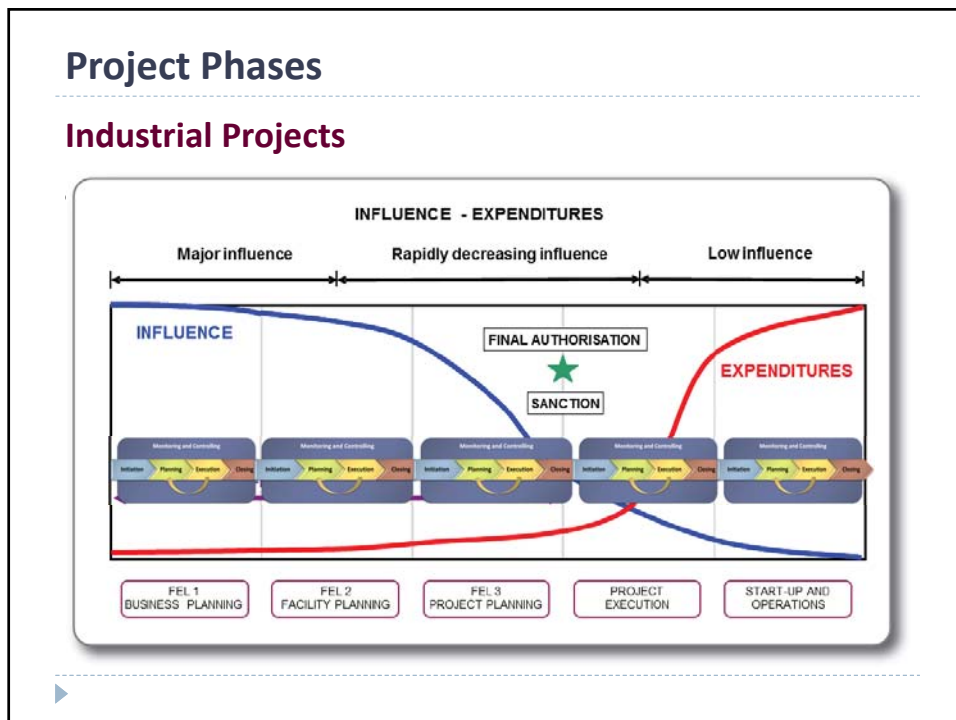
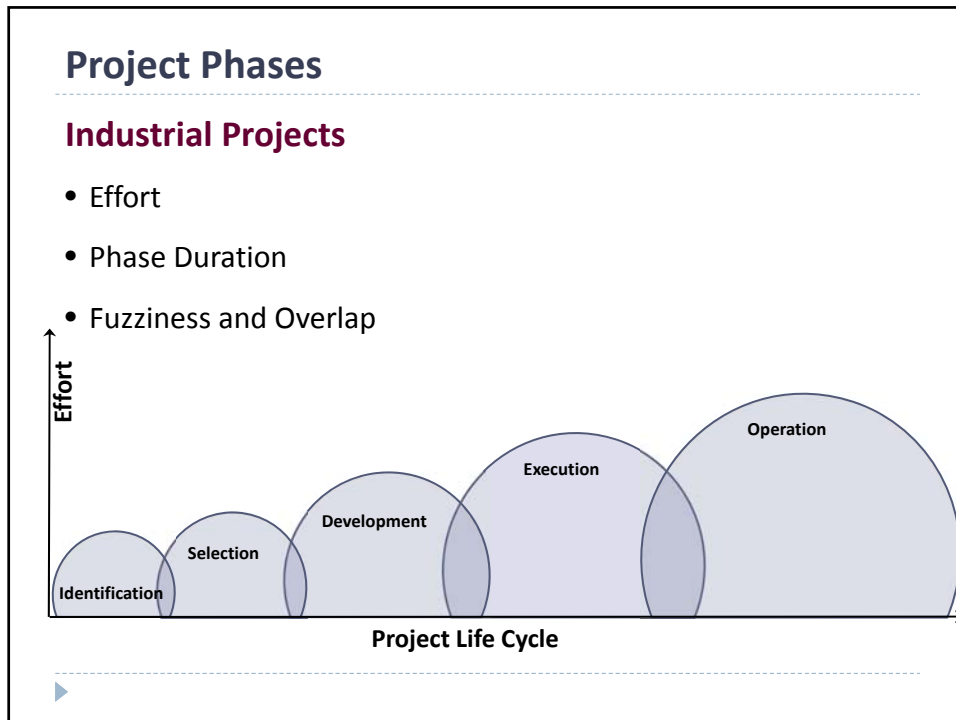
Project Phases

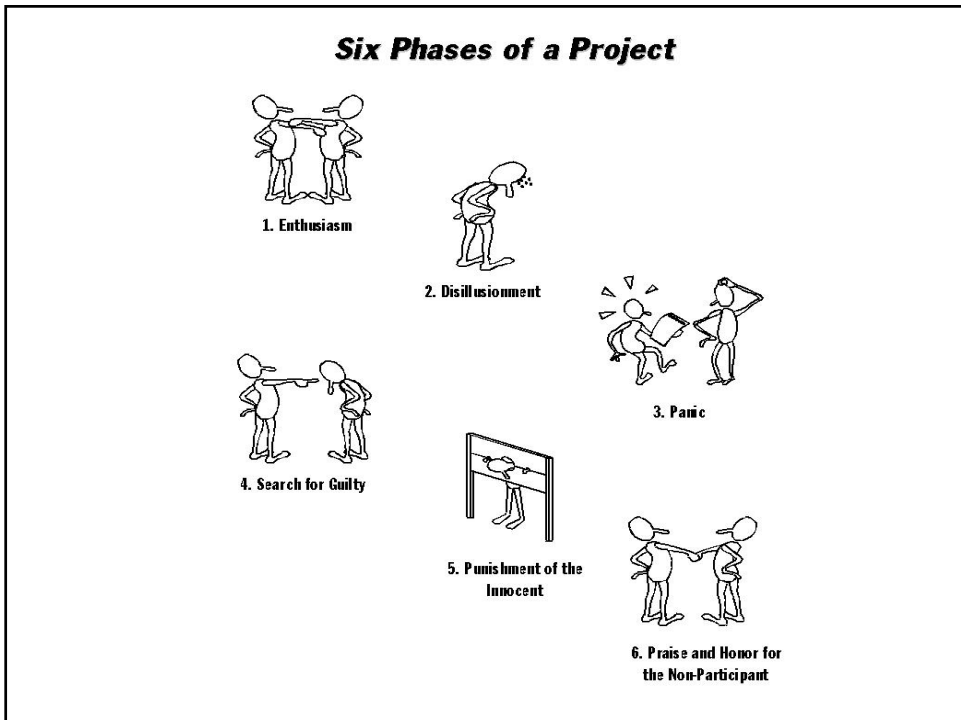
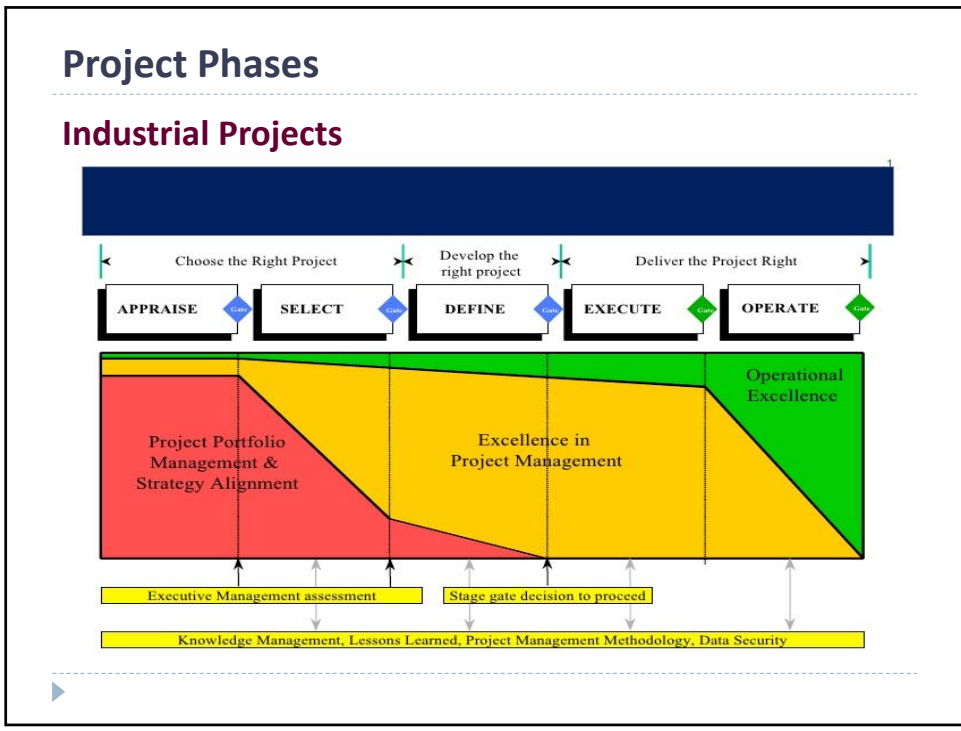
Industrial Projects

Either a team in Owners facilities or just one of services. But typically done by Owner. Owner may use Licensors to provide technology support and Contractor to provide physical layout and estimating support.









Thank You

References

- Project Management Institute (PMI), 2013, A Guide to Project Management Body of Knowledge (PMBOK), 5th Edition
- Jack R. Meredith, Samuel J. Mantel, Jr., Scott M. Shafer, Project Management: A Managerial Approach, 9th Edition
- Rory Burke, Project Management: Planning and Control Techniques, 4th Edition
- www.torak.com

