



Introduction to Project Management



600-101

INTRODUCTION

Enterprise Consultants International, Ltd.



INTRODUCTION

Large projects in the oil and gas industry create a need for :

- improved project management and implementation strategies.
- a new generation of project managers
- International products and technologies



OBJECTIVES OF THIS COURSE



- Project Management method based on the Purdue Enterprise Reference Architecture (PERA) Life Cycle (see www.pera.net)
- International approach to project management.
- Project management strategies and standards for large, remote projects.



WHAT IS PERA PROJECT MANAGEMENT?



- A structured Project Management method based on the PERA Enterprise Life Cycle Architecture

- Unique advantages:
 - Professional “Roles” or “Disciplines”
 - Strong Project Phasing
 - Integrates Master Planning with Project Execution
 - Defines Human and Information Systems roles
 - Defines project participant roles



Introduction to Project Management Topics

MODULE TOPIC

- 1 Introduction
- 2 Phasing
- 3 The Role of the Project Manager
- 4 Project Deliverables
- 5 Estimating & Cost Control
- 6 Project Scheduling
- 7 Project Procurement and Negotiation
- 8 Project Organization
- 9 The Role of Standards
- 10 Risk Management





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PROJECT MANAGEMENT CONCEPTS

PROJECT PHASING





PROJECT PHASES



Project Phasing is similar for Owner and EPC, but differ during “Implementation” and “Startup & Operations”

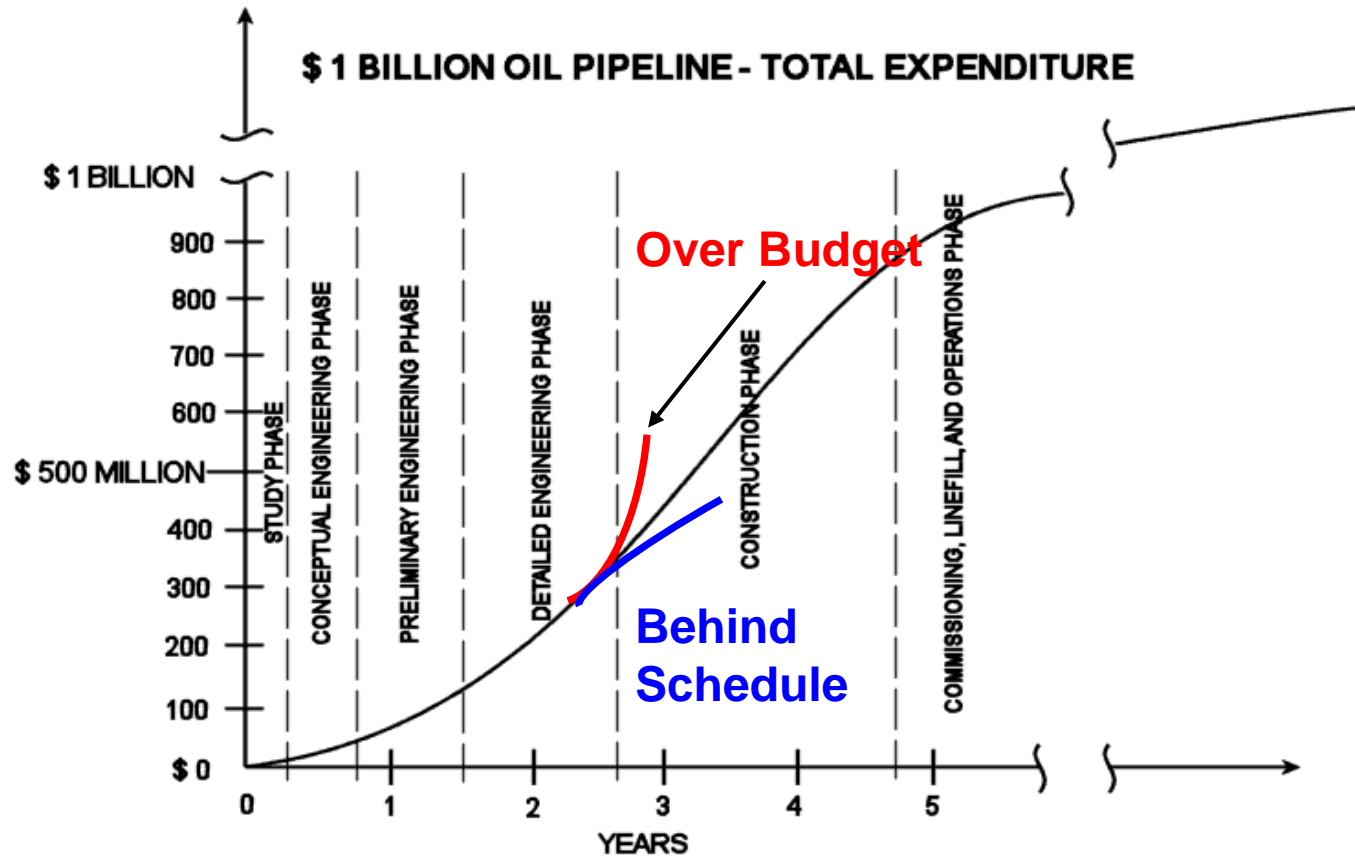
Handoffs between Owner and EPC are shown in “Gating Diagram” (page 10)

Owner Perspective	EPC Contractor Perspective
1. Evaluation	1. Feasibility Study Phase – Master Planning
2. Selection	2. Conceptual Engineering
3. Definition (FEED)	3. Preliminary Engineering (+ long lead procurement)
4. Implementation	4. Detail Engineering (+ procurement)
	5. Construction
5. Commission & Start-up	6. Commission, Startup, Operations & Maintenance
6. Operations & Maint.	



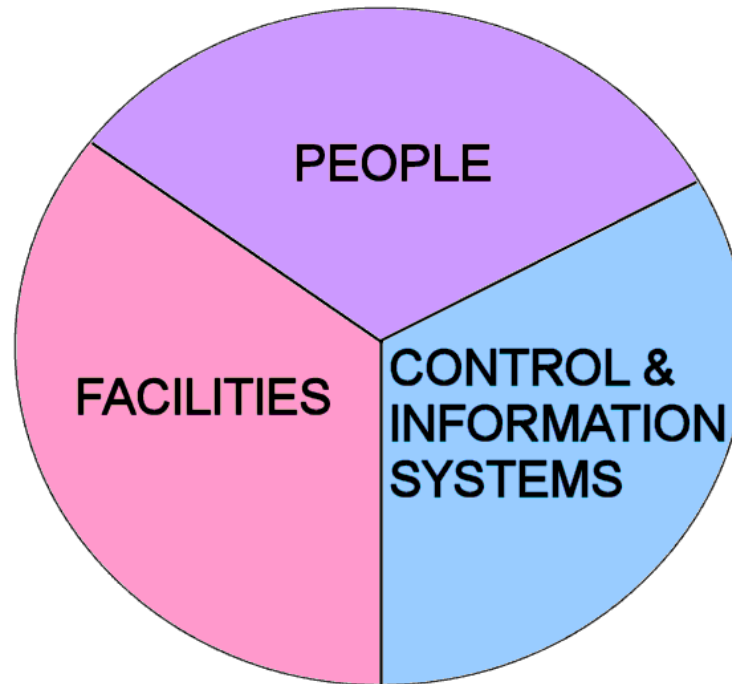


S-CURVE FOR A LARGE PROJECT – DIVIDED BY PHASE





AN ENTERPRISE CONSISTS OF PEOPLE, FACILITIES & SYSTEMS



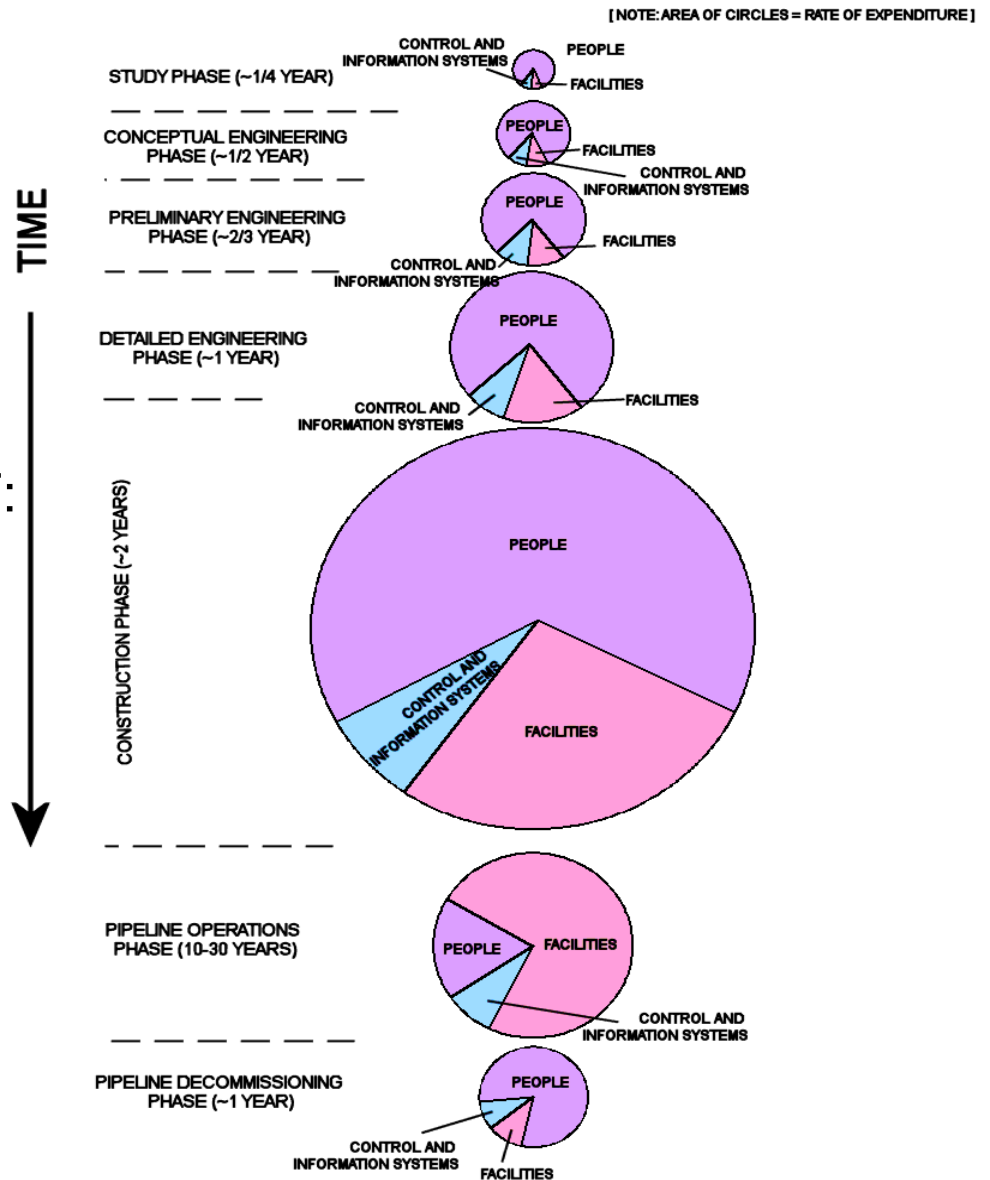
The previous diagram (S-curve) showed the combined expenditure during the project on People, Facilities and Control & Information Systems





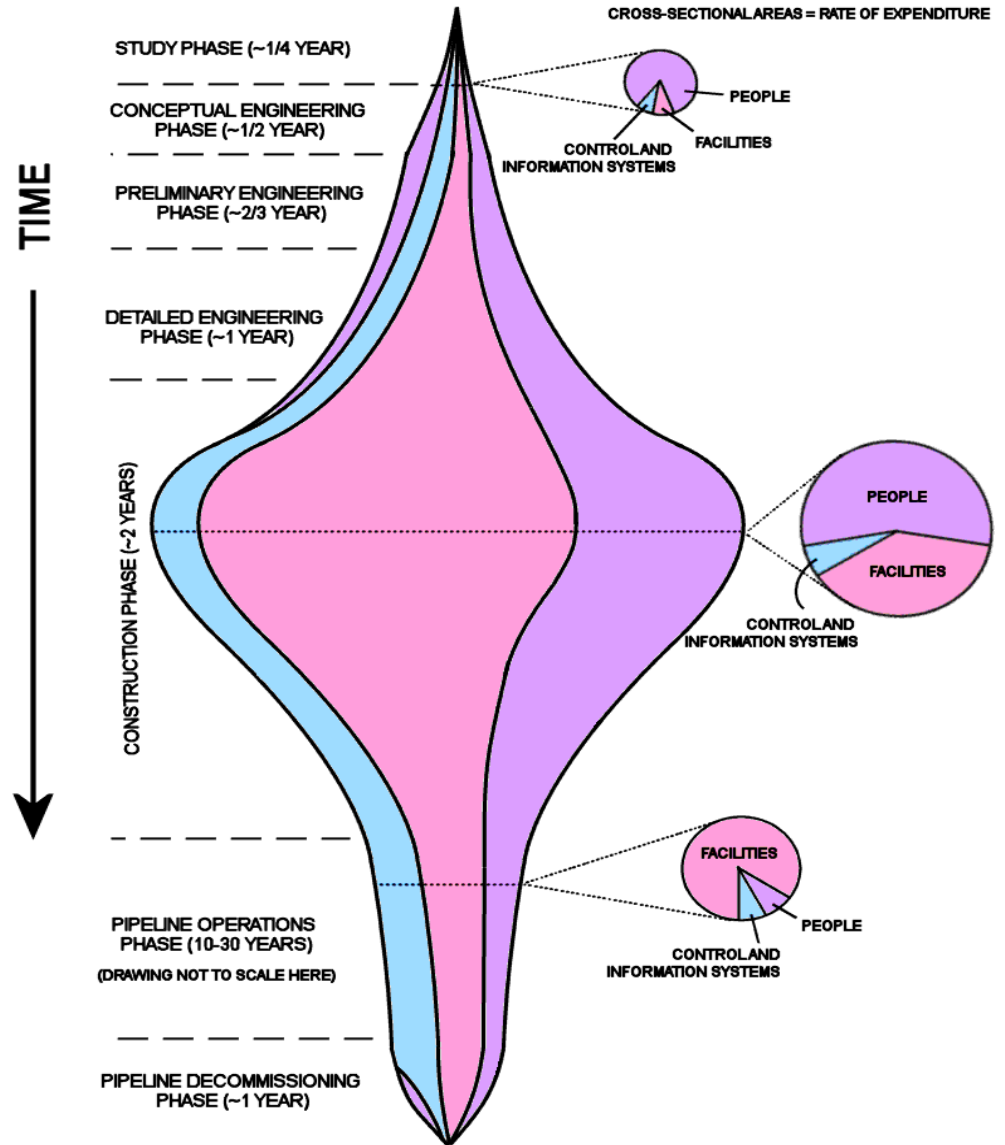
COMBINING THE CONCEPTS OF:

- Enterprise Components
- Project Phases





EXPENDITURES ARE CONTINUOUS EVEN ACROSS PHASE BOUNDARIES





DELIVERABLES



- Deliverable: an item, document, or drawing produced by the project team *as agreed in the contract*
- Each Project Phase has deliverables
- The goal of phasing is to manage information
- A “gate” is required *prior to beginning the next phase*

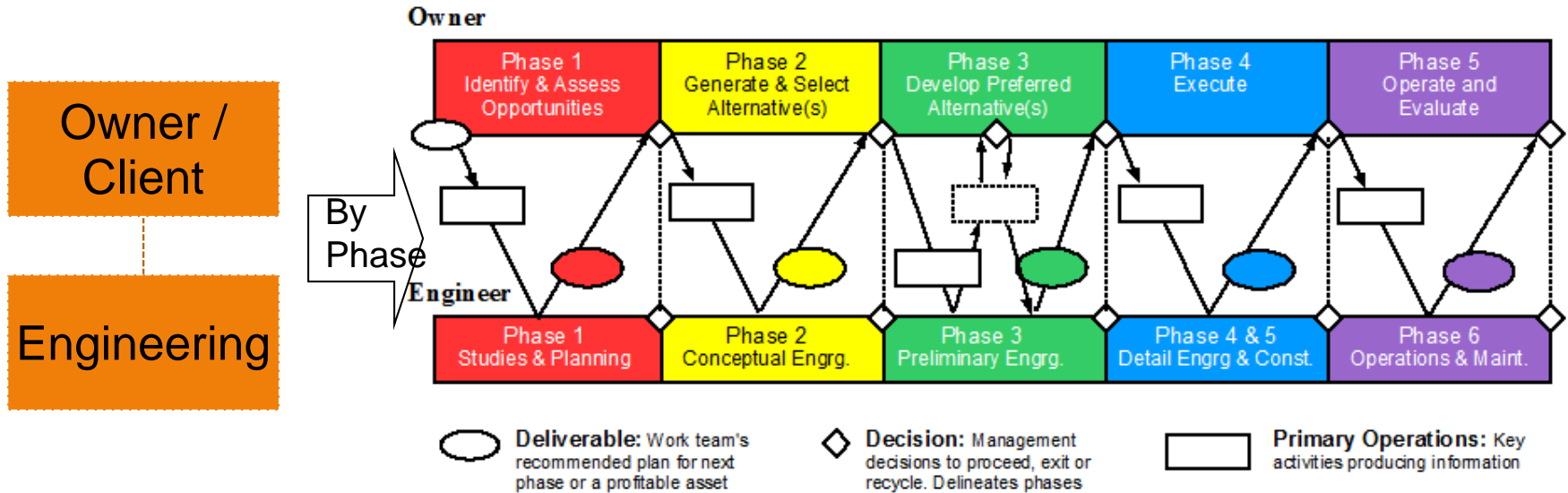




WITH PHASED ENGINEERING, THE OWNER EXCHANGES DELIVERABLES WITH ENGINEERING AS BELOW



Stage Gate Process (for Engineered Facilities)





GATE-KEEPER DECISION-MAKING AUTHORITY



Upon completing the end-of-phase review, the gatekeeper (or committee) must have the authority to:

- Approve the project to continue
- Order changes in the project
- Suspend the project activity
- Recycle the project
- Cancel the project





GATE-KEEPER DECISION-MAKING RESPONSIBILITIES



Gate-keeper(s) must decide whether:

- the project still meets the overall company strategy
- deliverables from the completed phase are adequate to proceed
- the present cost estimate is sufficiently detailed
- the total final cost will result in an acceptable ROI





PROJECT PHASING SUMMARY NOTES

WHAT TO DO



- Make each phase discrete
- Review the project's progress and deliverables at the end of each phase (critical reviews after Phases 1, 2, & 3)
- Maintain quality of deliverables
- Communicate results of the review to the project team





PROJECT PHASING SUMMARY NOTES

WHAT TO AVOID



1. Allowing the division between phases to become blurred
2. Allowing the scope of work to change without proper approval
3. Skipping critical reviews in order to maintain a schedule
4. Allowing the interests of the Project Team to supersede the Owner's interests





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PROJECT MANAGEMENT CONCEPTS:

PROJECT DELIVERABLES

PROJECT DELIVERABLES



- A Deliverable is an item, document, or drawing produced by the effort of the project team *as agreed in the contract*
- Deliverables form the basis of cost estimates and schedules
- Some Deliverables represent intermediate goals between the project phases and the final goals of the project
- Project Payments are made when Deliverables are accepted