

PM

(Project Management)

International Campus – Kish
Sharif University of Technology

Session # 3



Course Description

- *Instructor*
 - *Omid Fatahi Valilai, Ph.D. Industrial Engineering Department, Sharif University of Technology*
 - *Email: Omidf@ie.sharif.edu, Tel: 021-6616-5706*
 - *Web site: <http://sharif.edu/~fvalilai>*
- *Class time*
 - *Wednesdays*
- *Course evaluation*

▪ <i>Mid-term</i>	<i>(30%)</i>
▪ <i>Final exam</i>	<i>(40%)</i>
▪ <i>Quiz</i>	<i>(10%)</i>
▪ <i>Exercise</i>	<i>(20%)</i>

Course Description (Continued ...)

- **Mid-term session:**
 - 20th, Azar 1393
- **Reference:**
 - Kerzner, H., “Project Management—A Systems Approach to Planning, Scheduling, and Controlling, Eighth Edition”, 2003, John Wiley & Sons, Inc.
 - Lewis, James P.; “Project planning, scheduling, and Control a hands-on guide to bringing projects in on time and on budget”, 2001, McGraw-Hill
 - Project Management Institute; “A Guide to the Project; Management Body of Knowledge”, 5th edition, 2013, Project Management Institute, Inc.



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Course Description (Continued..)

- **Contents:**
 - Chapter 1 - Overview
 - Chapter 2 - Project Management Growth—Concepts and Definitions
 - Chapter 3 - Organizational Structures
 - Chapter 4 - Organizing and Staffing the Project Office and Team
 - Chapter 5 - Management Functions
 - Chapter 6 - Time Management and Stress
 - Chapter 7 - Conflicts
 - Chapter 8 - Special Topics
 - Chapter 9 - The Variables for Success
 - Chapter 10 - Working with Executives
 - Chapter 11 - Planning

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Course Description (Continued..)

- *Contents:*
 - *Chapter 12 - Network Scheduling*
 - *Chapter 13 - Project Graphics*
 - *Chapter 14 - Pricing and Estimating*
 - *Chapter 15 - Cost Control*
 - *Chapter 16 - Trade-off Analysis in a Project Environment*
 - *Chapter 17 - Risk Management*
 - *Chapter 18 - Learning Curves*
 - *Chapter 19 - Modern Developments in Project Management*
 - *Chapter 20 - Quality Management*
 - *Chapter 21 - Contracts and Procurement*
 - *Chapter 22 - Critical Chain Project Management*

Chapter 1 - Overview

- *Defining functional manager's role:*
 - *There are three elements to this role:*
 - *The functional manager has the responsibility to define how the task will be done and where the task will be done (i.e., the technical criteria).*
 - *The functional manager has the responsibility to provide sufficient resources to accomplish the objective within the project's constraints (i.e., who will get the job done).*
 - *The functional manager has the responsibility for the deliverable.*

Chapter 1 - Overview

- *Defining functional manager's problem:*
 - *Unlimited work requests (especially during competitive bidding)*
 - *Predetermined deadlines*
 - *All requests having a high priority*
 - *Limited number of resources*
 - *Limited availability of resources*
 - *Unscheduled changes in the project plan*
 - *Unpredicted lack of progress*
 - *Unplanned absence of resources*
 - *Unplanned breakdown of resources*
 - *Unplanned loss of resources*
 - *Unplanned turnover of personnel*

Chapter 1 - Overview

- *Defining functional manager's role:*
 - *Project management is designed to have shared authority and responsibility between the project and line managers.*

- *Project managers plan, monitor, and control the project, whereas functional managers perform the work*

Chapter 1 - Overview

▪ Dual responsibility:

Topic	Responsibility	
	Project Manager	Line Manager
Rewards	Give recommendation: Informal	Provide rewards: Formal
Direction	Milestone (summary)	Detailed
Evaluation	Summary	Detailed
Measurement	Summary	Detailed
Control	Summary	Detailed

Chapter 1 - Overview

▪ Reporting relationships:

Type of Project Manager	Type of Matrix Structure	Project Manager (PM)/Line Manager (LM)/Employee Relationship			
		PM Negotiates For	Employees Take Technical Direction From	PM Receives Functional Progress From	Employee Performance Evaluations Made By
Lightweight	Weak	Deliverables	LMs	Primarily LMs	LMs only with no input from PM
Heavyweight	Strong	People who report informally to PM but formally to LMs	PM and LMs	Assigned employees who report to LMs	LMs with input from PM
Tiger teams	Very strong	People who report entirely to PM full-time for duration of project	PM only	Assigned employees who now report directly to PM	PM only

Chapter 1 - Overview

- *Defining functional employee's role:*
 - *Once the line managers commit to the deliverables, it is the responsibility of the assigned functional employees to achieve the functional deliverables.*
 - *For years the functional employees were called subordinates. Although this term still exists in textbooks, industry prefers to regard the assigned employees as "associates" rather than subordinates.*
 - *In most organizations, the assigned employees report on a "solid" line to their functional manager, even though they may be working on several projects simultaneously. The employees are usually a "dotted" line to the project but solid to their function.*

Chapter 1 - Overview

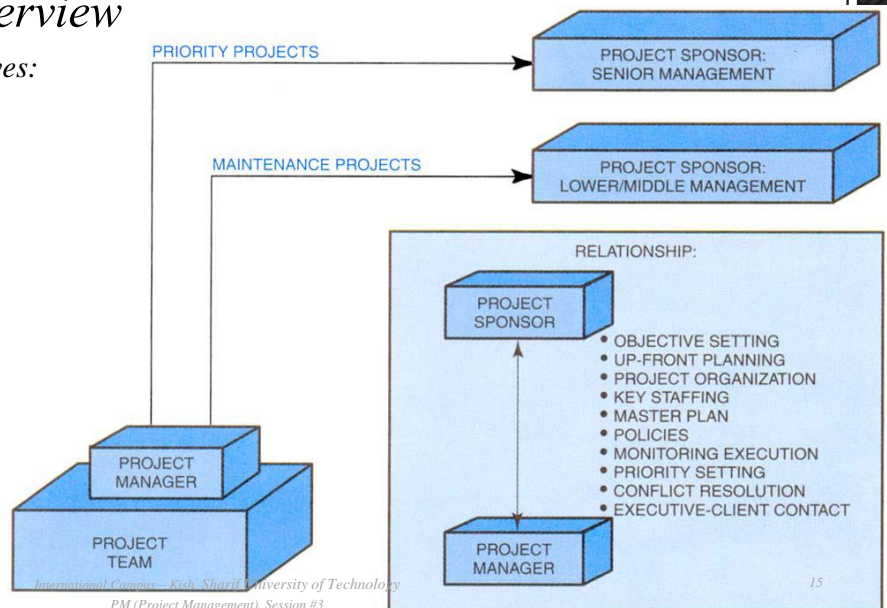
- *Defining functional employee's role:*
 - *The functional employee is expected to accomplish the following activities when assigned to projects:*
 - *Accept responsibility for accomplishing the assigned deliverables within the project's constraints*
 - *Complete the work at the earliest possible time*
 - *Periodically inform both the project and line manager of the project's status*
 - *Bring problems to the surface quickly for resolution*
 - *Share information with the rest of the project team*

Chapter 1 - Overview

- *Defining functional executive's role:*
 - *Executives are expected to interface a project as follows:*
 - *In project planning and objective-setting*
 - *In conflict resolution*
 - *In priority-setting*
 - *As project sponsor*
 - *Executives are expected to interface with projects very closely at project initiation and planning, but to remain at a distance during execution unless needed for priority-setting and conflict resolution.*

Chapter 1 - Overview

- *Working with executives:*



Chapter 1 - Overview

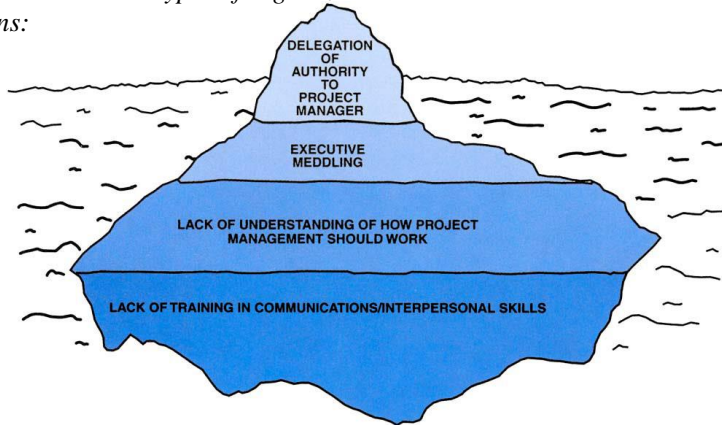
- *Project-driven VS non-project-driven organizations*
 - *In a project-driven organization, such as construction or aerospace, all work is characterized through projects, with each project as a separate cost center having its own profit-and-loss statement.*
 - *In the non-project-driven organization, such as low-technology manufacturing, profit and loss are measured on vertical or functional lines.*
 - *In this type of organization, projects exist merely to support the product lines or functional lines.*
 - *Priority resources are assigned to the revenue-producing functional line activities rather than the projects*

Chapter 1 - Overview

- *Project-driven VS non-project-driven organizations*
 - *Project management in a non-project-driven organization is generally more difficult for these reasons:*
 - *Projects may be few and far between.*
 - *Not all projects have the same project management requirements, and therefore they cannot be managed identically.*
 - *Executives do not have sufficient time to manage projects themselves, yet refuse to delegate authority.*
 - *Projects tend to be delayed because approvals most often follow the vertical chain of command. As a result, project work stays too long in functional departments.*
 - *Because project staffing is on a "local" basis, only a portion of the organization understands project management and sees the system in action.*
 - *There is heavy dependence on subcontractors and outside agencies for project management expertise.*

Chapter 1 - Overview

- *Project-driven VS non-project-driven organizations*
 - *The tip-of-the-iceberg syndrome occurs in all types of organizations but is most common in non-project-driven organizations:*



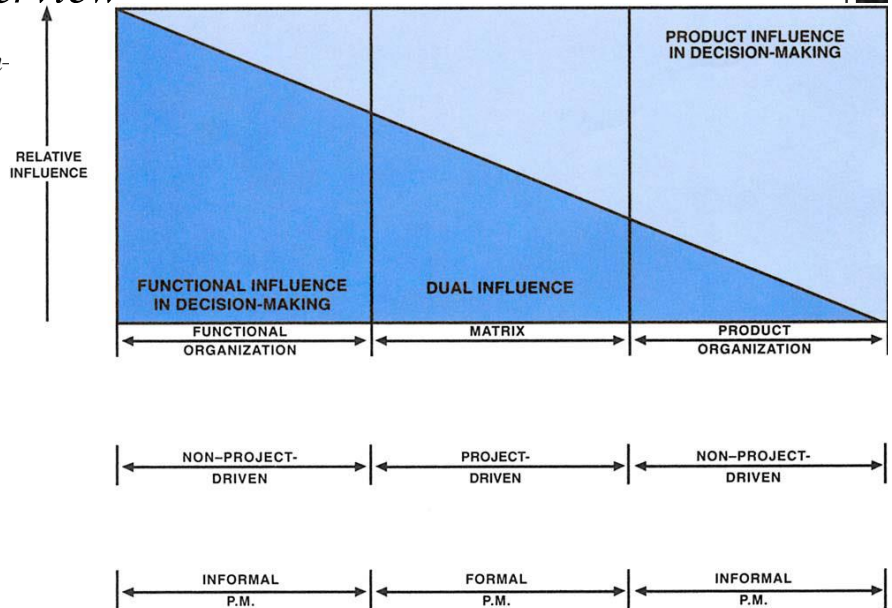
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MANY OF THE PROBLEMS SURFACE MUCH LATER IN THE PROJECT AND RESULT IN A MUCH HIGHER COST TO CORRECT AS WELL AS INCREASE PROJECT RISK

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Chapter 1 - Overview

- *Project-driven VS non-project-driven organizations*



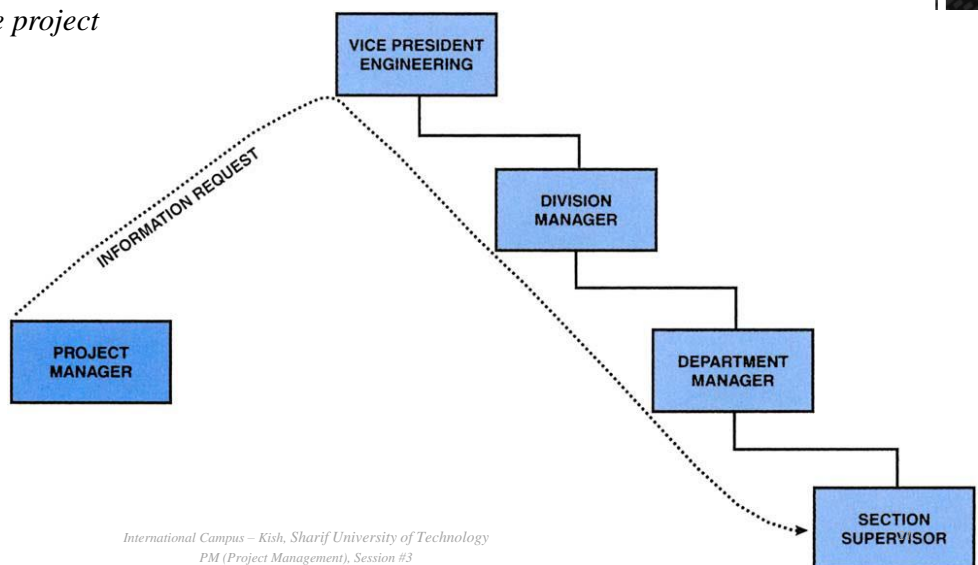
Chapter 1 - Overview

- *Classification of projects*
 - *The principles of project management can be applied to any type of project and to any industry. However, the relative degree of importance of these principles can vary from project to project and industry to industry.*

	Type of Project/Industry					
	<i>In-house R&D</i>	<i>Small Construction</i>	<i>Large Construction</i>	<i>Aerospace/Defense</i>	<i>MIS</i>	<i>Engineering</i>
<i>Need for interpersonal skills</i>	<i>Low</i>	<i>Low</i>	<i>High</i>	<i>High</i>	<i>High</i>	<i>Low</i>
<i>Importance of organizational structure</i>	<i>Low</i>	<i>Low</i>	<i>Low</i>	<i>Low</i>	<i>High</i>	<i>Low</i>
<i>Time management difficulties</i>	<i>Low</i>	<i>Low</i>	<i>High</i>	<i>High</i>	<i>High</i>	<i>Low</i>
<i>Number of meetings</i>	<i>Excessive</i>	<i>Low</i>	<i>Excessive</i>	<i>Excessive</i>	<i>High</i>	<i>Medium</i>
<i>Project manager's supervisor</i>	<i>Middle management</i>	<i>Top management</i>	<i>Top management</i>	<i>Top management</i>	<i>Middle management</i>	<i>Middle management</i>
<i>Project sponsor present</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>	<i>No</i>	<i>No</i>
<i>Conflict intensity</i>	<i>Low</i>	<i>Low</i>	<i>High</i>	<i>High</i>	<i>High</i>	<i>Low</i>
<i>Cost control level</i>	<i>Low</i>	<i>Low</i>	<i>High</i>	<i>High</i>	<i>Low</i>	<i>Low</i>
<i>Level of planning/scheduling</i>	<i>Milestones only</i>	<i>Milestones only</i>	<i>Detailed plan</i>	<i>Detailed plan</i>	<i>Milestones only</i>	<i>Milestones only</i>

Chapter 1 - Overview

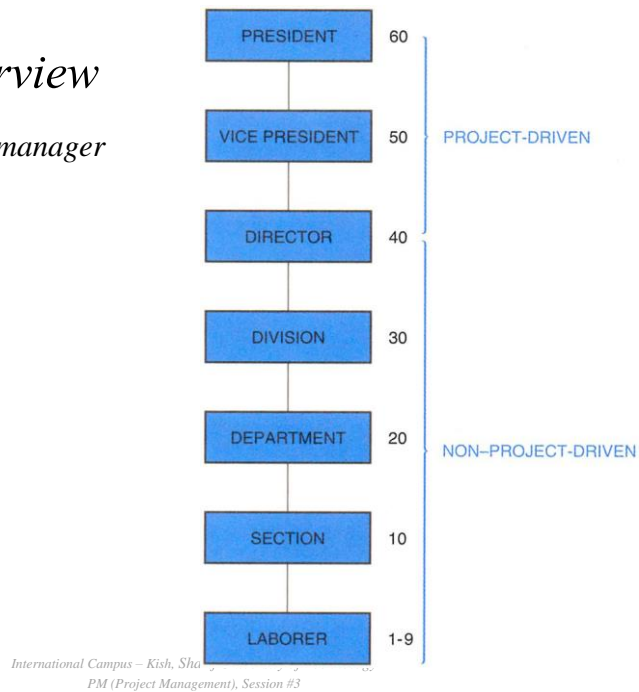
- *Location of the project manager*



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Chapter 1 - Overview

- Location of the project manager



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The role of managers in Information Technology (IT)

- HW#01
 - Consider the Chapter 1 problems and provide answers to the following questions:
 - Problem 1.1, 1.3, 1.6, 1.9, 1.12, 1.17
 - Consider the case study in the chapter 1 and describe it based on your own understanding

- The Home work should be sent to Fvalilai@sharif.edu till next session
- Email subject: "KISH:PM:HW01:studentnumber"

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