

ENTC 4060

# Project Management: An Introduction

## What is a “Project?”

Harold Kerzner, *Project Management*, pg. 2

- ◆ A series of activities and tasks that
  - Have a specific objective to be completed within certain specifications;
  - Have defined start and end dates;
  - Have funding limits (if applicable);
  - Consume resources (i.e., money, people, & equipment)

## What is a “Project?”

- ◆ A series of activities and tasks that have
  - SCOPE
    - Have defined start and end dates;
    - Have funding limits (if applicable);
    - Consume resources (i.e., money, people, & equipment)

## What is a “Project?”

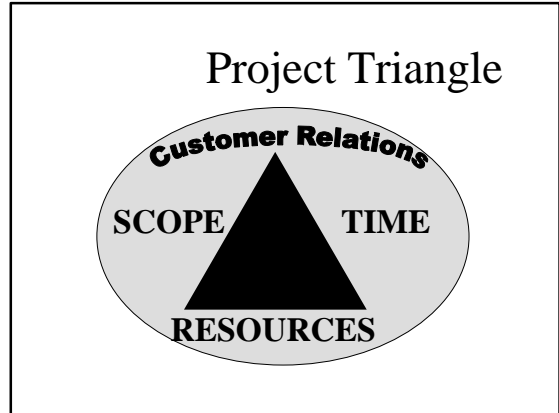
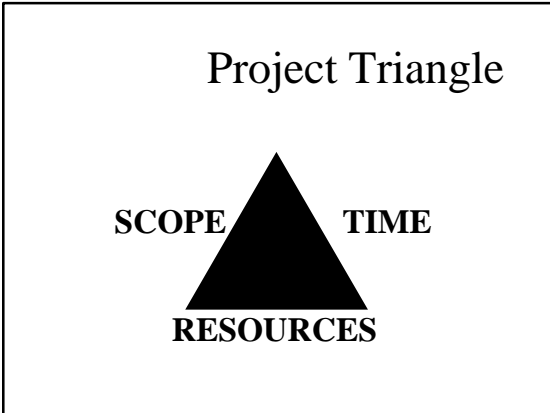
- ◆ A series of activities and tasks that have
  - SCOPE
  - TIME
  - Have funding limits (if applicable);
  - Consume resources (i.e., money, people, & equipment)

## What is a “Project?”

- ◆ A series of activities and tasks that have
  - SCOPE
  - TIME
  - RESOURCES

## The Three Project Constraints:

- ◆
  - SCOPE
  - TIME
  - RESOURCES



#### What is "Project Management?"

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◆ "Project management is the art of creating an illusion that any outcome is the result of a series of predetermined, deliberate acts when, in fact, it was dumb luck."  
Harold Kerzner, *Project Management*, pg. 3 ◆

#### What is "Project Management?"

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◆ "Project management is the planning, organizing, directing, and controlling of company resources for a relatively short term objective that has been established to complete specific goals and objectives."  
Harold Kerzner, *Project Management*, pg. 4 ◆

- ### Two Main Components
- 
- ◆  Planning
    - Creating, then fine tuning, the overall project plan
  - ◆  Monitoring
    - Tracking & reporting progress

- ### Measurements of Project Success
- 
- ◆  Within specifications
  - ◆  Within allotted time period
  - ◆  Within the budgeted costs
  - ◆  Accepted by the customer/user
  - ◆  Minimal and mutual scope changes
  - ◆  Within corporate culture & without disturbing organizational workflow

## Project Manager's Role

- Responsible for coordinating and integrating activities across multiple and functional lines
- Understand operations of line organizations
- Familiar with technology
  - Master if in R&D activities

## What's in the Successful Project Manager's Toolbox?

- Strong communication skills
- Strong interpersonal skills
- Ability to
  - balance technical and managerial functions;
  - overcome organizational constraints;
  - cope with and survive risks

## Ten Specific Skills

- Team Building
- Leadership
- Conflict Resolution
- Technical Expertise
- Planning

## Ten Specific Skills

- Organizing
- Entrepreneurship
- Administration
- Management support
- Resource allocation

## Project Managers Manage

- Engineering
- Procurement
- Construction
- Finance
- Cost engineering

## Project Managers Manage

- Schedule
- Environmental considerations
- Regulatory requirements and law
- Inflation & cost escalations
- Labor and client relations

## Management Skills

- ❑ Human behavior and interpersonal relationships
  - Psychology
- ❑ Organizational behavior
  - Sociology
- ❑ Communications

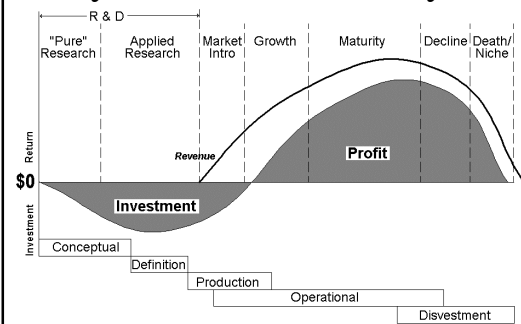
## Project Manager's Responsibilities

- ❑ Planning agent
  - Overall and summary
  - **NOT** detailed planning
    - Functional or line managers
- ❑ Resolve conflicts
- ❑ Make tradeoffs

## “Planning Architect” defines

- ❑ Complete tasks
- ❑ Resource requirements
- ❑ Major timetable milestones
- ❑ End-item quality and reliability requirements
- ❑ Performance measurements

## System/Product Lifecycle



What would a typical  
“Project Lifecycle” look like?