

**PROJECT MANAGEMENT IOM455
SESSION 2
INTRODUCTION, JANUARY 13, 2010**

OUTLINE

- **Questions?**
- **Take roll**
- **Homework – using the assignment manager**
- **Course outline**
- **Projects**

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Course Outline

- **Introduction**
- **Project Manager**
- **Organizations**
- **Planning**
- **Budgeting**
- **Scheduling**
- **Resources**
- **Control and Audit**
- **Termination**

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What is a project?

- **A temporary endeavor undertaken to create a unique product or service (Project Management Institute)**
- **Attributes:**
 - **Temporary**
 - **Unique**
 - **Done progressively in coordinated steps**
 - **Controlled resources**
 - **Specific Purpose**
 - **Subject to external forces**
- **Examples:**
 - **Develop the Atom Bomb**
 - **Land a man on the moon**
 - **Reduce the cost a printed circuit board**
 - **Install a new garage door in your home**
 - **Destroy German dams in WWII**
 - **Landscape our Sherman Oaks Home**
 - **Plan your wedding**

Examples of external forces

- **Societal forces**
- **Political forces**
- **Economic forces**
- **Goals of the organization**
- **Personal goals**
- **Contractor's goals**
- **Client's goals**

Examples of Roles and Experiences

- **Working Engineer, Sole contributor – Casting Process for disk read/write head (One year)**
- **Working Engineer, Large development team – Electrical connector for the First transistorized mainframe computer at Burroughs (now Unisys) (2 years)**
- **Working Engineer, 4 person team - connection scheme for a thin film memory (One year)**
- **Working Engineer, main contributor, small team within a large team – cooling system for a mainframe computer (also dissertation) (3 years)**
- **Project manager, small team – Electronic Backpanel for a telephone system (14 weeks)**
- **Unit manager, across departments – MRP software installation (3 months)**

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Examples of Roles and Experiences (continued)

- **Working Engineer, sole contributor – writing software for digital plotter (One year)**
- **Researcher, small team – develop new method of making copies (3 years)**
- **Project manager, small team – basic research – electron attachment to dielectrics (3 years)**
- **Project manager, matrix team – acquire new technology (Surface mounted devices) (3 years)**
- **Project manager, sole contributor – consolidation of machine shops in four factories (6 months)**
- **Consultant and developer – MRP system for small company (2 years)**

What is Project Management?

- “..the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project.” (PMBOK Guide)

Constraints

- **Three simultaneous constraints that tend to work against each other:**
 - **Budget**
 - **Specification**
 - **Schedule**

Phases, or life cycle, of a project

- **The phases of a project overlap in time**
 - **Concept**
 - **Planning**
 - **Execution**
 - **Control**
 - **Termination**

Which projects get done?

- **Very necessary ones**
 - **San Francisco Bay Bridge after the earthquake (1989)**
 - **Broken water line to a home (2 years and 30 years ago)**
- **Survivors of filtering processes**
 - **High rate of return**
 - **High powered supporter (the consolidation of machine shops)**
 - **Well suited to other goals**
- **Ones that satisfy a need**
 - **Market demand**
 - **Customer's request**
 - **Technological advance**
 - **Legal requirement**
 - **Social need**

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Structure of the course

- **Follows the life cycle of a project**
- **More or less follows the structure of the text**
- **Covers tools and methods as they are required**
- **This course, as all others, has all the earmarks of a project:**
 - **A beginning and an end (01/11/10 – 05/07/10)**
 - **Objectives**
 - » **To learn specific things**
 - » **To earn credits for a class**
 - » **To fulfill a contractual obligation (teach the class)**
 - **Budget (time of students, instructor)**
 - **Unique (to this set of instructor, students, semester)**

avg .8

Std dev = .125

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Standard deviation
Strategic Management and Selection

- Project Selection Models
 - Non-numerical
 - Numerical
 - Payback Period
 - Average rate of return
 - Discounted cash flow
 - Weighted Scoring models
- Risk Analysis and simulation
- Definitions dealing with attributes of data
- Project portfolio Process

2010 \$1 = \$.78
2012 \$1 =

.5
1
.9
.7
.8

average $\frac{39}{5} = \underline{\underline{.78}}$

5' 7"

std 4"

$$67 + 3(4) = 79 \quad 6' 7"$$

± 3 std. der encompasse virtually

all $67 - 12 = 55 \quad 4' 7"$

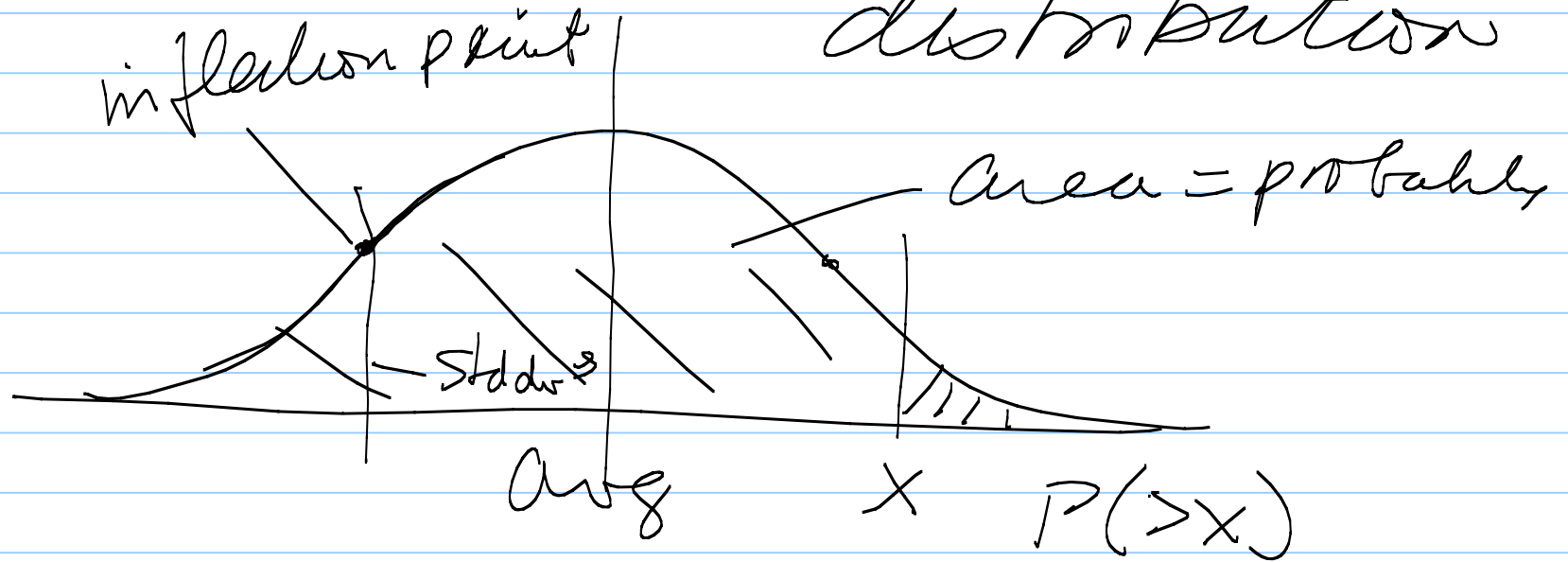
± 1 std der $\sim 60\%$ $63'' \quad 5' 11''$

$5' 3''$

5' 24. 19 6' 3''

Average
Standard deviation } from data

Assume a normal distribution



Establish MARR
minimum attractive
Rate of Return
20% to 30%