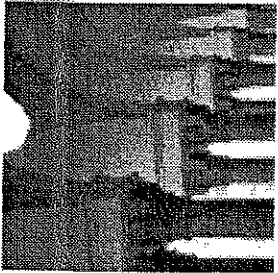# Objectives
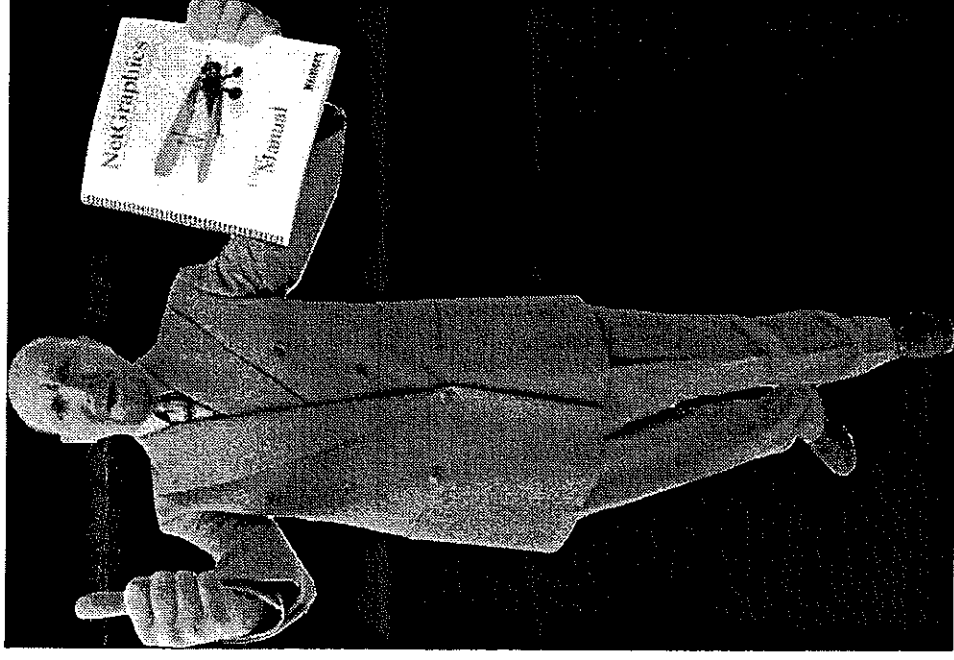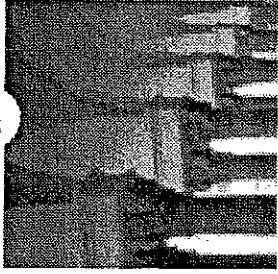
- Understand the business case

- Identify the project customers

- Communicate a common vision

- Identify the deliverables

- Understand the risk associated with the project

- Identify factors in the project environment that contribute to success

CALTECH

33

5/12/2004

# What is the Business Case?



- Key questions:
  - What is the business problem we're trying to solve?
  - Do we have the opportunity to be successful?
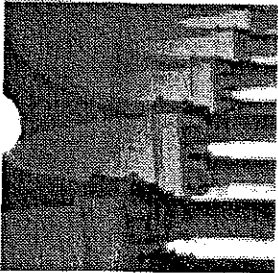  - How do we know when we're done?

CALTECH

5/12/2004

34

# Solution-Oriented Philosophy

- Focus on delivering a solution, rather than developing software

- On a software project "less is more"

- Starting with requirements, focus on what is really needed
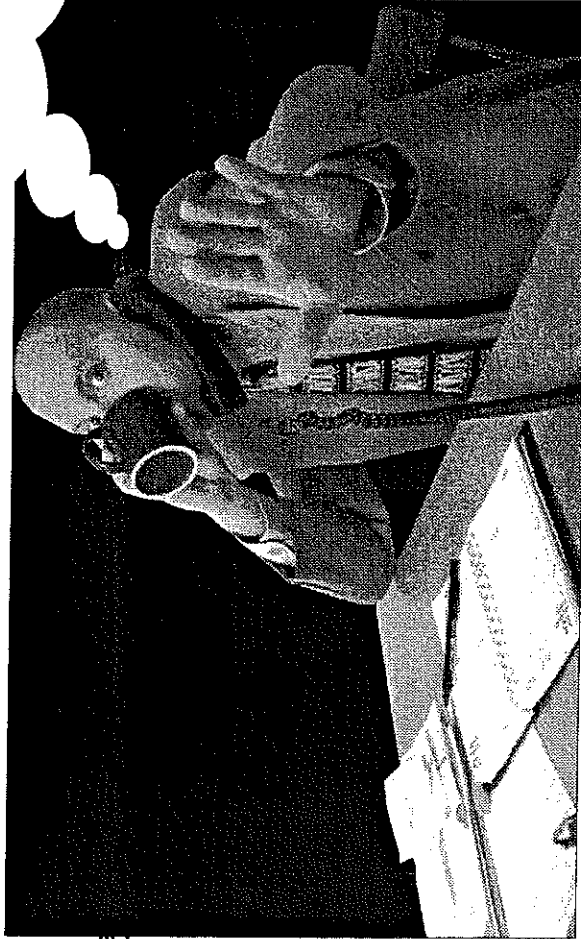
- Separate the "must-haves" from the "nice-to-haves"
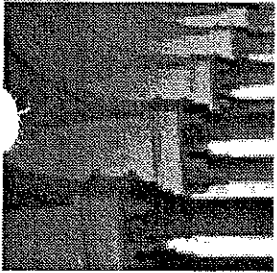
CALTECH

35

# The Customers

- Identify the project's customers:

  - Executive sponsors
  - Stakeholders
  - The project team
  - Audience
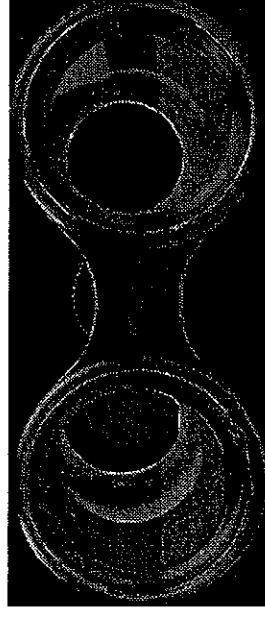  - Internal v. exte
  
  *External*

What's in it
for ME?

# Common Vision

- Success is dependent on a common vision
  - The project manager must obtain buy-in on the goal from the customer groups
- A well-stated vision should be:
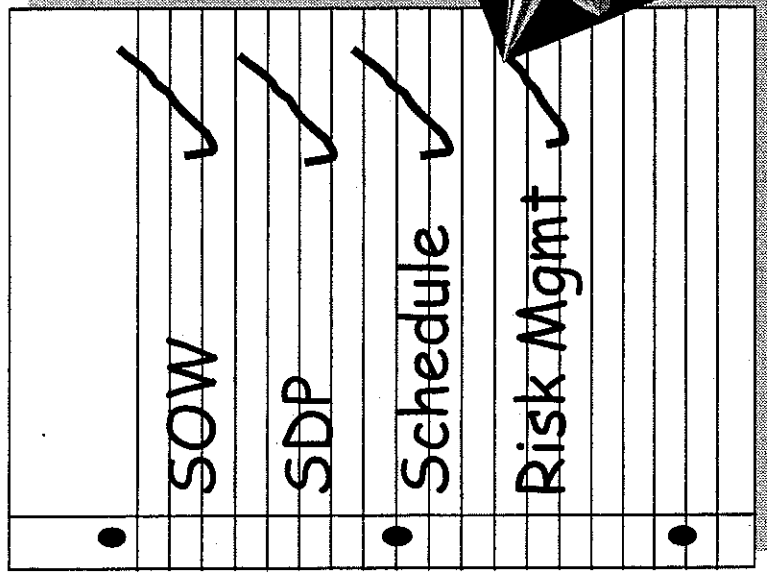  - Challenging
  - Motivating
  - Achievable

C A L T E C H

37

5/12/2004

# Deliverables

- Make sure there is a clear understanding of:

  - Everything that will be physically delivered by this project
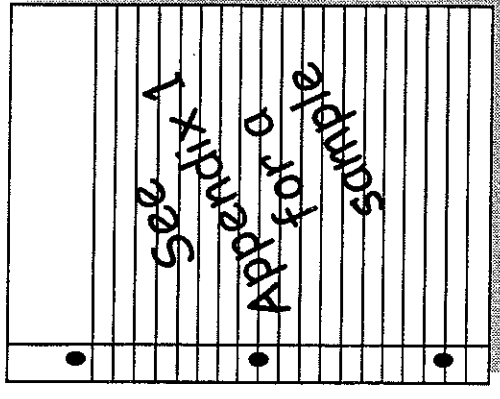
  - Who it will be delivered to

CALTECH

# Deliverables

- **Create a Deliverables List**
  - Statement of Work (SOW)
  - Software Development Plan
  - Project Schedule and Estimates
  - Risk Management Plan
  - Software Configuration Maintenance Plan
  - Verification and Validation Plan
  - Maintenance Plan

SOW ✓
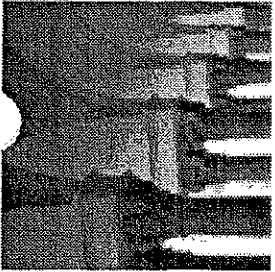SDP ✓
Schedule ✓
Risk Mgmt ✓

CALTEC

# Statement of Work

- Documents the scope of a proposed project

- Establishes the initial commitment to do the project

- Provides a conceptual estimate (± 50%)

- Prepared using business language
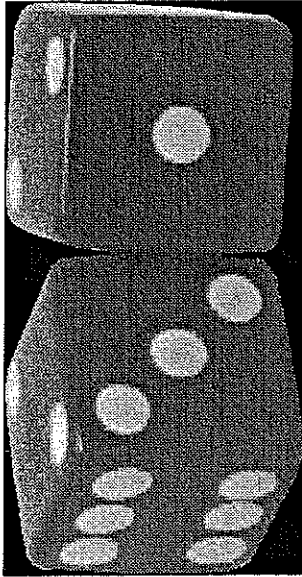
- Is **NOT** a **low-level** definition of the project

*see Appendix A for a sample*

CALTECH
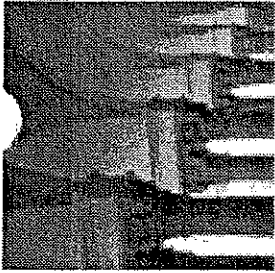
40

# Risk Management

- Software development is inherently risky
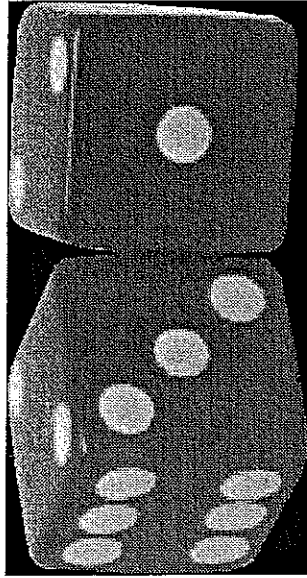
CALTECH

# Risk Management

- Success at Risk Management depends upon:

  - Making the commitment to perform it

  - Developing an ability to perform it

  - Carrying out the activities to perform it

  - Verifying the plan for each risk has been effective

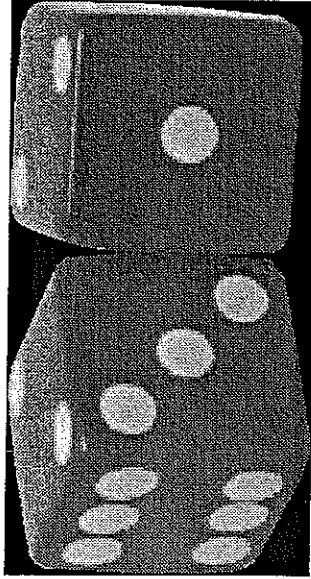42

CALTECH

# Risk Management

- For software projects there are 3 components to managing risk:
  - Document the approach to risk management
  - Set aside a budget for risk resolution
  - Incorporate risk assessments into the project plan

CALTECH

# Risk Management

- Include risk management in the Software Development Plan

- Assign someone to own risk management
  - Risk officer
  - Typically not the project manager
- Use Top 10 list

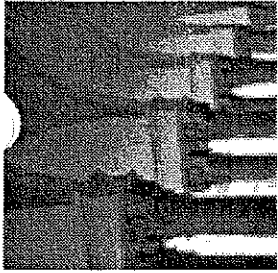- Establish risk management plan for each risk in the list

# Top Ten Lists

- List of the top project risks at any point in time

- Each risk should have detailed risk management plan

- Project team creates preliminary list before requirements and maintains it through the end of the project

- Review biweekly or some other regular project interval

- Available to all project personnel

CALTECH

45

# Risk Management Plan

- Risk Management Plan should answer:

  - **Why?** (Probability of occurrence, consequences & severity)

  - **How?** (General approach to resolving along with other options considered)

  - **What?** (Specific steps and deliverables to be done)

  - **Who?** (Person responsible for each step)

  - **When?** (Completion date for each step)

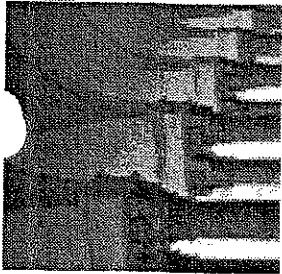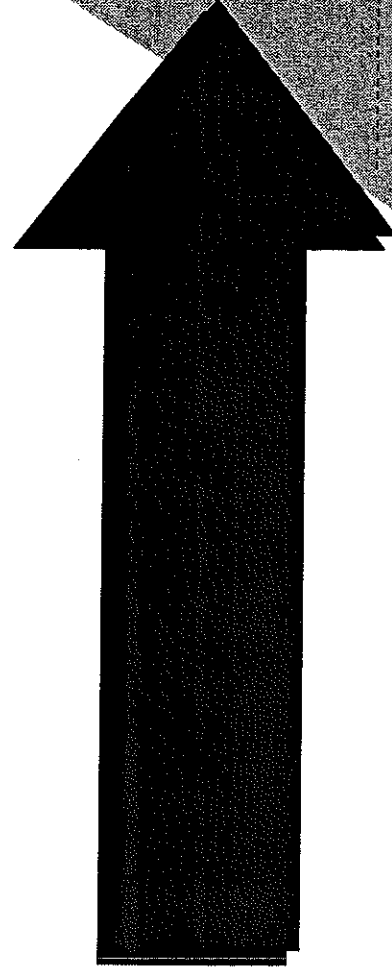  - **How Much?** (Budget allocated and the cost per step)

CALTECH

46

5/12/2004

# Success Factors

What does it take
for a software
project to succeed?



CALTECH

47

# Success Factors

- What do people need?

Maslow's Hierarchy
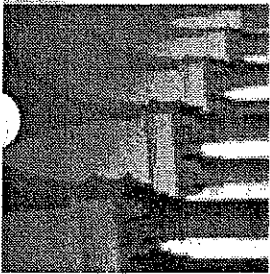of Needs

Self-
Actualization

Self-Esteem

Social Needs

Safety Needs

Physiological Needs

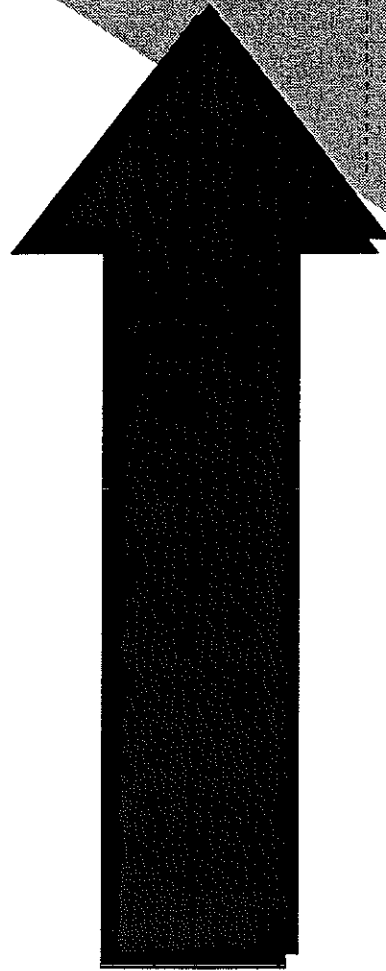# Success Factors

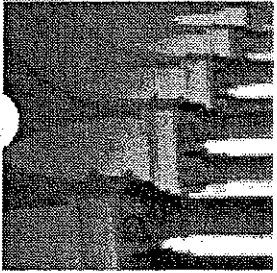- What do software projects need?

*What people in the project need*

Self-Actualization

Self-Esteem

Social Needs

Safety Needs

Survival Needs

CALTECH

49

5/12/2004

# Customer Expectations

■ What does the customer expect?

- To know how long the project will take
- To know how much the project will cost
- To choose the features of the software
- To know that objectives will be followed
- To be able to make changes throughout the project
- To have access to the deliverables
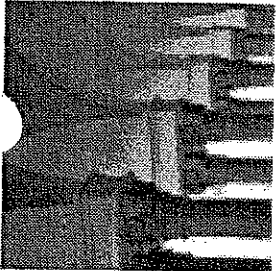- To be able to track progress
- To be made aware of risks to the project

Steve McConnell, Software Project Survival Guide, pg 7

50

CALTECH

# Project Team Expectations

■ What does the project team expect?

- To know the objectives

- To know the priorities

- To know the details of what to build

- To have access to "customers" and decision-makers

- To approve estimates for work that I will perform

- To have access to the deliverables

- To work in a productive environment

- To have my status reported correctly to stakeholders

Steve McConnell, Software Project Survival Guide, pg 8

CALTECH

# Exercise

■ 2.1 - Making the Case
for the Project

C A L T E C H

**Project Management and
Software Development**

Exercise Guide

**for Boeing Satellite Systems**

California Institute of Technology
Industrial Relations Center
321 South Hill Avenue

CALTECH