SGS 4613 REMOTE SENSING PROJECT MANAGEMENT

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Topic 3

Planning the Project

Two Extremes

- "Ready, Fire, Aim"
- "Paralysis by Analysis"

CONTENTS OF A PROJECT PLAN

Elements of Project Master Plan

- **Overview**
  - brief description of project
  - deliverables
  - milestones
  - expected profitability and competitive impact
  - intended for senior management
- **Objectives**
  - detailed description of project's deliverables
  - project mission statement

Elements of Project Master Plan
continued

- **General approach**
  - technical and managerial approaches
  - relationship to other projects
  - deviations from standard practices
- **Contractual aspects**
  - agreements with clients and third parties
  - reporting requirements
  - technical specifications
  - project review dates

Elements of Project Master Plan

continued

- **Schedules**
  - outline of all schedules and milestones
- **Resource requirements**
  - estimated project expenses
  - overhead and fixed charges
- **Personnel**
  - special skill requirements
  - necessary training
  - legal requirements

Elements of Project Master Plan concluded

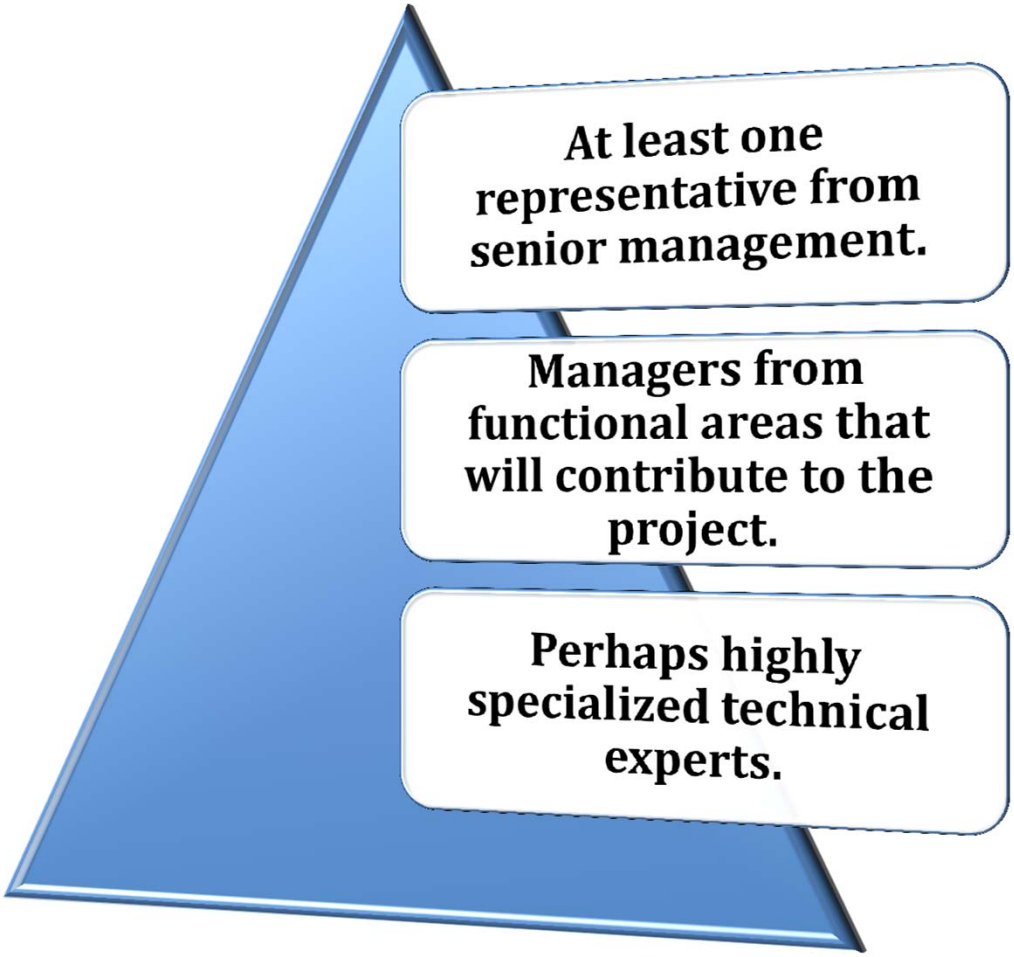
- **Evaluation methods**
  - evaluation procedures and standards
  - procedures for monitoring, collecting, and storing data on project performance
- **Potential problems**
  - list of likely potential problems

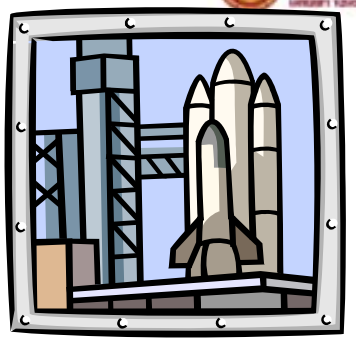
THE PLANNING PROCESS

PM's First Job

- Understand the expectations that the organization has for the project.
- Identify who among senior managers has a major interest in the project.
- Determine if anything about the project is atypical.

Developing Invitation List





The Launch Meeting

- **Senior management introduces PM**
- **PM chairs meeting**
  - develop general understanding of the functional inputs the project will need
  - may brainstorm the problem
  - may develop preliminary plan
- **Important results**
  - scope understood and temporarily fixed
  - functional managers understand their responsibilities and have committed to developing the initial plan

Sorting Out the Project

- **Hierarchical planning process**
  - begin with project's objectives
  - list major activities needed to achieve objectives (level 1 activities)
  - delegate level 1 activities to individuals or functional areas to develop list of level 2 activities …
  - degree of detail should be same within a given level

Three Levels of Detail in Hierarchical Planning

The Project Action Plan

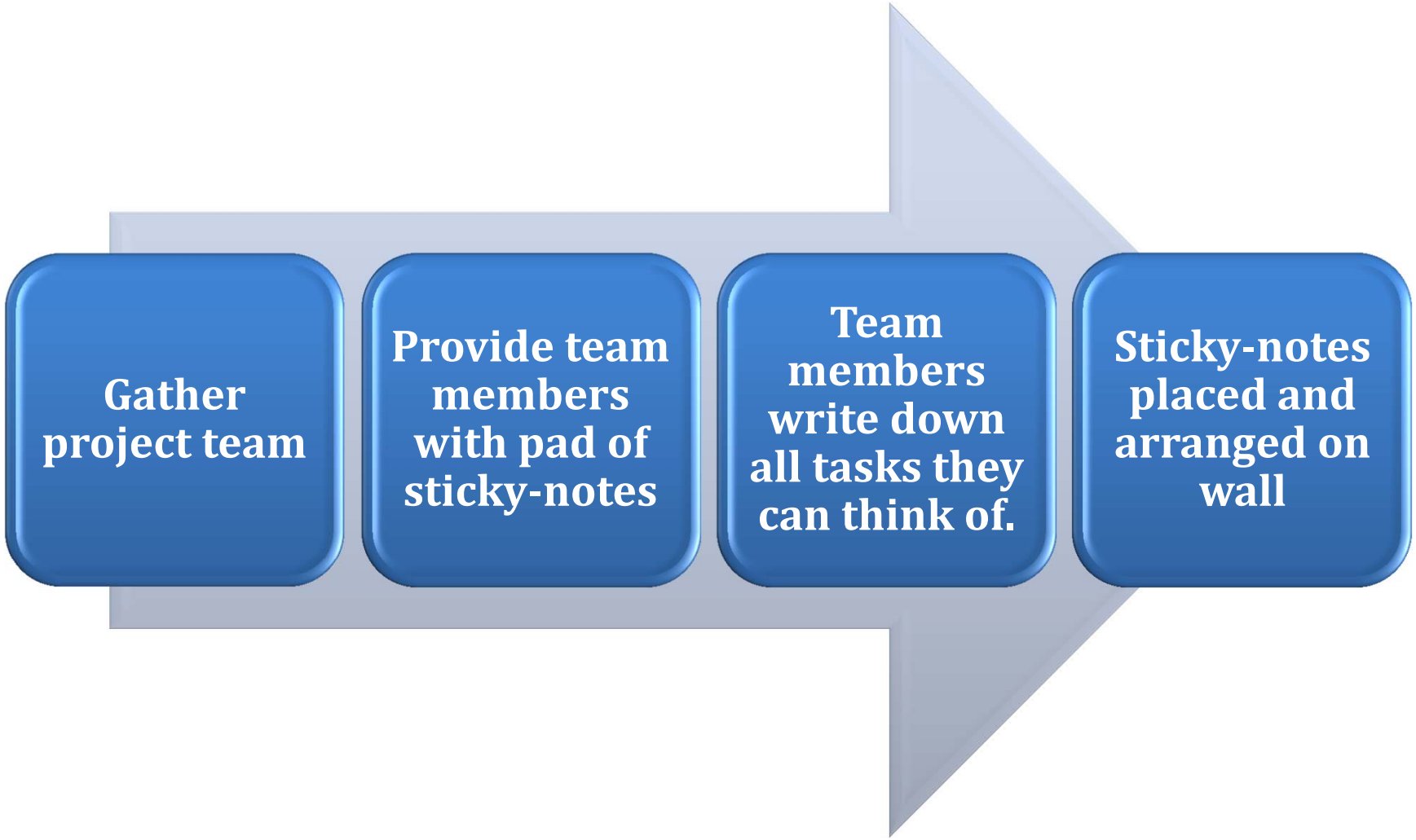
- Project activities identified and arranged in successively finer detail (by levels).
- Type and quantity of each required resource identified for each activity.
- Predecessors and durations estimated for each activity.
- Milestones identified.
- Individual or group assigned to perform the work identified for all activities.

Using the Project Action Plan

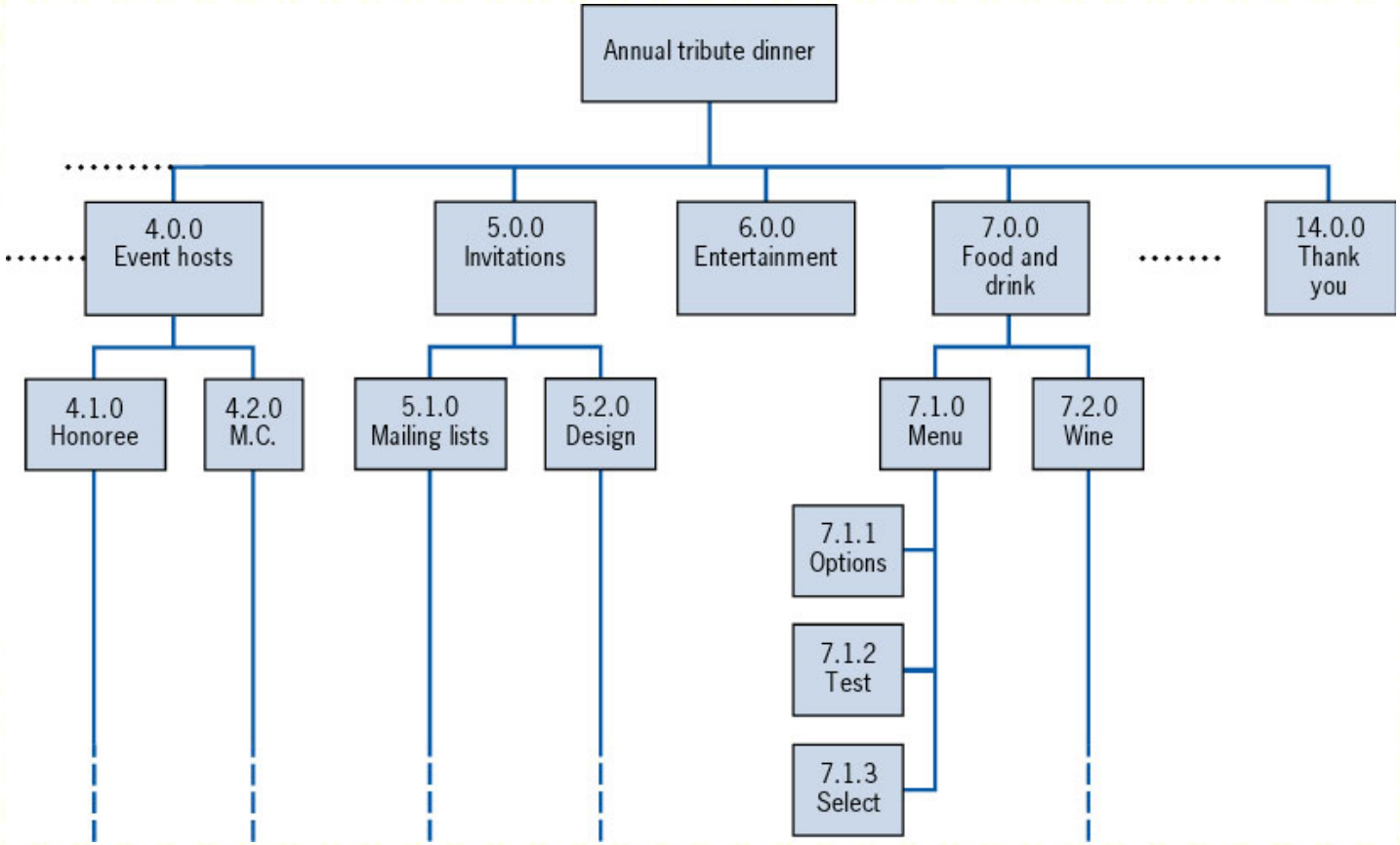
- **Project master schedule created by combining milestones, durations, and predecessors**
  - used to compare actual and planned performance
- **Use of templates**

THE WORK BREAKDOWN STRUCTURE

Simple Approach for Creating the WBS



A Partial WBS (Gozinto Chart) for an Annual Tribute Dinner Project



A Linear Responsibility Chart

WBS \ Responsibility		Project office				Field operator	
Subproject	Task	Project manager	Contract administrator	Project engineer	Industrial engineer	Field manager	
Determine need	A1	○		●	▲		
	A2	■	○	▲	●		
Solicit quotations	B1	○	■	▲		●	
Write appropriate request	C1	■	▲	○	●		
	C2		●	○	▲		
	C3	●	■	▲		■	
⋮	⋮						

Legend:

▲ Responsible ■ Notifiction

● Support ○ Approval

MULTIDISCIPLINARY TEAMS -- BALANCING PLEASURE AND PAIN

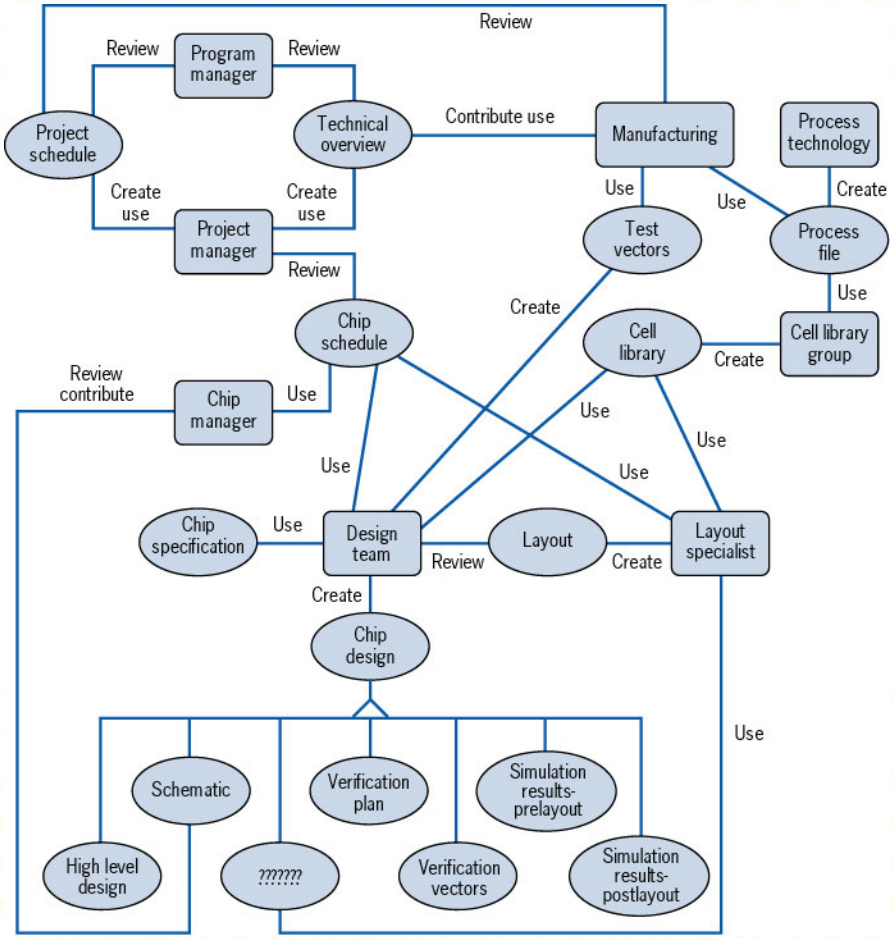
Concurrent Engineering

- **Carrying out steps concurrently rather than sequentially**
  - also referred to as simultaneous engineering
- **Key advantages**
  - helps minimize conflict across functional groups
  - reduces project duration

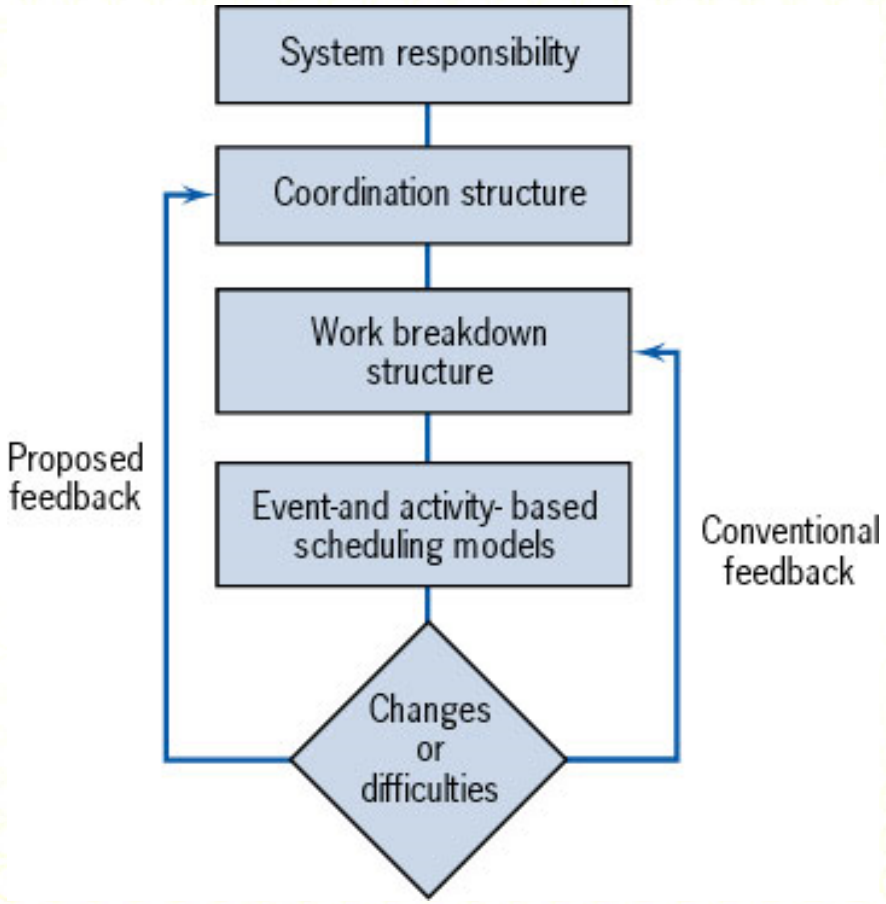
Interface Coordination -- Interface Management

- Key challenge facing PM is coordinating work of different functional groups.
- One approach is to identify and map the interdependencies between members of the project team.

An Interface Mapping of a Silicon Chip Design Project



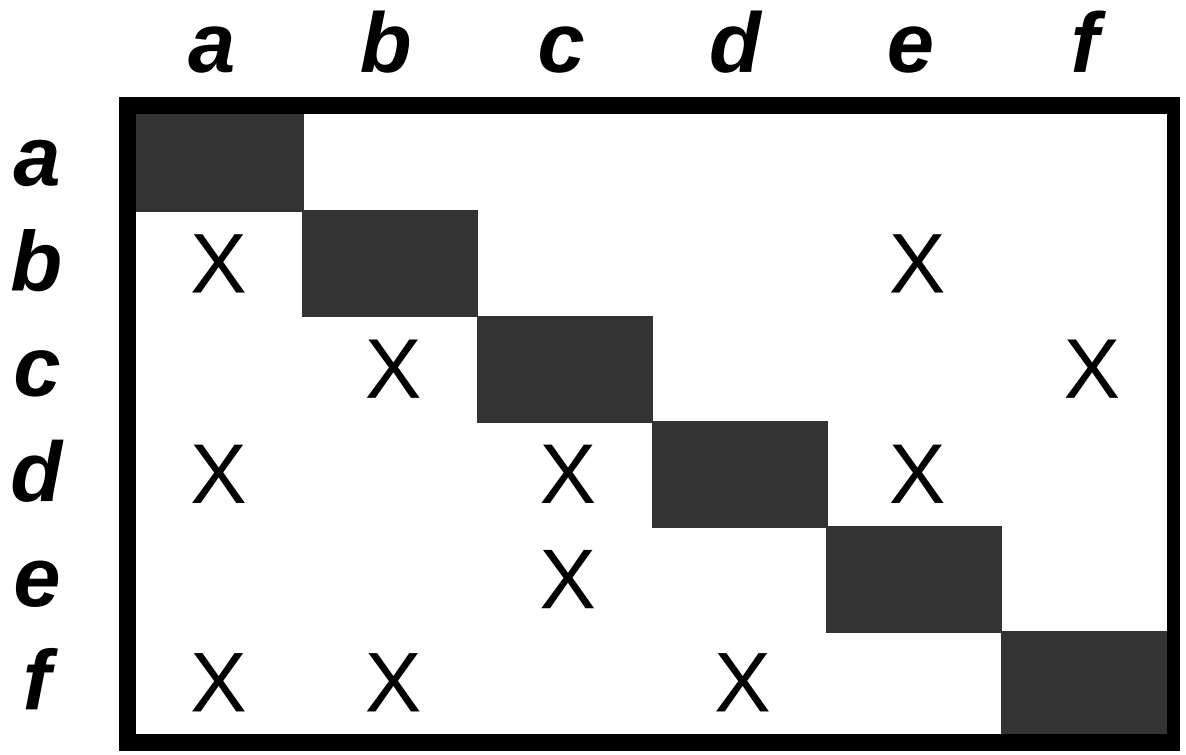
A Coordination Structure Model for Project Management



Design Structure Matrix (DSM)

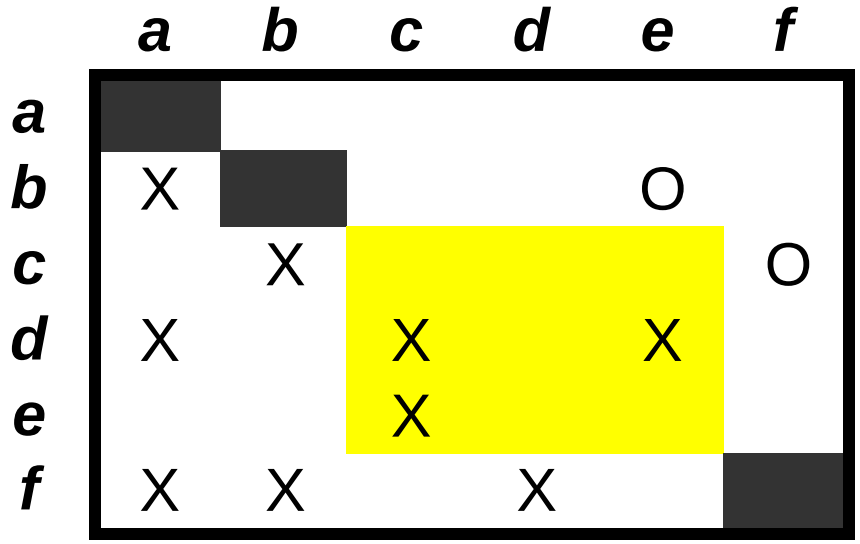
- Traditional project management tools tend to focus on which tasks have to be completed in order for other to start
- Another important question is what information is needed from other tasks to complete another task

Example DSM for Project with Six Activities



X -- information flow

Modified DSM to Show Activities to Be Completed Concurrently



tasks to be completed concurrently

X -- information flow

O -- potential rework situation

Comments on Empowerment and Work Teams

1. Participatory management

2. Success of empowered teams depends heavily on how team program implemented

Advantages of Empowerment

1. High quality solutions
2. Avoid micromanagement
3. Team has accountability for part of project deliverable
4. Synergistic solutions
5. Tool for timely evaluation and feedback

Reference

- **Meredith, R. J. & Mantel, J. S. (1995). *Project Management – A Managerial Approach*. John Wiley & Sons, 5th Edition.**