Project Human Resource Management
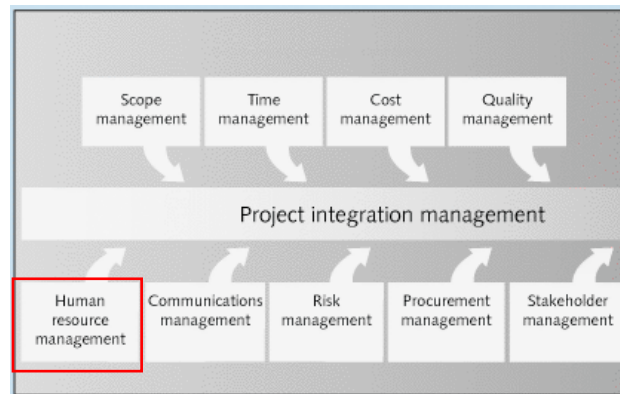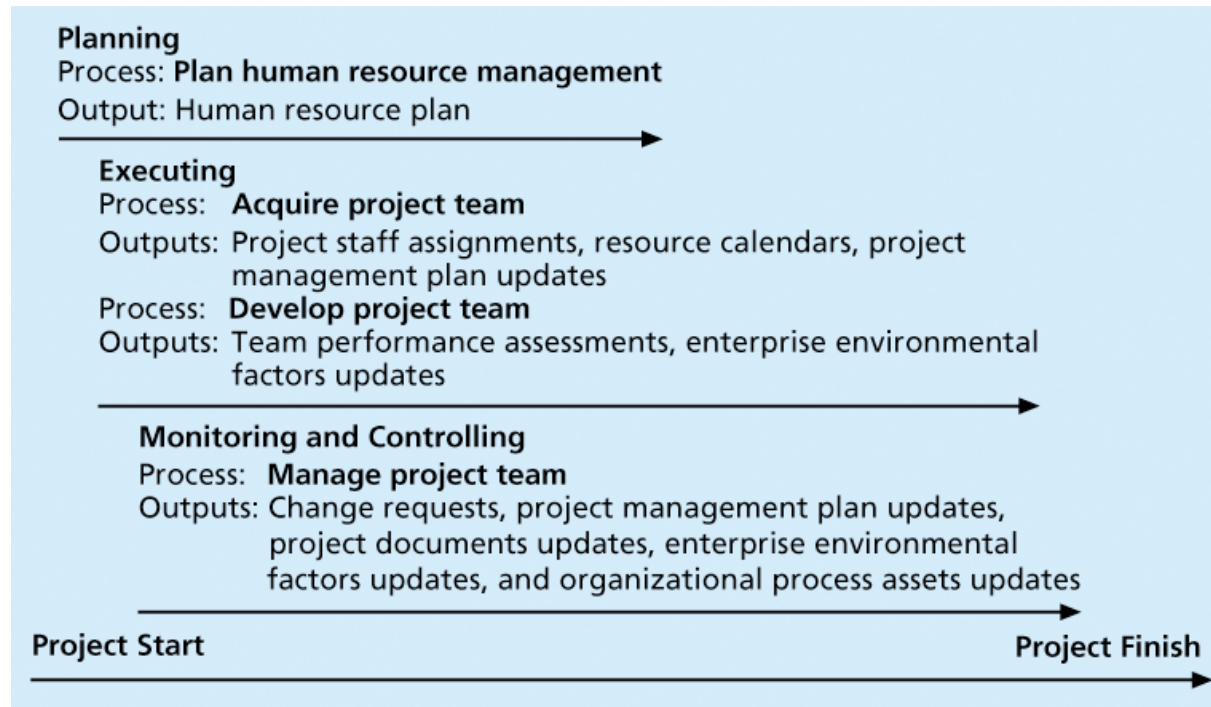
IT Workforce

- Many IT corporate executives proclaim "*People are our most important asset*"
- According to numerous surveys, there is a gap between skills that IT companies want and what they can actually find in the IT workforce
- 58% of IT businesses are concerned about the quality of candidates available for hire
- 68% of IT companies report having a very challenging time finding new staff for projects
- Shortage if IT professionals with required skills resulted in justification of the imposition of overtime work that increasing staff turnover

Project Human Resource Summary

Planning
Process: **Plan human resource management**
Output: Human resource plan

Executing
Process: **Acquire project team**
Outputs: Project staff assignments, resource calendars, project
management plan updates
Process: **Develop project team**
Outputs: Team performance assessments, enterprise environmental
factors updates

Monitoring and Controlling
Process: **Manage project team**
Outputs: Change requests, project management plan updates,
project documents updates, enterprise environmental
factors updates, and organizational process assets updates

Project Start   **Project Finish**

‣ Project HR management includes processes and documents that are needed for making the most effective use of the people involved with a project: project team members, project sponsor, customers, suppliers, *etc*
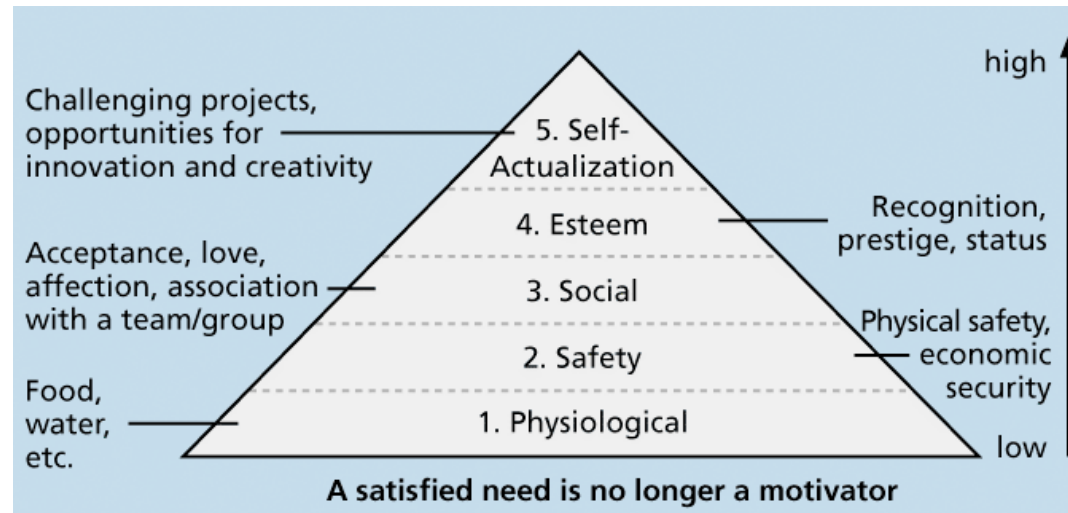
Keys to Managing People

- Psychologists have studied the field of managing people at work. A lot of books and research papers have been published.
- Recently proposed theories and methodologies that are related to management of people at work
  - Motivation theories
  - Influencing and resolving conflicts
  - Team effectiveness
  - Emotional intelligence
  - The role of leadership

Keys to Managing People

Motivation

▸ **Intrinsic motivation** causes people to participate in an activity for their own enjoyment

▸ **Extrinsic motivation** causes people to do something for a reward or to avoid a penalty

▸ Abraham Maslow developed a **hierarchy of needs** which states that people's behaviors are guided or motivated by a sequence of needs


Challenging projects, opportunities for innovation and creativity — 5. Self-Actualization

4. Esteem — Recognition, prestige, status

Acceptance, love, affection, association with a team/group — 3. Social

2. Safety — Physical safety, economic security

Food, water, etc. — 1. Physiological

high ↑

low

A satisfied need is no longer a motivator

Herzberg's Motivational and Hygiene Factors

▸ Frederick Herzberg wrote several famous books and articles about worker motivation. He distinguished between

  ◦ Motivational factors: produce job satisfaction. Examples include achievements, recognition, respect, personal growth

  ◦ Hygiene factors: cause dissatisfaction if not sufficient, but do not necessarily motivate staff to work harder. Examples include higher salaries, helpful supervision, attractive work environment

HYGIENE FACTORS	MOTIVATORS
Larger salaries	Achievement
More supervision	Recognition
More attractive work environment	Work itself
Computer or other required equipment	Responsibility
Health benefits	Advancement
Training	Growth

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Ways to Influence that Help and Hurt Projects

- Projects are more likely to succeed when project managers influence with
  - Expertise and skills
  - Respect
  - Work challenge

- Projects are more likely to fail when project managers rely too heavily on
  - Authority
  - Pay and benefits
  - Penalties

Developing the Human Resource Plan
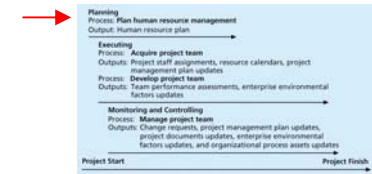
- ‣ The Human Resource Plan establishes guidelines on how human resources for a project will be estimated, assigned to tasks, managed and controlled.
- ‣ Objective: establish a process that facilitates efficient use of available human resources with appropriate skills and their high productivity at work
- ‣ Contents include
  - ◦ Staffing Management Plan – who, when and how needs to be assigned to the project, required skills
  - ◦ Responsibility assignment matrixes – map project tasks to the project staff
  - ◦ Charts that describe the process and the project team structure

Figure 9-4. Work Definition and Assignment Process
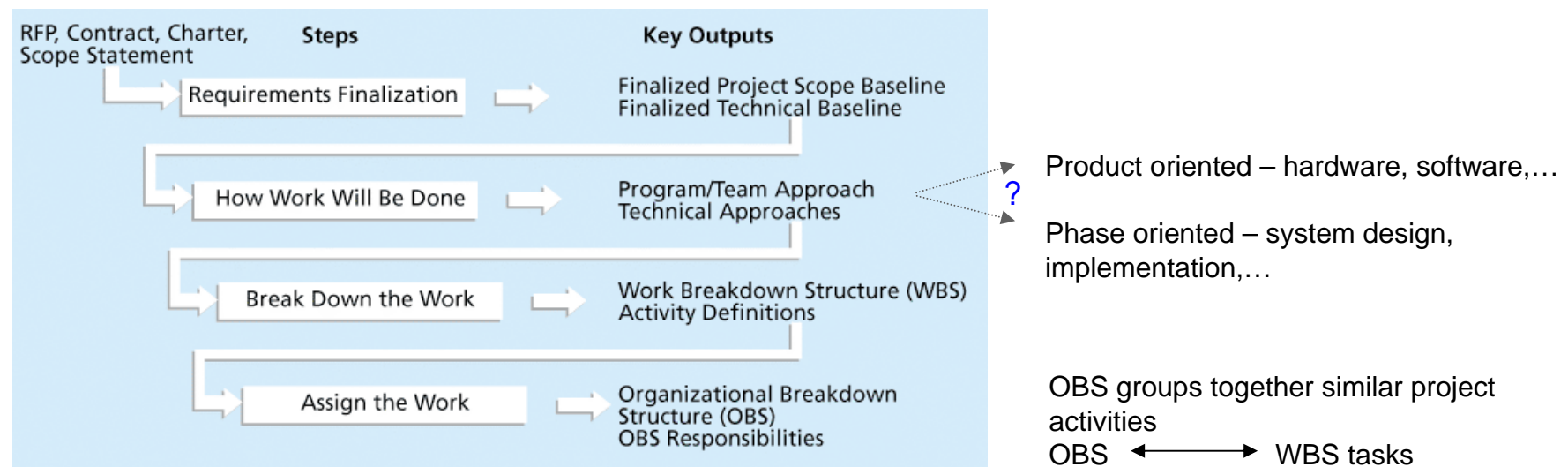
- **As project requirements may change, the whole process may need several iterations**
- **As the WBS can be product oriented or phase oriented, it needs to be decided how work will be broken down**
- **Large multidiscipline project teams are usually subdivided into units according to their work - OBS**

Responsibility Assignment Matrices

▸ **Responsibility Assignment Matrix (RAM)** is a matrix that maps the work of the project as described in the WBS to the units (or individuals) responsible for performing the work as described in the OBS

WBS activities →								
	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8
Systems Engineering	R	R P					R	
Software Development			R P					
Hardware Development				R P				
Test Engineering	P							
Quality Assurance					R P			
Configuration Management						R P		
Integrated Logistics Support							P	
Training								R P

OBS units ↓

R = Responsible organizational unit
P = Performing organizational unit

Table 9-2. Sample RACI Chart

	Group A	Group B	Group C	Group D	Group E
Test Plans	R	A	C	C	I
Unit Test	C	I	R	A	I
Integration Test	A	R	I	C	C
System Test	I	C	A	I	R
User Acceptance Test	R	I	C	R	A

R = responsibility: who works on a task
A = accountability: who signs related documents
C = consultation: who can provide information and consultations
I = informed: who must be informed when the task is completed

• Helps to establish efficient communication between project units

Resource Breakdown Structure

▸ Resource Breakdown Structure is a hierarchical structure that lists required resources by category and type

▸ It is used to help project managers
  ◦ Organize the project team structure and see how staff members are interrelated, and optimise it to facilitate communication and reporting
  ◦ aligns human resources with the project goals
  ◦ Calculate costs
  ◦ Schedule the project

• Organization Breakdown Structure (OBS)
• Responsibility Assignment Matrix (RAM)
• Risk Register
• Project Cost

```
Resource Breakdown Structure

1. Human Resources
   1.1 Manager
          1.1.2 Business analyst
          1.1.3 Programming team
                 1.1.3.1 Software Engineer (4)
                 1.1.3.2 UI Designer
                 1.1.3.3 System architect
          1.1.4 Hardware team
                 1.1.4.1 HW system architect
                 1.1.4.2 Technician
2. Equipment
   .   .   .   .
```

Project Organizational Chart
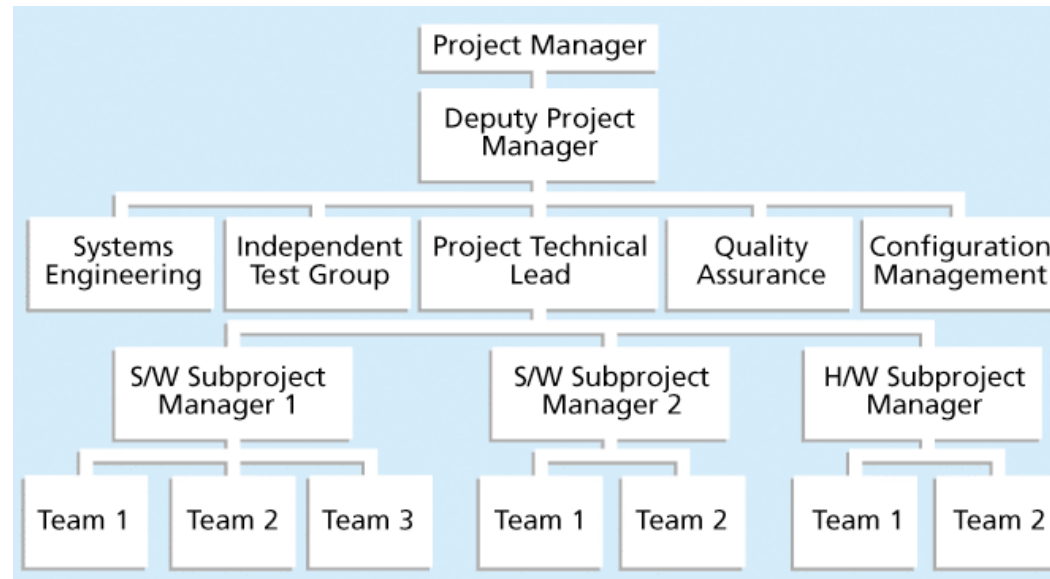
▶ A project organization chart is a diagram that shows who works on the project and the role they play. It's helpful for big projects.

▶ Some project managers include the project sponsor into the chart

▶ The chart helps to
  ◦ understand the reporting structure
  ◦ organise communication and collaboration between units

Staffing Management Plans and Resource Histograms

▶ **Staffing Management Plan** mostly describes when and how people will be added to and taken off the project team
Additional information to include in the plan:
- ◦ Professional skill requirements
- ◦ Training needed
- ◦ Expected hourly rate for contractors
- ◦ Work place location

▶ A **resource histogram** is a column chart that shows the number of resources assigned to a project over time
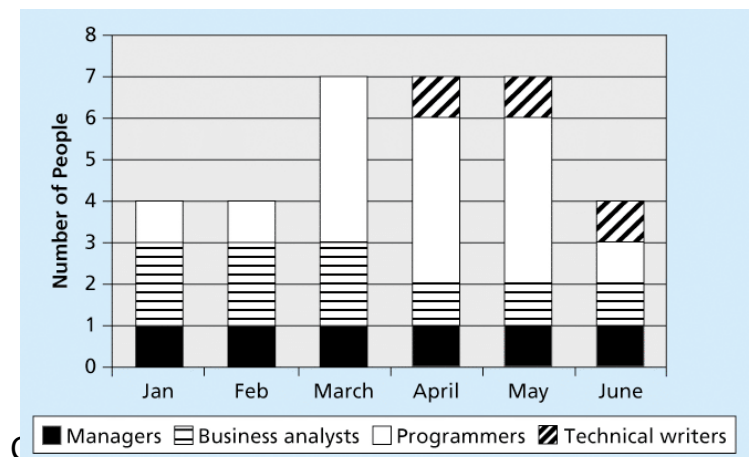
Resource Assignment
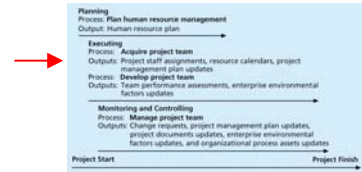
- Having developed The Human Resource Plan, the project manager needs to work with the project sponsor and an HR officer to formally assign people to the project
- Acquiring skilled and self motivated professionals for teams is vital and you may need to use your best negotiation skills to get right people
- Company staffing plans and good hiring procedures are important for hiring subcontractors and recruiting new employees when more people are needed for a project
- When all required staff has been formally allocated to the project, the manager can use MS Project to assign staff members to project tasks defined in the WBS

Resource Sheet

Resource Under/Over Allocation
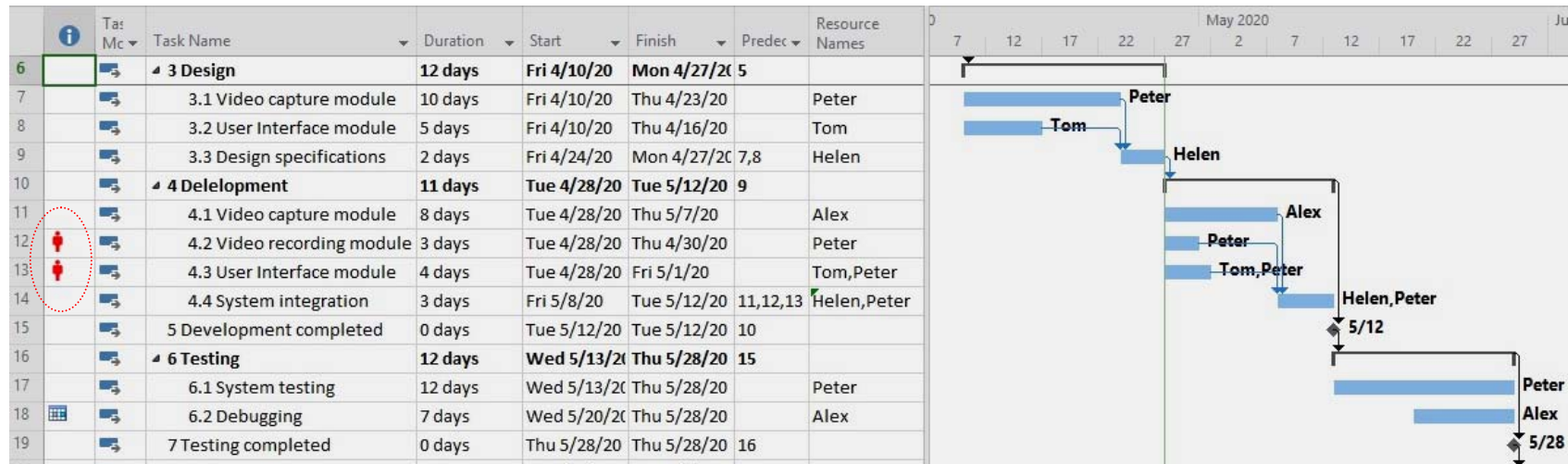
▸ At first glance, the WBS with assigned resources may look correct. However, resource over-allocation indicators warn of a problem
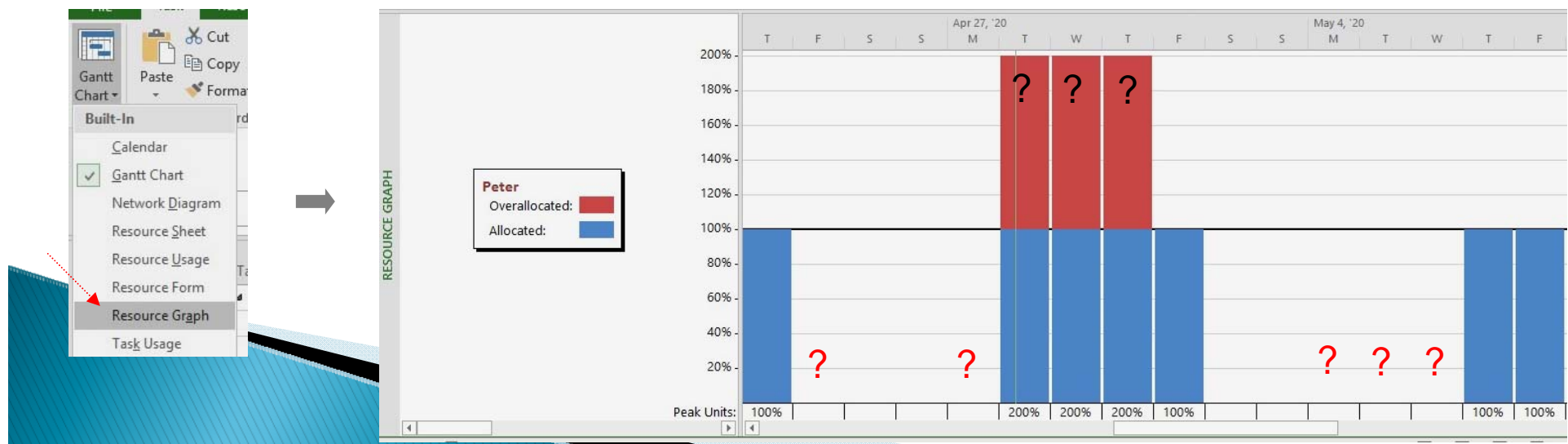
Resource Leveling

▶ Resource leveling is a technique for resolving resource over/under allocation by delaying tasks
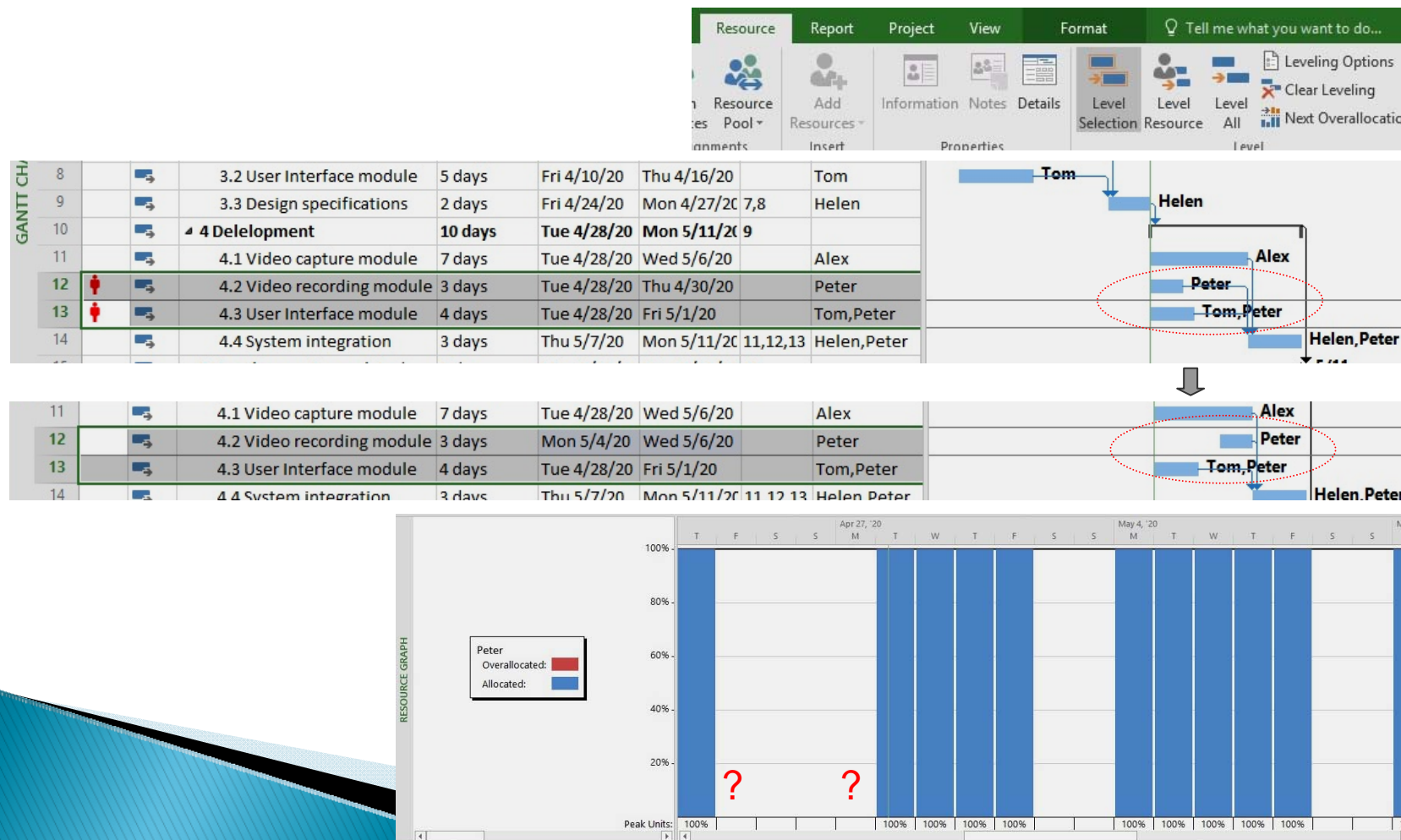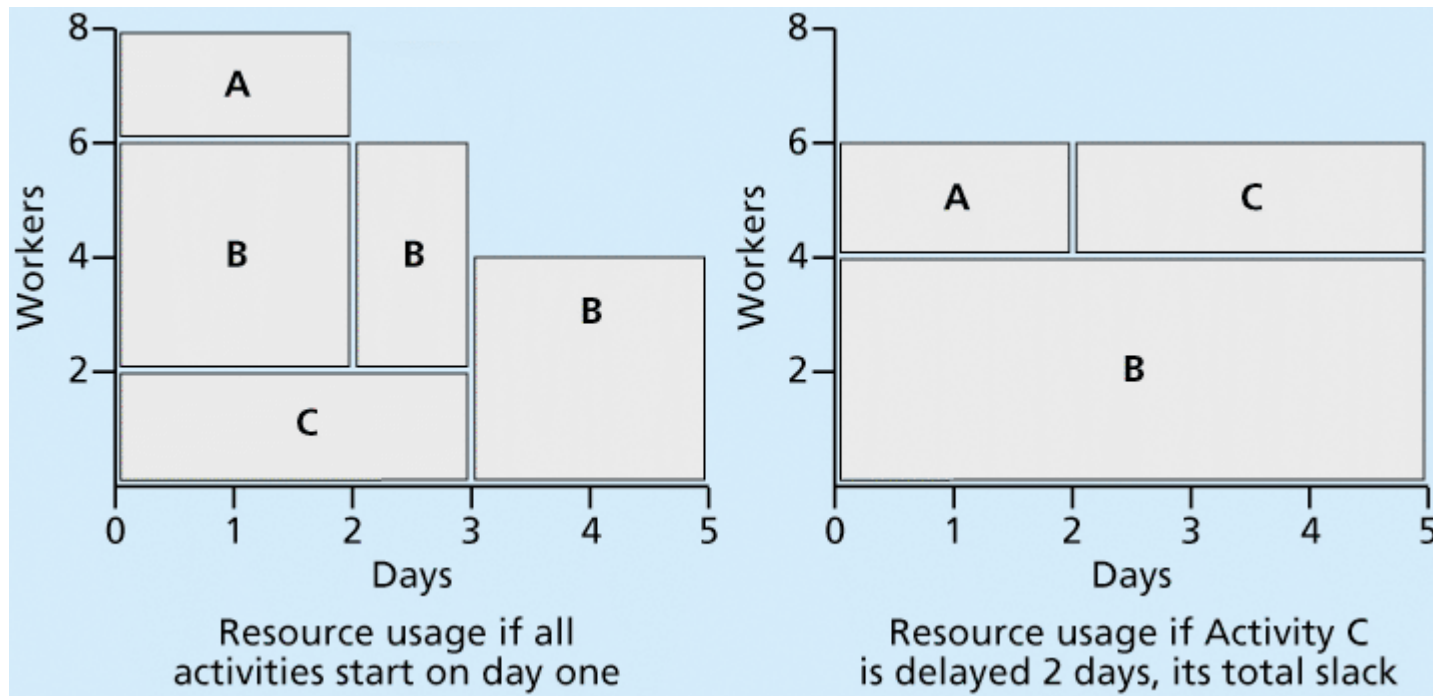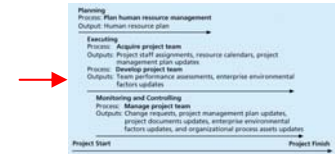
Figure 9-8. Resource Leveling Example

Resource usage if all activities start on day one

Resource usage if Activity C is delayed 2 days, its total slack

▸ Resource Leveling benefits:
  ◦ when people don't need to switch between tasks, they can focus on one task; better productivity
 ◦ people require less management

Developing the Project Team

- Even top class professionals may not perform well together
  - New technologies, programming languages, *etc*
  - Internal conflicts
  - Competition for professional leadership
  - Different ethical standards
- The main goal of **team development** is to help people work together more effectively to achieve the best project performance
  - Training
  - Team building
  - Consideration of personal preferences
- Makes human resource allocation harder

Managing the Project Team
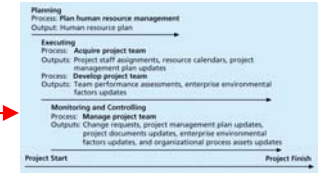
- Manage Project Team is the process of tracking team member performance, providing feedback, resolving issues to dynamically optimize project performance
- After assessing team performance, the project manager must decide
  - if changes to the project staff are required
  - if corrective or preventive actions should be recommended
  - if updates are needed to the project management plan or organizational processes and policies
- Commonly used techniques
  - Observation and conversation
  - Personal performance appraisals
  - Interpersonal skills analysis
  - Conflict prevention and resolution

Figure 9-11. Conflict Handling Modes

▶ According to the PMBOK Guide, "conflict is inevitable in a project environment."

▶ Research suggests that task-related conflicts often improve team performance, but emotional conflicts often depress team performance

General Advice on Teams

‣ Be patient and kind with your team
‣ Understand what motivates individuals and the team
‣ Fix the problem instead of blaming people
‣ Establish regular, effective team meetings
‣ Allow time for teams to go through the basic team-building stages
‣ If possible, limit the size of work groups to three - seven members
‣ Acknowledge individual and group accomplishments
‣ Organize social activities to help project team members get to know each other better
‣ Encourage them to help each other

Chapter Summary

▸ Project human resource management includes the processes required to make the most effective use of the people involved with a project
▸ Main processes include
  ◦ Plan human resource management
  ◦ Acquire project team
  ◦ Develop project team
  ◦ Manage project team

Chapter 9: Project Human Resource Management