

Chapter 9: Project Resource Management

Information Technology Project Management, Ninth Edition

Note: See the text itself for full citations

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The Importance of Human Resource Management

- People determine the success and failure of organizations and projects
 - Most project managers agree that managing human resources effectively is one of the toughest challenges they face.
 - Managing people is a vital component of project resource management.

The Global IT Workforce

- Although there have been ups and downs in the IT labor market, there will always be a need for good IT workers
 - Jobs available to IT professionals are expected to increase by 12 percent by 2024.
 - Project management is number three on Computer world's hottest tech list .

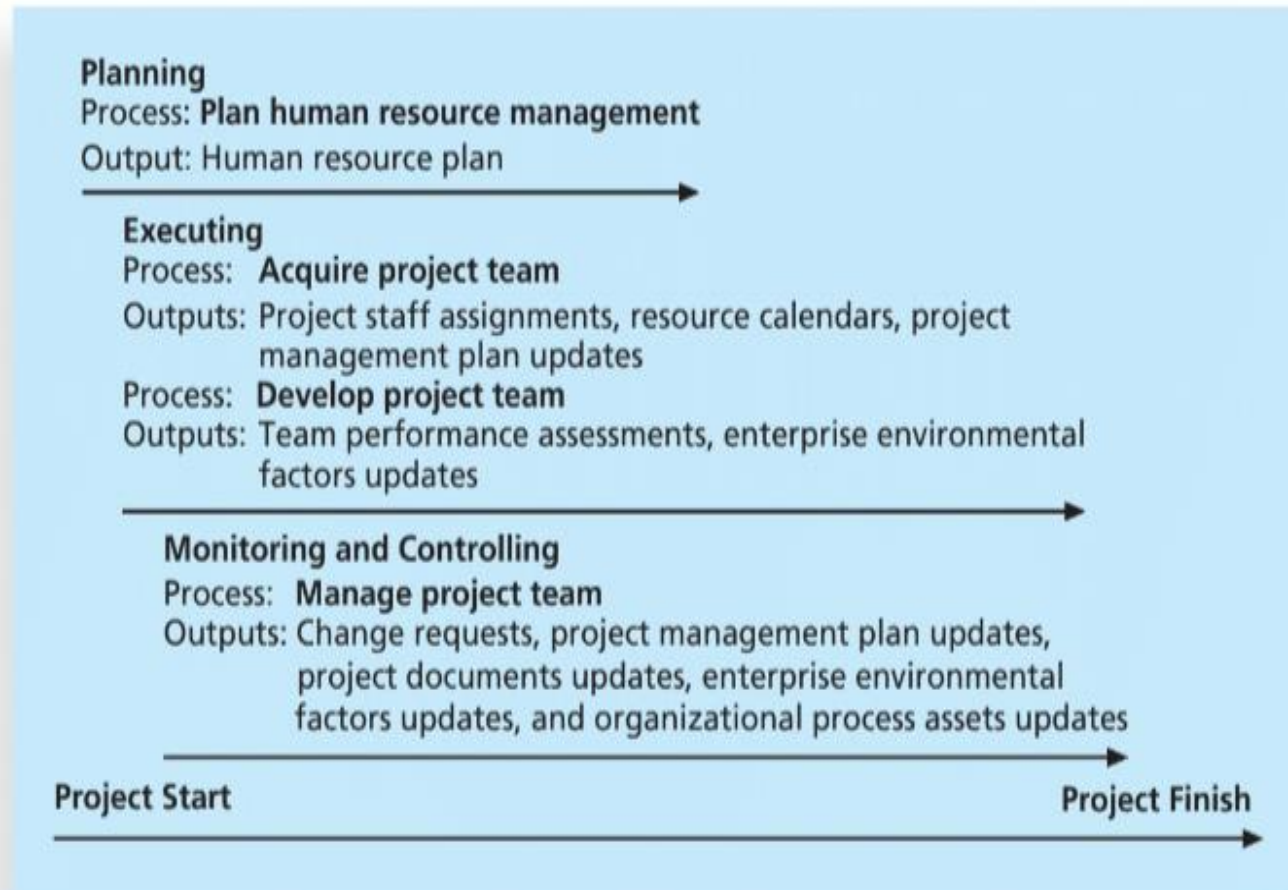
Implications for the Future of IT Human Resource Management

- Proactive organizations are addressing human resource needs by:
 - Improving benefits [online workspace](#)
 - Redefining work hours
 - Finding future workers

What is Project Human Resource Management?

- includes the processes required to make the most effective use of the people involved with a project
- includes the following four processes:
 - Planning human resource management
 - Acquiring the project team
 - Developing the project team
 - Managing the project team

What is Project Human Resource Management? Cont.



Keys to Managing and Leading People

managers are multi-disciplinary

- Psychologists and management theorists have devoted much research and thought to the field leading people at work
 - Motivation theories
 - Influence and power
 - Leadership

1. Motivation Theories

- Intrinsic motivation causes people to participate in an activity for their own enjoyment
 - Example: some people love to read, write, or play an instrument because it makes them feel good
- Extrinsic motivation causes people to do something for a reward or to avoid a penalty
 - Example: some young children would prefer not to play an instrument, but they do because they receive a reward or avoid a punishment for doing so

2. Influence and Power

- Project managers who use work challenges and expertise to influence people projects are more likely to succeed
- Ways of influence :
 - Authority: the legitimate hierarchical right to issue orders
 - Promotion: the ability to improve a worker's position
 - Money: the ability to increase a worker's pay and benefits
 - Penalty: the project manager's perceived ability to dispense or cause punishment
 - Friendship: the ability to establish friendly personal relationships between the project manager and others
- Projects are more likely to fail when project managers rely too heavily on authority, money, or penalty.

2. Influence and Power cont.

- Power is the potential ability to influence behavior to get people to do things they would not otherwise do
 - Power is much stronger than influence, because it is often used to force people to change their behavior
- Examples of Types of power
 - Coercive
 - Using punishment, threats, or other negative approaches to get people to do things they do not want to do.
 - Legitimate
 - Getting people to do things based on a position of authority.
 - Reward
 - Using incentives to induce people to do things
 - Referent convince
 - Based on a person's own charisma

3. Leadership

- There is no one best way to be a leader
 - Most experts agree that the best leaders are able to adapt their style to needs of the situation
 - It is important to understand and pay attention to concepts of motivation, influence, power and leadership in all project processes

1. Planning Human Resource Management

- Involves identifying and documenting project resources, roles, responsibilities, skills, and reporting relationships
 - Can be separated into a ^{people} human resource management plan and a physical resource management plan
^{material, infrastructure}
- The main output of this process is a human resource plan which include:
 - Project organizational charts
 - Responsibility assignment matrixes
 - Staffing management plan and resource histograms

1. Planning Human Resource Management cont.

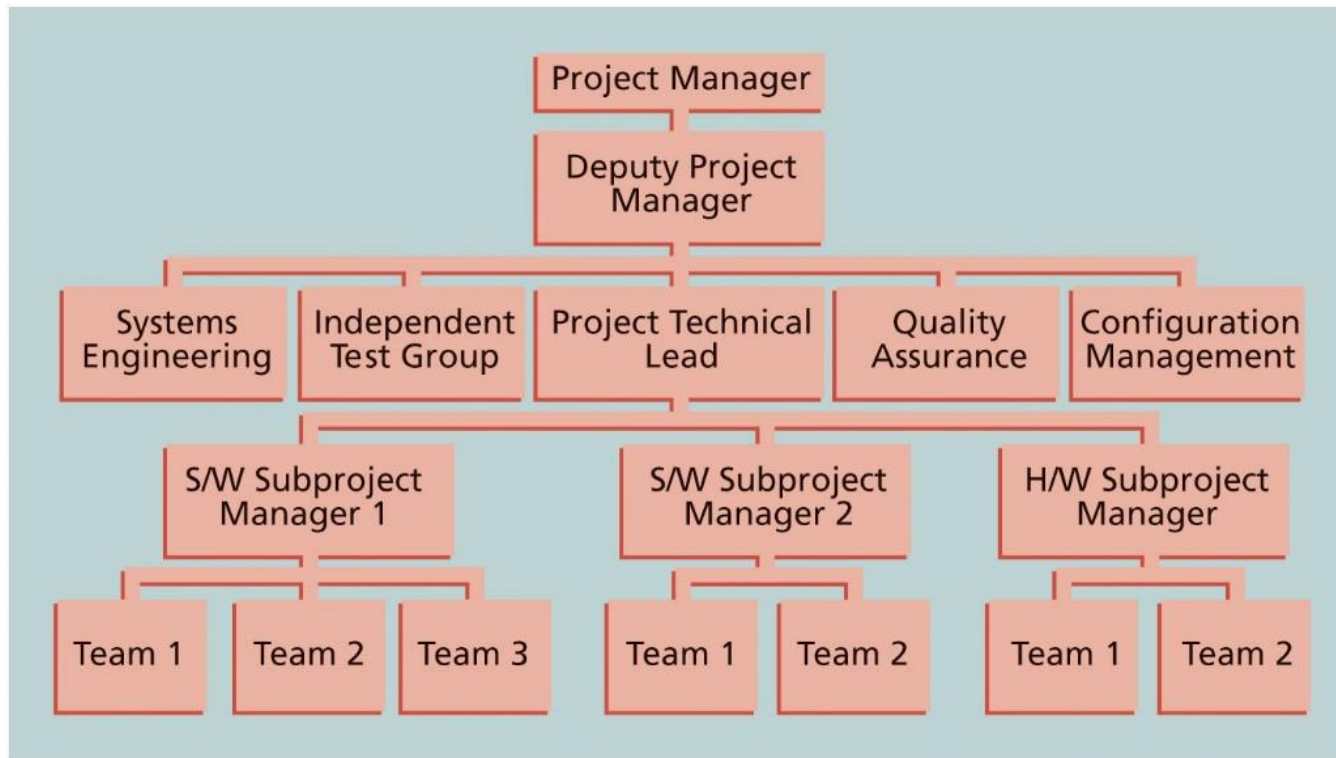


FIGURE 9-3 Sample organizational chart for a large IT project

1. Planning Human Resource Management

- The project manager assigns work in WBS to organizational units.
- The project manager often bases these work assignments on where the work fits in the organization and uses an organizational breakdown structure to conceptualize the process.
- An organizational breakdown structure (OBS) is a specific type of organizational chart that shows which organizational units are responsible for which work items.
 - can be based on a general organizational chart and then broken down into more detail, based on specific units within departments in the company

1. Planning Human Resource Management cont.

A responsibility assignment matrix (RAM) maps the work of the project, as described in the WBS, to the people responsible for performing the work, as described in the OBS.

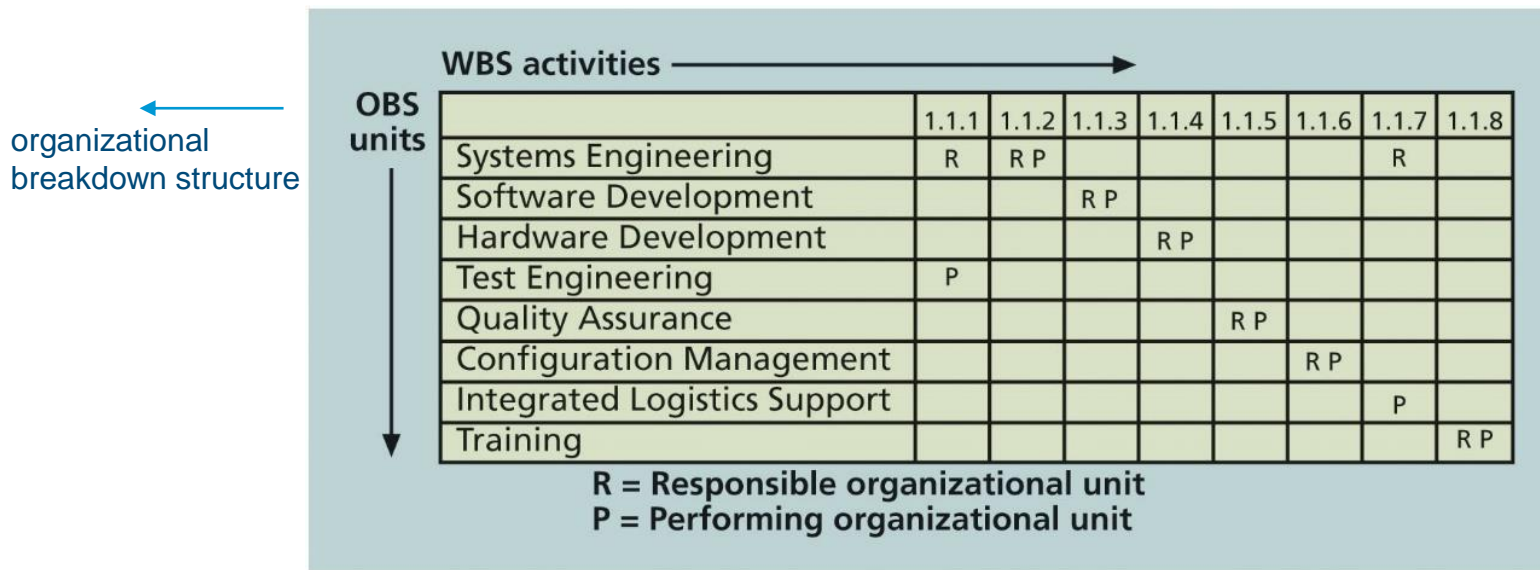


FIGURE 9-5 Sample responsibility assignment matrix (RAM)

1. Planning Human Resource Management cont.

	Car Owner	Shop Owner	Mechanic	Parts Supplier
Pay for parts and services	A, R	C		
Determine parts and services needed	C		A, R	C
Supply parts		C	C	A, R
Install parts	I	A	R	

Table 9-2 Sample RACI chart

Some organizations use RACI charts to show four key roles for project stakeholders:

- Responsibility: Who is supposed to complete the task?
- Accountability: Who signs off on the task and makes sure it is completed on time?
- Consultation: Who has information necessary to complete the task?
- Informed: Who needs to be notified of task status and results?

1. Planning Human Resource Management cont.

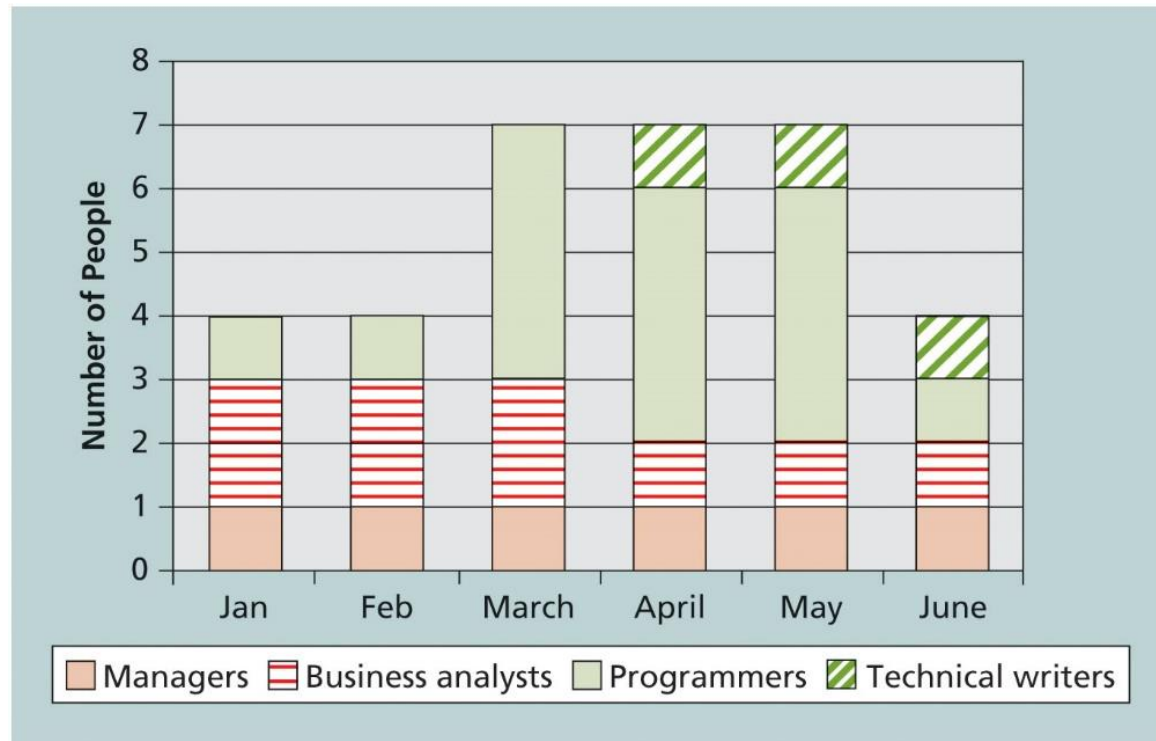


FIGURE 9-6 Sample resource histogram

2. Acquiring the Project Team

- This process addresses important topics related to acquiring the project team: resource assignment, resource loading, and resource levelling.

2. Acquiring the Project Team: Resource Assignment

- After developing resource requirements, project managers must work with other people in their organizations to assign them to their projects or to acquire additional human or physical resources needed for the project
 - Organizations that do a good job of staff acquisition have good staffing plans
 - It is very important to consider the needs of individuals and the organization when making recruiting and retention decisions.
 - The main outputs of this process are project staff assignments, resource availability information, and updates to the staffing management plan.

2. Acquiring the Project Team: Resource Loading

how many people at this time to accomplish this task

- Resource loading refers to the amount of individual resources an existing schedule requires during specific time periods
 - Helps project managers develop a general understanding of the demands a project will make on the organization's resources and individual people's schedules
- Overallocation means more resources than available are assigned to perform work at a given time

2. Acquiring the Project Team: Resource Loading

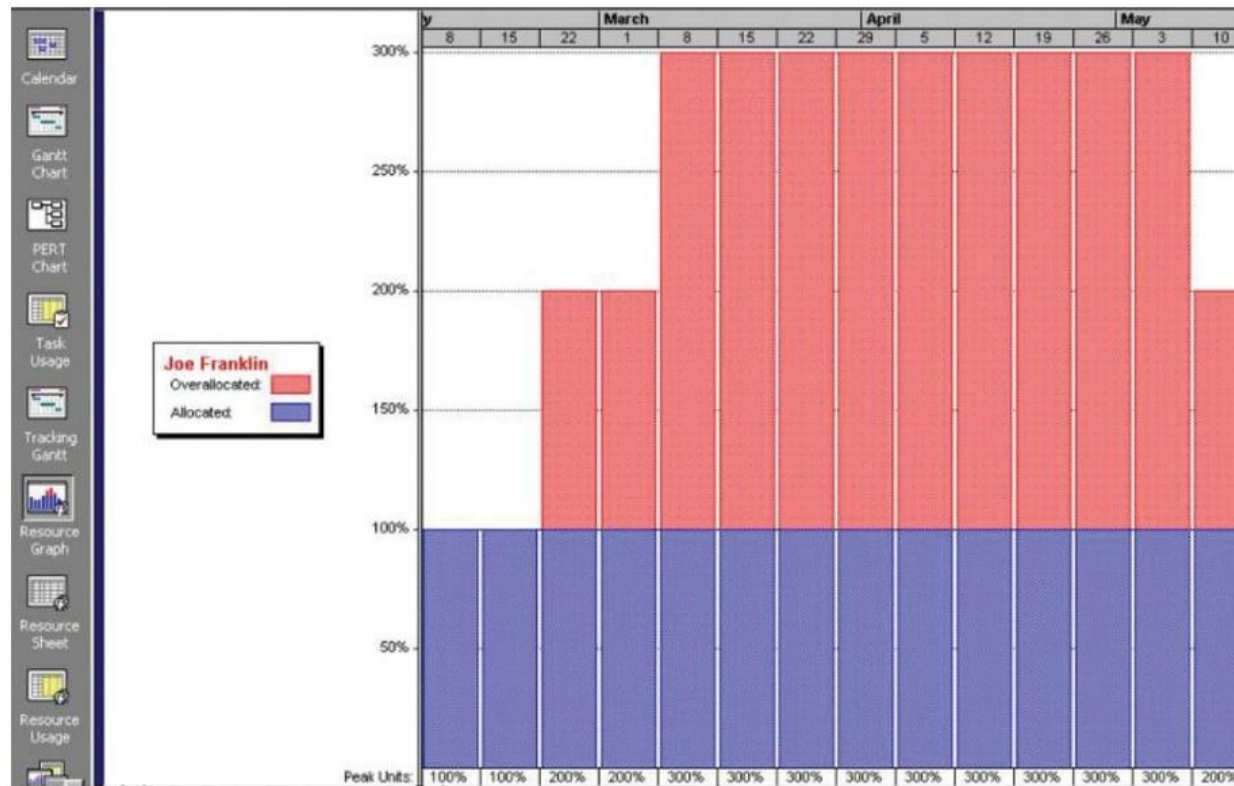


FIGURE 9-7 Sample histogram showing an overallocated person

2. Acquiring the Project Team: Resource Leveling

- Resource leveling is a technique for resolving resource conflicts by delaying tasks
 - Main purpose is to create a smoother distribution of resource usage
- Benefits of resource leveling
 - When resources are used on a more constant basis, they require less management
 - May enable project managers to use a just-in-time inventory type of policy for using subcontractors or other expensive resources
 - Results in fewer problems for project personnel and accounting department

3. Developing the Project Team

- The main goal of team development is to help people work together more effectively to improve project performance
 - It takes teamwork to successfully complete most projects
- Dr. Bruce Tuckman model describes five stages of team development
 - Forming
 - Storming
 - Norming
 - Performing
 - Adjourning

3. Developing the Project Team cont.

1. Forming involves the introduction of team members, either at the initiation of the team or as new members are introduced. This stage is necessary, but little work is actually achieved.
2. Storming occurs when team members have different opinions for how the team should operate. People test each other, and there is often conflict within the team.
3. Norming is achieved when team members have developed a common working method, and cooperation and collaboration replace the conflict and mistrust of the previous phase.
4. Performing occurs when the emphasis is on reaching the team's goals rather than working on team process.
5. Adjourning involves the break-up of the team after it successfully reaches its goals and completes the work.

4. Managing the Project Team

- involves tracking team member performance, motivating team members, providing timely feedback, resolving issues and conflicts, and coordinating changes to help enhance project performance.
- Several tools and techniques are available to assist in managing project teams
 - Interpersonal and team skills
 - Conflict management

4. Managing the Project Team cont.

- Conflict handling modes
 - Confrontation: directly face a conflict using a problem-solving approach that allows affected parties to work through their disagreements
 - Compromise: use a give-and-take approach. They bargain and search for solutions that bring some degree of satisfaction to all the parties in a dispute
 - Smoothing: avoid areas of difference and emphasize areas of agreement
 - Forcing: exert their viewpoint at the potential expense of another viewpoint
 - Withdrawal: retreat or withdraw from an actual or potential disagreement
 - Collaborating: decision makers incorporate different viewpoints and insights to develop consensus and commitment

4. Managing the Project Team cont.

Relationship Importance	High	Smoothing/ Accommodating		Confrontation/ Problem-solving Collaborating
	Medium		Compromise/ Reconcile	
	Low	Withdrawal/ Avoidance		Forcing/ Directing
		Low	Medium	High
		Task Importance		

Source: *Kathy Schwalbe, An Introduction to Project Management, Sixth Edition* (September 2017)

FIGURE 9-11 Conflict handling modes

Using Software to Assist in Resource Management

- Software can help in producing a simple responsibility assignment matrix or resource histograms
- Software includes several features related to human resource management
 - Assigning and tracking resources
 - Leveling resources
 - Resource usage reports
 - Overallocated resource reports
 - To-do lists