

Chapter 9:

Project Human Resource Management

**Information Technology
Project Management**

Learning Objectives

- Explain the importance of good human resource management on projects, including the current state and future implications of the global IT workforce
- Define project human resource management and understand its processes
- Summarize key concepts for managing people by understanding the theories of Abraham Maslow, Frederick Herzberg, David McClelland, and Douglas McGregor on motivation, H. J. Thamhain and D. L. Wilemon on influencing workers, and Stephen Covey on how people and teams can become more effective

Learning Objectives (continued)

- Discuss human resource planning and be able to create a project organizational chart, responsibility assignment matrix, and resource histogram
- Understand important issues involved in project staff acquisition and explain the concepts of resource assignments, resource loading, and resource leveling
- Assist in team development with training, team-building activities, and reward systems
- Explain and apply several tools and techniques to help manage a project team and summarize general advice on managing teams
- Describe how project management software can assist in project human resource management

The Importance of Human Resource Management

- Many corporate executives have said, “People are our most important asset”
- People determine the success and failure of organizations and projects

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
- The Digital Planet 2006 study estimated that the global marketplace for information and communications technology (ICT) would top \$3 trillion in 2006 and reach almost \$4 trillion by 2009

More Digital Planet Report Findings

- Communications products and services represented the largest single category of ICT spending in 2006 with \$1.57 trillion, but software was the fastest growing category, up year to year by 9.9 percent
- ICT spending per employee was up almost 40 percent between 2001 and 2006
- In spending by country, the top ten ICT spending countries remained fixed in rank between 2001 and 2005
 - In descending order, these are the United States, Japan, Germany, United Kingdom, France, China, Italy, Canada, Brazil, and Korea
- China's ICT annual growth rates exceeded 20 percent every year between 2001 and 2006

U.S. IT Workforce

- U.S. IT employment grew nearly 4 percent in 2005
- Seven IS-related occupations will be among the top 30 fastest-growing occupations in the U.S. between now and 2012
- Sarbanes-Oxley has caused the need for closer scrutiny of IT projects
- Hiring managers say interpersonal skills are the most important soft skill for IT workers

Implications for the Future of IT Human Resource Management

- Proactive organizations are addressing workforce needs by:
 - Improving benefits
 - Redefining work hours and incentives
 - Finding future workers

Media Snapshot

- Here's the dirty little secret: U.S. productivity is No. 1 in the world when productivity is measured as gross domestic product per worker, but our lead vanishes when productivity is measured as GDP per hour worked
- Europeans take an average of six to seven weeks of paid annual leave, compared with just 12 days in the United States; twice as many American as European workers put in more than 48 hours per week
- Sociologists have shown that many Americans, especially men, would like to have more family or leisure time; recent surveys show that many Americans are willing to sacrifice up to a quarter of their salaries in return for more time off

What Went Wrong?

- A 2006 report by The Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, and the Society for Human Resource Management suggests that entry-level workers in the U.S. are ill-prepared for the workplace
- Four-year college graduates were listed as deficient in the following three skills:
 - Written Communications - 27.8%
 - Writing in English - 26.2%
 - Leadership - 23.8%

What is Project Human Resource Management?

- Making the most effective use of the people involved with a project
- Processes include:
 - **Human resource planning:** identifying and documenting project roles, responsibilities, and reporting relationships
 - **Acquiring the project team:** getting the needed personnel assigned to and working on the project
 - **Developing the project team:** building individual and group skills to enhance project performance
 - **Managing the project team:** tracking team member performance, motivating team members, providing timely feedback, resolving issues and conflicts, and coordinating changes to help enhance project performance

Figure 9-1: Project Human Resource Management Summary

Planning

Process: **Human Resource Planning**

Outputs: Roles and responsibilities, project organizational chart, staffing management plan

Executing

Process: **Acquire Project Team**

Outputs: Project staff assignments, resource availability, updates to the staffing management plan

Process: **Develop Project Team**

Outputs: Team performance assessment

Monitoring and Controlling

Process: **Manage Project Team**

Outputs: Requested changes, recommended corrective actions, recommended preventive actions, and updates to organizational process assets and the project management plan

Project Start

Project Finish

Keys to Managing People

- Psychologists and management theorists have devoted much research and thought to the field of managing people at work
- Important areas related to project management include:
 - Motivation theories
 - Influence and power
 - Effectiveness

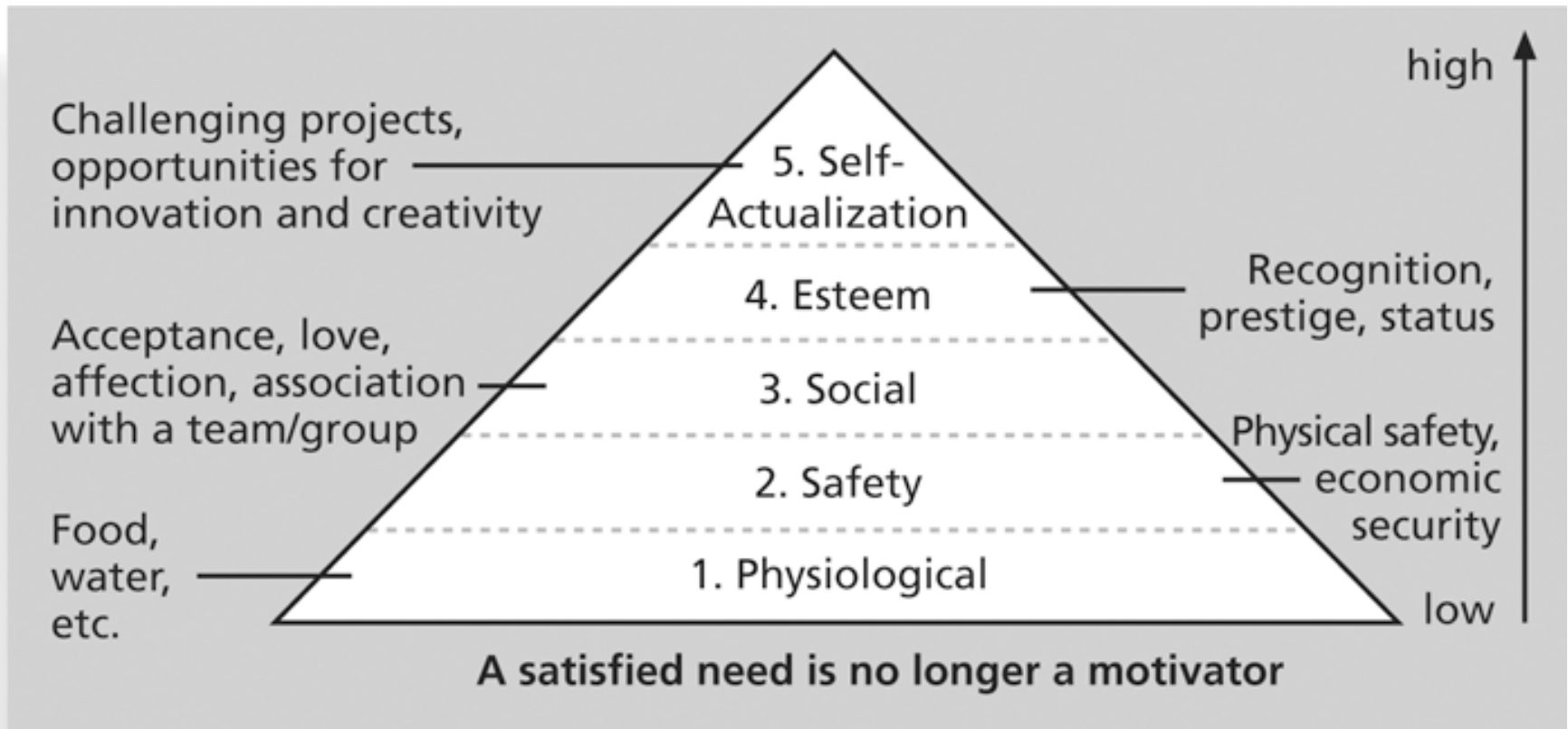
Intrinsic and Extrinsic Motivation

- **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
- For example, some children take piano lessons for intrinsic motivation (they enjoy it) while others take them for extrinsic motivation (to get a reward or avoid punishment)

Maslow's Hierarchy of Needs

- Abraham Maslow argued that humans possess unique qualities that enable them to make independent choices, thus giving them control of their destiny
- Maslow developed a **hierarchy of needs** that states that people's behaviors are guided or motivated by a sequence of needs

Figure 9-2: Maslow's Hierarchy of Needs



Herzberg's Motivational and Hygiene Factors

- Frederick Herzberg wrote several famous books and articles about worker motivation; he distinguished between:
 - Motivational factors: achievement, recognition, the work itself, responsibility, advancement, and growth, which produce job satisfaction
 - Hygiene factors: cause dissatisfaction if not present, but do not motivate workers to do more; examples include larger salaries, more supervision, and a more attractive work environment

Table 9-1: Examples of Herzberg's Hygiene Factors and Motivators

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

McGregor's Theory X and Y

- Douglas McGregor popularized the human relations approach to management in the 1960s
- Theory X: assumes workers dislike and avoid work, so managers must use coercion, threats, and various control schemes to get workers to meet objectives
- Theory Y: assumes individuals consider work as natural as play or rest and enjoy the satisfaction of esteem and self-actualization needs
- Theory Z: introduced in 1981 by William Ouchi, and is based on the Japanese approach to motivating workers, emphasizing trust, quality, collective decision making, and cultural values

Ways to Influence that Help and Hurt Projects

- Projects are more likely to *succeed* when project managers exert influence with:
 - Expertise
 - Work challenge
- Projects are more likely to *fail* when project managers rely too heavily on:
 - Authority
 - Money
 - Penalty

Power

- **Power** is the potential ability to influence behavior to get people to do things they would not otherwise do
- Types of power include:
 - Coercive
 - Legitimate
 - Expert
 - Reward
 - Referent

Covey and Improving Effectiveness

- Project managers can apply Covey's 7 habits to improve effectiveness on projects
 - Be proactive
 - Begin with the end in mind
 - Put first things first
 - Think win/win
 - Seek first to understand, then to be understood
 - Synergize
 - Sharpen the saw

Empathic Listening and Rapport

- Good project managers are **empathic listeners**; they listen with the intent to understand
- Before you can communicate with others, you have to have **rapport** – a relation of harmony, conformity, accord, or affinity
- **Mirroring** is the matching of certain behaviors of the other person, a technique to help establish rapport
- IT professionals need to develop empathic listening and other people skills to improve relationships with users and other stakeholders

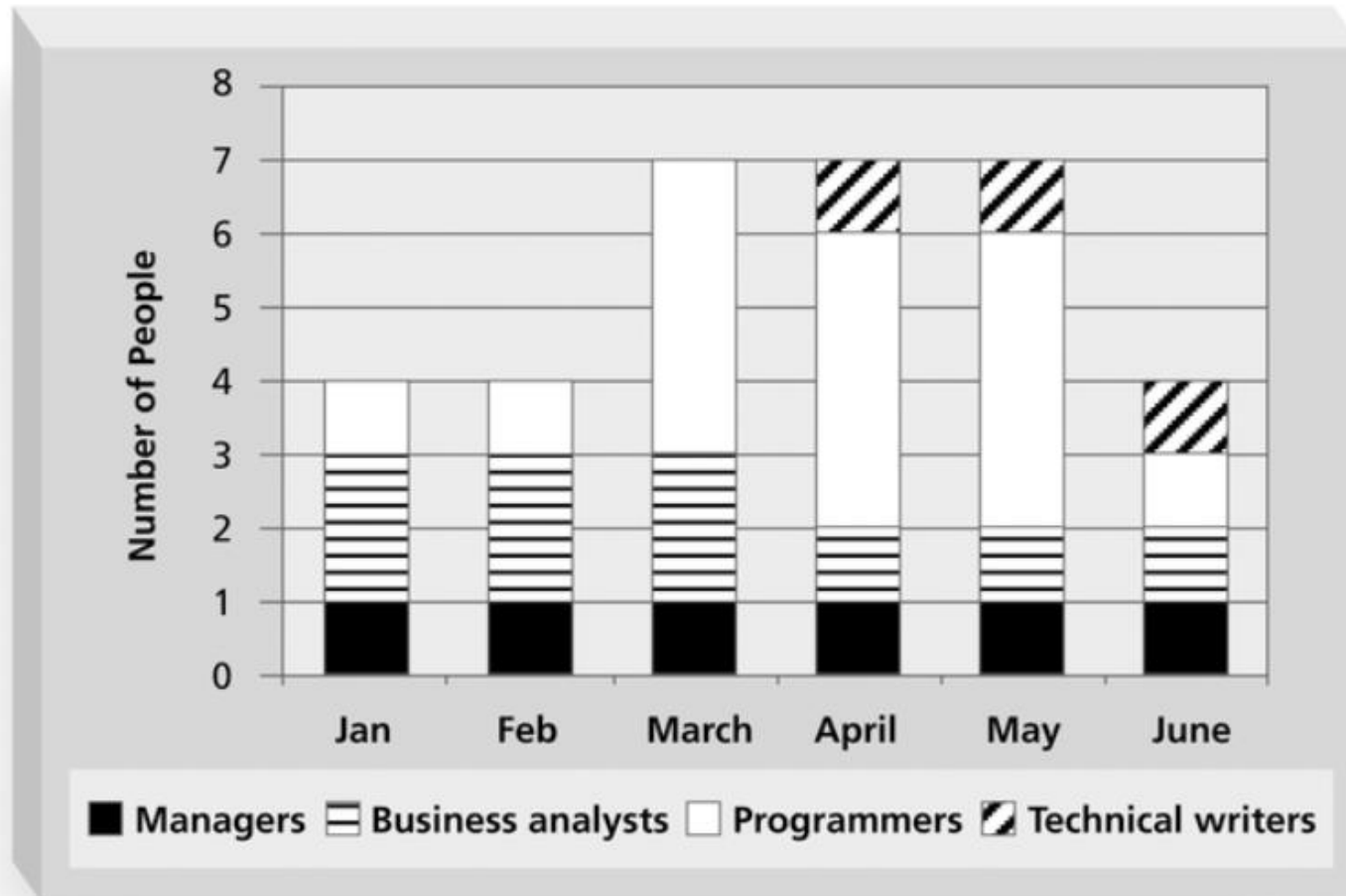
Human Resource Planning

- Involves identifying and documenting project roles, responsibilities, and reporting relationships
- Outputs include:
 - Project organizational charts
 - Staffing management plan
 - Responsibility assignment matrixes
 - Resource histograms

Staffing Management Plans and Resource Histograms

- A **staffing management plan** describes when and how people will be added to and taken off the project team
- A **resource histogram** is a column chart that shows the number of resources assigned to a project over time

Figure 9-7: Sample Resource Histogram



What Went Right?

- In addition to providing technical training for IT personnel, several companies have made significant investments in project management training to provide career paths for project managers
 - Hewlett Packard employed only six registered PMPs in 1997, but by August 2004, it employed more than 1,500 PMPs and was adding 500 more per year
 - While most consulting firms offer a single path to a leadership position, IBM has four to allow their people to succeed by focusing on their strengths and interests in one or more disciplines

Acquiring the Project Team

- Acquiring qualified people for teams is crucial
- The project manager who is the smartest person on the team has done a poor job of recruiting!
- It's important to assign the appropriate type and number of people to work on projects at the appropriate times

Resource Assignment

- Staffing plans and good hiring procedures are important, as are incentives for recruiting and retention
 - Some companies give their employees one dollar for every hour a new person they helped hire works
 - Some organizations allow people to work from home as an incentive
- In CIO's "2006 Midyear Staffing Update" report, IT leaders ranked finding, hiring, and retaining workers with the needed skill sets among their top staffing concerns

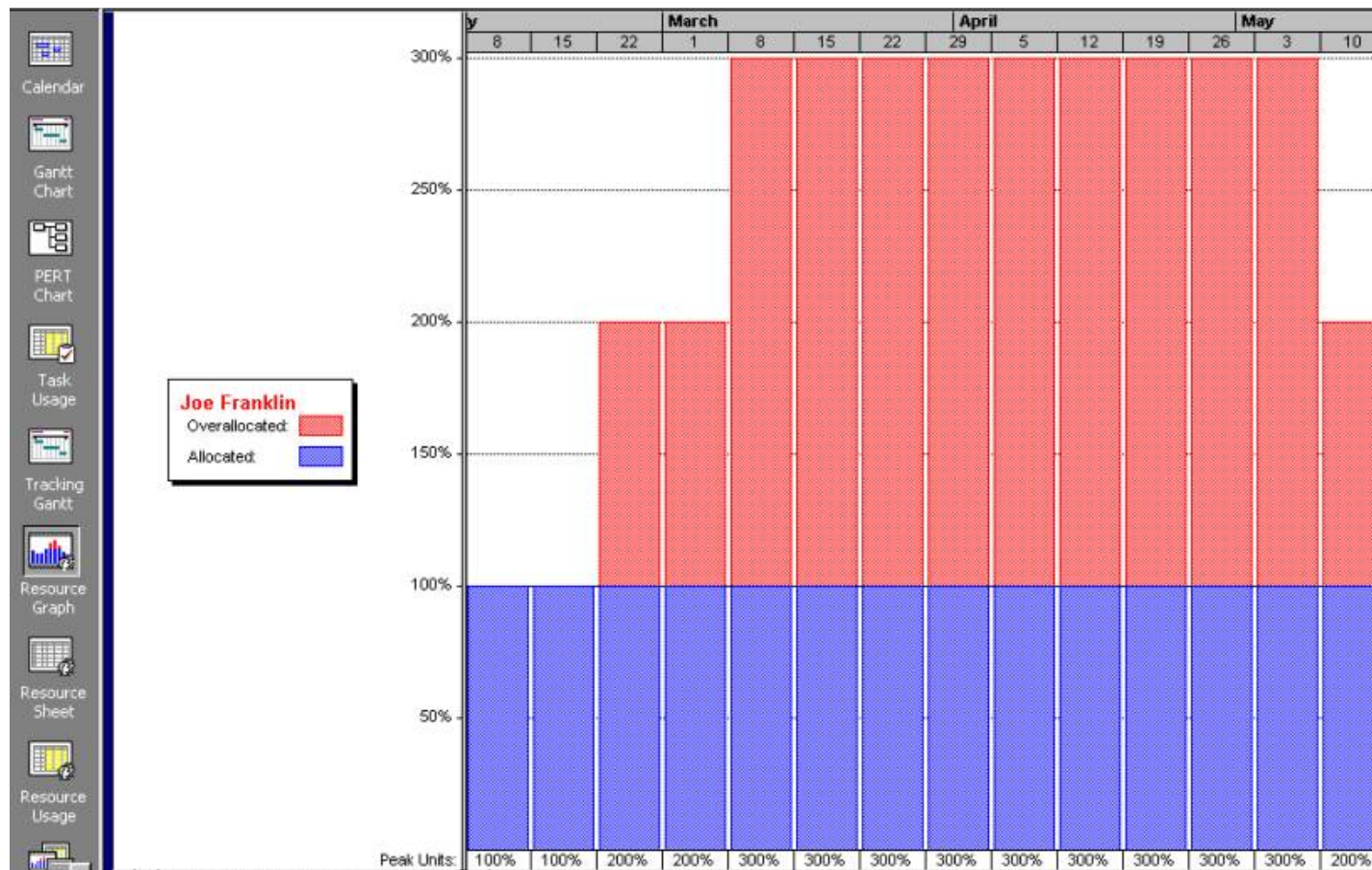
Best Practice

- Best practices can be applied to include the best places for people to work
 - For example, Fortune Magazine lists the “100 Best Companies to Work For” in the United States every year, with Google taking the honors in 2007
 - Working Mothers Magazine lists the best companies in the U.S. for women based on benefits for working families
 - Timesonline (www.timesonline.co.uk) provides the Sunday Times list of the 100 Best Companies to Work For, a key benchmark against which UK companies can judge their Best Practice performance as employers

Resource Loading

- **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 are available are assigned to perform work at a given time

Figure 9-8: Sample Histogram Showing an Overallocated Individual



Resource Leveling

- **Resource leveling** is a technique for resolving resource conflicts by delaying tasks
- The main purpose of resource leveling is to create a smoother distribution of resource usage and reduce overallocation

Benefits of Resource Leveling

- When resources are used on a more constant basis, they require less management
- It may enable project managers to use a just-in-time inventory type of policy for using subcontractors or other expensive resources
- It results in fewer problems for project personnel and accounting department
- It often improves morale

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

Training

- Training can help people understand themselves, each other, and how to work better in teams
- Team building activities include:
 - Physical challenges
 - Psychological preference indicator tools

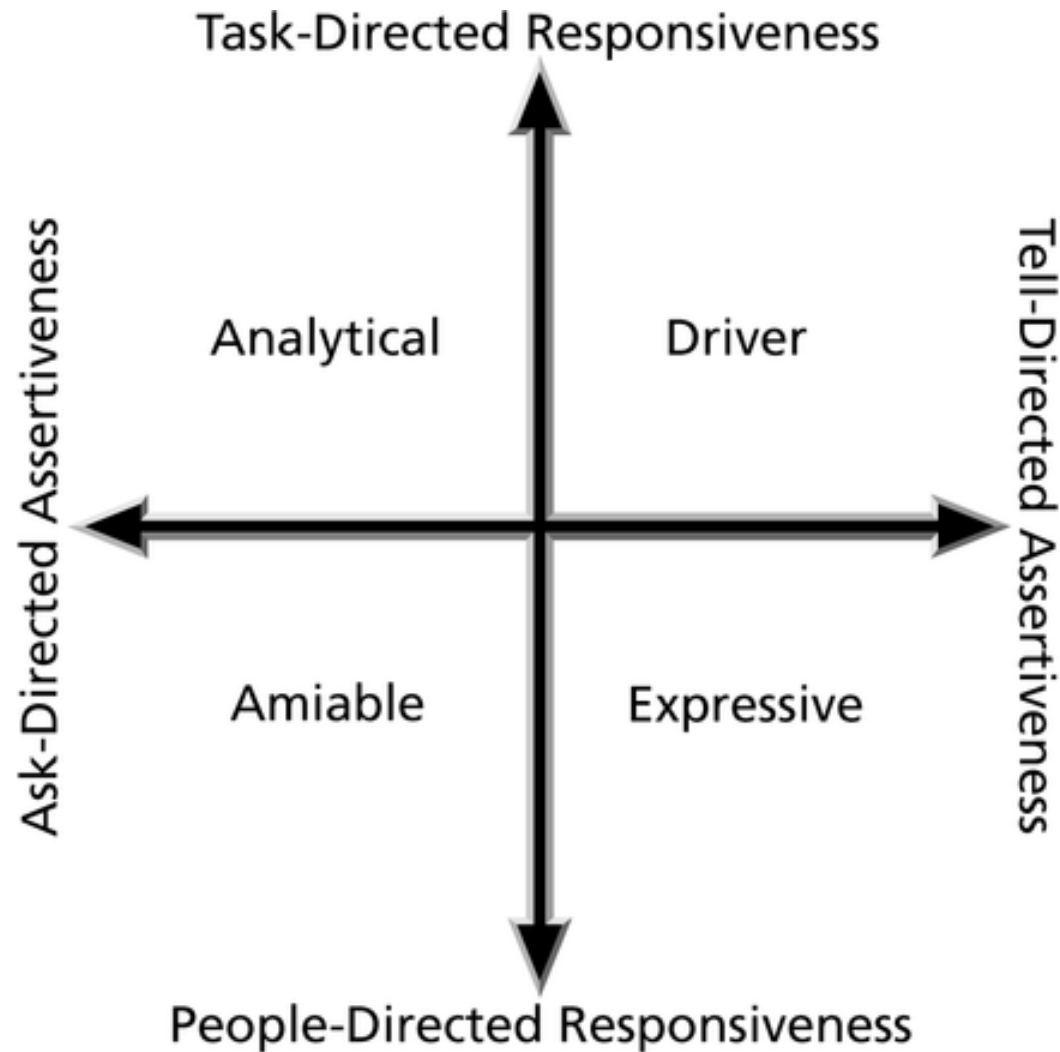
Meyers-Briggs Type Indicator (MBTI)

- MBTI is a popular tool for determining personality preferences and helping teammates understand each other
- Four dimensions include:
 - Extrovert/Introvert (E/I)
 - Sensation/Intuition (S/N)
 - Thinking/Feeling (T/F)
 - Judgment/Perception (J/P)
- NTs or rationals are attracted to technology fields
- IT people vary most from the general population in not being extroverted or sensing

Social Styles Profile

- People are perceived as behaving primarily in one of four zones, based on their assertiveness and responsiveness:
 - Drivers
 - Expressives
 - Analyticals
 - Amiables
- People on opposite corners (drivers and amiables, analyticals and expressives) may have difficulties getting along

Figure 9-10: Social Styles



DISC Profiles

- Also uses a four-dimensional model of normal behavior
 - Dominance
 - Influence
 - Steadiness
 - Compliance
- People in opposite quadrants can have problems understanding each other

Figure 9-11: The DISC Profile



Reward and Recognition Systems

- Team-based reward and recognition systems can promote teamwork
- Focus on rewarding teams for achieving specific goals
- Allow time for team members to mentor and help each other to meet project goals and develop human resources

Managing the Project Team

- Project managers must lead their teams in performing various project activities
- After assessing team performance and related information, the project manager must decide:
 - If changes should be requested to the project
 - If corrective or preventive actions should be recommended
 - If updates are needed to the project management plan or organizational process assets

Tools and Techniques for Managing Project Teams

- Observation and conversation
- Project performance appraisals
- Conflict management
- Issue logs

General Advice on Teams

- Be patient and kind with your team
- Fix the problem instead of blaming people
- Establish regular, effective meetings
- Allow time for teams to go through the basic team-building stages
- Limit the size of work teams to three to seven members

Five Dysfunctions of a Team

- Patrick Lencioni, author of several books on teams, says that “Teamwork remains the one sustainable competitive advantage that has been largely untapped”*
- The five dysfunctions of teams are:
 1. Absence of trust
 2. Fear of conflict
 3. Lack of commitment
 4. Avoidance of accountability
 5. Inattention to results

*Lencioni, Patrick, “Overcoming the Five Dysfunctions of a Team,” Jossey-Bass: San Francisco, CA (2005), p. 3.

General Advice on Teams (continued)

- Plan some social activities to help project team members and other stakeholders get to know each other better
- Stress team identity
- Nurture team members and encourage them to help each other
- Take additional actions to work with virtual team members

Using Software to Assist in Human Resource Management

- Software can help in producing RAMS and resource histograms
- Project management software includes several features related to human resource management such as:
 - Assigning resources
 - Identifying potential resource shortages or underutilization
 - Leveling resources

Project Resource Management Involves Much More Than Using Software

- Project managers must:
 - Treat people with consideration and respect
 - Understand what motivates them
 - Communicate carefully with them
- Focus on your goal of enabling project team members to deliver their best work

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:
 - Human resource planning
 - Acquiring the project team
 - Developing the project team
 - Managing the project team