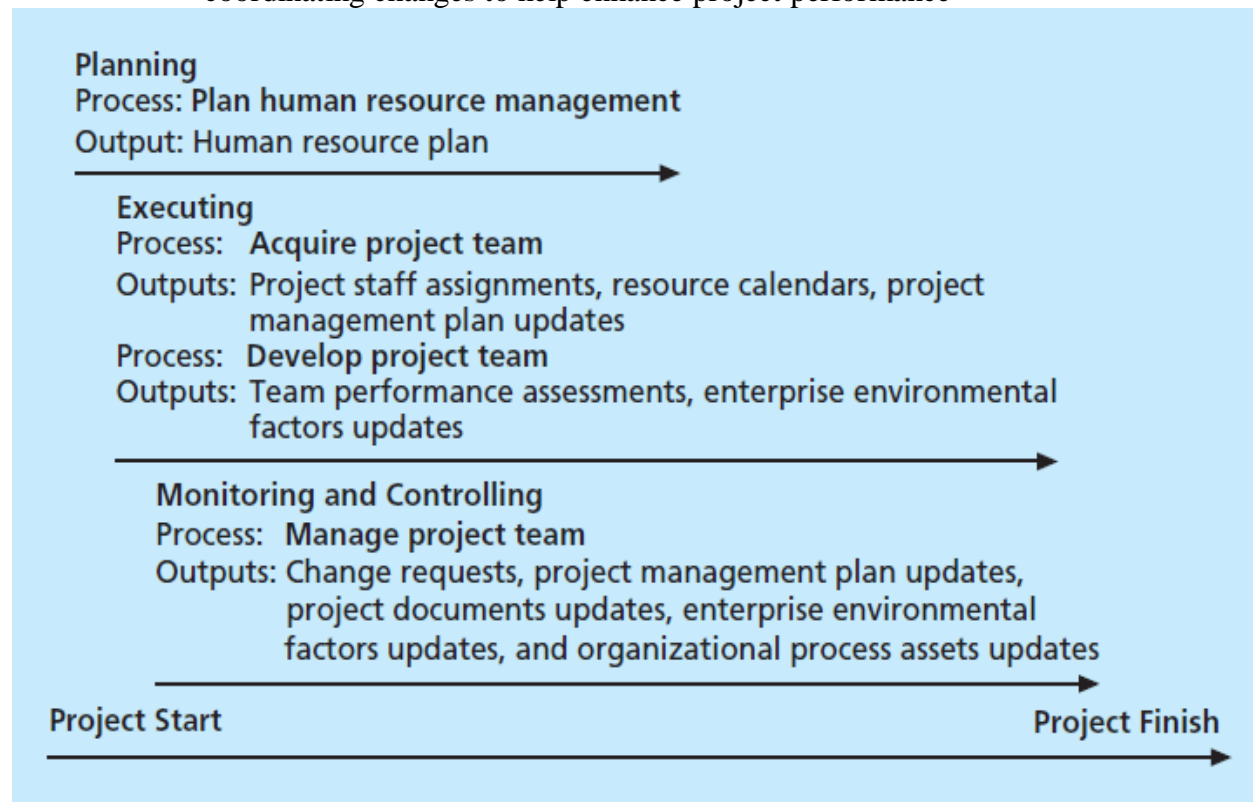


Table of Contents

Keys to managing people	2
Motivation Theories	2
Maslow's Hierarchy of Needs.....	3
Herzberg's Motivational and Hygiene Factors	3
McClelland's Acquired-Needs Theory.....	3
McGregor's Theory X and Y	3
Influence	3
Thamhain and Wilemon's Ways to Have Influence on Projects	3
Ways to Influence that Help and Hurt Projects.....	4
Power.....	4
Effectiveness	4
Covey and Improving Effectiveness	4
Empathic Listening and Rapport.....	4
DEVELOPING THE HUMAN RESOURCE PLAN	5
Project Organizational Charts	5
Staffing Management Plans and Resource Histograms	6
Responsibility Assignment Matrices.....	7
ACQUIRING THE PROJECT TEAM	8
Resource Assignment	8
Resource Loading.....	8
Resource Leveling.....	8
Benefits of Resource Leveling	8
DEVELOPING THE PROJECT TEAM.....	9
Team development	9
Training	9
Reward and Recognition Systems.....	10
MANAGING THE PROJECT TEAM.....	10
Tools and Techniques for Managing Project Teams.....	11

Project Human Resource Management

- Making the most effective use of the people involved with a project
- Processes include
 - **Planning human resource management:** 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



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

Motivation Theories

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

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

McClelland's Acquired-Needs Theory

- Specific needs are acquired or learned over time and shaped by life experiences, including:
 - Achievement (nAch): Achievers like challenging projects with achievable goals and lots of feedback
 - Affiliation (nAff): People with high nAff desire harmonious relationships and need to feel accepted by others, so managers should try to create a cooperative work environment for them
 - Power: (nPow): People with a need for power desire either personal power (not good) or institutional power (good for the organization). Provide institutional power seekers with management opportunities

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

Influence

Thamhain and Wilemon's Ways to Have Influence on Projects

- 1 Authority: the legitimate hierarchical right to issue orders
- 2 Assignment: the project manager's perceived ability to influence a worker's later work assignments
- 3 Budget: the project manager's perceived ability to authorize others' use of discretionary funds

- 4 Promotion: the ability to improve a worker's position
- 5 Money: the ability to increase a worker's pay and benefits
- 6 Penalty: the project manager's ability to cause punishment
- 7 Work challenge: the ability to assign work that capitalizes on a worker's enjoyment of doing a particular task
- 8 Expertise: the project manager's perceived special knowledge that others deem important
- 9 Friendship: the ability to establish friendly personal relationships between the project manager and others

Ways to Influence that Help and Hurt Projects

- Projects are more likely to *succeed* when project managers 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 power involves using punishment, threats, or other negative approaches to get people to do things they do not want to do
 - Legitimate power is getting people to do things based on a position of authority
 - Expert power involves using personal knowledge and expertise to get people to change their behavior
 - Reward power involves using incentives to induce people to do things
 - Referent power is based on a person's own charisma

Effectiveness

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: practice of self renewal

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

DEVELOPING THE HUMAN RESOURCE PLAN

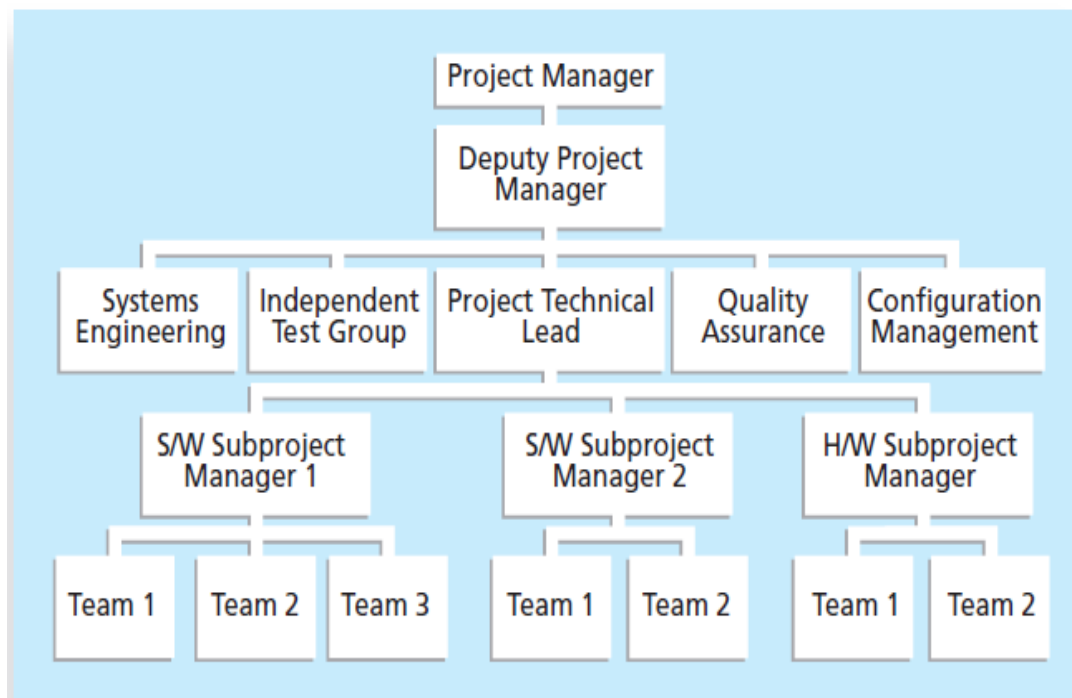
To develop a human resource plan for a project, you must identify and document project roles, responsibilities, skills, and reporting relationships

- Contents include
 - project organizational charts
 - staffing management plan
 - responsibility assignment matrixes
 - resource histograms

Project Organizational Charts

- The nature of IT projects often means that project team members come from different backgrounds and possess a wide variety of skills.
- It can be very difficult to manage such a diverse group of people, so it is important to provide a clear organizational structure for a project.
- After identifying important skills and the types of people needed to staff a project, the project manager should work with top management and project team members to create an organizational chart for the project.

Sample organizational chart for a large IT project

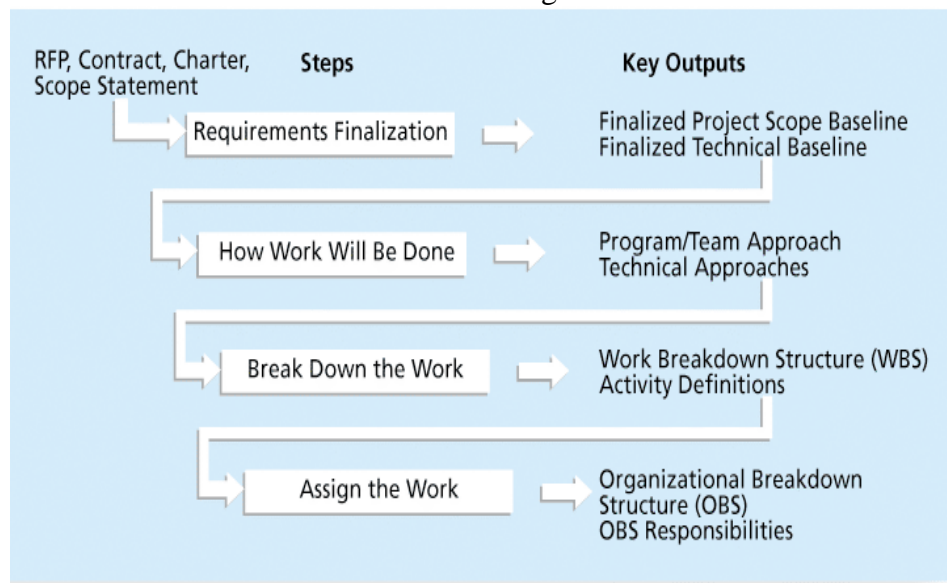


Work Definition and Assignment Process

In addition to defining an organizational structure for a project, it is also important to follow a work definition and assignment process

1. Finalizing the project requirements
2. Defining how the work will be accomplished
3. Breaking down the work into manageable elements
4. Assigning work responsibilities

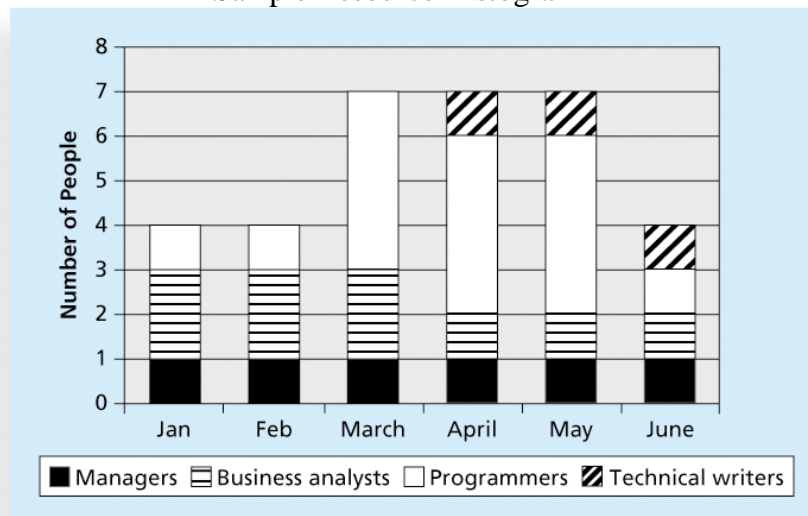
Framework for Work Definition and Assignment Process



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

Sample Resource Histogram



Responsibility Assignment Matrices

- A **responsibility assignment matrix (RAM)** is a matrix that maps the work of the project as described in the WBS to the people responsible for performing the work as described in the OBS
- Can be created in different ways to meet unique project needs

OBS units	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

R = Responsible organizational unit
P = Performing organizational unit

- Some organizations use RACI charts to show four key roles for project stakeholders:
 - Responsibility: Who does the task?
 - Accountability: Who signs off on the task or has authority for it?
 - Consultation: Who has information necessary to complete the task?
 - Informed: Who needs to be notified of task status and results?
- A RACI chart lists tasks vertically and lists individuals or groups horizontally.
- Each intersecting cell contains an R, A, C, or I.
- A task may have multiple R, C, or I entries, but there can be only one A entry per row to clarify who is accountable for each task

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

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

Project managers must work with other people in their organizations to assign personnel to their projects or to acquire additional human resources needed to staff the project. Project managers with strong influencing and negotiating skills are often good at getting internal people to work on their projects. However, the organization must ensure that people are assigned to the projects that best fit their skills and the needs of the organization

- **The main outputs of this process are project staff assignments, resource availability information, and updates to the staffing management plan**
- 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
- It is very important to consider the needs of individuals and the organization when making recruiting and retention decisions and to study the best practices of leading companies in these areas

Resource Loading

- Once people are assigned to projects, two techniques are available to project managers that help them use project staff most effectively: resource loading and resource leveling
- **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
- **Over-allocation** means more resources than are available are assigned to perform work at a given time

Resource Leveling

- Resource leveling is a technique for resolving resource conflicts by delaying tasks.
- It is a form of network analysis in which resource management concerns drive scheduling decisions (start and finish dates).
- The main purpose of resource leveling is to create a smoother distribution of resource usage and reduce over-allocation
- Resource leveling, therefore, aims to minimize period-by-period variations in resource loading by shifting tasks within their slack allowances

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 project manager must ensure that people can work together as a team to achieve project goals. The main goal of team development is to help people work together more effectively to improve project performance

Team development

Tuckman model of team development

The Tuckman model describes five stages of team development:

1. **Forming** involves the introduction of team members, either at the initiation of the team or as new members are introduced.
2. **Storming** occurs when team members have different opinions for how the team should operate
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

Training

- Project managers often recommend that people take specific training courses to improve individual and team development
- It is important to make sure that the timing and delivery method for the training is appropriate for specific situations and individuals.
- Training can help people understand themselves, each other, and how to work better in teams
- Team building training activities include
 - physical challenges
 - psychological preference indicator tools
- Three common exercises used in mental team building include the Myers-Briggs Type Indicator, Wilson Learning Social Styles Profile, and the DISC Profile

The Myers-Briggs Type Indicator (MBTI)

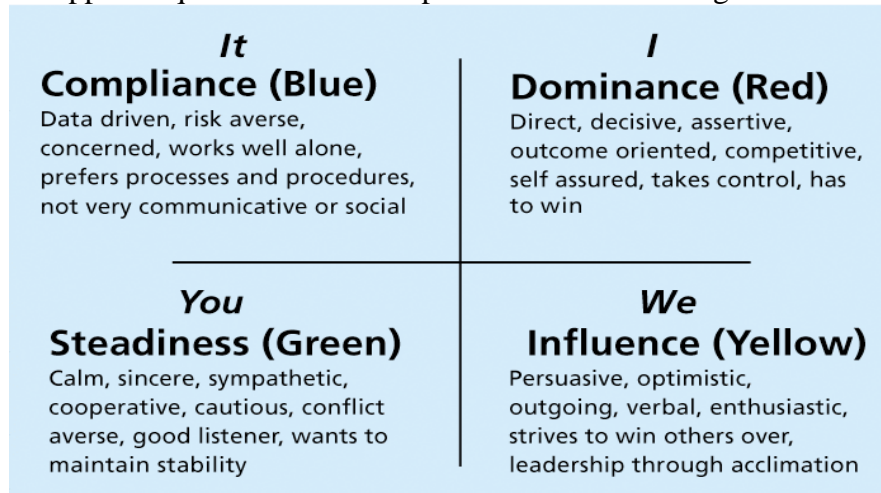
- A popular tool for determining personality preferences and helping teammates understand each other
- The four dimensions of psychological type in the MBTI include:
 - **Extrovert/Introvert (E/I)**: signifies whether you draw energy from other people (extrovert) or from yourself (introvert)
 - **Sensation/Intuition (S/N)**: relates to the manner in which you gather information
 - **Thinking/Feeling (T/F)**: Thinking judgment is objective and logical, and feeling judgment is subjective and personal
 - **Judgment/Perception (J/P)**: concerns people's attitudes toward structure
- Project managers can often benefit from knowing their team members' MBTI profiles by adjusting their management styles for each person.
- Project managers may also want to make sure they have a variety of personality types on their teams.

The Social Styles Profile

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

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



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 managers need to observe team members at work to assess how they are performing and ask team members how they feel about their work
- Project performance appraisals: The need for project performance appraisals and the types required vary depending on the length of the project, its complexity, organizational policies, contract requirements, and related communications.
- Interpersonal skills: To effectively manage teams, it is especially important to focus on leadership, influencing, and decision-making skills.
- Conflict management: It's important for project managers to understand strategies for handling conflicts and to proactively manage conflict

Conflict Handling Modes based on concern for production and concern for people

1. **Confrontation:** Directly face a conflict using a problem-solving approach
2. **Compromise:** Use a give-and-take approach
3. **Smoothing:** De-emphasize areas of difference and emphasize areas of agreement
4. **Forcing:** The win-lose approach
5. **Withdrawal:** Retreat or withdraw from an actual or potential disagreement
6. **Collaborating:** Decision makers incorporate different viewpoints and insights to develop consensus and commitment

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

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
- 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

