

Software Project Management



Chapter7: Human
Resource Management

Structure of this course

	5 process groups				
10 knowledge areas	Initiating	Planning	Executing	Monitoring & Controlling	Closing
1. Integration management					
2. Scope					
3. Time					
4. Cost					
5. Quality					
6. Human resource					
7. Communications					
8. Risk					
9. Procurement					
10. Stakeholder					

Human Resource Management Overview

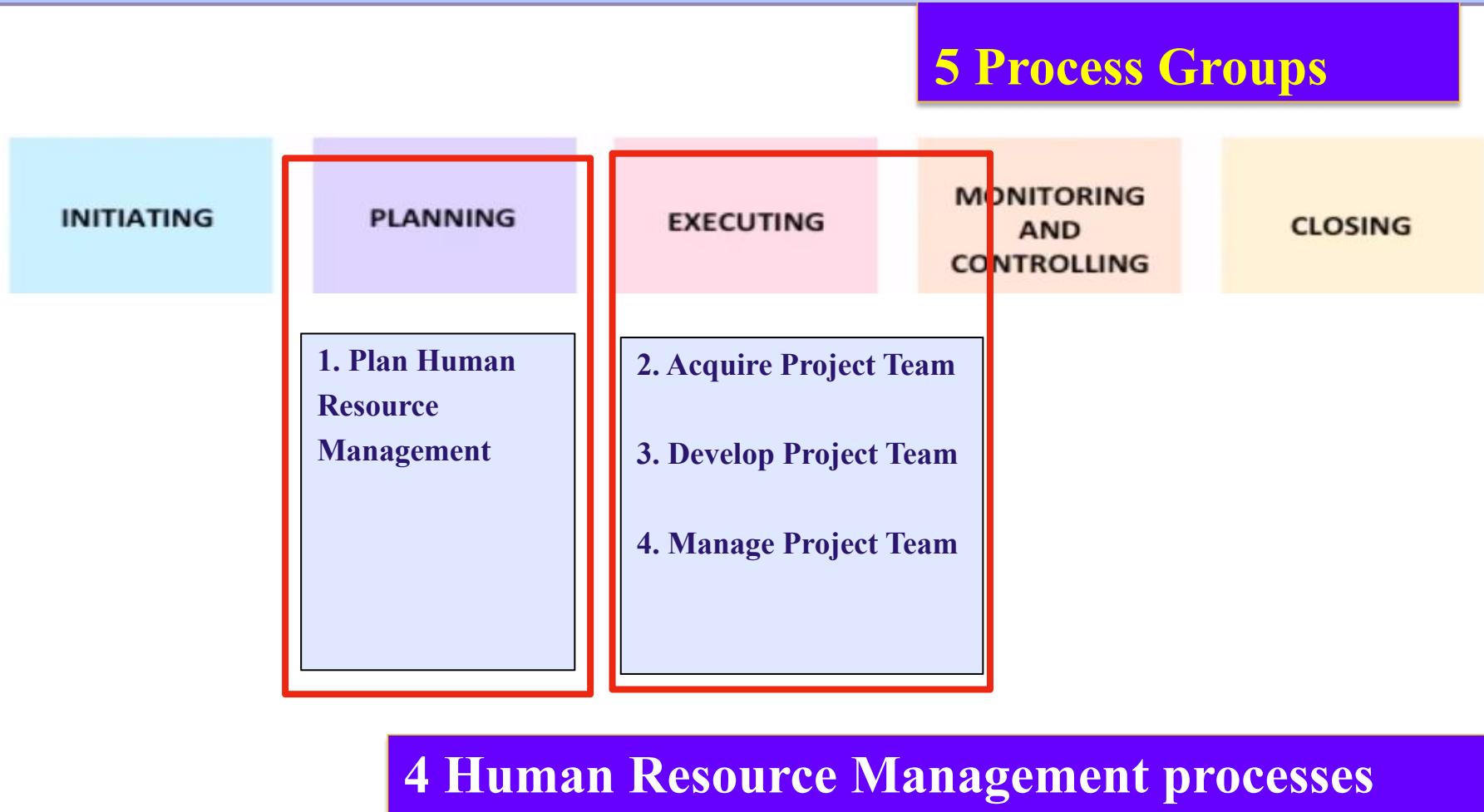
□ Human Resource Management

Getting the team together

Includes the processes that organize, manage, and lead the project team.

- Project team is comprised of the people with assigned roles and responsibilities for completing the project.
- Project team members (Project's staff) may have varied skill sets, may be assigned full or part-time, and may be added or removed from the team as the project progresses.

Human Resource Management Overview



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1

Plan Human Resource Management

2

Acquire Project Team

3

Develop Project Team

4

Manage Project Team

7.1 Plan Human Resource Management

Plan Human Resource management

The process of identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan

The key benefit of this process is that it establishes project roles and responsibilities, project organization charts, and the staffing management plan including the timetable for staff acquisition and release

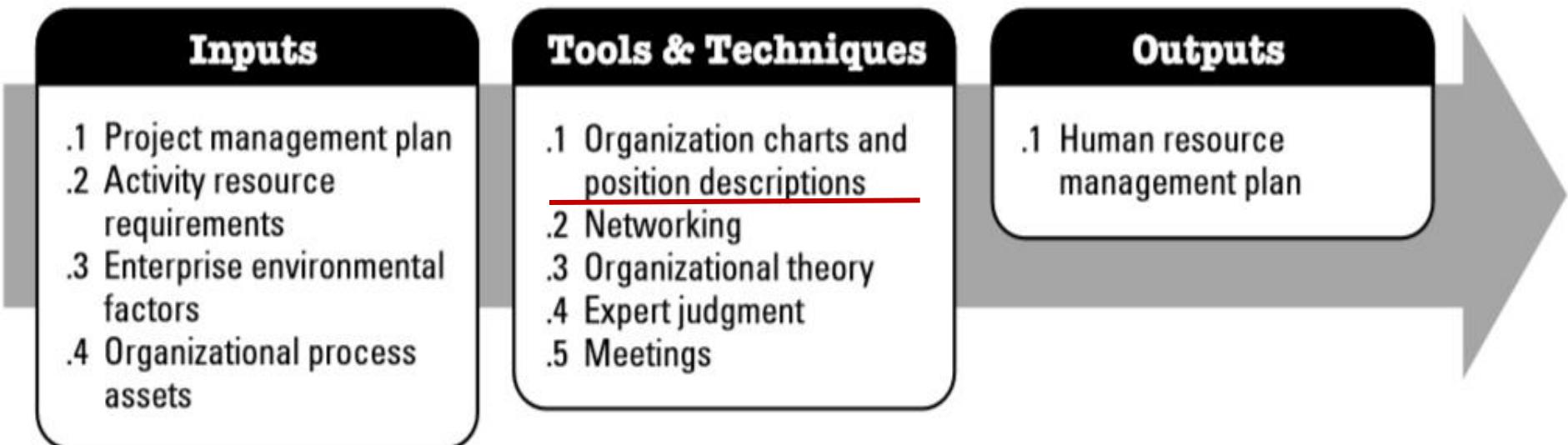
7.1 Plan Human Resource Management

Human resource planning is used to determine and identify human resources with the necessary skills required for project success.

The Human Resource Management Plan describes:

- Roles and responsibilities
- Timetables for staff acquisition and release
- Reporting relationships
- Team-building strategies
- Staffing management
- Training needs\ Rewards programs

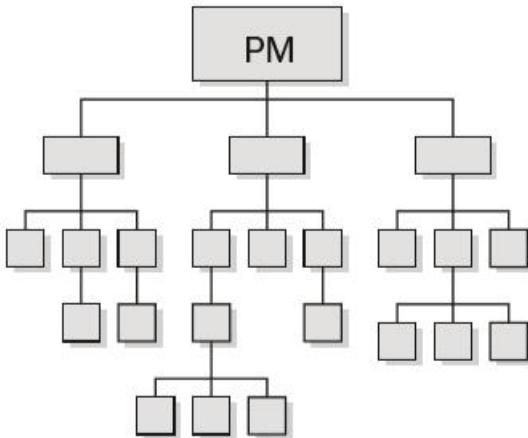
7.1 Plan Human Resource Management



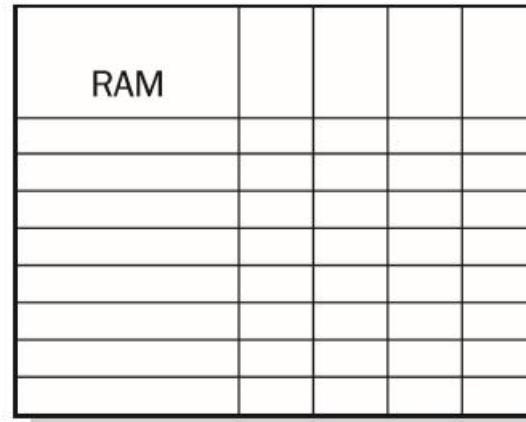
7.1 Plan Human Resource Management



1. Organization charts and position descriptions:
 1. hierarchical,
 2. matrix,
 3. text-oriented.



Organization Chart
(hierarchical)



Responsibility Chart
(matrix)

Role	_____
Responsibilities	_____

Authority	_____

Role Description
(text)

7.1 Plan Human Resource Management

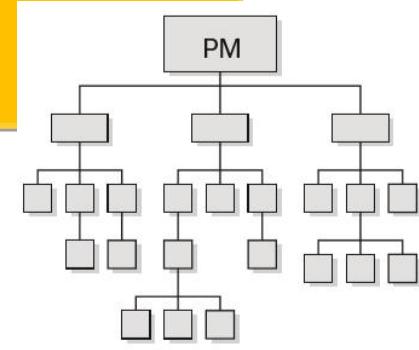
1

Hierarchical-type charts

Traditional organization chart structure can be used to show positions and relationships in a graphical, top-down format.
Organizational breakdown structure (OBS)



A breakdown structure
of project deliverables



Organization Chart
(hierarchical)

Arranged according to an organization's existing departments, units, or teams with the project activities or work packages listed under each department

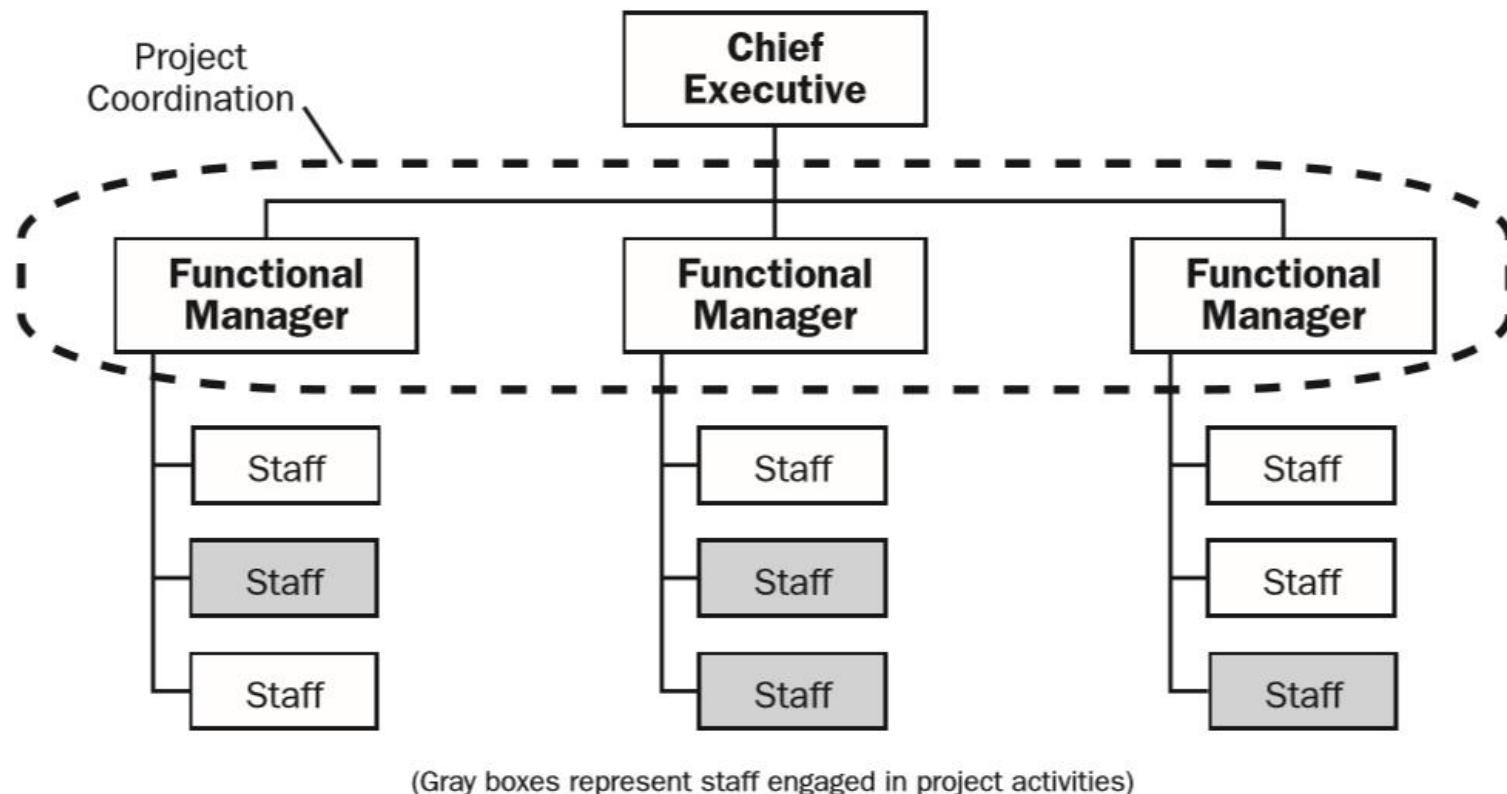
7.1 Plan Human Resource Management

Organizational structure is an enterprise environment factor, which can affect the availability of resources and influence how projects are conducted.

- Functional organizational structure
- Projectized organizational structure
- Matrix organizational structure

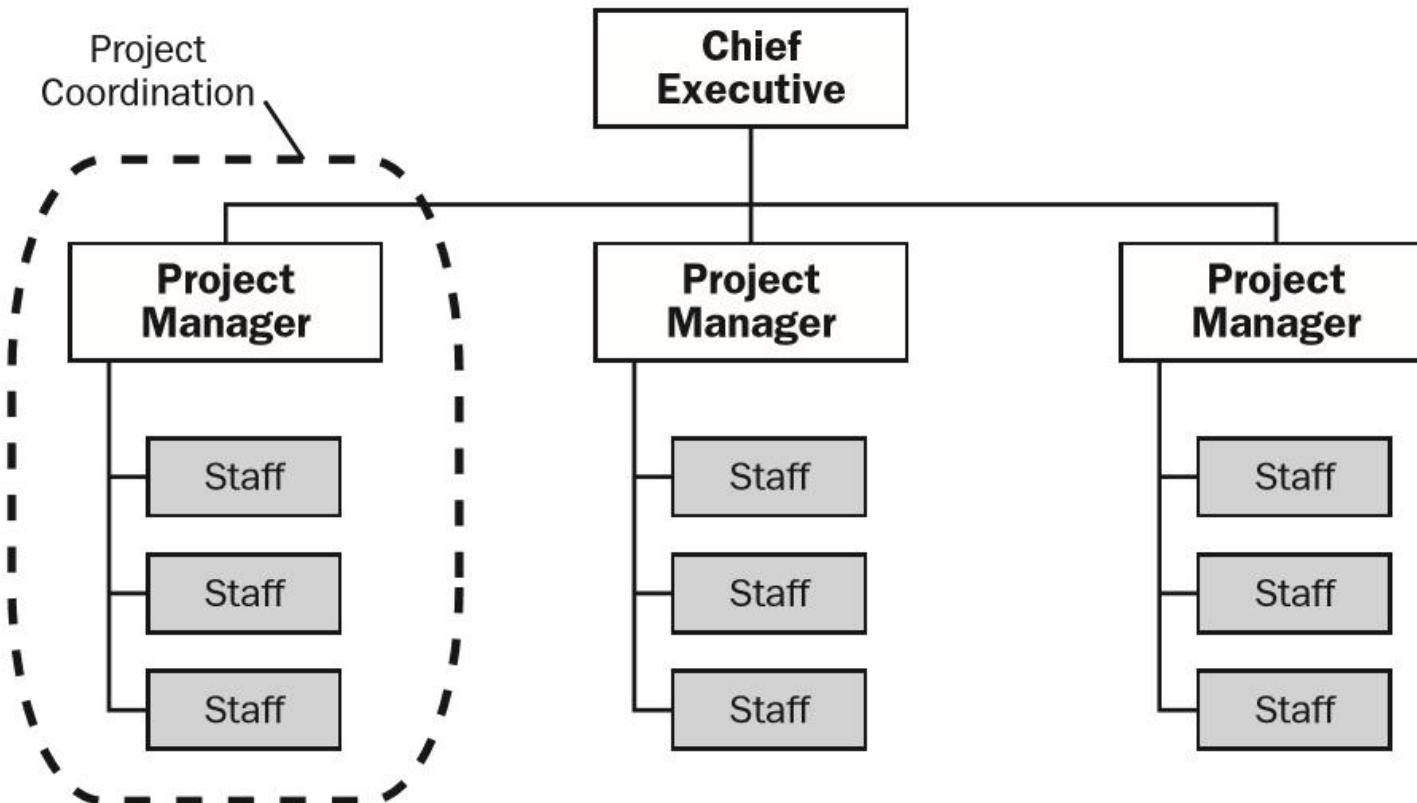
7.1 Plan Human Resource Management

Functional Organization



7.1 Plan Human Resource Management

Projectized Organization



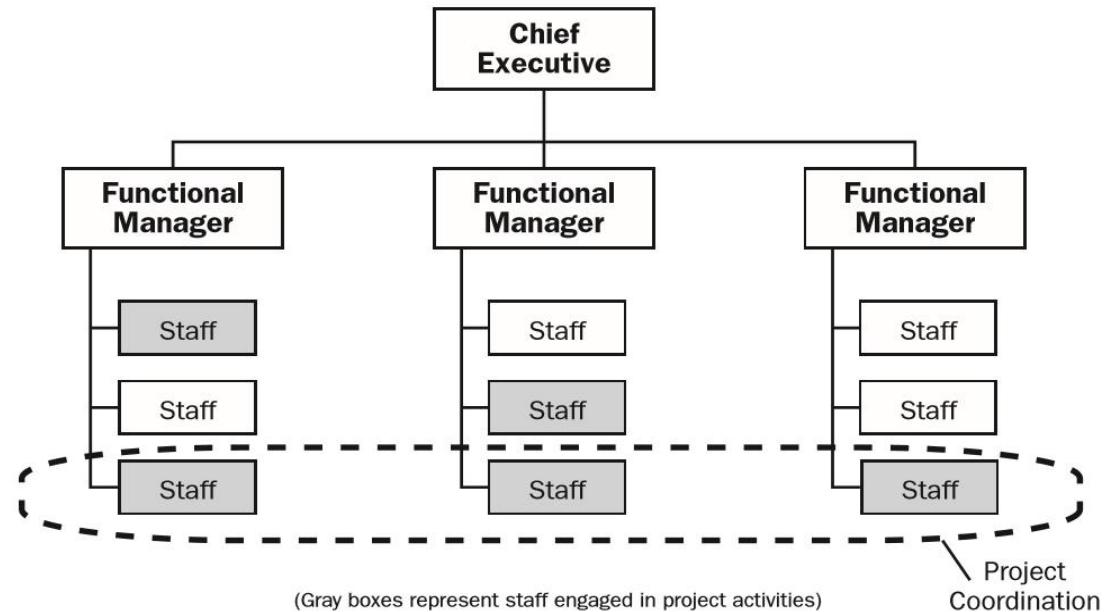
(Gray boxes represent staff engaged in project activities)

7.1 Plan Human Resource Management

Matrix Organization

■ It reflects a blend of **functional** and **projectized** characteristics. It can be classified as:

- **Weak**
- **Strong**
- **Balanced**

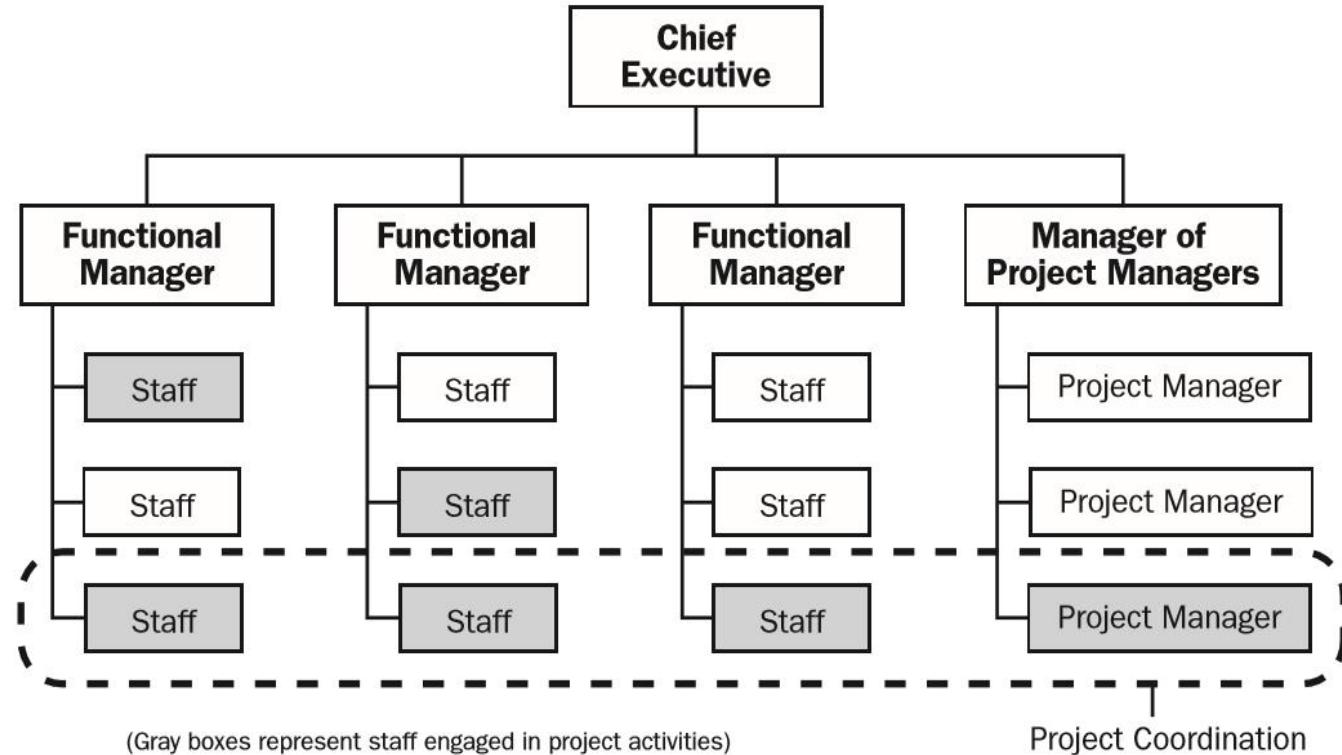


7.1 Plan Human Resource Management

Matrix Organization

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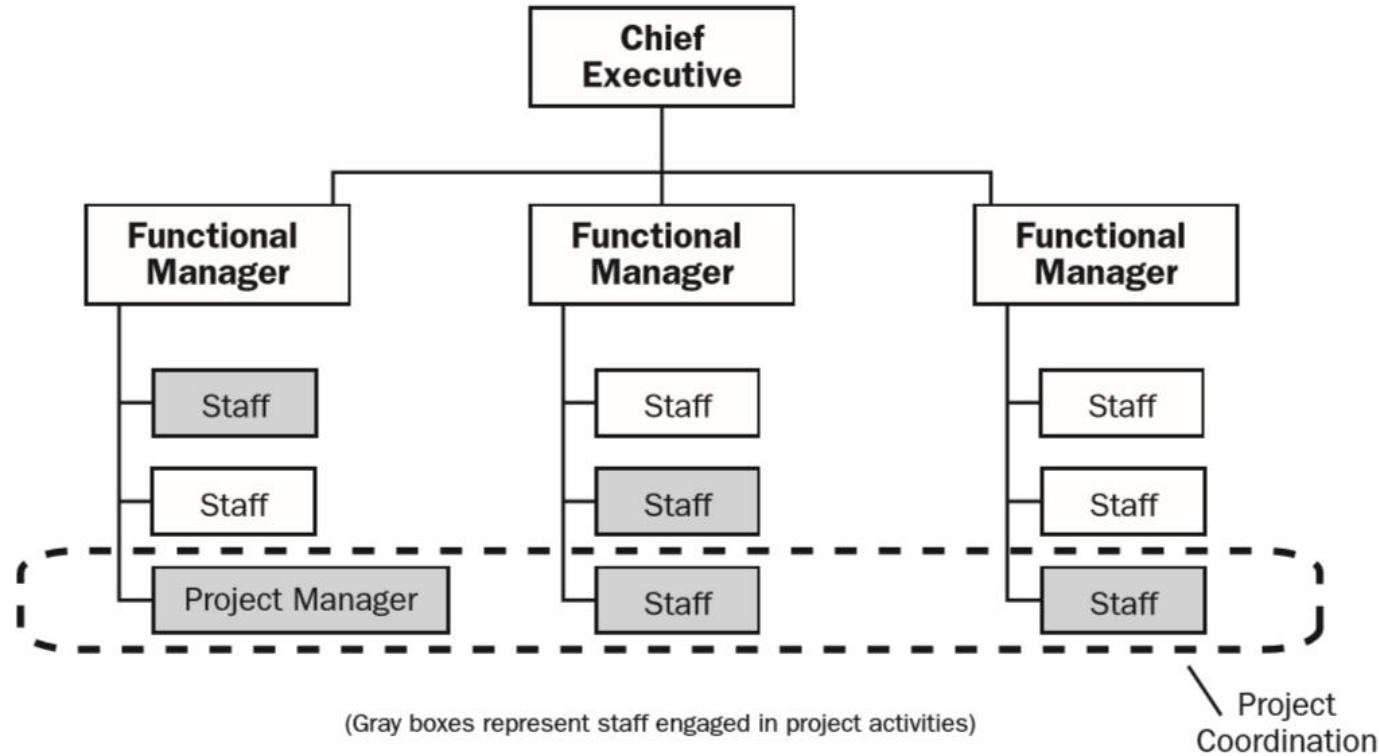


7.1 Plan Human Resource Management

Matrix Organization

- It reflects a blend of **functional** and **projectized** characteristics. It can be classified as:

- Weak
- Strong
- Balanced



7.1 Plan Human Resource Management

Project Characteristics Organization Structure	Functional	Matrix			Projectized
		Weak Matrix	Balanced Matrix	Strong Matrix	
Project Manager's Authority	Little or None	Low	Low to Moderate	Moderate to High	High to Almost Total
Resource Availability	Little or None	Low	Low to Moderate	Moderate to High	High to Almost Total
Who manages the project budget	Functional Manager	Functional Manager	Mixed	Project Manager	Project Manager
Project Manager's Role	Part-time	Part-time	Full-time	Full-time	Full-time
Project Management Administrative Staff	Part-time	Part-time	Part-time	Full-time	Full-time

7.1 Plan Human Resource Management

Three types: hierarchical, matrix, and text-oriented

Responsibility Chart (matrix)

2

Matrix-based charts

A responsibility assignment matrix (RAM) is a grid that shows the project resources assigned to each work package. It is used to illustrate the connections between work packages or activities and project team members.

The matrix format shows all activities associated with one person and all people associated with one activity. This also ensures that there is **only one person accountable** for any one task to avoid confusion of responsibility.

7.1 Plan Human Resource Management



RACI Chart	Person				
Activity	Ann	Ben	Carlos	Dina	Ed
Create charter	A	R	I	I	I
Collect requirements	I	A	R	C	C
Submit change request	I	A	R	R	C
Develop test plan	A	C	I	I	R

7.1 Plan Human Resource Management

3

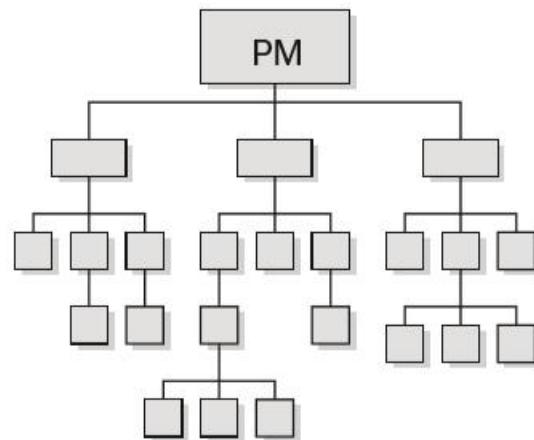
Text-oriented formats

Team member responsibilities that require detailed descriptions can be specified in text-oriented formats. Usually in outline form, the documents provide information such as responsibilities, authority, competencies, and qualifications.

Role	_____
Responsibilities	_____

Authority	_____

Role Description (text)



Organization Chart (hierarchical)

Responsibility Chart (matrix)

7.1 Plan Human Resource Management



Human Resource Management plan

Roles and responsibilities

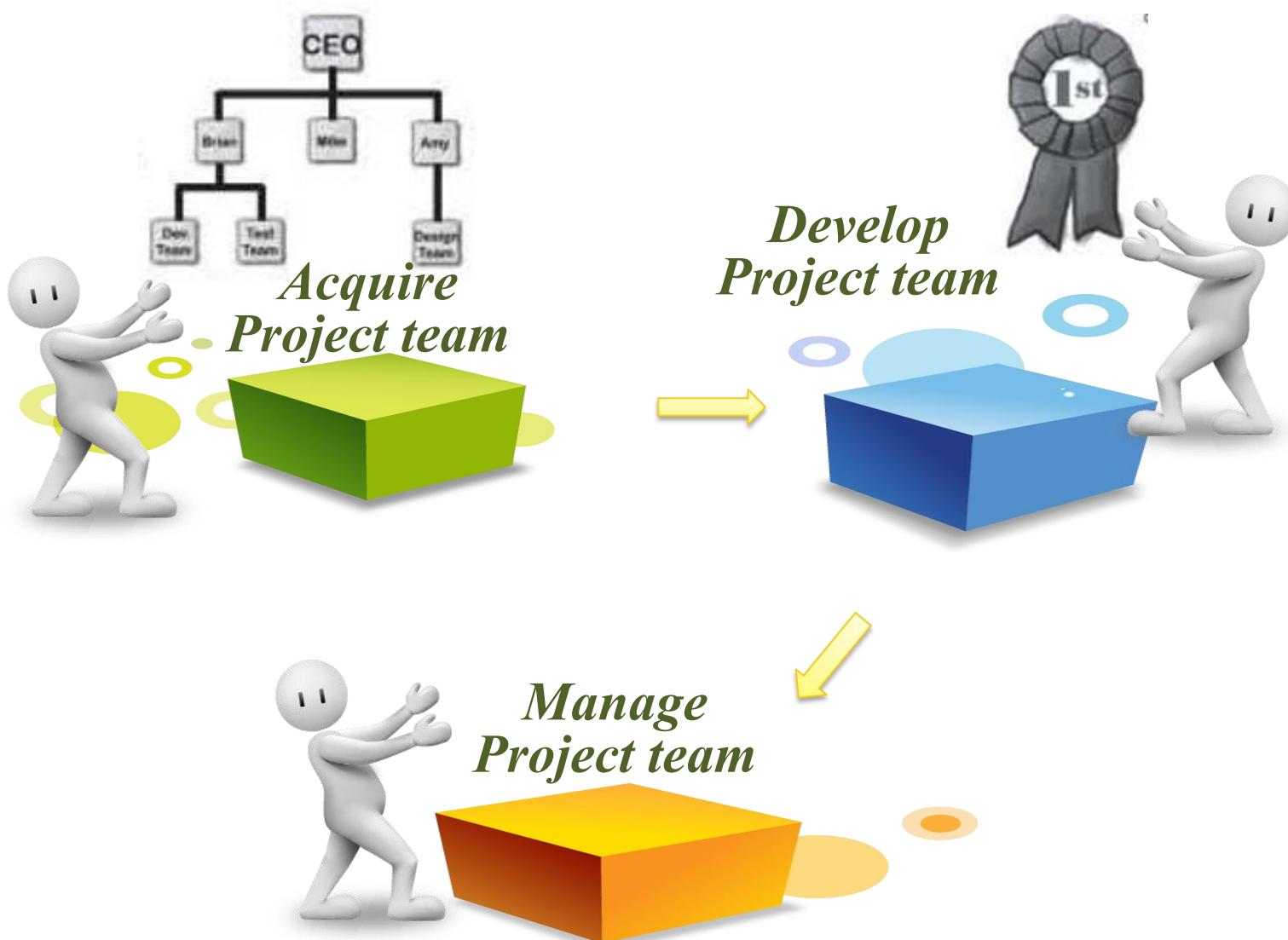
- Role
- Authority
- Responsibilities
- Competency

Project organization charts

Graphic display of project team members and their reporting relationships

Staffing management plan

- Staff acquisition
- Resource calendars
- Staff release plan
- Training needs
- Recognition and rewards



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7.2 Acquire Project Team

Acquire Project Team

The process of **confirming** human resource availability and **obtaining** the team necessary to complete project activities

The key benefit of this process consists of **outlining** and **guiding** the **team selection** and **responsibility assignment** to obtain a **successful team**.

7.2 Acquire Project Team



Pre-assignment

Project team members are selected in advance;

- *If the project is dependent upon the expertise of particular persons;*
- *Or if some staff assignments are defined within the project charter*

7.2 Acquire Project Team

Negotiation

Staff assignments are negotiated on many projects.

The project management team may need to negotiate with:

- *Functional managers*
- *Other project management teams*
- *External organizations, vendors, suppliers, contractors*

7.2 Acquire Project Team

Acquisition

When the performing organization is unable to provide the staff needed to complete a project, the required services may be acquired from outside sources.



7.2 Acquire Project Team

Virtual Teams

The use of virtual teams creates new possibilities when acquiring project team members.

*Virtual teams can be defined as **groups of people with a shared goal** who fulfill their roles with **little or no time spent meeting face to face**.*



*E-mail
Audio conferencing
Social media
Video conferencing*

7.2 Acquire Project Team

Multi-Criteria Decision Analysis

*Selection criteria are often used as a part of acquiring the project team. By use of a **multi-criteria decision analysis** tool, criteria are developed and used to rate or score potential team members*

Availability

Cost

Experience

Ability

Knowledge

Skills

Attitude

**International
factors**

7.2 Acquire Project Team

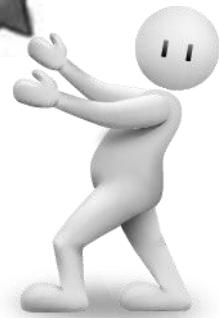


■ Project Staff Assignments

- The project is staffed when appropriate people have been assigned to the team.
- The documentation of these assignments can include a project team directory, memos to team members, and names inserted into other parts of the project management plan, such as project organization charts and schedules.

7.3 Develop Project Team

*You need to train your team,
and keep them motivated
with rewards in order to get
the project done*



*Develop
Project team*



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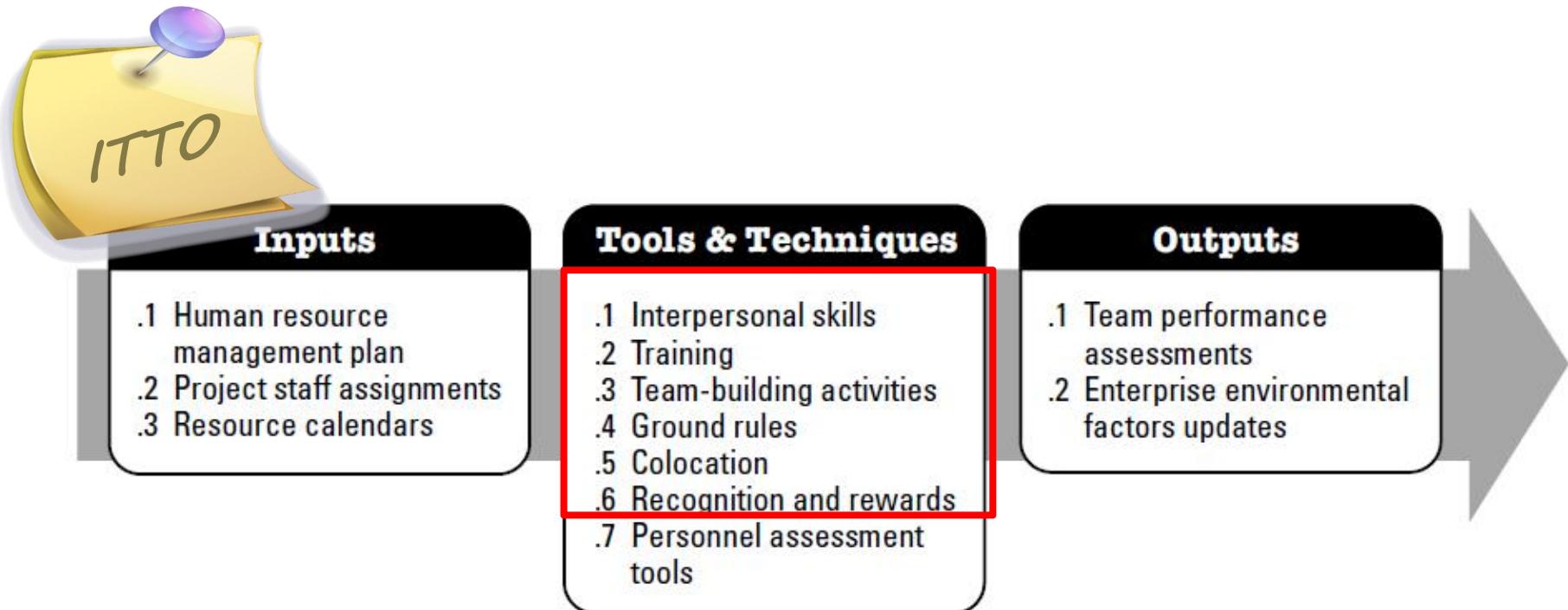
7.3 Develop Project Team

Develop Project Team

The process of **improving competencies, team member interaction, and overall team environment to enhance project performance.**

The key benefit of this process is that it results in **improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.**

7.3 Develop Project Team



6.3 Develop Project Team



01

Recognition and rewards

The best way to keep your team motivated

It can help you prevent problems between team members, and let you establish working conditions that everyone on the team can live with

03

Ground rules

Training

A really important part of developing your team

Also a good way to motivate your team. People always want to feel like they're growing professionally

02

The opposite of virtual teams. When you have all of your team located in the same room, you can increase communication and help them build a sense of community.

Co-location

04

6.3 Develop Project Team



05

Interpersonal Skills

"soft skills", communication skills, emotional intelligence, conflict resolution, negotiation, influence, team building, and group facilitation

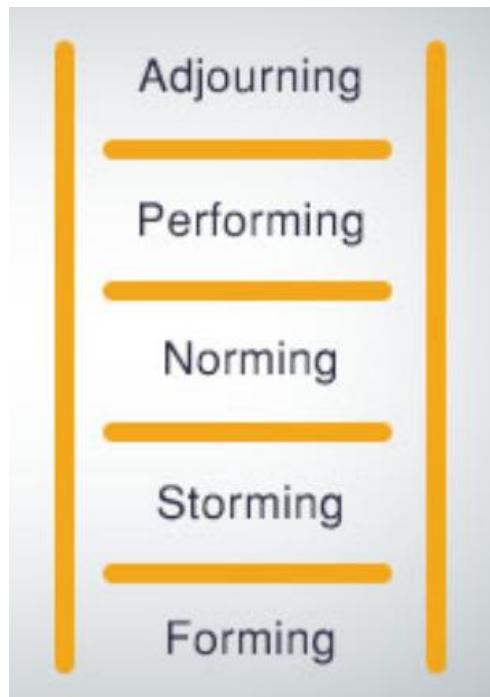
06

Team-building activities

*Important throughout your entire project.
You're responsible for keeping the team together*

6.3 Develop Project Team

Tuckman Ladder



(1) Forming

The team meets and learns about the project and their formal roles and responsibilities

(Independent and not as open, working on their own)

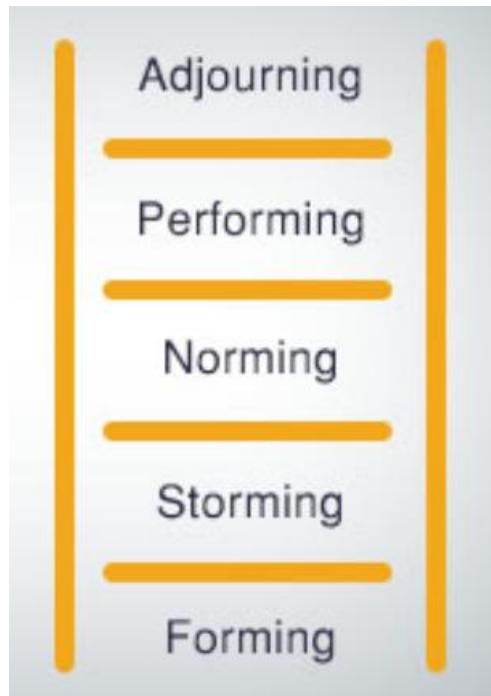
(2) Storming

The team begins to address the project work, technical decisions and the project management approach.

(Not collaborative and open to ideas, counterproductive, they don't like each other, difference in opinion, ego clashes)

6.3 Develop Project Team

Tuckman Ladder



(3) Norming

Team members begin to work together and adjust their work habits and behaviors to support the team

(Learns to trust each other, starts working towards the project)

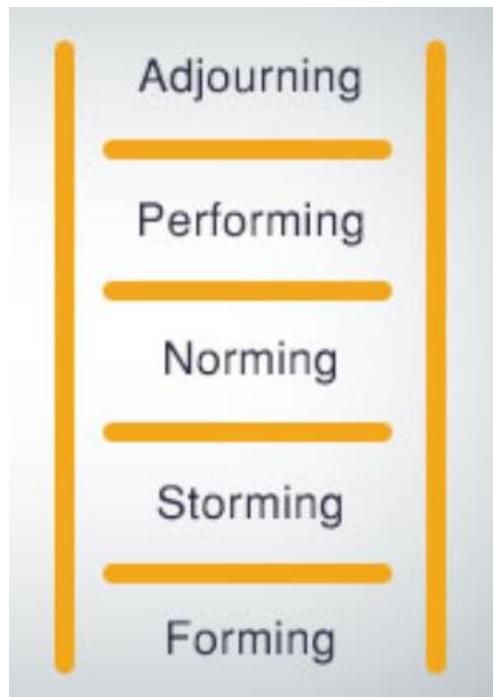
(4) Performing

Well-organized unit. They are interdependent and work through issues smoothly and effectively

(Always speaking about the project)

6.3 Develop Project Team

Tuckman Ladder



(5) Adjourning

The team completes the work and moves on from the project, staff releases as the work gets completed

(They make project success and may go back to their respective functions, take the team to a recreational outing)



Test

Project manager has provided each kind of training for the team members. Team members begin to work together and adjust work habits that support the team. What stage is the project team at?

- A. Forming
- B. Storming
- C. Norming
- D. Performing



6.3 Develop Project Team

Motivate your team



7.3 Develop Project Team



You need to train your team, and keep them motivated with rewards in order to get the project done



Develop Project team



No project goes perfectly. People have conflicts, and it's up to you to make sure they get resolved

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7.4 Manage Project Team

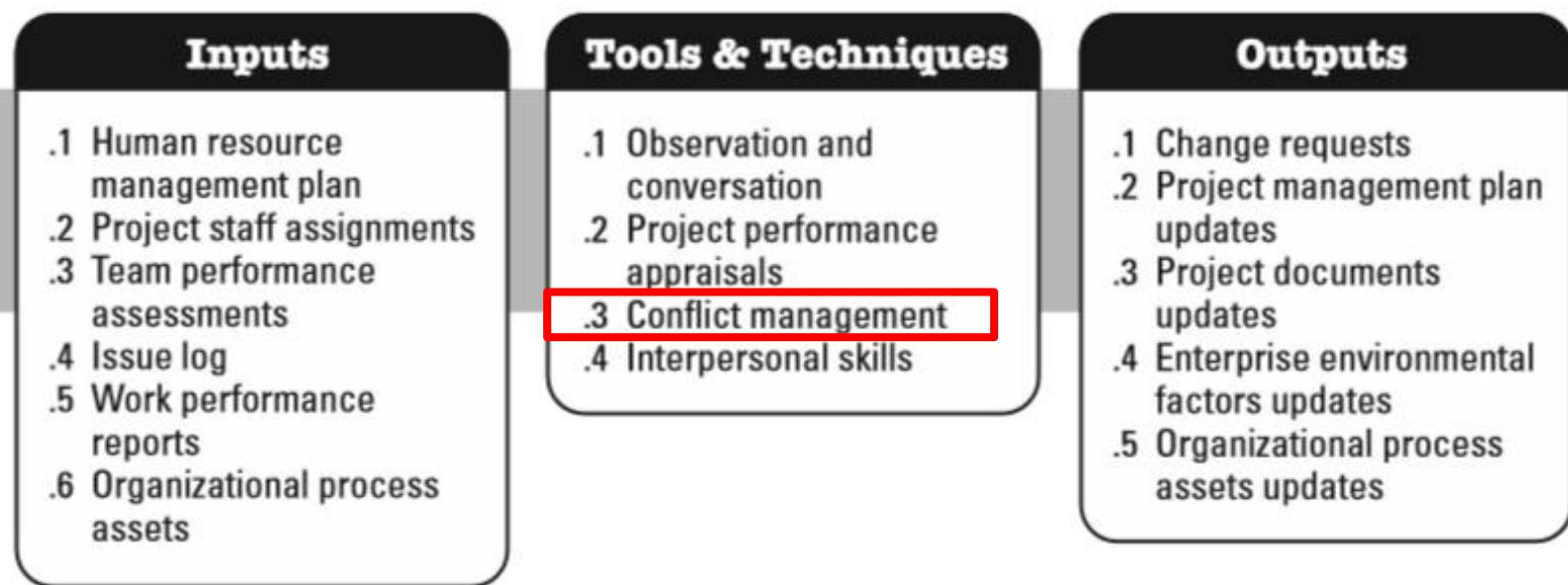
Manage project team

the process of tracking team member performance, providing feedback, **resolving issues**, and managing team changes to optimize project performance.

The key benefit of this process is that it influences team behavior, **manages conflict**, resolves issues, and appraises team member performance

Managing your team means solving problems

7.4 Manage Project Team



Team management involves a combination of skills with special emphasis on communication, conflict management, negotiation, and leadership.

7.4 Manage Project Team



Conflict management

Over 50% of all conflicts are caused by resources, priorities and schedules

Conflict is inevitable in a project environment

Sources of conflict

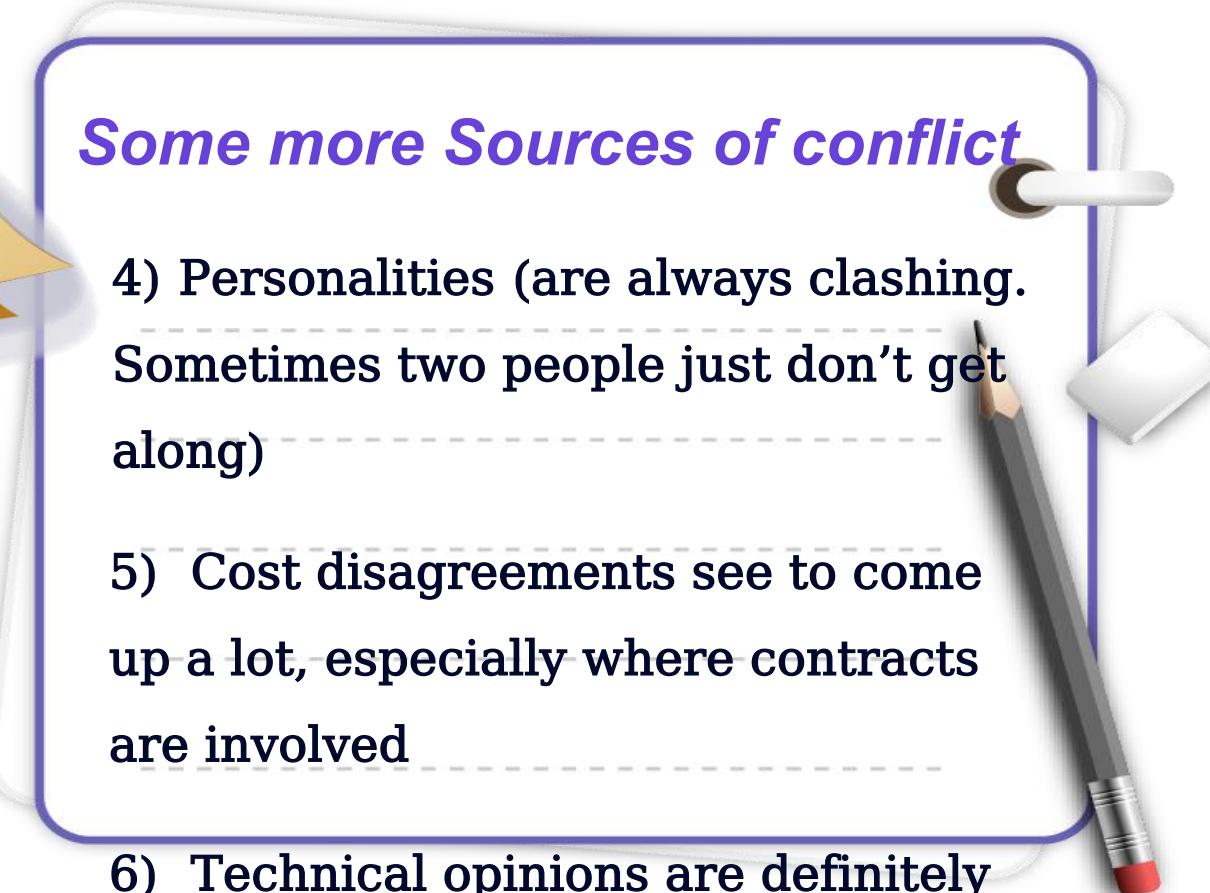
- 1) Resources are scarce (that's why you have to negotiate for them)
- 2) Priorities (one project or person is more important than another, and gets more budget, resources, time, prestige)
- 3) Schedules (decide who gets what, when.)

7.4 Manage Project Team



Some more Sources of conflict

- 4) Personalities (are always clashing.
Sometimes two people just don't get along)
- 5) Cost disagreements see to come up a lot, especially where contracts are involved
- 6) Technical opinions are definitely a reason that conflicts happen



7.4 Manage Project Team



How to resolve a conflict

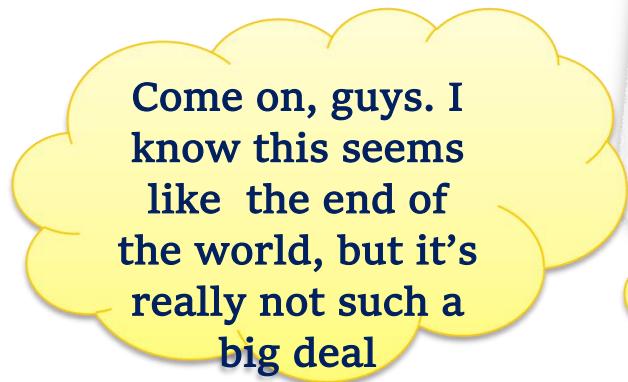
- 1) Withdraw/ avoid
- 2) Smoothing/ Accommodate
- 3) Compromise/ Reconcile
- 4) Force/ Direct
- 5) Collaborate/ Problem Solve

1) Withdraw/Avoid. Retreating from an actual or potential conflict situation; postponing the issue to be better prepared or to be resolved by others.

It doesn't do much good for anyone, almost always counterproductive.

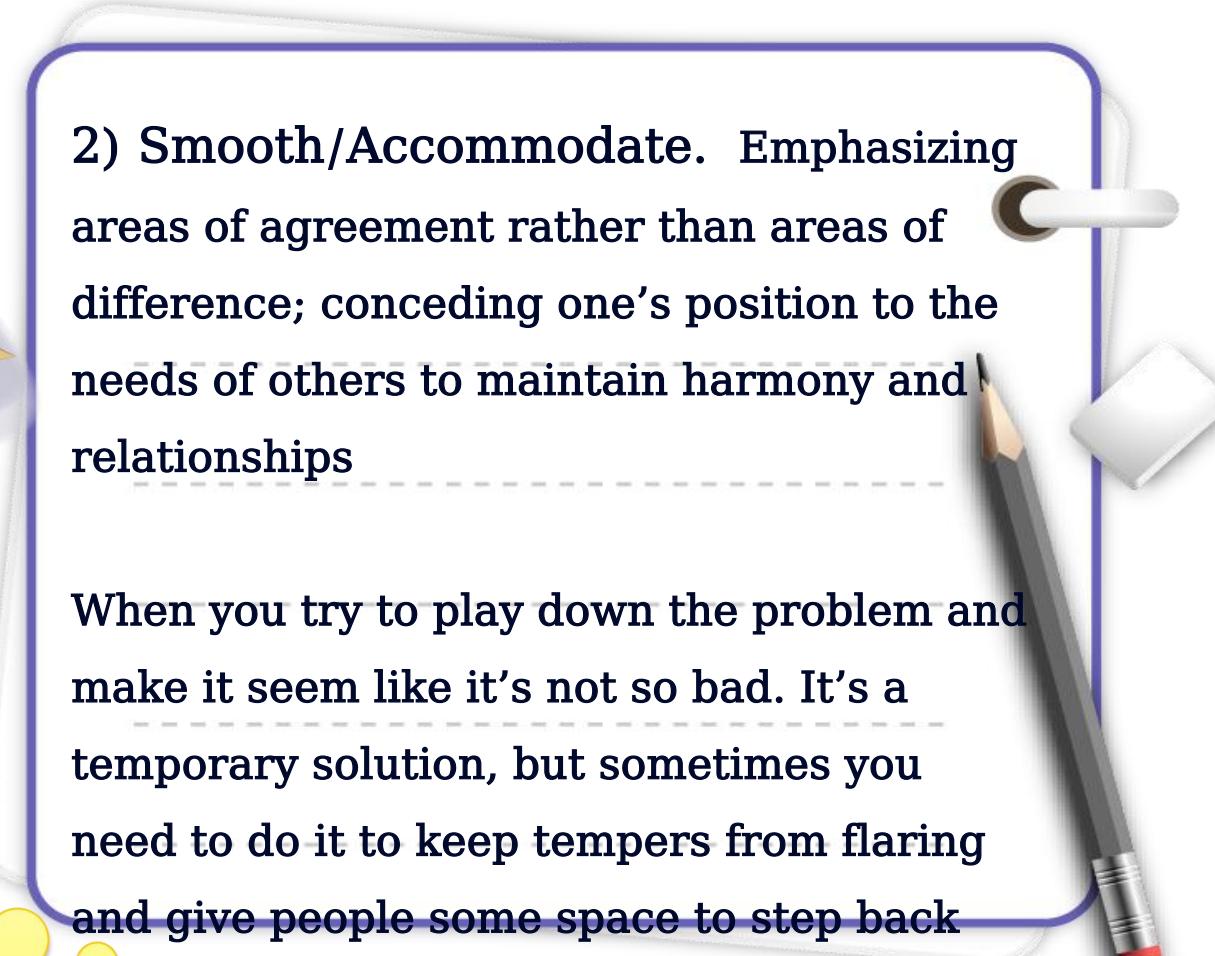
You guys are being totally unreasonable, and we're just not going to talk about it anymore

7.4 Manage Project Team



2) Smooth/Accommodate. Emphasizing areas of agreement rather than areas of difference; conceding one's position to the needs of others to maintain harmony and relationships

When you try to play down the problem and make it seem like it's not so bad. It's a temporary solution, but sometimes you need to do it to keep tempers from flaring and give people some space to step back and really figure out what's going on



7.4 Manage Project Team

A yellow sticky note pinned to a white surface with a blue pushpin. The sticky note has the words "Conflict management" written on it. Below it, a yellow speech bubble contains the text: "Look, each of you is going to have to give up something if we want to get back on track". To the right, there is a notepad with a purple border. Inside the notepad, the text "3) Compromise/Reconcile. Searching for solutions that bring some degree of satisfaction to all parties in order to temporarily or partially resolve the conflict." is written. Below this text, a dashed line leads to another text block: "Sounds good, doesn't? But when two people compromise, it means that each person gives up something. A "lose-lose" solution". A pencil and an eraser are also part of the illustration.

Conflict management

Look, each of you is going to have to give up something if we want to get back on track

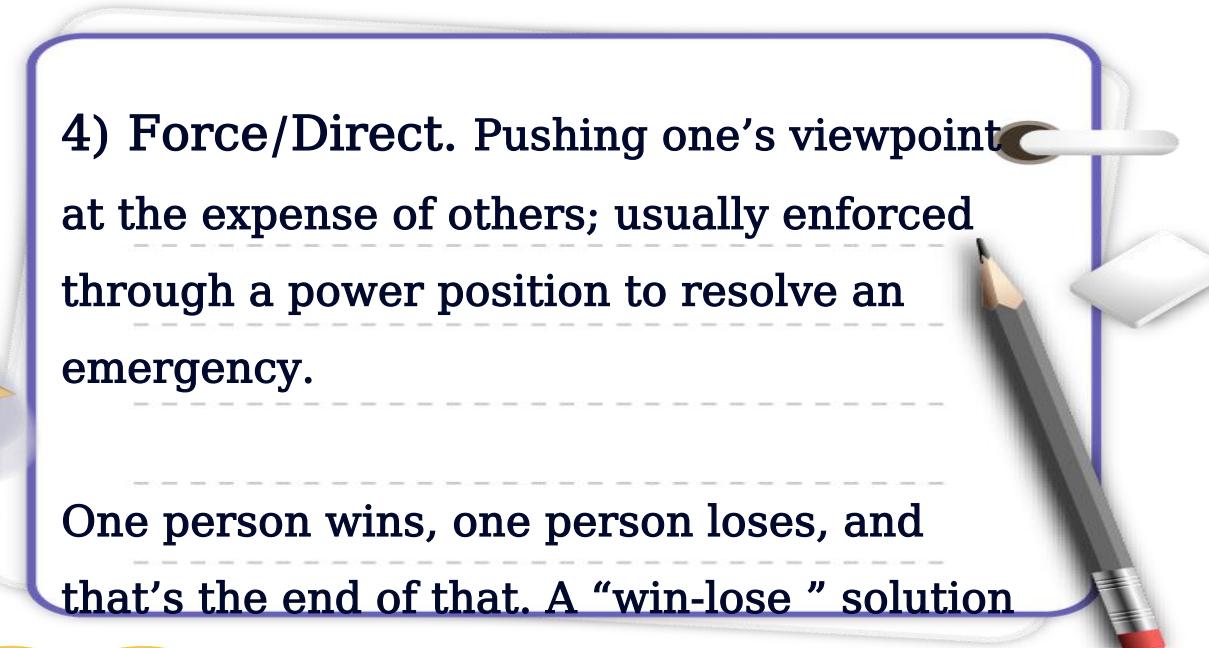
3) Compromise/Reconcile. Searching for solutions that bring some degree of satisfaction to all parties in order to temporarily or partially resolve the conflict.

Sounds good, doesn't? But when two people compromise, it means that each person gives up something. A "lose-lose" solution

7.4 Manage Project Team

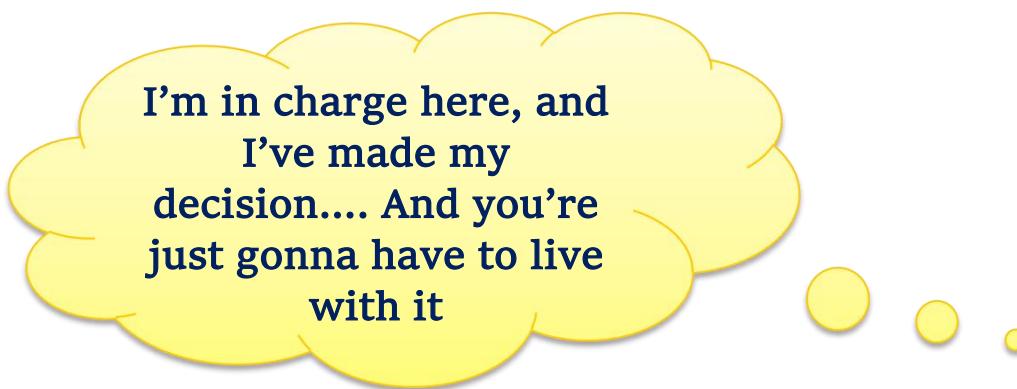


Conflict management



4) Force/Direct. Pushing one's viewpoint at the expense of others; usually enforced through a power position to resolve an emergency.

One person wins, one person loses, and that's the end of that. A "win-lose" solution



I'm in charge here, and I've made my decision.... And you're just gonna have to live with it

7.4 Manage Project Team



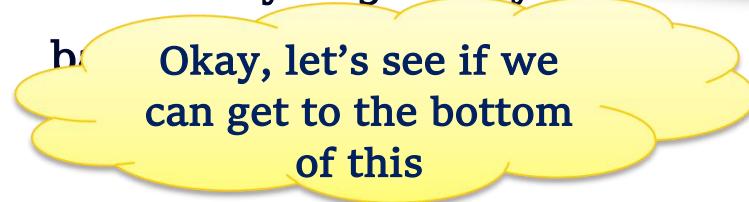
Conflict management

The best way to resolve a conflict is to confront the problem: do your research, figure out what's behind it, and fix the root cause.

5) Collaborate/Problem Solve.

Incorporating multiple viewpoints and insights from differing perspectives; requires a cooperative attitude and open dialogue that typically leads to consensus and commitment.

When you confront the source of the conflict head-on and work with everyone to find a solution that actually fixes the reason that conflicts happen, then the problem is most likely to go away and never come



back.
Okay, let's see if we can get to the bottom of this

Test

1) Look Sue, Joe's already filled me in on your issue. I've considered his position, and I've decided that he's right, so I don't need to hear any more about it

A. Withdrawal

B. Smoothing

C. Compromise

D. Force

E. Collaborate



Chapter 7 Summary

A

Understand the concept of Human Resource Management

B

Understand Organizational Structures

C

Understand the tools and techniques used for Motivating and Developing Teams

D

Understand the tools and techniques used for dealing with conflicts

Summary

5 process groups

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define		6.7 Control Schedule	
		6.6 Develop Schedule			
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Define		7.4 Control Costs	
8. Project Quality Management		Budget	8.1 Plan Quality Management 8.2 Perform Quality Assurance	8.3 Control Quality	
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses		11.6 Control Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement	

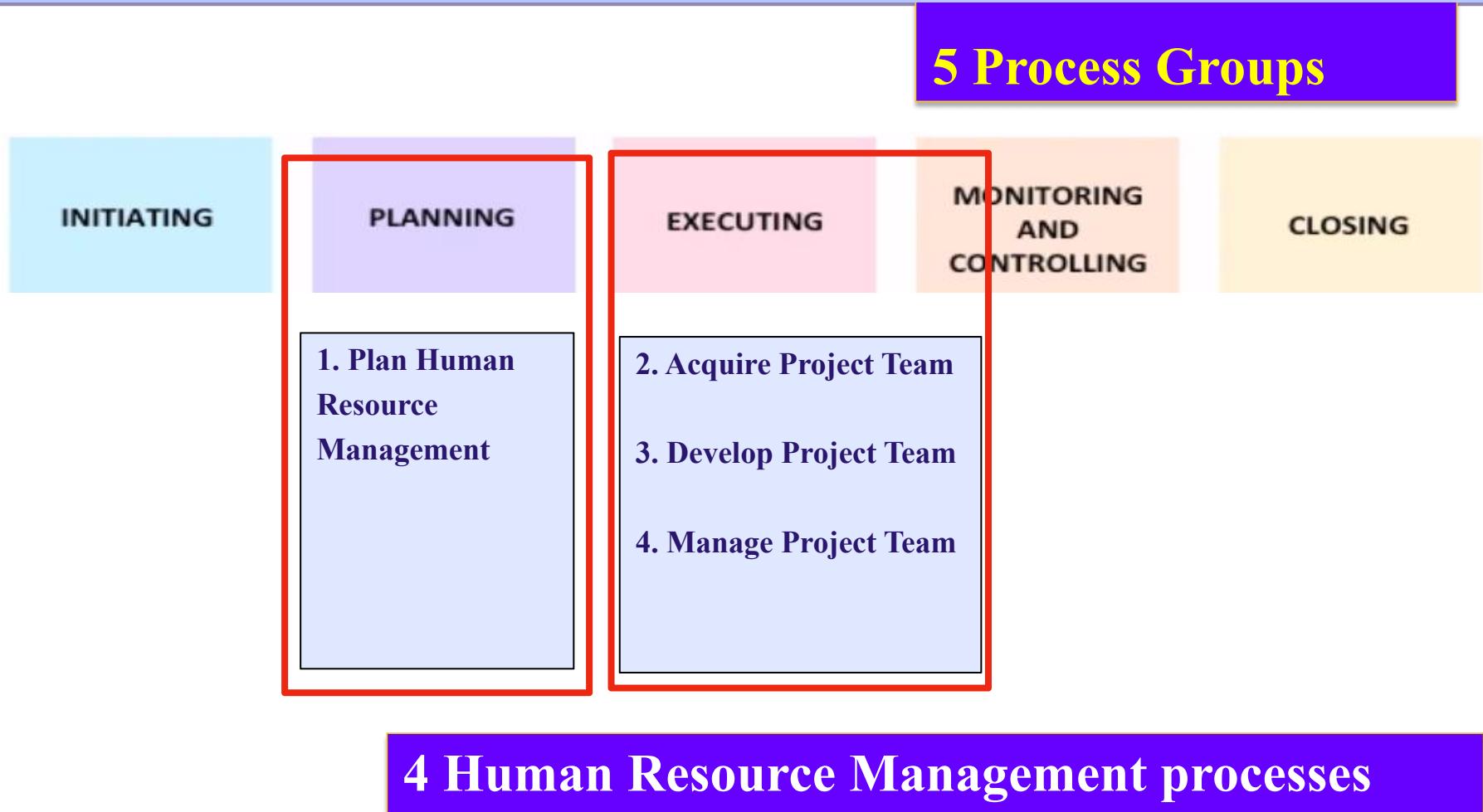
Behind every successful project is a great team!

10
knowledge
areas

6. Human Resources Management

1. Plan Human Resource Management
2. Acquire Project Team
3. Develop Project Team
4. Manage Project Team

Summary



Summary

5 Process Groups

It establishes project roles and responsibilities, project organization charts, and the staffing management plan

CONTROLLING

Project Characteristics	Organization Structure	Functional	Matrix			Projected
			Weak Matrix	Balanced Matrix	Strong Matrix	
Project Manager's Authority	Little or None	Low	Low to Moderate	Moderate to High	High to Almost Total	
Resource Availability	Little or None	Low	Low to Moderate	Moderate to High	High to Almost Total	
Who manages the project budget	Functional Manager	Functional Manager	Mixed	Project Manager	Project Manager	
Project Manager's Role	Part-time	Part-time	Full-time	Full-time	Full-time	
Project Management Administrative Staff	Part-time	Part-time	Part-time	Full-time	Full-time	

1. Plan Human Resource Management

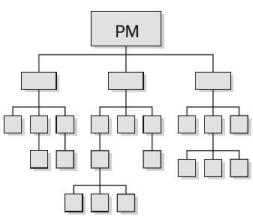
2. Acquire Project Team

3. Develop Project Team

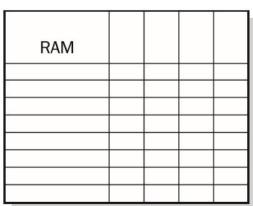
4. Manage

T&T:	Project Management Administrative Staff	Part-time	Part-time	Part-time	Full-time
1. Organization charts and position descriptions					

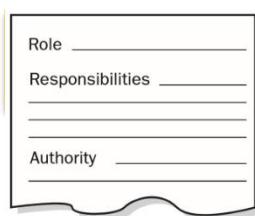
1. hierarchical,
 - Functional
 - Projectized
 - Matrix
 2. matrix,
 3. text-oriented.



Organization Chart (hierarchical)



Responsibility Chart (matrix)



Role Description (text)

Summary

5 Process Groups

It outlines and guides the team selection and responsibility assignment to obtain a successful team.

CONTROLLING

1. Plan Human Resource Management

2. Acquire Project Team

3. Develop Project Team

4. Manage

- T&T:
- 1. Pre-assignment
 - 2. Negotiation
 - 3. Acquisition
 - 4. Virtual Teams
 - 5. Multi-Criteria Decision Analysis

4 Human Resource Management processes

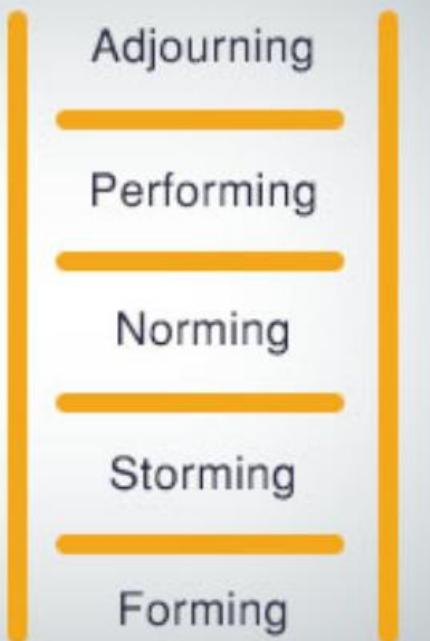
Summary

5 Process Groups

It results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.

SING

Tuckman Ladder



1. Plan Human Resource Management
2. Acquire Project Team
3. Develop Project Team
4. Manage T&T:
 1. Team-Building Activities
 - Tuckman ladder

4 Human Resource Management processes

Summary

Managing your team means solving problems

5 Process Groups

INITIATING

PLANNING

EXECUTING

MONITORING
AND
CONTROLLING

CLOSING

1. Plan Human
Resource
Management

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- 1) Withdraw/ avoid
- 2) Smoothing/ Accommodate
- 3) Compromise/ Reconcile
- 4) Force/ Direct
- 5) Collaborate/ Problem Solve

T&T:
1. Conflict management

in Resource Management processes