

# RESOURCE MANAGEMENT

Get the right ones!

*Please note that this tutorial is based on the PMBOK Version 6 which were released by PMI in September 2017. This article is revised in January 2020.*

The notes below contains ALL the concepts that any PMP aspirants should know, however; should not be limited. It is recommended to refer linked articles for detailed understanding.

Before we proceed, let's take a look at WHY we need Resource Management Management:

Management has decided to assign you as the Project Manager to create a mobile app for visitor management.

The app is to be built on the Android and IOS however you are not getting the team with adequate skills, also they are given to you for lesser time period than you want.

You are facing trouble to understand who is doing what and when.

Resource Management: The process to ensure that the project team works on all the work required and ONLY the work required; in order to complete the project successfully.

<p>The features and functionalities that define a product are known as product scope.</p> <p>Example: For the ZARA app, the product scope is the login with facebook, registration feature, wishlist, cart etc</p>	<p>The complete activities and work done to deliver a product or service, along with the features and functionalities.</p> <p>Project scope includes Product Scope as well in it and other additional activities. Example: In addition to all the features mentioned in product; it also includes license and agreement for 3rd party to get payment gateways, identifying the risks involved to build the app, manage the team to work etc</p>
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Here is a snippet of various processes that are distributed across multiple phases of a project:

	INITIATION	-
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	PLANNING	Plan Resource Management
		Estimate Activity Resources
	EXECUTING	Acquire Resources
		Develop Team
		Manage Team
	MONITORING & CONTROLLING	Control Resources
	CLOSURE	-

## PLAN RESOURCE MANAGEMENT

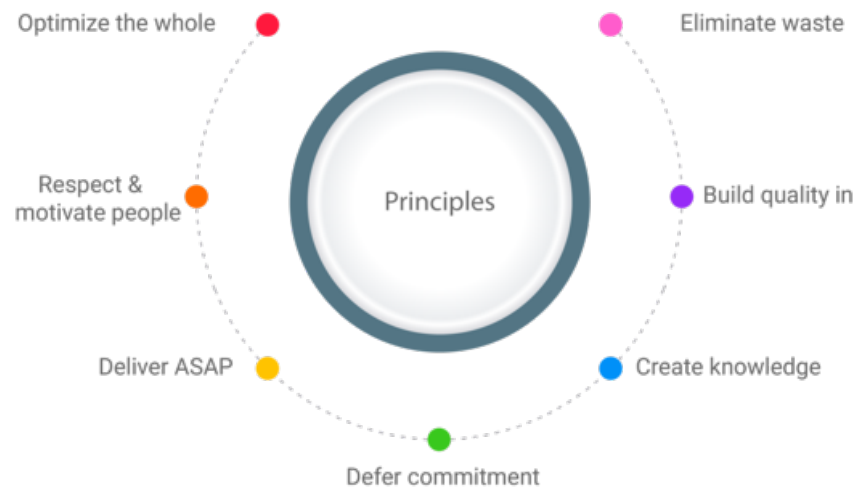
Phase: **PLANNING**

Knowledge Area: **RESOURCE MANAGEMENT**

This plan is an umbrella for all the resources to be used whether the human resource or other physical resources needed for the project. This also deals with the concepts like how will resources be managed, their cost, how to acquire etc.

Before we discuss further, there are a few important terms that PM should always keep in mind:

**Lean:** The lean suggests to remove waste from the process. Agile is a derivative of this approach. It recommends efficient use of the resources.



**Kaizen:** Kaizen is a Japanese approach that means “continuous improvement”. This is an important term in Quality Management.

**Just In Time:** The JIT approach refers to getting the resources just before they are needed and avoid any sort of hoarding including inventories, raw materials, supplies etc.

- **Responsibility Assignment Matrix (RAM):** This is the chart created to show which resource needs to work on which work package. It only contains the resource names and the work package assigned to them.
- **RACI Chart:** This is a more elaborative chart that refers to RACI (Responsibilities, Accountability, Consult and Inform). This chart defines the roles in a more descriptive manner.
- **Organizational Breakdown Structure:** The chart that divides the project under multiple verticals like departments, Business Units etc is called Organizational Breakdown Structure.
- **Resource Breakdown Structure:** The chart that breaks down the resources based on the resources.
- **Position Descriptions:** For each project, there are job descriptions needed that are created specific to that project. Basically this contains the roles and responsibilities for each position.
- **Physical Resource Documentation:** The physical resources needed in the project other than the human resources are needed to be documented. This is done on the simple text file called as Physical Resource Document.
- **Organizational Theory:** The Organizational Theory refers to the study of the organization and its process how they deal with problems etc and encourage adopting practices like Lean, Kaizen etc.

**Resource Management Plan:** The resource management plan is an elaborated plan that is the major outcome of this process. It deals with the human resources and physical resources.

#### HUMAN RESOURCES

- Identify the human resources needed for the project
- Define the roles & responsibilities
- Training and Team Development
- Project Organizational Chart
- Release of Human Resources

#### PHYSICAL RESOURCES

- Identify physical resource needed (what, when, how etc)
- Process of acquiring the physical resource
- Manage Inventory
- Release Resource

**Team Charter:** This is a project specific document that team creates to establish the approach they will be following like communication, decision making etc

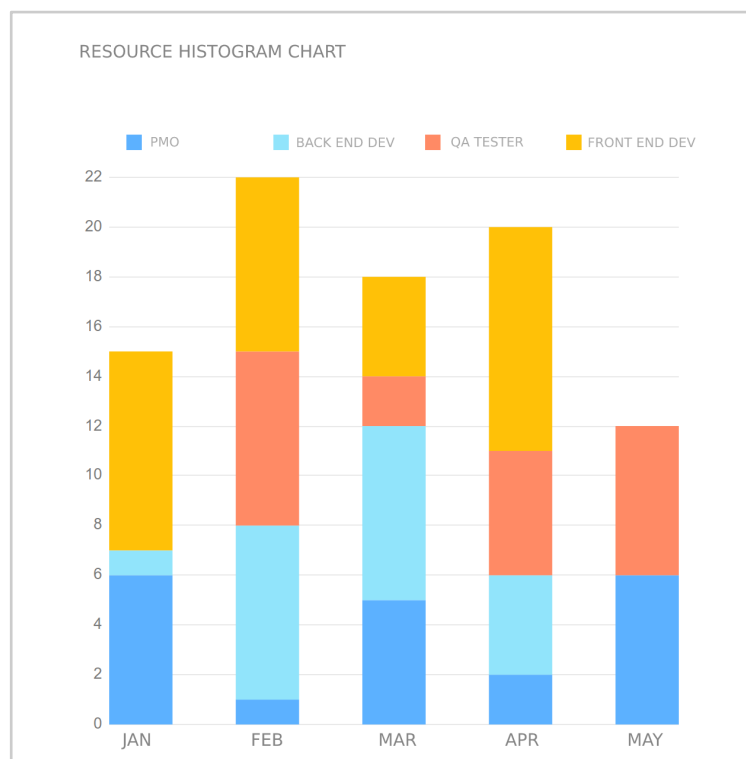
## ESTIMATE ACTIVITY RESOURCES

Phase: **EXECUTION**

Knowledge Area: **RESOURCE MANAGEMENT**

In this process the needs of the resources for the project is determined. The PM recognizes what type of and what number if resources are required.

Based on the inputs above the PM designs the resource histogram chart that helps to visualize the usage of the resources for the work.



The PM uses scope baseline, schedule baseline etc to determine the relevant resources needed to complete the work in defined boundaries.

# ACQUIRE RESOURCES

Phase: **EXECUTING**

Knowledge Area: **RESOURCE MANAGEMENT**

In order to execute the project, the PM needs to secure all the human and physical resources as necessary. This process helps to acquire the resources as per the Resource Management Plan.

There are few factors needed for the acquiring of the resources:

- Know which resources are pre-assigned and their availability
- Recruiting resources
- Negotiate to get best resources
- Using lean, JIT etc as per the organization

There are following types of Resources:

- **Dedicated:** The full time resources that work exclusively on one project
- **Part Time:** PM/Team which uses partial time on the project and rest on another project
- **Partnership:** When there are multiple organizations having different teams
- **Virtual:** When the teams are not in same geography

## [IMP] DEVELOP TEAM

Phase: **EXECUTING**

Knowledge Area: **RESOURCE MANAGEMENT**

Once you capture all the required resources, now is the need to build the team. This is an on-going process that goes on. The building of teams is where the leadership and other management skills comes into the picture.

Following are some important motivation theories for team building:

### [IMP] McGregor's Theory of X and Y:

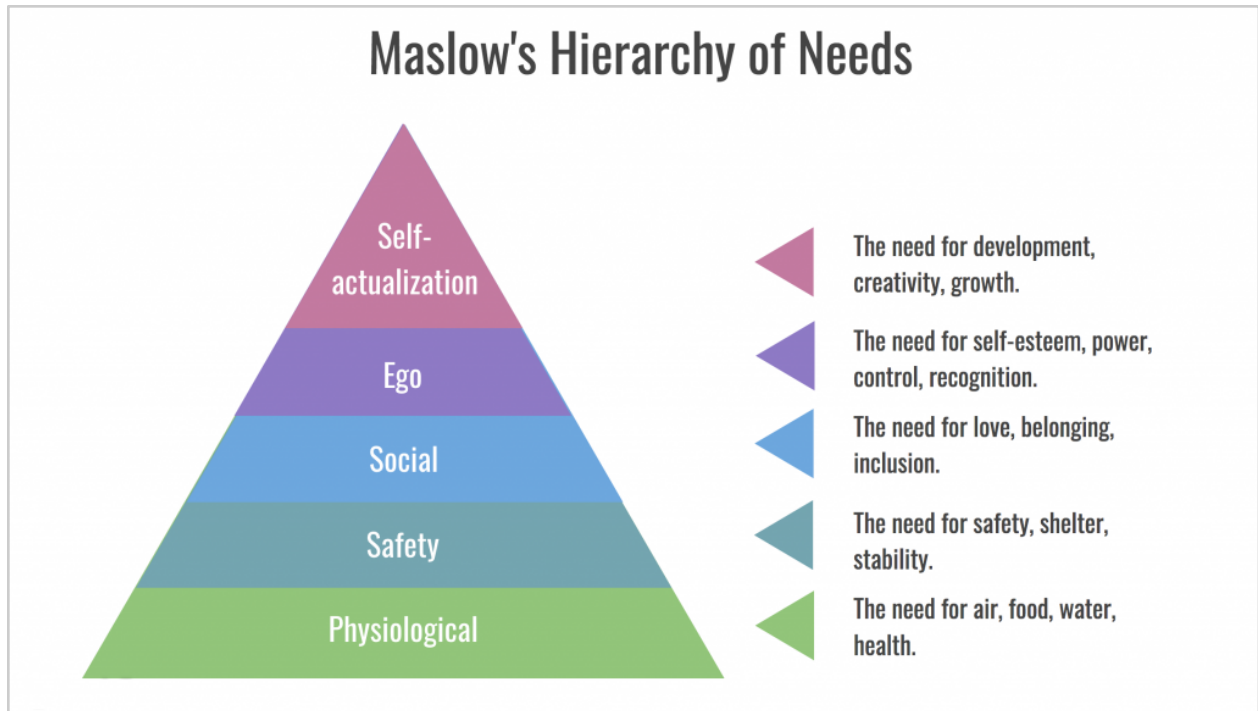
As per McGregor, there are 2 categories for the workers.

Category X: The managers who believe the workers need to be checked every minute (micro-managed). Their perception is that they are incapable.

Category Y: They believe that employees are much more willing to work with freedom and hence they can route their efforts when given liberty.

### [IMP] Maslow's Hierarchy of Needs:

As per Maslow, the needs of the employees vary from low to high as shown in the pyramid.



**McClelland's Theory of Needs:** This theory suggests that people can be motivated by one of the following 3 needs:

ACHIEVEMENT	To give challenging work to these people but achievable. Recognition is important.
AFFILIATION	They work in a team and collaborate often. They seek approval rather than the recognition.
POWER	Socially oriented people who are good leaders. They tend to lead and organize people.

**[IMP] Herzberg's Two-Factor Theory of Motivation:** Herzberg's theory states the same factors does not satisfy and motivate the employees, but these are 2 segments:

**HYGIENE:** This is a necessity for workers, if not done right would destroy motivation. However, if done right, then also it may not boost the motivation.

- Working Conditions
- Salary
- Personal Life
- Status
- Security

**MOTIVATING AGENTS:** The team is motivated by the work itself.

- Responsibilities
- Self Actualization
- Professional Growth
- Recognition

**[IMP]** The team building is considered more of a technique based activity. Following are the major stages of team building (in following chronology):

- **Forming:** Bring together people to form the team
- **Storming:** Initially people tend to have disagreements and friction
- **Norming:** People learn to trust each other and start working together
- **Performing:** The team works together as a close knit unit and works efficiently.
- **Adjourning:** Dissolving the team once project is over

**Recognition and Rewards:** The team's performance is one of the outcomes of this process which act as the data points for the PM to understand the need of continuous improvements.

## MANAGE TEAM

Phase: **EXECUTING**

Knowledge Area: **RESOURCE MANAGEMENT**

This is an ongoing process to handle and manage the team. This involves daily operational tasks.

There are multiple ways of leading and managing the team, primary styles of leading are mentioned below:

- **Directing:** PM uses his own expertise to tell the team what to do
- **Facilitating:** PM enables communication and remove blockers
- **Coaching:** PM helps team by advising them and providing recommendations
- **Supporting:** PM encourages and provides assistance
- **Influencing:** PM lays stress on team collaboration and team building
- **Delegating:** PM decides the goals & then give authority to team members to achieve it

There are some other styles that are good for conflict resolving:

- **Consultative:** The PM uses the servant-leadership by listening to others' opinions in this bottom-up approach.
- **Consensus:** PM encourages problem to be solved in groups
- **Democratic or participative:** In this style, the team members are encouraged to participate in the decision making process.
- **Bureaucratic:** This is procedure based approach that directs to strictly use the process.

- **Analytical:** In this the PM makes decision himself based on his technical and analytical skill and then communicates the decision to the team.

**[IMP] Laissez-Faire:** The French name translates to “allow to act” which implies that the manager is not directly involved with the team.

#### POWERS OF PROJECT MANAGER

- **Formal:** Power is based on your position, considering where you fall in hierarchy.
- **Reward:** This power comes from giving rewards to team.
- **Penalty:** This fear-based approach comes from penalizing the team for not accomplishing work.
- **Expert:** Power comes from being technical or PM expert.
- **Referent:** The power comes from other person liking you, respecting you or wanting to be like you. This is a form of charismatic.

#### **[IMP] SOURCES OF CONFLICT**

- Schedule
- Project Priorities
- Resources
- Technical Opinions
- Admin Procedures
- Cost
- Personality

#### CONFLICT RESOLUTION TECHNIQUES

- **Collaborating** (problem solving): In this technique, both parties openly discusses the issue and try to come to a conclusion. It is a win-win.
- **Compromising** (reconciling): This is a technique that brings a certain degree of satisfaction to both parties. This is lose-lose.
- **Withdrawal** (avoidance): When both parties postpone the conflict. As per PMI this is not the best choice.
- **Smoothing** (accommodating): This techniques suggests on pressing on agreement rather than differences.
- **Forcing** (directing): This technique involves one viewpoint at the expense of other

**Emotional Intelligence:** The ability to recognize and express one's emotions appropriately and to perceive & manage the emotions of others using observation, communications and interpersonal skills.

# CONTROL RESOURCES

Phase: **MONITORING & CON**

Knowledge Area: **RESOURCE MANAGEMENT**

This process unlike the above two, focuses on the physical resources. It focuses on the cost, amount and quality being used compared to what was planned.

The resource plan indicates how resources should be utilised, controlled and eventually released.

- **Agreements/Contracts:** The contract contains the information of the seller considering the resources are taken from an external party
- **Work Performance Data:** The document containing the info of the resource used, date they arrived, and whether they worked as intended.
- **Performance Review:** The performance analysis to determine the actual use vs planned usage.
- **Trend Analysis:** Compare measurements taken throughout the project so as to use this info for future usage.
- **Alternative Analysis:** The process to determine methods or onboarding new resources to enhance the usage of the resource on track.
- **PMIS:** The Project Management Information System (PMIS) is used to analyse, track and access the data on the usage of the resources.