## Management

## &

## **Project Management Introduction**

**By** :-

Jamal Mahmood Qader

**Civil Engineer** 

**Iraq-Kurdistan Region** 

Member of KEU 5077

# Management

## Management:-

Management is a set of principles relating to the functions of planning, organizing, directing and controlling, and the application of these principles in harnessing physical, financial, human, and informational resources efficiently and effectively to achieve organizational goals.

#### Management concepts

A manager needs to understand a few simple ideas to employ the three basic operations. These concepts are essential to ensure their team comes together to reach the company's goals.

#### Control

Employees of an organization need to understand the goals that they are aiming for as well as the measurement that will be used to determine whether they have been successful. Different staff members in a company have different roles that entail separate levels of responsibility. A manager must have control over what the members do, how they do it and how to measure their progress. Control over these factors helps a manager reach success.

#### Planning

The best managers know that planning is critical before the implementation of any strategy, but it is also an ongoing activity. Planning does not end when implementation begins. Rather, management needs to be prepared to answer the questions of who, what, when and where a team is working to implement the organization's mission. Planning should include selecting objectives as well as implementing them.

#### Staffing

Staffing is an underappreciated but crucial function of management. Managers need to ensure that they have the right people for the job, but they also need to pay attention to issues like organizing workplace policies. The company needs to retain the best talent by providing incentives such as benefits, paid time off and a thorough training program.

## **Three layers of management**

Large businesses and corporations often have three primary levels of management organized in a hierarchical structure. You may have heard terms that refer to these different layers of management, such as "middle management" or "senior management."

#### Low-level management

Low-level managers include roles like front-line team leaders, foremen, section leads and supervisors.

This level of management, the lowest in the three layers, is responsible for overseeing the everyday work of individual employees or staff members and providing them with direction on their work.

Low-level management's responsibilities often include ensuring the quality of employees' work, guiding staff in everyday activities and routing employee problems through the appropriate channels. They also are responsible for the dayto-day supervision and career planning for their team, as well as providing feedback on their employees' performance.

#### Middle management

Middle managers, the next layer in the management hierarchy, are overseen by senior management. Middle management includes those working in the roles of a department manager, regional manager and branch manager. Middle\_management is responsible for communicating the strategic goals developed by senior management down the line to front-line managers.

In contrast with senior management, middle managers spend more of their time on directional and organizational functions. This includes defining and discussing important policies for lower management, providing guidance to lower-level management to achieve better performance and executing organizational plans at the direction of senior management.

#### Senior management

Senior management, including the chief executive officer, president, vice president and board members, is at the top layer of this management hierarchy. Senior management needs to set the overall goals and direction of an organization. Senior management develops strategic plans and company-wide policy and makes decisions about the direction of the organization at the highest level. They also usually play an essential role in mobilizing outside resources and are held accountable to the company's shareholders as well as the general public for the performance of the company.

## **Management styles**

Analysts who study management have identified several effective leadership styles. There is no one best style of management, and some people will feel more personally suited to one type or another. You can also select elements of different styles of management to create the best archetype for you and your company.

Here, we briefly review three positive management styles that can help make any manager a more effective leader.

#### Persuasive management style

A compelling leader spends a lot of time with their team members. Being engaged with employees allows the persuasive manager to lead by example, and to gain buy-in and compliance from the team by persuading rather than instructing or demanding. Influential managers are aware of the work that their team members are doing on a day-to-day basis and are involved in their work lives.

#### **Democratic management style**

A democratic manager invites the team to be directly involved in decision-making. Open lines of communication between democratic managers and employees allow these types of managers to understand the skills and advantages that each employee brings to the table. Open participation and exchange of ideas among different levels of employees allow everyone to contribute to the outcome of a decision or a project.

This style of management is more successful when managers develop organized and streamlined decision-making processes. Otherwise, accepting input from everyone can make the process sluggish and disorganized.

#### Laissez-faire management

The laissez-faire manager functions almost more like a mentor than a manager. They empower their employees to step up and make decisions. This allows the team to feel like they own a part of each project. The manager takes a backseat role, stepping in to offer advice or get things back on track when something goes wrong. Otherwise, they stand aside, allowing their employees to flourish creatively and exercise their own leadership.

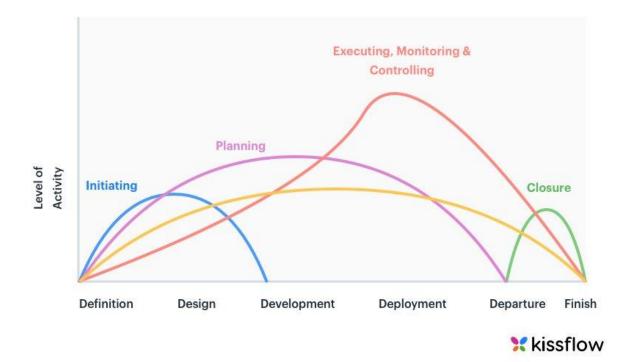
#### **Construction Managers**

Construction managers plan, direct, coordinate, and budget a wide variety of residential, commercial, and industrial construction projects including homes, stores, offices, roads, bridges, wastewater treatment plants, schools, and hospitals. Strong scheduling skills are essential for this role. Communication skills are often used in coordinating design and construction processes, teams executing the work, and governance of special trades (carpentry, plumbing, electrical wiring) as well as government representatives for the permit processes. A construction manager may be called a project manager or project engineer. The construction manager ensures that the project is completed on time and within budget while meeting quality specifications and codes and maintaining a safe work environment. These managers create project plans in which they divide all required construction site activities into logical steps, estimating and budgeting the time required to meet established deadlines, usually utilizing sophisticated scheduling and cost estimating software. Many use software packages such as Microsoft Project® or Procure® or online tools like BaseCamp. Most construction projects rely on spreadsheets for project management. Procurement skills used in this field include acquiring the bills for material, lumber for the house being built, and more. Construction managers also coordinate labor, determining the needs and overseeing.

## **Project management**

#### **Project management:-**

Project management is defined as the process of steering a project from the start through its lifecycle. The main objective of project management is to complete a project within the established goals of time, budget, and quality. Projects have life cycles since they aren't intended to last forever.



#### The Project management life cycle

## The five major phases of the project management process

#### **1. Initiation**

The project initiation phase marks the beginning of a project by determining highlevel expectations like why a project is required, if it is feasible or not, and what is needed to complete the project.

Outputs of this phase include required stakeholder approvals to proceed to the next phase, documentation pertaining to project needs (business case), and rough estimates of time and resources required to complete the project (project\_charter), and an initial list of stakeholders.

#### 2. Planning

In the planning phase, project managers detail the project\_scope, time frame, and risks. Completeness and continuity are the major components of a successful project\_plan.

Outputs of this phase include a detailed project plan, a project communication plan (if there is no project plan), budget baseline, project\_scheduling, individual project\_goals, scope document, and updated stakeholder registry.

#### **3. Execution**

In the project\_execution\_phase, the project team members are coordinated and guided through proper project communication to get the work done as explained in the approved project management plan.

Additionally, this phase also covers the proper allocation and management of other project resources like materials and budgets. Project deliverables are the output of the execution phase.

#### 4. Monitoring and Control

During the project\_monitoring\_and\_controlling\_phase, the time, cost, and performance of the project are compared at every stage and necessary adjustments are made to the project activities, resources, and plan to keep things on the right track.

Outputs from this phase include project progress reports and other communications that ensure adherence to project plans and prevent larger milestones and deadline disruptions.

#### 5. Closure or Completion

The process of finalizing the project, reviewing the project deliverables, and transitioning them to the business leaders is called the project closure phase in a project management life cycle.

This stage offers time for both celebration and reflection. Outputs from this project management phase include approved project results and learnings that can be applied to similar projects in the future.

## The Triple Constraint

The triple constraint, also known as **the project management triangle**, or **iron triangle**, refers to the boundaries of time, scope and cost that apply to every project. Here's how it works.

#### Time

Project managers must estimate the time required to complete a project. To do so, they use project scheduling tools such as PERT charts or the critical path method.

This must be done during the initiation and planning phases of the project life cycle to develop a schedule covering the duration of all the activities.

#### **Project Scope**

The scope refers to all the work necessary to complete a project. It must be identified during the planning stage by using a work breakdown structure.

If the scope is not defined in the project plan, it can cause the project to fail, which is known as scope creep.

#### Cost

There are many costs associated with a project. Project managers are responsible for estimating, budgeting and controlling costs so the project can be completed within the approved budget.

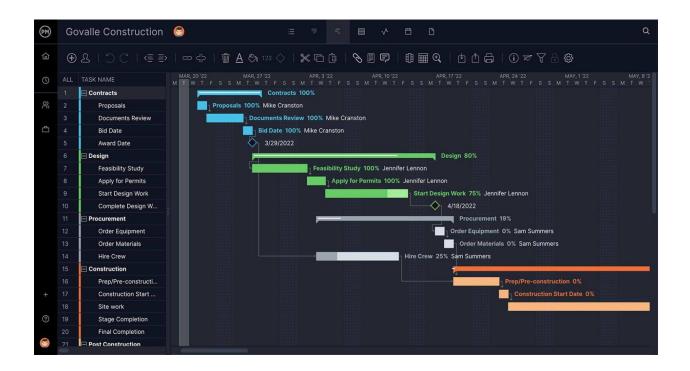
Project managers balance these three constraints making tradeoffs between them. For example, you can increase the number of activities in your project scope, but this means there will be less time and costs will be higher for each project task.

## **Project Management Tools & Techniques**

There are a wide range of project management tools, both online and mobile, available to manage projects. These are the most essential tools for a project manager:

#### **Gantt Charts**

A Gantt chart is a visual representation of a project timeline which shows all the project tasks in one graph. Gantt charts are used for project planning, project scheduling, task management and resource management. They work best on waterfall projects.

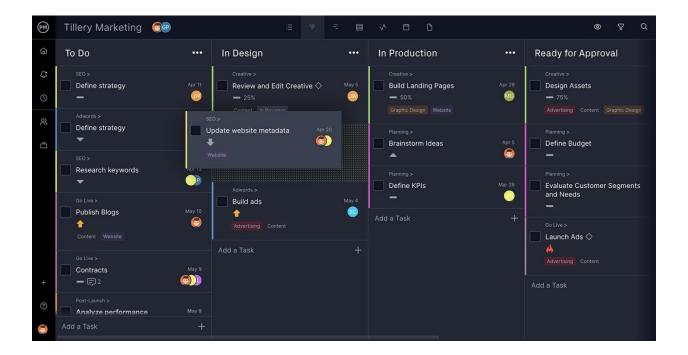


The Gantt chart is the preferred method used by project managers to schedule their projects. Some tasks are dependent on others before they can start or end, and these task dependencies can create bottlenecks later on in the project.

By linking them on a Gantt chart, a head's up is created to avoid slowing down the schedule. Projects can be divided by milestones, diamond symbols, which indicate the end of one phase and the beginning of the next.

#### **Kanban Boards**

A kanban board is a task management tool that allows project managers and team members to visualize tasks. Kanban boards are used by agile and scrum teams who work in iterative sprints. They're easy to use and foster team collaboration.



#### Work Breakdown Structure (WBS)

A work breakdown structure is a very useful project planning tool that allows project managers to map out the project scope and break it into individual tasks. WBS are used in conjunction with methods and techniques such as the critical path method (CPM), <u>Program Evaluation and Review Technique (PERT)</u> and Gantt charts.

#### **Network Diagrams**

Network diagrams help project managers visualize schedules. Some examples of project management network diagrams could be a critical path diagram or a PERT chart.

#### **Project Reports**

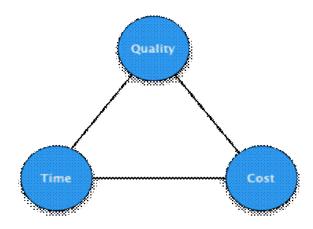
Project management reports are an essential part of the monitoring phase. Reports are also necessary for stakeholder management, cost management and time tracking purposes.

### **Project Success**

There are two broad issues associated with project success: the criteria used to define and measure success *project success criteria* and the factors that influence success *project critical success factors* (CSFs). Generally, project management triangle, or called iron triangle, that consists of cost, time and quality is used to measure the success of the project. Traditional project success criteria focused on the 'iron triangle' of meeting cost, time and quality-related objectives and, although there is general recognition in the project management community that defining project success is not so simple, a survey of 236 project managers, reported in 2002, found that iron triangle criteria were still the most commonly cited measures of project success.

Project success can be distinguished between short-term and long-term success criteria. Criteria linked to the iron triangle, such as delivering projects within budget and meeting time objectives and project specifications, are short-term and measured prior to project closure. Long-term criteria, such as providing both tangible and intangible benefits, are often measured after project closure.

Another factor is CSF that is based on the notion that there are a number of factors common to most projects, such as the establishment of a set of agreed project objectives that are critical to success. The general CSF (independent variable) – success criteria (dependent variable) relationship has been the focus of empirical studies in the business and management literature i.e. in relation to supply chain management and, management accounting, information systems development, human resource management, leadership and operations as well as in respect of project environments.



Project Management Triangle

## 6 reasons why projects fail and how to avoid it

- 1. Lack of resource planning
- 2. Unclear Goals and Objectives
- 3. Lack of project visibility
- 4. Communication gaps
- 5. Scope creep
- 6. Unrealistic expectations

Here's a look at some of the causes of project failure and how you can avoid them.

#### 1. Lack of resource planning

We plan timelines. We plan meetings. We plan structure and themes and interfaces. But sometimes, in the midst of all that project\_planning, we forget to plan for our resources. It's a huge contributor to why projects fail. Project management involves resource management, often taking other projects into consideration. Most of us know that financial resource planning is important.

#### 2. Unclear Goals and Objectives

One way to almost guarantee project failure is to begin work without clear project objectives and goals. After all, there's no way to know whether you've succeeded when you aren't completely sure what you're trying to accomplish.

#### 3. Lack of project visibility

No matter how well-planned your project is, a lack of visibility can lead quickly to failure. It's essential to create a project management system that provides visibility, not just for the project manager but for all team members. Visibility includes project transparency of task status, clear communication, and good document management.

#### 4. Communication gaps

It should go without saying, but communication in project management is the key. The tools your team uses to communicate should be explained and implemented from the outset of your project.

#### 5. Scope creep

It seems so innocent at first. A simple customer request to add an item here, a brilliant idea to expand a service there, and before you know it, your project scope has outgrown and your team is over-extended. Scope creep happens when either

- the parameters of the project were not well-defined from the outset or
- there's pressure either internally from the team or externally from customers or bosses to take on tasks that were not part of the original project plan.

#### 6. Unrealistic expectations

Sometimes disguised as dogged optimism, unrealistic expectations have destroyed many projects. As a project\_manager, it's absolutely essential to gain a clear picture of what your team can accomplish and in what time frame. Once you have aligned your expectations with reality, you must communicate them to the customer and often to your bosses.

## My skill as a Project manager

1-General Manager at kobany interchange in Sulaymaniyah. Malik Mahmood ring road (2013 - 2015).

2-Manager of East Municipality of Sulaymaniyah (2015-2019).

3-General Manager in the brusk Company and Project manager at Khawnakan Complex (2021)

4-General Manager in Tera building Company (2022- Present)

## Conclusion

Project management is very important organizing to govern the project. A team leader needs to understand project lifecycle, risk and risk management in order to create the strategy for the project to be successful. Moreover, applying the proper tool during the process duration estimation by considering the iron triangle can lead to reach the goal of the project.

Project management helps to detail what tasks will be accomplished, who will be involved in completing the tasks, and when tasks should start and finish.

According to my skill as a Project Manager .You and your team have worked diligently on your project. You have involved contractors. You also needed to check out many items of equipment, purchase supplies and materials, and have maintenance contracts in place. You are responsible to evaluate the safety, security and environmental standards of the project.

A project can end as planned. It has done what it set out to do on plan, it moves from execution to closure.

Now, you are closing your project. According to the Project Management Institute, you need to get your sponsor's agreement to formally close the project. Then you need to ensure all the stakeholders agree that your project is closed. This is sometimes a difficult task.

You must close out all contracts, and ensure all contractors have been adequately informed their job is done, and all payments have been made.

Finally, ensure you have a good hand-off of the product, to who-ever will be using it, and maintaining it. Congratulations! Time to celebrate a job well done. Be sure to learn from the experience, successful, or not, so you will do better.

## Resources for my report

-http://en.wikipedia.org/wiki/Project\_management, viewed October 31, 2009.

-<u>http://www.brunswickis.co.uk/project-management-glossary.asp</u>, viewed October 30, 2009.

-Haga, Wayne A, and Marold, Kathryn A. "A Simulation Approach to the PERT/CRM Time-cost Trade-off Problem". **Project Management Journal**. Vol. 35, Issue. 2 (2004): 31.

-<u>http://www.mpmm.com/project-management-methodology.php</u>. viewed November 1, 2009 .

-Hanley, Ken. "The project management triangle". ComputerWorld,

Vol. 14 Issue 6 (1998):19.

-System Project Management by (Prof. Olivier de weck, Dr. James Lyneis, Prof. Dan Braha).

- **Project** \_ **Management** by ( Heerkens , Gray R ).

-Project Management by ( The Investopedia Team) .

- Resource Management: Process, Tools & Techniques by (Jason Westland ).

-Lewis, R 2006, Project Management. McGraw-Hill Professional, New York.

-Lock, D 2007, Project management. Gower Publishing Ltd, Aldershot

-Meredith, JR & Mantel, SJ 2002, Project Management: A Managerial Approach. John Wiley & Sons, Inc., New York, NY.