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Information Technology Projects Management
ادارة مشاريع تكنولوجيا المعلومات
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Introduction to Project Management

Project management is essentially aimed at producing an end-product **that will effect some change for the benefit of the organization that instigated the project. It is the** initiation, planning and control **of a range of tasks required to deliver this end product, which could be a physical product, it could be new software or something less tangible like a new way of working.**

A key factor that distinguishes project management from just management is that it has this final deliverable and a finite time-span**, unlike management which is an** ongoing process**. Because of this a project manager needs a wide range of skills; often** technical and functional skills, certainly resource management skills and good business awareness**.**

For all but the simplest projects a formal approach to managing a project works best. The control imposed by a formal approach is essential when there are complexities such as new technology, inter-dependent tasks, teams spread across several departments, or where teams are located in different parts of the world; all common occurrences in many business projects.

Because every project will involve some type of change, change management **is an integral part of the project management process. And because there is change there are likely to be risks so** risk management **is also thrown into the project management-mix.**

A project is defined as a sequence of tasks that must be completed to attain a certain outcome. According to the Project Management Institute (PMI), the term Project refers to" to any temporary endeavor with a definite beginning and end".

IT project management is the process of managing, planning, and developing information technology projects. IT projects exist within a variety of industries, including software development, information security, information systems, communications, hardware, network, databases, and mobile apps.

IT project developers deliver a product or service, while managers handle IT project management. Managers are in charge of communicating expectations and keeping projects on track and on budget to ensure the IT projects run smoothly.

Examples of IT Projects

- Migrating IT systems to new servers.
- Building websites or software systems.
- Building mobile, tablet, or web applications.
- Deploying new IT infrastructure, such as networks and hardware.
- Updating or migrating database systems

Project and Product Life Cycles
Project Life Cycle
Product Life Cycles

What are the relationships between products and project life cycle?

Every product moves through a life cycle right from the project initiation stage through developing a product until it reaches the end of the life cycle. Every product in different stages of product life cycle goes through each phase of the project life cycle.

Project Life Cycle

Project Life Cycle is the entire cycle that enraptures a project. It means the different phases that take place within a project. There are typically five different processes that take place in a project, namely:
- **Initiation**
- **Planning**
- **Executing**
- **Monitoring and Control**
- **Closing**
  Initiation, planning, executing, monitoring, and controlling, and closing is also the five basic processes of project management. Every project has

these five phases in existence. Initiation, planning, executing, and closing takes place once throughout the process; however, monitoring and control need to be done even after <u>closing of the project</u> towards smooth and fluent project delivery. Also, monitoring and control is a part of every process at different levels.
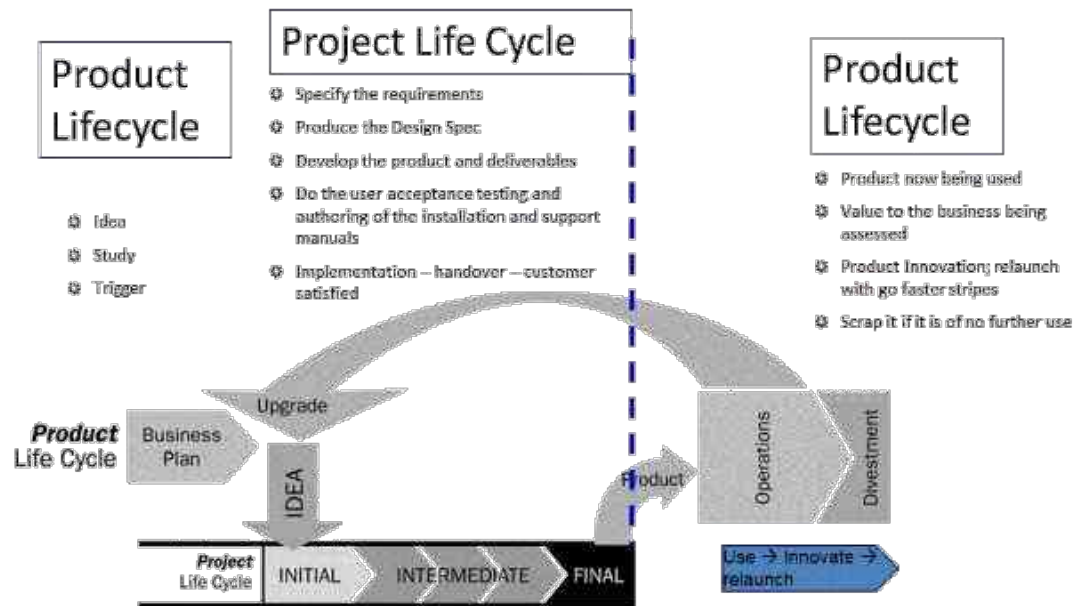
Product Life Cycle

Product Life Cycle defines the different stages that enrapture the growth of a product. A product typically goes through the below-mentioned stages.

- **Market Introduction**

- **Market Growth**

- **Market Maturity**

- **Decline and Saturation Stage**

At each stage of a product life cycle, marketing strategies along with revenue and profit generation might keep changing. Every product moves through a life cycle right from the project initiation stage through developing a product until it reaches the end of the life cycle. Every product in different stages of product life cycle goes through each phase of the project life cycle. That is the primary difference between the project life cycle and product life cycle.

The Product Lifecycle is longer than the Project Lifecycle

Product Lifecycle
- Idea
- Study
- Trigger

Project Life Cycle
- Specify the requirements
- Produce the Design Spec.
- Develop the product and deliverables
- Do the user acceptance testing and authoring of the installation and support manuals
- Implementation – handover – customer satisfied

Product Lifecycle
- Product now being used
- Value to the business being assessed
- Product Innovation; relaunch with go faster stripes
- Scrap it if it is of no further use
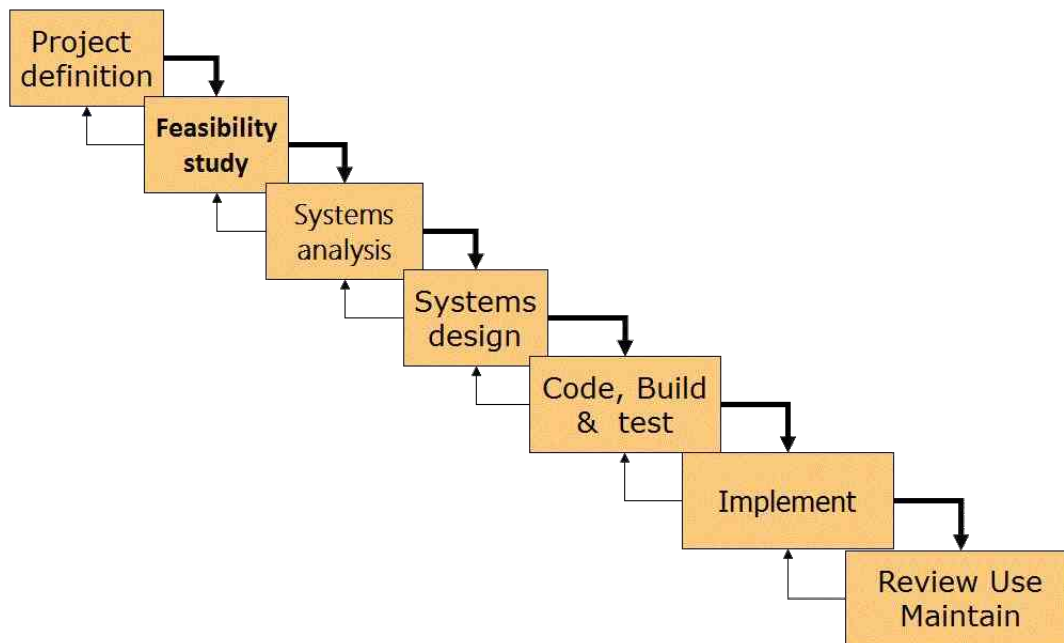
Phases or Sub Projects

- Projects can be split into 2 or more phases or sub-projects (also may be called stages)
- Normally sequential
- May overlap
- Sub-divisions of a larger project
- May be part of a programmed or portfolio
- First phase is clearly defined, next phases may not be -> rolling wave planning = progressive elaboration

Iterative and Incremental Lifecycles

Iterations (phases)

- **Project Vision overall, detailed scope is elaborated for each iteration**
- **Product developed and functionality added incrementally**
- **Activities from all PM Process Groups normally performed during each iteration**
- **At iteration end, a deliverable or a set of deliverables are completed and accepted by the customer**
- **Each iteration builds in lessons learned from previous**
- **Need to manage changing scope or objectives**

Adaptive Lifecycles

- **Aka change driven or Agile**
- **High levels of change and active stakeholder involvement**
- **Iterations are short; typically 2 to 4 weeks; fixed time and cost**
- **Product Backlog – set of requirements, defined by customer**
- **Self managing team s - decide which backlog items they will produce;**
- **Deliverables should be complete and ready for review**
- **If not complete, returned to product backlog**

- **Preferred when environment is rapidly changing, requirements difficult to specify at outset**

The Project Life-Cycle

Level of uncertainty (risk of failing) and Stakeholders; Influence is:

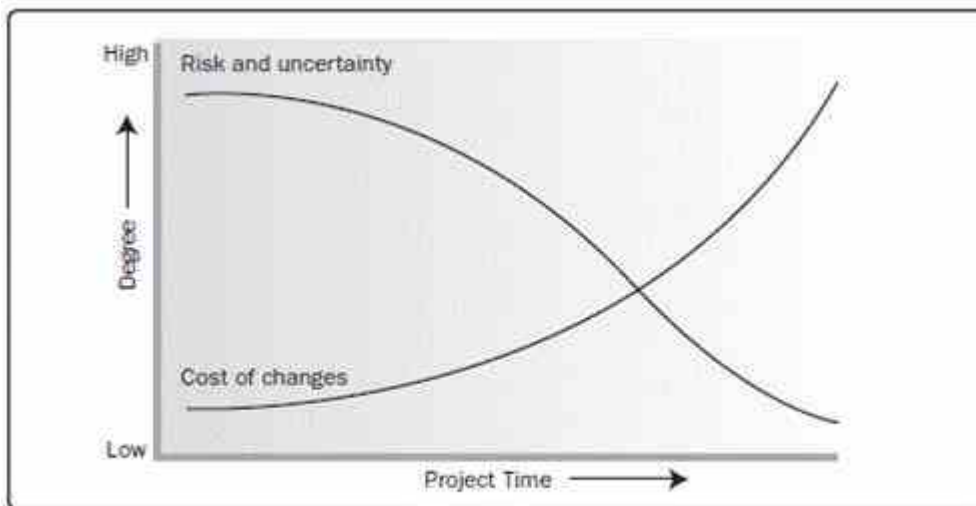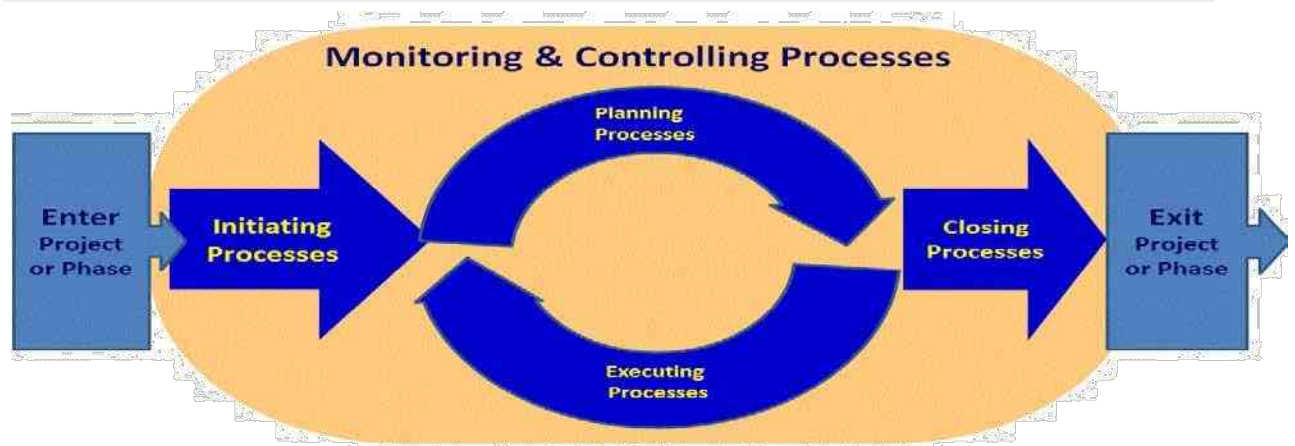- **highest at the start of the project**
- **lowest towards the end**

Figure 2-9. Impact of Variable Based on Project Time

Cost of making changes is:

- lowest at the start of the project
- highest towards the end

The 5 Process Groups in the Project Lifecycle

The Project Process Groups

- **Initiating - Those processes performed to define a new project or a new phase of an existing project, by obtaining authorisation to start the project or phase**
- **Planning - Those processes performed to establish the total scope of the effort, define and refine the objectives, and develop the course of action required to attain these objectives**
- **Executing - Those processes performed to complete the work defined in the Project Management Plan to satisfy the project objectives**
- **Monitoring and Controlling - Required to track, review and regulate the progress and performance of the project, identify any areas in which changes to the plan are required, and initiate the corresponding changes**
- **Closing - Completing all the project or phase activities, both production and project management, to formally close the project or phase**

The definitions shown above in italics are taken from the Glossary of the Project Management Institute, A Guide to the Project Management Body of Knowledge,
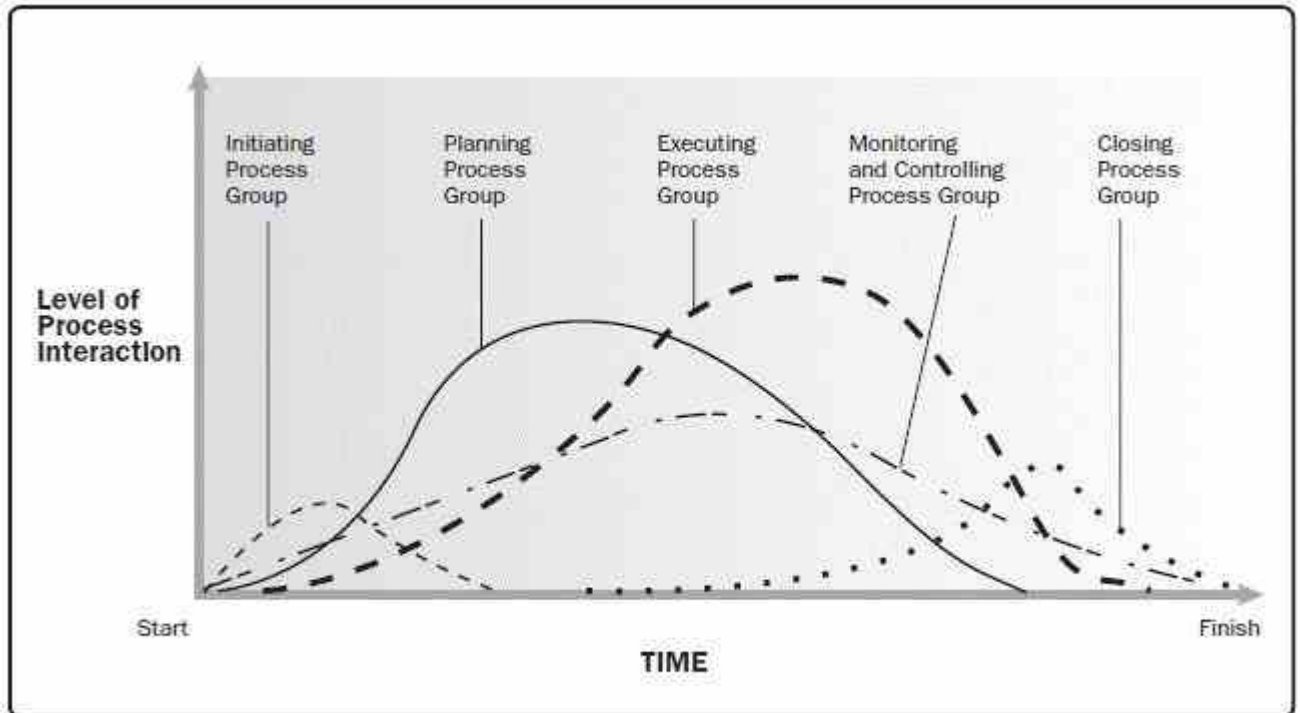
How Process Groups Overlap


Figure 3-2. Process Groups Interact in a Phase or Project

Process Groups and Life Cycle Phases

- Process Groups are not Project Life Cycle Phases
- Project Life Cycle could be: Develop Concept -> Initial Design -> Detailed Design -> Prototype -> First Build -> Commission -> Test -> Secure -> Training -> Rollout
- Each phase could require all the Process Group processes

Proof of concept or Design environment / Pre-production or Production environment
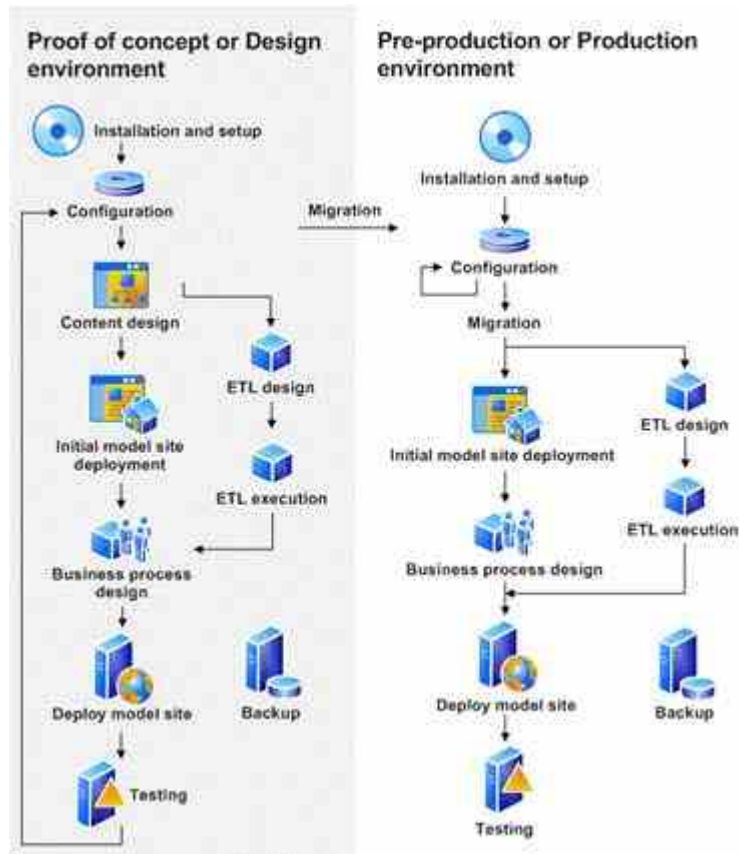
. IT Project Management Project Examples

IT Project Management Project Examples

Other examples of real-world IT projects we have provided for clients include the following:

1. Network Services.
2. Backup and Disaster Recovery.
3. VoIP (Voice-over-Internet protocol)
4. Rapid IT Help desk response

Example #1: Constructing the Burj Khalifa Skyscraper

In 2004, leaders in the United Arab Emirates announced intentions to construct the world's tallest skyscraper in downtown Dubai, surpassing any existing supertall buildings. Such an enormous endeavor required coordinating enormous engineering, procurement and construction efforts within tight timeframes.

The intricate project meticulously planned technical requirements, budgets, workforce allocation, safety regulations, supply deliveries and more. An expert PM team tracked progress daily, rapidly addressing issues like material delays or construction accidents. While the global recession almost halted funding halfway through, additional financiers kept it moving. Eventually in 2010, the awe-inspiring Burj Khalifa was officially complete, standing at over 800 meters tall as a new world record and icon of future cities.

Key themes:
- Strict planning, budgeting and oversight control
- Overcoming potential show-stopping risks
- Delivering a history-making product through project management

This building is an impressive testament to detailed project preparation and leadership in steering such massive initiatives.

Example #2: Creating Digital Features for a Fashion Retail Company

Finally, we'll look at project management in digital commerce. Fast fashion e-tail giant SHEIN constantly rolls out fresh app and website features to engage their young demographic. But how do product managers plan agile web projects while collaborating across merchandizing, design and tech teams? Using frameworks like SAFe helps coordinate roadmaps, sprints and tracking for huge initiatives like SHEIN's "try-on" augmented reality experience. PMs Work with various specialists while also seeking user feedback for iterative refinement before widely releasing digital features.

Strong organization and rapid adaptation ultimately helps SHEIN web innovation machine achieve incredible conversions. And with 65 million monthly customers, these projects impact more users than leading Tech Company products do.

Key themes:
- Coordinating digital releases across departments
- Using agile workflows suited for web projects
- Achievement of growth and engagement metrics

Smooth-running project management again proves vital, even for fashion.

What are the projects attributes?

Projects come in all shapes and sizes, and it is important to distinguish between organizational operations and projects.

The following attributes help to identify projects:

•objective: •every project should have a well-defined objective, an expected result or product. The objective of a project is usually outlined in terms of scope, time and cost. For example, the objective for the refurbishing of a primary school might be defined as being completed within 4 weeks at a cost of $200,000 in a quality manner that meets industry and education departmental standards.

•temporary: •Projects have a specific time frame or fixed life span with a definite beginning and end. For example, the refurbishing of a primary school might have to be completed between Dec 20 and Jan 20.

Unique: •A project may be unique or a once-off endeavour. For example, some projects like designing a space station are unique because they have never been attempted before. The projects such as building a house or planning a wedding are unique because of the customization they require.

•interdependent tasks: •Carried out through a set of interdependent tasks, that is they are developed in increments. A project team should develop initial plans and then update them with more detail based on new information as the project progresses. For example, in the refurbishing of a primary school, firstly plans must be drawn up, subcontractors determined, licenses or permits obtained, materials ordered etc.

Resources: A project requires resources, often from various areas. Resources include people, organizations, equipment, materials, and facilities. For example, a wedding is a project that may involve resources such as a caterer, a florist, reception hall, and a limousine.

•customer: •A project should have a primary customer or sponsor. Most projects have many interested parties or stakeholders, but someone must take the primary role of sponsorship. The project sponsor usually provides the direction and funding for the project. For example, when a contractor builds a home for a couple, the couple is the sponsor or customer funding the project.

•uncertainty: •A project involves uncertainty because each project is unique, it is sometimes difficult to define the project's objectives clearly,

estimate how long it will take to complete, or determine how much it will cost. External factors also cause uncertainty, such as a supplier going out of business or a project team member needing time off. This combination of assumptions and estimates causes a degree of uncertainty that makes project management so challenging. For example, a contractor may supply and install a new computer system on time, and within scope, however, the budget may blow out due to the skyrocketing cost of parts imported from a tornado-ravaged country.
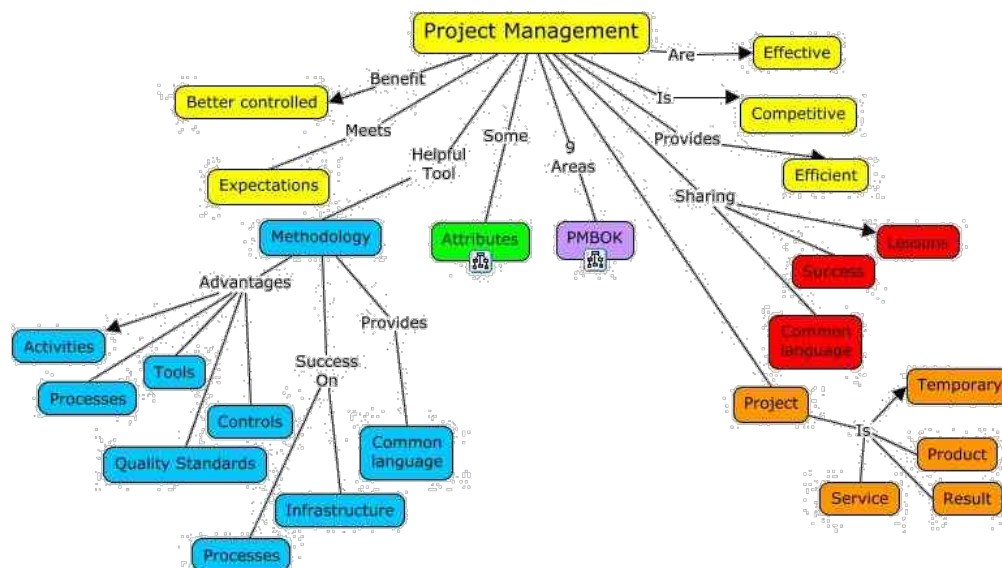
Relationship between projects attributes, project performance, and project governance dimensions--building the theoretical framework

Projects differ from each other in terms of their attributes and may require different management and governance mechanisms so that the specific project needs, based on the changing context, can be fulfilled. This paper focuses on finding the relationship between project types and project governance by exploring the relationship between project attributes and project governance dimensions or roles, taking into account the moderating impact of project performance on this relationship.

The research takes a transaction cost economics perspective using a contingency approach. The development of theoretical framework, through literature review, is part of a larger research project, which will be conducted for information technology (IT) industry within Gulf Cooperation Council (GCC) countries

Introduction

The basic nature of humans, to learn and do new things, has created a sense of competition and uncertainty. Because of this uncertain nature of our environment, organizations have to constantly change the way they are doing work, to keep them competitive, and perform different functions in a more productive manner. That might be the reason that Turner and Keegan (2001) stated that our current environment is a "more project-based economy" (p. 254).

Such organizational changes and resulting initiatives cannot be handled through the routine operations that organizations perform; thus organizations have to create projects within them, or among themselves, which can keep them more viable and competitive in the market. These projects are formed to meet the desired objectives, using the provided resources, within the defined constraints.

Although similar in terms of the certain attributes these projects may differ in complexity, size, organizational setup and other attributes. Because of these differences all project cannot be managed in a similar manner and will require different management models (Shenhar, 2001).

Along with management, these projects need surveillance, support, and guidance from executives to achieve the desired objectives. This is part of the governance mechanism that needs to be put in place. However, the governance mechanism for projects cannot be applied in a similar manner for all types of projects (Miller & Hobbs, 2005). This paper focuses on the relationship between project attributes and project governance dimensions or roles.

From a theoretical perspective, various researches have been carried out that discuss these concepts. Exhibit 1 identifies some of these studies.

| Concept	Source
Project Attributes	Project management (Shenhar, 2001; Crawford, Hobbs, & Turner, 2005) Project manager selection (Turner & Müller, 2006) Project success (Turner & Müller, 2007)
Project Attributes and Project Governance	Turner & Keegan, 2001; Miller & Hobbs, 2005; APM, 2007b; Klakegg, Williams, Magnussen, & Glasspool, 2008; Müller, 2009
Project Performance and Project Governance	Cable, Ordonez, Chintalapani, & Plaisant, 2004; Crawford & Cooke-Davies, 2005; Crawford, Cooke-Davies, Hobbs, Labuschagne, Remington, & Chen, 2008

Project governance focuses on the portfolios of programs and projects used by the organization to deliver many of the strategic objectives. This process focuses first on doing the right projects and programs constrained by the organizations capacity to undertake the work – Portfolio Management; secondly, creating the environment to do the selected projects and programs right-developing and maintaining an effective capability; and lastly systems to validate the usefulness and efficiency of the ongoing work which feeds back into the selection and capability aspects of governance.
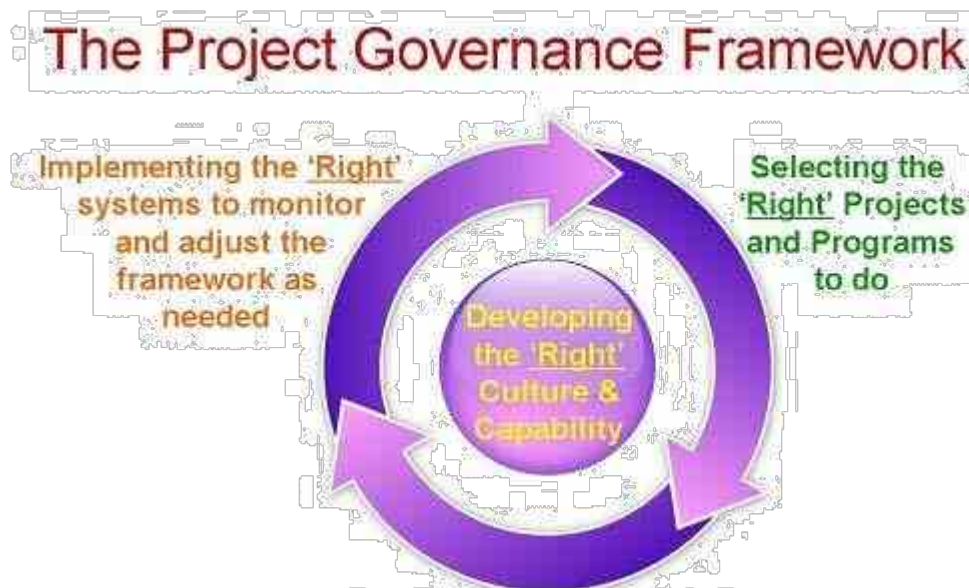
Within this framework, portfolio management is the key. Strategic Portfolio Management focuses on developing the best mix of programs and projects to deliver the organizations future within its capacity to deliver. This means taking the right risk and having sufficiently robust system in place to identify as early as possible the 'wrong projects', so they can be either be reframed or closed down and the resources re-deployed to other work.

It is impossible to develop an innovative future for an organization without taking risks and not every risk will pay off. Remember Apple developed the 'Apple Lisa' as its first GUI computer which

flopped in the market, before going on to develop the Apple Macintosh which re-framed the way we interact with machines.
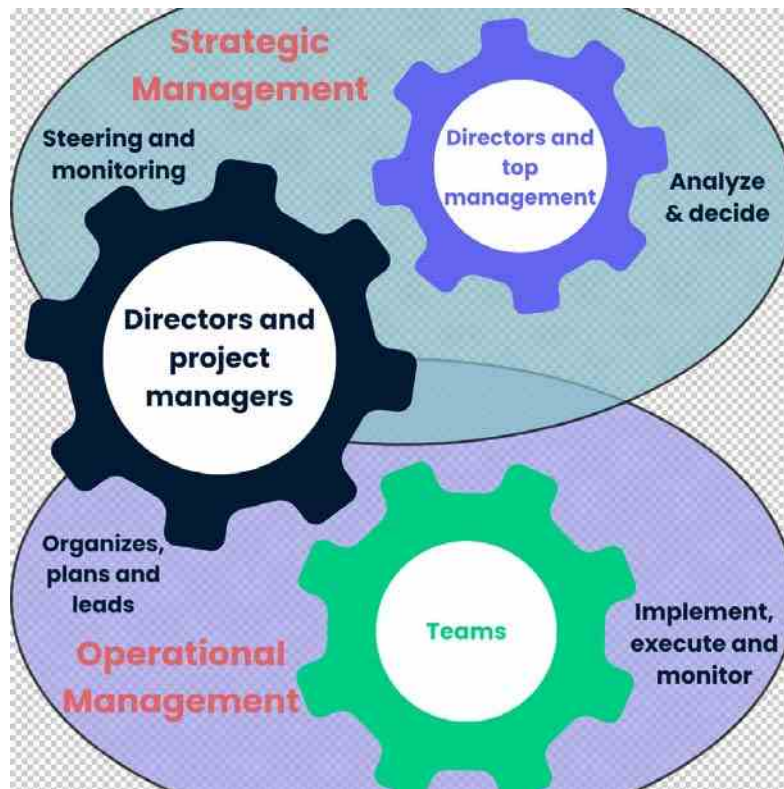
What is project governance process?

(A) Differentiating between project governance and project management
While project management and project governance both involve the realization of implementation of projects within a company, they differ, however, in their dimension.
Project governance being a global global methodologyuses project management as a tool to achieve its strategic objectives. its strategic objectives.
B) A management method
" the set of rules and methods organizing reflection, decision-making and the monitoring of the application of decisions within a social body "In practice, project governance remains a management management method and and organization.
Made up of aset of processes, it defines the organizationat the overallcompany level. Project governance makes it possible to establish the appropriate environment foreffective project portfolio management.

C) A strategic dimension

One of the main characteristics of project governance is its strategic dimension. Strategic dimension. Indeed, defining project governance implies taking the lead in vision. Management teams then have a heavy responsibility: that of choosing projects that align with the company's overall strategy.

2. Why set up project governance?

Guaranteeing a certain level of quality thanks to structuring and organization project governance meets real challenges. What's more, its implementation offers many advantages.

A) Aligning operations with strategy

Aligning projects with corporate strategy can be complex. However, setting up a precise project governance structure will enable you to work towards this coherence, while taking into account the company's development objectives development objectives.

In addition, project governance is particularly useful for reconcile the sometimes of an organization's various stakeholders.

B) Facilitating decision-making

The definition of project governance is based on concrete concrete figures from operational activities activities.

A reliable analytical vision will help provide all the elements needed for informed decision-making. It should also be noted that this analysis must be based on relevant relevant financial indicators to be defined strategically.

C) Optimizing resource management

Visit resource management is often a particularly complex issue for companies.

Indeed, the lack of visibility sometimes complicates the smooth running of projects.

By defining project governance upstream, you will improve your long-term visionwhich will enable you to better prioritize development projects.

Would you like to maximize your resource management? This article detailing the 5 steps to effective resource management should help.

D) Ensuring sustainability

Project governance is a major investment for any company, since it requires the involvement the involvement of teams and managementthe benefits are nevertheless considerable.

The implementation of project governance contributes to a company's company's long-term viability by facilitating the smooth running of activities smooth operation, which in turn generates productivity gains and improved profitability. What's more, it helps loyalty by simplifying their day-to-day activities, thanks to increased greater autonomy and visibility.

   E) Improving communication

Project governance helps to streamline the flow of information. Each role is defined in advance and, above all, transparent. Obtaining information becomes accessibleevery employee knows exactly who to contact. Communication flows are thus simplified and considerable time savings.

What are the benefits of project governance?

   A) Measuring performance

Thanks to visibility on the company's various activities, project governance makes it possible to streamline decision-making on projects. Indeed, doubts can sometimes arise, and teams may have to ask themselves: should we launch this project? Postpone it? Reframe it? Re-prioritize? Abandon it?

Project governance helps to answer these kinds of questions by enabling performance to be performance measurement,through <u>project management indicators</u>, thus facilitating decision-making.

<u>Creating a project management dashboard</u> will help you in this task.

   B) Respect costs and deadlines and offer a high level of quality

By clarifying procedures and enabling improved productivityby clarifying procedures and improving productivity, project governance is a powerful method of ensuring that activities run smoothly. Precise planning makes it easier to costsand deadlines and helps deliver high quality.

Successful projects contribute to customer satisfaction. The company can benefit from opportunitiesopportunities, thereby boosting sales.

Tools such as project accounting software and project management time tracking software provide this long-term visibility and alert you when a project goes off-budget.

What are the key factors in setting up project governance?

A) Involving management

While this step may seem obvious, its essential nature justifies our highlighting it. Indeed, project governance is only made possible by the deep involvement of management's deep involvement management. The latter must understand the importance of implementing it on a global scale. global scalebecause it implies policies, priorities and strategic and strategic decisions.

The finance department must also join the collective effort by helping to define KPIs linked to budget management. In addition, it must help provide resources resources consistent with the company's vision, both in terms of staff and budget and equipment.

B) Define procedures

Project governance is, practically by definition, the implementation of procedures.

To generate real spin-offs, these must be clear and focused. Thus, the early the end and control methods must be perfectly defined.

On a day-to-day basis, this can take the form of optimal operational planning for example, by defining the schedule and resource planning of teams in a precise manner, taking into account the management of unforeseen events.

- **Project Constraints**

Project constraints are the general limitations that you need to account for during the project life cycle. For example, a cost constraint means that you're limited to a specific project budget, while a time constraint means you must complete your project within a specified timeframe.

Definition of a Project Constraint

A project constraint is any condition, limitation, or restriction that can influence the course and outcome of a project. These constraints are often considered within the classic project management triangle of scope, time, and cost, which are known to be the primary constraints every manager must balance. An example of a project constraint might be a budget that limits financial resources, a deadline by which the project must be completed, or the quality standards that the project's outputs must adhere to. These constraints are not merely challenges to overcome; they are defining factors that shape the planning, execution,

and delivery of a project. Understanding these limitations is crucial as they often have a cascading effect on the constraints of a project's success or failure. Identifying and addressing these constraints early in the project planning phase can significantly increase the likelihood of a project's success.

Understanding the Importance of Project Constraints

Recognising the significance of project constraints is fundamental to project management. These constraints set the boundaries within which a project must be delivered. They help define a clear path and provide a structure for making decisions throughout the project lifecycle. Constraints can also serve as a reality check, ensuring that project goals are realistic and achievable. By understanding the limitations early on, project managers can set more accurate expectations with stakeholders, allocate resources more effectively, and devise contingency plans for potential risks. Moreover, a thorough comprehension of project constraints allows for better prioritisation of tasks and more informed risk management. In essence, these five constraints in project management don't just pose limitations; they are essential elements that, when managed properly, can drive efficiency and enhance the potential for project success

Types of Project Constraints

Time as a Project Constraint

Time is often the most pressing constraint in project management. It refers to the schedule or deadline by which the project's deliverables must be completed. Time constraints can significantly impact the planning and execution of a project, as they dictate the pace at which work must progress. A tight timeline can add pressure on the team to perform efficiently and may require additional resources to meet the deadline. Conversely, a more generous timeline could lead to complacency

and inefficiency. Managing time effectively involves careful scheduling, task prioritization, and constant monitoring to ensure the project remains on track. It's also important to build in some flexibility in project timeline to accommodate unforeseen delays or changes. Effective time management under constraint conditions is a skill that can define the difference between a project's success and failure.

Budget as a Project Constraint

Budget is a critical project constraint that stands as a testament to the saying, "money makes the world go round." It encapsulates the total financial resources available for the project. A strict budget limits the amount that can be spent, often necessitating creative solutions and careful allocation of funds. Project managers must ensure that the project remains within financial constraints while still meeting the required standards and specifications. This often involves negotiating costs, making trade-offs, managing constraints and prioritising spending on critical project elements. A comprehensive understanding of the project's financial limitations is essential from the outset, as it influences nearly every decision, from staffing to procurement. Balancing quality and cost-efficiency under the constraint of a budget is a juggling act that requires both strategic planning and financial acumen.

Scope as a Project Constraint

Scope pertains to the specific tasks, deliverables, and goals that make up a project's life cycle. It defines what is and isn't included in the project, and changes to the scope can result in significant shifts in time and budget requirements. Scope creep, the gradual expansion of the project beyond its initial boundaries, is a common issue

that can derail a project if not managed properly. To maintain control, project managers must clearly define the scope at the beginning and communicate it effectively to all stakeholders. It is equally important to have a robust change management process in place to evaluate the impact of any requested changes on the project's overall objectives. A well-managed scope ensures that the project team remains focused on delivering the agreed-upon work, avoiding unnecessary tasks that can consume resources and extend timelines.

Real-World Examples of Project Constraints

Example of a Project Time Constraint

An example of a project time constraint could be the development of a new software feature that must be released before a major industry event. The event date sets a hard deadline for the project completion. This time constraint necessitates a detailed project schedule with milestones and deliverables clearly mapped out. The project team must work diligently to adhere to this timeline, balancing speed with the quality of work. Any delays in the early stages of development must be addressed promptly to prevent a cascade effect that could jeopardise the final delivery. In this scenario, effective time management is critical, and the project manager might employ strategies such as overlapping phases, adding additional resources, or reducing the project scope to ensure the deadline is met. This real-world constraints of project management constraint demonstrates the importance of agility and adaptability in project management.

Example of a Project Budget Constraint

Consider a startup aiming to launch a new product within a year. The company has a fixed amount of seed funding, presenting a clear example of a project budget constraint. With limited financial resources, the project manager needs to make strategic decisions about where to allocate funds to maximise the chances of a successful product launch. This could involve choosing more cost-effective materials, limiting the scope of the initial release to essential features, or negotiating better terms with suppliers. It might also mean forgoing certain marketing activities or relying on in-house talent instead of hiring external consultants. The key is to find a balance between cost-saving measures and the quality and potential of the product. In this instance, the budget constraint forces the project management software team to innovate and optimise their resource use to deliver a viable product within the available financial parameters.

Example of a Project Scope Constraint

Imagine a municipal council tasked by main project constraints with renovating a public library within a fixed budget and timeframe. The scope constraint here involves refurbishing within the existing building's footprint, as there's no option for expanding the structure due to local regulations and neighbouring property lines. This constraint demands that the project team optimises the use of available space. They must prioritise renovations that will deliver the greatest benefit to the community while staying within the defined scope. For instance, they might need to choose between upgrading technological resources and expanding the children's reading area. The project manager's challenge is to make decisions that align with the community's needs and the council's strategic objectives, ensuring that the scope limitation doesn't compromise the renovation's quality and utility. This example illustrates how a

project scope constraint can shape the decision-making process and project outcomes.

- **What Is Project Management?**
  - **Project Stakeholders**
- **Project Management Knowledge Areas**

Project management

 Is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters Project management has final deliverables that are constrained to a finite timescale and budget.

When do we use project management?

Projects are separate from business-as-usual activities and occur when an organization wants to deliver a solution to set requirements within an agreed budget and timeframe. Projects require a team of people to come together temporarily to focus on specific project objectives. As a result, effective teamwork is central to successful projects.

Projects require a team of people to come together temporarily to focus on specific project objectives. As a result, effective teamwork is central to successful projects. Project management is concerned with managing discrete packages of work to achieve specific objectives. The way the work is managed depends upon a wide variety of factors.

The scale, significance and complexity of the work are obvious factors: relocating a small office and organising the Olympics share many basic principles, but offer very different managerial challenges. Objectives may be expressed in terms of:

- outputs (such as a new HQ building);
- outcomes (such as staff being relocated from multiple locations to the new HQ);
- benefits (such as reduced travel and facilities management costs);
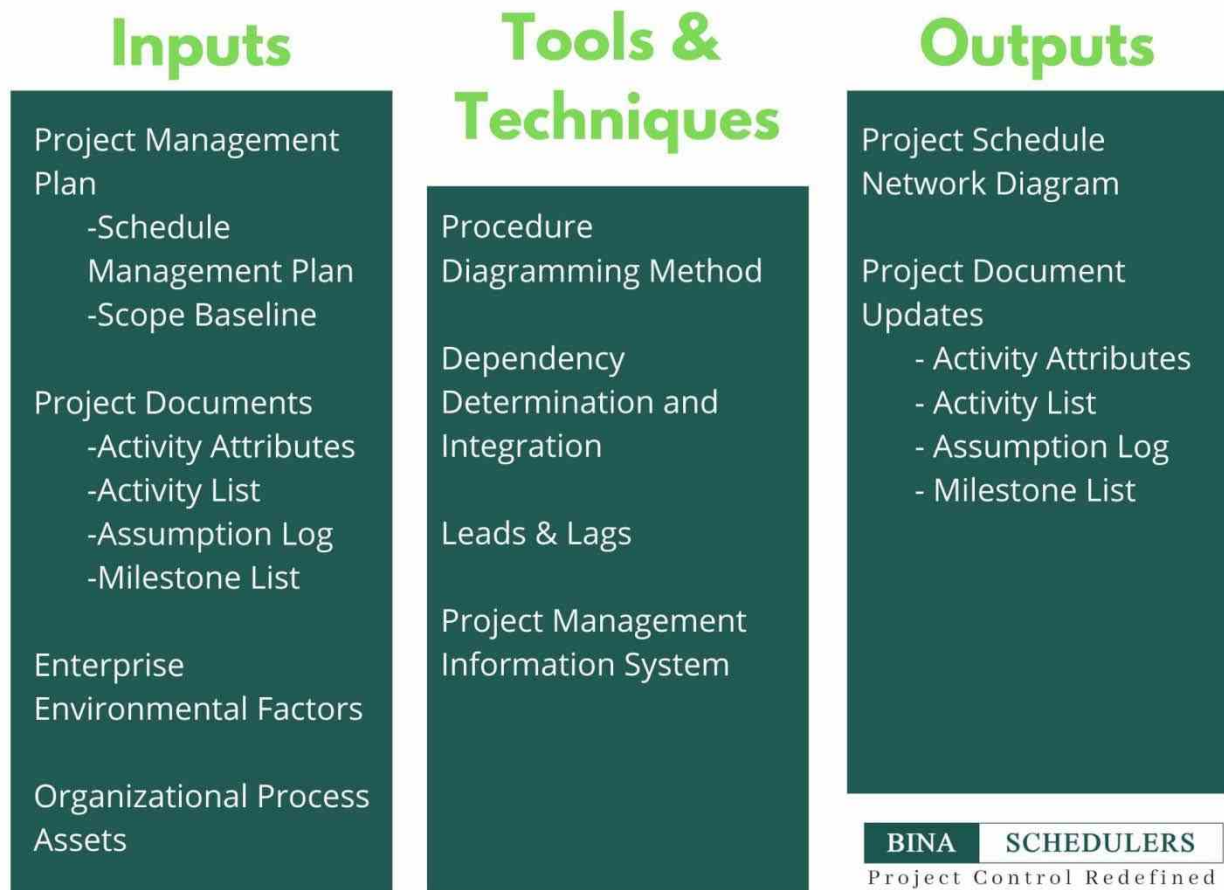
What does it take to be successful in project management?

- Identifying the factors needed to start a project,

- Clearly defining objectives, and

- Identifying measures of performance.

• **Defining Sequence Activities in a Project** •

Inputs

Project Management Plan
- Schedule Management Plan
- Scope Baseline

Project Documents
- Activity Attributes
- Activity List
- Assumption Log
- Milestone List

Enterprise Environmental Factors

Organizational Process Assets

Tools & Techniques

Procedure Diagramming Method

Dependency Determination and Integration

Leads & Lags

Project Management Information System

Outputs

Project Schedule Network Diagram

Project Document Updates
- Activity Attributes
- Activity List
- Assumption Log
- Milestone List

BINA | SCHEDULERS
Project Control Redefined

The sequence activities are designed to fall under these project management groups and knowledge areas. By using the results from the procedures, the project schedule development defines sequence activities, estimate activity resources, and estimate activity durations in combination with the scheduling tool to produce the schedule model. The Schedule management plan recognizes what scheduling method and device to use for the task, which will manage the activities to be sequenced.

How to Sequence Activities in a Project?

Sequencing can be performed by utilizing project management soft wares or by using manual procedures. The Sequence Activities process focuses on changing the project activities from a list to a diagram to act as a first step to publish the schedule baseline. The below chart portrays the data flow diagram of sequence activities on how every activity except the first and last should connect to at

least one predecessor and at least one successor activity with an appropriate logical affiliation.
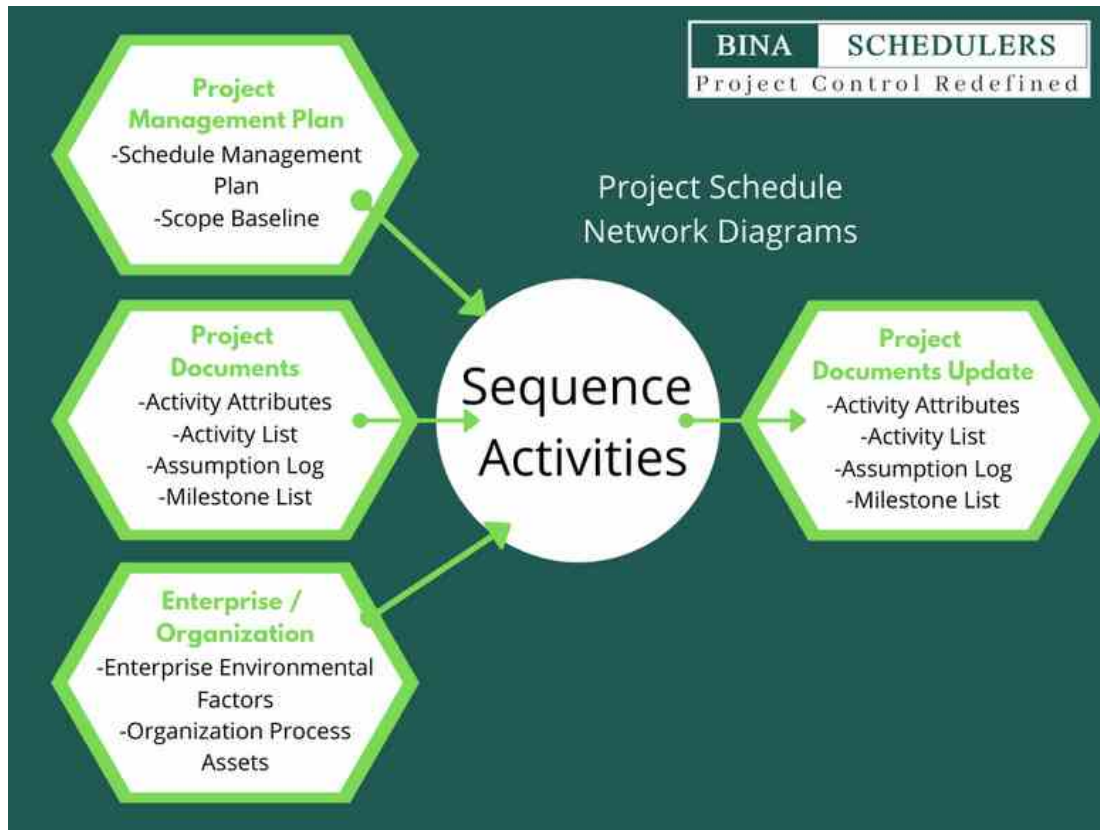
The process of Sequence Activities in Project Management

Sequence Activities is the process of identifying and documenting relationships among the project activities. So the fundamental reason for the sequence activities process is finalizing the interrelationship of activities to finish the project scope and achieve the task objectives.

The critical consequence of the Sequence Activities process is a Network Diagram. Network Diagram of a project represents the activities in boxes with activity ID and shows the relationship of activities.

Each activity excluding the first and last ought to be associated with at least one predecessor and at least one successor activity with a proper logical relationship. A realistic project schedule ought to be apt by creating logical relationships. It might be essential to utilize lead or lag time between exercises to help a reachable undertaking plan. Sequencing can be performed by

using software that is built for project management, manual or computerized procedures. The Sequence Activities process focuses on changing the project activities from a list to a diagram to go about as an initial step to distribute the schedule baseline.

Project Stakeholders

What Is a Stakeholder in Project Management?

Stakeholders are those with an interest in your project's outcome. They are typically the members of a project team, project managers, executives, project sponsors, customers, and users.

Stakeholders are people who will be affected by your project at any point in its life cycle, and their input can directly impact the outcome. It's essential to practice good stakeholder management and continuously communicate to collaborate on the project.

In this article, we will talk about typical stakeholders for any kind of project and how to identify them.

Stakeholders vs. key project stakeholders

Project stakeholders, in general, can be single individuals or entire organizations who are affected by the execution or outcome of a project. It doesn't matter whether the project affects them negatively or positively — if they're affected, they're a stakeholder. Key project stakeholders, however, are stakeholders who have the influence and authority to dictate whether a project is a success or not. These are the people and groups whose objectives *must* be satisfied, as they have the power to make or break the project. Even if all deliverables are in and budgets are met, if the stakeholders aren't happy, the project cannot be considered a success.

Typical key stakeholders in a project

Some of the typical key project stakeholders you'll find in a project include:

- **Customers**: **The direct user of a product or service, often both internal and external to the company executing the project**

- **Project manager**: **The project's leader**

- **Project team members**: **The group executing the project under the project manager's leadership**

- **Project sponsor**: **The project's financier**

- **Steering committee**: **An advisory group providing guidance on key decisions, which includes the sponsor, executives, and key stakeholders from the organization**

- **Executives**: **The top management in the company executing the project; those who direct the organization's strategy**

- **Resource managers**: **Other managers who control resources needed for executing the project**

Internal vs. external stakeholders in project management

It's important to understand your project may have key stakeholders both inside and outside of your organization. That's why it's worth noting the key differences between internal and external stakeholders.

Internal stakeholders in project management

Internal stakeholders are those within your organization. They can include top management, project team members, your own manager, your peers or co-workers, a resource manager, and internal customers.

External stakeholders in project management

External stakeholders are not part of your organization but might include external customers, government entities, contractors, and subcontractors, as well as suppliers.

Identifying stakeholders for a project

Identifying internal and external stakeholders in project management will allow you to better execute your project planning by ensuring each and every stakeholder is informed throughout the project and satisfied with the end result. To ensure you include all relevant internal and external stakeholders, you'll want to learn how to create a **stakeholder management plan** with our helpful guide.

Stakeholder vs. Shareholder

Stakeholders are not the same thing as shareholders. A stakeholder can be a wide variety of people impacted or invested in the project. For example, a stakeholder can be the owner or even the shareholder. But stakeholders can also be employees, bondholders, customers, suppliers and vendors.
A shareholder can be a stakeholder. A shareholder, though, is someone who has invested in a corporation through the purchase of stocks. A stakeholder has an interest in the corporation's overall performance, not stock performance.
The stakeholder has a vested interest in the project, meaning you'll want to keep them updated regularly. **ProjectManager** is work and project management software that has real-time dashboards that monitor six project metrics. Dashboards require no setup and automatically show progress and performance in colorful graphs and charts. They are easily shareable to manage your stakeholders' expectations. Get started with ProjectManager today for free.

Types of Stakeholders

Stakeholders can be anyone with influence or anyone who can be influenced by the project. We've already seen that there can be many

stakeholders, something that we'll discuss below. All stakeholders can be broken into two groups: internal stakeholders and external stakeholders. Let's take a look at both.

1. Internal Stakeholders

Internal stakeholders are within the organization. The project directly impacts them as they serve and are employed by the organization managing it. Internal stakeholders can include employees, owners, the board of directors, **project managers**, investors and more.

2. External Stakeholders

External stakeholders are outside of the organization and are indirectly impacted by the project. They're influenced by the organization's work but are not employees of the organization. These people can be suppliers, customers, creditors, clients, intermediaries, competitors, society, government and more.

Stakeholder Examples

As we mentioned, there are many types of stakeholders, many of which fall under the internal or external stakeholder categories. Let's take a look at some of the more common stakeholder examples.

- **Investors:** These are stakeholders looking for a financial return and can be shareholders and debtholders. They have invested capital in the business and want a return on that investment.

- **Employees:** These stakeholders rely on their employment and job security. They have a direct stake in the organization as it supports them and provides them with benefits.

- **Customers:** These stakeholders want the product or service that the project delivers and they expect it to be of quality and contain value.

- **Suppliers and Vendors:** These stakeholders have their revenue tied up with the project as they sell goods and services to the business managing the project. Project success means more business for them.

- **Communities:** These stakeholders don't want the project to negatively impact their health, safety or economic development. The organizations that are housed in their communities or working on projects in their communities can impact job creation, spending and more.

- **Government:** These stakeholders get taxes and gross domestic product from a project. They are major stakeholders as they collect taxes from both the company on a corporate level and individually from those it employs.

How to Manage Project Stakeholders

Managing stakeholders is easy if you follow the right stakeholder management steps. Here are the steps that any project manager should follow when managing stakeholder relations.

1. Stakeholder Identification

Identifying the stakeholders in your project is key as the project's success depends on it. If your stakeholder isn't happy, the project isn't a complete success. You'll want to start this process as soon as the **project charter** is created.

A good place to start figuring out who your stakeholders are is by reviewing the project charter, which documents the reason for the project and appoints the project manager. Among the information about

objects, **[budget](#)**, schedule, assumptions, constraints, project sponsors and top management, you can discern the stakeholders.

Make sure to review the contracts as stakeholders might be mentioned in these documents. Are there environmental factors or other organizations with key ties to the project? Look those over as they might supply you with the names of stakeholders. For example, if there are environmental factors dictated by the government, then the government is a stakeholder. Review their regulations and standards to stay on good terms with them.

2. Stakeholder Analysis

Once you identify your project stakeholders, it's time for the **[stakeholder analysis](#)** phase. This is when you'll gather information and requirements from them. You'll also need to begin estimating their level of involvement and influence in your project to prepare stakeholder communication strategies and prioritize them.

3. Stakeholder Prioritization

A key question for anyone managing a project is how should you manage a stakeholder on the project? To complicate matters, there might be many stakeholders, and you should treat them like you would any other task on your to-do list: by prioritizing them.

Over the course of a project, one stakeholder might be more valuable in terms of the project objections and some might demand more attention than others. When you're building your **[project schedule](#)**, make sure to define who those people are and at what point in the project phase you might need to attend to them more.

4. Stakeholder Engagement

Now we've come to the second part of our question. When we talk of stakeholder management, what we mean is creating a positive relationship with your stakeholders by meeting their expectations and whatever objectives they agreed to in the project. This relationship isn't just granted, however. It must be earned. You can earn the trust and build a positive relationship with stakeholders through proactive communication and by listening to their needs.

One way to do this is by interviewing the project stakeholders—not all of them, but certainly the most important ones. You might need to speak to experts to get background information on particular fields or groups so when you do have one-on-one conversations with stakeholders, you're well-informed and productive.

Project Management Knowledge Areas
10 Knowledge Areas of project management

1. Integration Management
2. Scope Management
3. Schedule Management
4. Cost Management
5. Quality Management
6. Resource Management
7. Communications Management
8. Risk Management
9. Procurement Management
10. Stakeholder Management.

Integration	• Coordinate activities across all project management areas and process groups
Scope	• Ensure the project work includes all elements required to complete the work
Schedule	• Ensure the project work is completed in a timely way
Cost	• Plan, estimate, manage and control project finances
Quality	• Ensure the project delivers a quality output that is fit for purpose
Resource	• Secure, manage and monitor use of resources throughout the project
Communications	• Ensure communications on the project are planned and carried out appropriately
Risk	• Identify, assess and manage risk
Procurement	• Carry out purchasing and contracting as required
Stakeholder	• Identify and engage stakeholders throughout the project

1. Integration Management

Project Integration Management is the hardest KA to get your head around because (in my opinion) it feels so vague.

The point of this whole Knowledge Area is to make it clear that everything about effective project management overlaps and needs to be managed as a holistic whole.

In other words, you can't 'do' schedule management and ignore what the impacts of that might be on people, risk, communications, cost and the rest. This is the domain where you have to manage interdependencies between pretty much everything on the project.

2. Scope Management

This Knowledge Area looks at everything to do with managing project scope. Ultimately, the end result is that once you have worked through the relevant processes, you know what the project is going to deliver, as outlined in the project charter.

That includes requirements (full or as full as is appropriate at this point in time) or a scope statement and a work breakdown structure if you use one.

3. Schedule Management

Project Schedule Management is all about making a detailed plan to tell everyone when the project will deliver what is in the requirements.

Schedule management overlaps heavily with comms, as the timeline for the project is of major interest to stakeholders. It's a key document that you'll use to manage stakeholders' expectations. You use it to track progress as well as keeping work moving along the critical path.

There are a number of different techniques for tracking schedule progress including earned value management and percent complete. There is a whole other PMI practice standard for scheduling, so this KA doesn't have a ton of detail in about the 'how'.

4. Cost Management

Cost management is basically managing funding for project activities.

Under the umbrella of cost management, you will:

- **Plan how much you are going to approach budgeting**
- **Estimate your costs**
- **Create the project budget**
- **Track and control the budget (using a budget tracking spreadsheet like this one).**

Many project managers on smaller projects don't have the final say on how much money is allocated to their project, or final sign off on how it is spent. I think that's unfortunate. If you are going to do the job, you should have authority to do it all.

5. Quality Management

It would be nice to think that quality was something formal covered on every project, but in my experience, and the experience of the project managers I mentor, quality isn't often considered formally.

Obviously it depends on your project. If you are opening a factory that makes bricks, you want every single brick to adhere to quality criteria that make it safe for building works.

6. Resource Management

Project Resource Management is so important! It's the domain where you work out what you need to get the project done.

Resources are typically people but could also be other things like:

- **Equipment or vehicles**
- **IT hardware and software**
- **Materials like sand, gravel or other components**
- **Facilities e.g. an office you have to rent for the duration of the project**
- **Office gadgets like projectors.**

7. Communications Management

In this Knowledge Area, you:

- **Create a communications management plan**
- **'Do' communications i.e. carry out your plan, send briefings out, give presentations or whatever**
- **Monitor the success (or otherwise) of those**
- **Make changes as appropriate to ensure your next communications are effectively received and acted on.**

8. Risk Management

There's a whole PMI credential on risk management, so that tells you risk management is a big deal for project managers.

The [Project Risk Management](#) Knowledge Area covers an adequate overview of what you need to do to manage risk on your project. If you want more detailed guidance, there are plenty of books on the subject.

9. Procurement Management

If your project isn't buying anything, you can skip this whole Knowledge Area in real life, although you'll need to know it for the PMP® exam.

In the Project Procurement Management Knowledge Area, you:

- **Plan the procurements required and create a statement of work**
- **Plan how you will make decisions about vendors**
- **Carry out the procurement exercise to select a vendor**
- **Manage the relationship with the vendor while they do the work**
- **Close the procurement contract at the end of the work.**

10. Stakeholder Management

Project Stakeholder Management is my favorite Knowledge Area because I believe that projects are done through people.

I also believe that managing people is a slightly arrogant way to think about the work we do in this domain, so it's preferable to think about it as stakeholder engagement.

In this KA you:

- **Identify the people involved and affected by the project objectives — the stakeholders**
- **Plan how you are going to engage them in your work: create a stakeholder engagement plan**
- **Manage the activities you are going to use to engage them, and gather feedback on whether the activities were successful or not.**
- **Act on the feedback to improve your stakeholder engagement work for next time**

- Project Management Tools and Techniques
- Project Success
- Program and Project Portfolio Management

Project management life cycle describes the high-level process of delivering a project and the steps you take to make things happen. And while the project management life cycle might not sound that interesting, it is important because the project management life cycle is what we as project managers lead and facilitate.
The crux of any project life is the same: defining a project's objectives and then making stuff happen to meet those objectives. Different project managers or agencies may use slightly different terms to describe the project management life cycle phases, but fundamentally, they're pretty much the same.
A project life always has to start somewhere, and the problem that needs fixing needs to be defined (initiating)**. A solution to fixing that problem and an approach to doing it then has to be created** (planning)**. That plan has to then be put into action** (executing) **while being tracked to make sure it does what it's supposed to** (monitoring and controlling)**. The project is then**

deployed, performance is evaluated and the project is then over (closing).
That's the essence of the project management life cycle.

PMI have defined these five process groups which come together to form the project management life cycle.
1. **Initiating**
2. **Planning**
3. **Executing**
4. **Monitoring & Controlling**
5. **Closing**

In this article, we're going to look in detail at what these project management life cycle phases consist of, the key project management steps, and how they can help deliver a successful, well-managed project.

1- . Initiating: Defining what needs to be done

Initiating, the first phase of the project management life cycle, is all about kicking off a project, with your team and with the client and getting their commitment to start the project. You bring together all of the available information together in a systematic manner to define the project's scope, cost and resources. The goal of the initiation phase is to take a loose brief of a project and define it in terms of what it needs to do and achieve in order to be successful.

Key project management steps for initiating a project:

- **Make a Project Charter – What is the vision, objective, and goals of this project?**
- **Identify the High-level Scope and Deliverables – What is the product or service that needs to be provided?**
- **Conduct a Feasibility Study – What are the primary problem and its possible solutions?**
- **Ballpark the high-level Cost and create a Business Case – What are the costs and benefits of the solution?**

- **Identify Stakeholders**

2. Planning phase: Defining how to do, what needs to be done?

After approval to proceed from initiation, you can begin project planning. This is arguably the most critical phase in the project management life cycle. Get it wrong, and you'll scupper your chances of delivering the project on time and budget. Planning is where you define all the work to be done and create the roadmap that you follow for the remainder of the project to get you there. It's during planning phase that you figure out how you're going to perform the project and answer the questions – what exactly are we going to do, how are we going to do it, when are we going to do it, and how will we know when we're done?
At this point in the project life cycle, you take the goals of the and expand on those goals to decide how to attain them. It's worth keeping evaluating those goals with three criteria: what are *Possible, Passionate,* and *Pervasive?*

Key project management steps for planning a project:

- **Create a Project Plan – Identify the phases, activities, constraints and schedule and timeline with a Work Breakdown Schedule and Gantt chart**
- **Create a Financial Plan – Create a project budget and cost estimate and a plan to meet your maximum cost, complete with allocations across resources and departments**
- **Create a Resource Plan – Build a great team, recruit and schedule the resources and materials needed to deliver the project**
- **Create a Quality Plan – Set your quality targets and measures**
- **Create a Risk Plan – Identify the possible risks, assumptions, issues and dependencies, assign an owner, and develop a mitigation plan for how will you avoid/overcome them**
- **Create an Acceptance Plan – Assign criteria for what constitutes 'done' and 'delivered'**
- **Create a Communication Plan – List your stakeholders, and plan the communication cadence**
- **Create a Procurement Plan – Find any 3rd party suppliers required and agree terms**
- **All of this should come together into a Project Statement of Work – Create a statement of work scope document which outlines the parameters of the project for approval**
- **Get approval of your Statement of Work (Sow) to proceed!**

3. Executing: Making a project happen

This is the part of the project management life cycle where you finally get to execute on your awesome project plan – it's where planning gets turned into action. You bring your resources onboard; brief them, set the ground rules, and introduce them to one another. After that, everyone jumps in to perform the work identified in the plan. Easy peas.

As the project manager, you shift from talking about a project and creating documentation to get the green light to proceed with the project execution – to leading the team and managing them toward delivery. You'll spend your time in briefings, meetings, and reviews to lead the team, and keep the project on track.

Key project management steps for executing a project:

- **Team Leadership – Cast a vision for success and enable the team to deliver on it**
- **Creating Tasks – Clearly define what needs to be done and the criteria for the task**
- **Task Briefing – Ensuring the team are clear about what they need to do, by when**
- **Client Management – Working with the client to ensure deliverables are acceptable**
- **Communications – Ensure you're informing and updating the right people at the right time through the right channel**

4. Monitoring & Controlling: Keeping a project on track

This is where it can get tough. In parallel with the project execution, as a project manager, you report performance, and monitor and control the project. That means monitoring the project life to ensure the project is going according to plan, and if it isn't, controlling it by working out solutions to get it back on track.

First, that means ensuring you capture the data (usually derived from timesheets and tasks completed) to track progress effectively against the original plan. Secondly, it means taking the data and comparing the task completion, budget spend and timeline allocated in the original plan. By comparing the plan against actual you can establish whether or not you're hitting the objectives for timeline, cost, and quality and success metrics.

And when you realize that─ things are not quite going to plan (they rarely do)
something the client is happy with while meeting the budget, timeline and
quality constraints. Pro-tip: usually that means reducing scope!

Key project management steps for monitoring and controlling a project:

- **Cost & Time Management** – Review timesheets and expenses to record, control and track against the project's budget, timeline and tasks
- **Quality Management** – Reviewing deliverables and ensuring they meet the defined acceptance criteria
- **Risk Management** – Monitor, control, manage and mitigate potential risks and issues
- **Acceptance Management** – Conduct user acceptance testing and create a reviewing system, ensuring that all deliverables meet the needs of the client
- **Change Management** – When the project doesn't go to plan, managing the process of acceptable changes with the client to ensure they're happy with necessary changes

5. Closure: Ending a project

In this final phase of the project life cycle, your project is essentially over and your job as project manager on the project comes to a close. But the project's not over yet – check out our article on [How to manage a project when it's over](). At this point, before everyone forgets, it's useful to hold a meeting post project review or post-mortem to discuss the strengths and weaknesses or the project and team, what went wrong and what didn't go so well, and how to improve in the future. It's a great opportunity to recognize and acknowledge valuable team members and celebrate the successes.

Key project management steps for closing a project:

- **Project Performance Analysis** – This is an overall look at how well the project was managed, and whether the initial estimates of costs and benefits were accurate. Were there unforeseen risks? What issues arose and how well were they dealt with? Has the project plan been changed, and how?
- **Team Analysis** – Did everyone do what they were assigned to do? Were they passionate and motivated enough? Did they stay thorough and

accountable? Was the communication within the team healthy and constructive?

- **Project Closure – Document the tasks needed to bring the project life to an official end. This includes closing supplier agreements, signing off contracts and handing in all the necessary project documentation.**
- **Post-Implementation Review – Write down a formal analysis of successes and failure, and resulting lessons learned and suggestions for the future. At the end of every successful project, you will learn that room for improvement always remains.**

5 Phases of the Project Management Lifecycle

Key project management steps involved in the Initiation phase
- **Conduct a feasibility study to identify the primary problem the project will solve and whether the project can deliver a solution to that problem**
- **Create a business case and define the project at a high level**
- **Create a Project Charter or project initiation document that outlines the vision, objectives and goals of the project**
- **Identify the high-level scope of the project and define the product or service the project will deliver**
- **Identify key project stakeholders**
- **Once the project gets a go-ahead, assemble the project team and establish a project office**

Key project management steps involved in the Planning phase:
- **Create a Statement of Work document to flesh out the details of project deliverables**
- **Develop a Work Breakdown Structure**
- **Create a project plan, assign team members (and other resources) to the various tasks and build a detailed project timeline**

- **Identify the Project Team roles and other resources for the project. At this stage, the Project Manager – working with a project staffing function – will most likely identify specific people for some of the key roles needed for the success of the project.**
- **Create a risk mitigation plan to identify potential risks and develop a strategy to minimize them**
- **Incorporate an effective change management plan for necessary changes in the project and to avoid bottlenecks**
- **Create a communication plan to schedule interactions with relevant stakeholders**

Key project management steps involved in the Execution phase:
- **Identify and assign the project team Assign the team and other resources to the project tasks and begin work in the planned manner**
- **Provide necessary guidance to the team on how tasks should be completed**
- **Monitor progress of the team**
- **Communicate with the stakeholders on a regular basis to ensure that the project deliverables are acceptable**

Key project management steps involved in the Monitoring and Control phase:
- **Tracking the progress of various project tasks**
- **Measure budget, timeline and quality performance of the project**
- **Conduct user reviews and collect feedback, and take any corrective actions needed**
- **Track all changes to the project scope (whether from team members or the stakeholders) and report on their impact to project goals.**
- **Monitor overall project performance, including all project plan changes, and ensure that all stakeholders and the project team are on the same page about the project status and its expected outcomes.**

Key project management steps involved in the closing phase:
- **Conduct a "End of Project" Review or Retrospective and to analyze project performance and a formal analysis of successes and failures**
- **Document project closure and provide reports to key stakeholders**
- **Account used/ unused budget and release remaining resources for other projects**

A project is defined as a one-time activity with a series of tasks that produces a specific outcome to achieve organizational goals. Projects are a set of interdependent tasks that have a common goal. No matter what the project is, each project is broken down into objectives and what needs to be

done to achieve them, ensuring that the project stays on track and is completed 'as per plan'.

There are some things to identify when considering a project, its stakeholders and characteristics that distinguishes a project from other ongoing business activities.

Projects have several characteristics-
- Every project is unique that creates something new – or improves something existing
- A Project is a temporary (limited time) endeavour with a definite beginning and an end
- A Project operates within certain constraints of time, budget, scope, quality, resources and risks
- A Project is completed when the project's goals are achieved. A project may be canceled or discontinued if it is considered to be no longer viable. This happens quite a lot.

The primary constraints of a project are:
- Time – the schedule for the project to reach completion
- Cost – the budget allocated for the project to meet its objectives and complete it on time
- Scope – the specific deliverables of the project
- Quality – the standard of the outcome of the project

In order to successfully execute projects, it is critical to manage them within the constraints of time, scope and quality which are popularly known as the "triple constraints" in project management (also known as The Project Management Triangle, Iron Triangle and Project Triangle). Without an organized approach to the task of managing projects and achieving its objectives, it would be very difficult for organizations to deliver projects successfully with the required results.
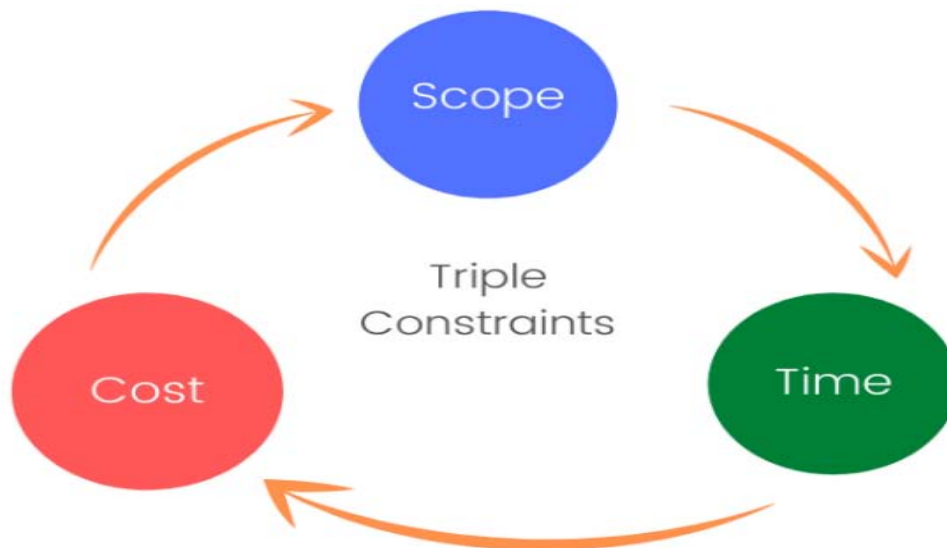
**Project Management Tools and Techniques
Project Success
Program and Project Portfolio Management**

## What are project management tools?

Almost everything that we do—from building a sand castle to revamping a website or constructing a skyscraper—is a project with a goal tied to it. A simple project doesn't need extensive project tools for us to map out its schedule; an everyday to-do list would do the trick. On the other hand, a complex project requires the help of project planning tools to break it down into smaller, doable chunks.

Project management tools assist project managers in quantifying their outcome and ensuring they align project's goals with the scheduled timeline. They allow teams to collaborate effectively, diligently monitor issues, weigh potential risks, and stay on top of major updates.

Some of the tools and techniques that can be used in programmed and project management are outlined below.

- ➢ SWOT - strengths, weaknesses, opportunities, threats. SWOT analysis diagram. ...
- ➢ Stakeholder matrix. Stakeholder matrix. ...
- ➢ Cause and effect diagram. ...
- ➢ Risk map. ...
- ➢ Summary risk profile. ...
- ➢ Decision tree. ...
- ➢ Charts

The top five project management tools for project teams:
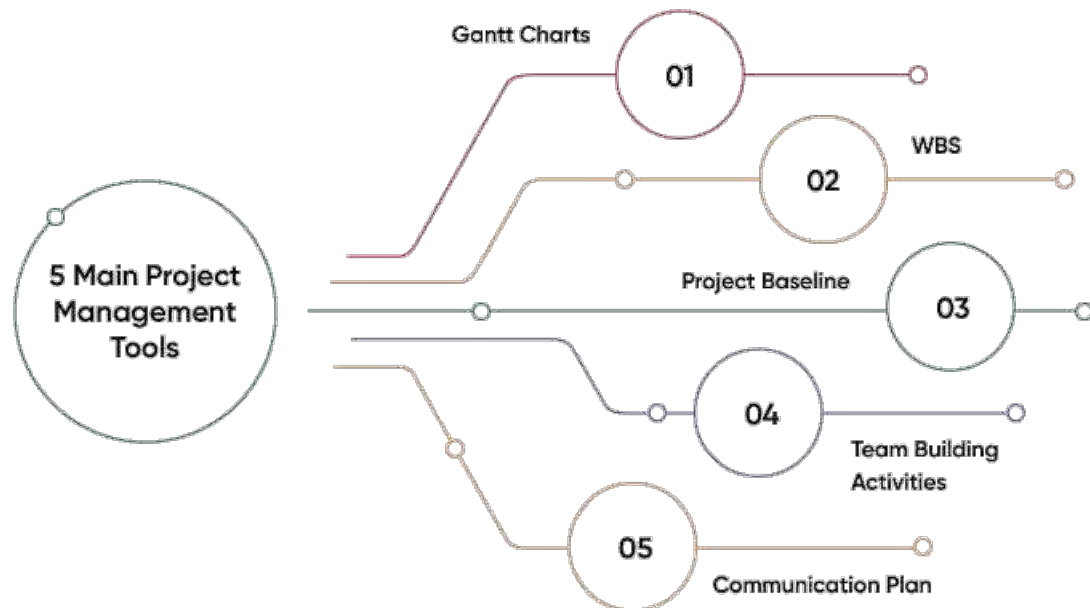
.-1 Gantt charts

A Gantt chart is a visualization of your project timeline and the dependencies amongst your various work items.

It is helpful in tracking your project schedule, checking for any deviations from the project plan, and identifying delays. Businesses can use Gantt charts to stay on track with their planned schedule and budget. And if things don't go as planned, they can also use these charts to spot critical tasks that will ensure the project gets completed on time.

Gantt charts are one of the most important tools used in project management. They provide a complete picture of the work breakdown structure and aid in allocating resources efficiently, be it time, money, or people. These charts also map the interdependencies of different work items, help in prioritizing the critical tasks, and reduce scope creep.

Gantt charts in Zoho Projects are an intuitive, easy-to-use tool that makes your planning and scheduling easier. The simple drag-and-drop interface to adjust your timeline, four types of dependencies, and critical path, baseline, chart scaling, and task management capabilities within the chart make this type of chart one of the indispensable project management tools. Plus, this feature is even available in our free plan! Check out more information about the Gantt chart features in our various **pricing plans here.**

2. Work breakdown structure

Among the surplus number of tools for project management available on the market, the work breakdown structure (WBS) undoubtedly comes first. It offers a hierarchical breakdown of your project goal into actionable work items.
WBS follows a hierarchy where your end goal is split into stages that can be further divided into tasks or sub-tasks. This helps in planning every single aspect of your project without leaving anything to chance. The breakdown gives clarity on the time and resources needed and helps in setting the planned constraints for a project.

3. Project baseline

A project baseline is a graphical way of representing your project values by comparing the baseline, which is the standard you set for your project, against your actual performance. Project baselines are tools of project management that encompass the scope baseline, cost baseline, and schedule baseline. Your baseline also acts as a project tracking tool that helps in tracking your real-time progress. It can also help avoid scope creep by keeping the unplanned work in check.

4. Team-building activities

**Team-building activities are a way to improve morale and boost productivity. From group surfing lessons to team pot lucks, there's a wide range of fun activities you can use as part of corporate team building.
The connection between team building and PM tools may not be obvious. But the relationships between the teams, as well as with the stakeholders, are as important to a project as the planning or execution. And this is an easy way to strengthen these relationships.
Team-building activities may include healthy competitions conducted in a controlled environment; these work as a positive disruption to everyday workplace culture. They can also encourage creativity, highlight your team members' various talents, and motivate people to work together to find the best solutions.**

5. Communications management plan

A project communication plan ensures there's a regular, relevant flow of information between the project members, clients, and other stakeholders. While many project planning tools aim to keep everyone in the loop, this particular tool helps maintain relationships and includes details regarding who communicates what, to whom, and how often. There's the obvious benefit of keeping your stakeholders in the loop, since satisfying their needs is an integral part of a project's success. A communication plan will help tackle any risks that may arise and improve collaboration among the members of your team.

Key features of the best project management tools

The key features of tools used in project management, apart from basic task management, are:
1. Project estimation

To ensure your project succeeds, it's important to not only track the real-time progress but also to estimate the project constraints based on your current performance. This could be in the form of budget forecasts, EVM, or baselines.

2. Budgeting

Manage your costs to stay within the planned budget. Track expenses, track actual costs to invoice clients and pay employees, compare planned and actual costs, forecast the budget, and analyze your budget health.

3. Resource allocation

Make sure the right people work on the right tasks. Avoid overworking or under working your employees by using the **resource utilization chart.** These project management tools also help in assigning work based on the employee workload and availability.

04. Collaboration

Keep all the project stakeholders on the same page.

Effortless **collaboration** is an essential aspect of an online project management tool. Virtual collaboration tools like chat, web meetings, and forums are some great features to have.

5. Quality management

Always put out your best work by constantly reviewing the quality of your project. **Issue tracking** and resolution capabilities serve pivotal functions in a project tracking tool. Automation to escalate and deal with bugs is a bonus.

6. Project administration

Onboarding your workforce, clients, and organizational structure to a project management tool is important. From industry-specific templates to various third-party integrations, there are several ways project management tools can help you with **project administration.**

7. Risk management

People also use **online project management software** to deal with uncertainties in the estimated duration of each task. Arrange tasks to meet various deadlines, and juggle multiple projects simultaneously as part of an overall objective.

Benefits of using project management tools

- **Work out the right timing**

  Among different tools of project management, Gantt chart software is one that helps best in accommodating delays. **Task dependencies** and their effect on the time taken to complete a task can be captured and managed with Zoho Projects' **Gantt chart software.**
- **Evade slippery scopes**

WBS is one of the project planning tools that helps in ideation and is heavily relied upon during planning. It provides an outline to establish your cost, schedule, and work hours. It also helps in identifying risks.

- **Keep your cost boxed**

   Cost baseline is the comparison between your initial estimate and your actual project spending. It works closely with schedule and scope baselines, since these factors are interconnected and can easily cause the cost of a project to deviate from its plan.

- **Collaborate to open locked doors**

   Promote **effective team communication.** The best project management tools for teams encourage people to ask questions, ensure balanced workloads, raise questions about ideas that may not work, and achieve success in work.
- **Close the gap that stops you from listening**

   Streamlining cross-functional communication with proper project planning tools ensures that all the stakeholders are aware of how to get hold of relevant information. The PM tools ensure that important decisions aren't delayed and all project activities proceed smoothly.

How to choose the best project management tool

Let's face it: there's a wide range of project management tools available with numerous features, catering to businesses with different requirements. The whole process of choosing the right project management app can be confusing, to say the least. But we're here to help you with that. Here's a list of questions to ask yourself before you make the big decision:

What are your needs?

Every business has pain points that need to be addressed, and yours is sure to have its own share. Jot down all these points in the form of a list, which could look something like this:

- **One too many emails that go unopened**
- **Missed deadlines**
- **Inconsistent meetings**
- **Disproportionate workload**
- **Time wasted on unnecessary tasks**
- **Silos existing within teams**

==If this looks familiar, your quest to find the best project management tool has gotten some headway. Feel free to add to the list; consult with your teams as well, since they'll be using the tool on a daily basis.==

What are the other project management tools out there?

==Conduct your own research. A few things that you could do:==

- ==Compare products on review sites.==
- ==Ask other team members and their managers for input.==
- ==Consult with professionals in the industry.==
- ==Ask your own team if they've used project tools in the past or if they recommend any.==
==Does the tool work for you and your teams? What about your budget?==

At this point, you should've shortlisted two or three tools for project management that are worth the investment. Test them out by yourself, and then with a pilot team. Gather feedback by asking users if:

- ==The tool is user-friendly==
- ==The customer support is helpful==
- ==The learning curve is shallow or steep==
- ==There are features they like or dislike==
==Next, see if it fits well within your budget. Even if it does, you don't want to put your money into planning tools that reap little to no benefits. You can also request a free demo to better understand the product. See if these project management tools are solutions to your pain points listed earlier. Weigh pros and cons, and pick a winner.==

Project, Program, and Portfolio Management

The relationship between project, program, and portfolio management can best be described like this:

- A **project** is a temporary endeavor undertaken by a company or organization (such as the creation of a new product, service, or result)

- A **program** is a group of projects that are similar or related to one another, and which are often managed and coordinated as a group instead of independently

- **A portfolio is a group of different programs and/or projects within the same organization, which may be related or unrelated to one another**

Put another way, *projects* **fit within larger** *programs***, which themselves fit within** *portfolios***.**

Though related, tasks associated with project, program, and portfolio management are by nature very different.

What Is a "Portfolio" in Project Management?

A portfolio is a collection of projects and programs that are managed as a group to achieve strategic objectives. An organization may have one portfolio, which would then consist of all projects, programs, and operational work within the company. It may also establish several portfolios for project selection and ongoing investment decisions.

According to PMI and its *PMBOK Guide***, a portfolio includes, "Projects, programs, other portfolios, and operations managed as a group to achieve strategic objectives."**

Organizations need to decide which projects are the right ones to focus on. Often times, they are limited by how many projects can be done based on the capacity within an organization, begging the question, *"Are we doing the right projects?"*

What Does a Portfolio Manager Do?

Portfolio management is the centralized management of one or more portfolios to achieve an organization's strategic objectives.

Within organizations, the reality is often that resources are limited, whether it's dollars, people, space, or equipment. Based on the organization's strategy, there are several projects and programs that could be done; it just needs to be decided which are the right ones and in what order they should be completed.

It's critical to look not only at programs and projects at the individual level, but also holistically to know how these align with the organization's overarching goals.

At the same time, it's important to consider a level of balance in the portfolio. The organization "needs to keep the lights on," while also developing new opportunities. Some risk needs to be taken, but the

portfolio should not be so risky that everything could be lost within a period of time.

Beyond prioritizing and selecting projects and programs, portfolio management is balancing the portfolio so that the right projects and programs are selected and implemented. Monitoring and controlling is key to the process, since portfolio composition is not a one-time decision. Evaluations should be conducted in some regular cadence. It may be decided that a project's priority becomes lower and others move into its place. A project could be temporarily moved out of the portfolio or permanently moved out of what that portfolio entails.

This is done to ensure projects align with an organization's strategies, goals, and objectives. It may also be the case that, as we get into performing a project or program, we find it no longer aligns, causing a reprioritization of all projects and programs in the portfolio.

Project vs. Program vs. Portfolio Managers

While the project manager is managing multiple tasks within a project, the program manager is coordinating between related projects within a program, in order to determine which projects are working towards the same or similar goals, and which may be dependent upon others. Portfolio managers, on the other hand, are managing all (or multiple) programs within an organization, ensuring that all programs are working towards fulfilling the strategic objectives of the organization.

The easiest way to explain the difference in how project, program, and portfolio managers work is: A project manager works to deliver a project efficiently and reliably. They are responsible for the day-to-day management that brings a project to fruition. Program managers are more concerned with strategic alignment: Understanding what individual project managers are doing and enabling effective communication between them in order to understand where projects are and in order to provide support where necessary. Portfolio managers, meanwhile, coordinate between various

Programs in order to ensure that things stay on track and that the organization is meeting its overarching strategic initiatives.

- **Project Portfolio Management**
- **Organizational Project Management**
- **The Role of the Project Manager**
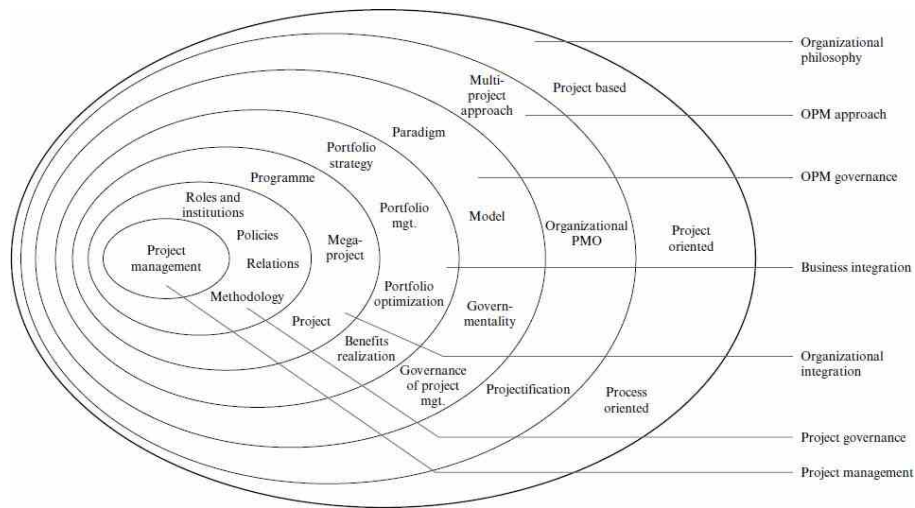- **Project Manager Job Description**

54

Organizational Project Management

What is organizational project management?

Organizational Project Management (OPM) is a method of project management used to help improve the overall efficiency of an organization. It can be used in any business, from small-scale startups to large multinational companies. OPM describes how different departments work together to complete projects.

WHAT IS ORGANIZATIONAL PROJECT MANAGEMENT?

Doing projects in organizations requires careful selection of the 'right' projects and thereafter careful coordination with other projects being carried out by the organization. Numerous issues could be resolved through this coordination in order to avoid clashes between projects. This is often achieved through measures such as the prioritization of projects to assign resources to work on the projects, harmonizing the ways to execute the projects to leverage established working practices, or standardizing the ways project management is governed in order for project managers to know what they are expected to do and how they are held accountable for their responsibilities.

Organizational project management (OPM) addresses this coordination from a broad perspective. Briefly, OPM is the integration of the primarily project (management)-related activities of an organization into a cohesive network of activities which, by themselves and in their interactions, can be understood, planned and managed for the benefit of the organization and its stakeholders.

==Organizational project management (OPM) is the framework used to align project, program, and portfolio management practices with organizational strategy and objectives, and customizing or fitting these practices within the organization's context, situation, or structure."==

Several component entities and how they are related to one another:

- **Organizational Strategy** – **The C-level driven and approved strategy for the overall organization and its components.**
- **Project Management Practices** – **The project management standards which have been adopted and are being applied consistently across the organization.**

- **Business Management Practices** – The common business practices, as documented, for example, in the organization's   , by which business is executed.
- **Organizational Project Management** – At the intersection of Project Management Practices and Business Management Practices, the strategic and adaptable capabilities for executing projects to support business practices. OPM can change as required to support strategy adjustments.

Organizational Project Management and Change

How does OPM relate to organizational change? That's where OPM has the potential to become an adaptable strategic capability.

A core capability for managing programs, portfolios, and projects needs to be adaptable to change. I see this happening in two ways:

1. **Continuous improvement** – Practitioners need to build a continuous process improvement loop into the relationships among program, portfolio, and project management. The unique processes, as tailored for the organization, need to be improved and adapted on a regular basis to remain sharp and relevant.
2. **Adapting to strategy changes**

OPM concepts can help an organization in many ways. The key, mentioned in both points above, is to tailor OPM practices to the size and needs of the organization. This raises the practice of project management to an organizational perspective, positioning it as a strategic strength.

Most important to supporting change is the ability to build in adaptability. That means to tailor OPM in such a way that it is adaptable to change as frequently and rapidly as needed, depending on the competitive environment and other environmental factors.

- Careers for IT Project Managers
- Ethics in Project Managem

WHAT ARE ALTERNATIVE CAREERS FOR PROJECT MANAGERS?

If you're a project manager looking for a career change, we've got you covered. We asked nine professionals from various industries,

including co-founders, CEOs, and community managers, to share their top alternative career options. From becoming a productivity coach to embracing sustainability management, explore these diverse opportunities to find your next professional path.

- **Become a Productivity Coach**
- **Explore Sales and Marketing Roles**
- **Assistant Director in Film Industry**
- **Transition to Product Ownership**
- **Pursue Human Resources Management**
- **Consider Operations Management**
- **Consulting as a Career Option**
- **Business Analyst as an Alternative**
- **Embrace Sustainability Management**

Ethics in Project Management

in a pivot in the c   and will sometimes result
projects needs to   network for managing
changes.   ntial for major strategic

Ethics in project management are certain beliefs about what is morally acceptable or appropriate. It comprises the values of responsibility, honesty, respect and fairness. These four core values are central to the project management profession and must be adhered to by project management professionals.
The project management profession has specific values that leaders in the field should adhere to in order to be successful. Understanding what these values are and how to apply them is critical to working in project management.
This article defines ethics in project management and looks at some key values published by the Project Management Institute. It also touches on how the right project tools can help you maintain ethics while completing successful projects, and we'll even suggest a few of those tools to get you started

What is ethics in project management?

Ethics in project management comprises the values of honesty, responsibility, respect and fairness that are central to the project management profession. Project management professionals must adhere to the Code of Ethics set out by the Project Management Institute (PMI) to ensure the decision-making process is honorable and choices are made with the interest of all parties in mind, rather than the individual.

PROJECT MANAGEMENT ETHICS

1- Ethics Wikipedia defines ethics as:
2-"Ethics, also known as moral philosophy, is a branch of philosophy that involves systematizing, defending, and recommending concepts of right and wrong conduct."In philosophy, ethics studies the moral behavior in humans, and how one should act.

3-Business EthicsBusiness ethics are the ethical principles and morals that arise in a business environment.It applies to all aspects of business conduct, and it is relevant to the conduct of individuals and entire organizations.Professional people use specialist knowledge and skills. How to use this knowledge should be governed when providing a service to the public is a moral issue, and it is termed professional ethics.For example, software engineering is carried out within a social and legal framework that limits the freedom of people working in that area.

4- Software Engineering Ethics
Software engineering involves wider responsibilities than simply the application of technical skills.Software engineers must behave in an honest and ethically responsible way if they are to be respected as professionals.Ethical behavior is more than simply upholding the law but involves following a set of principles that are morally correct.

5-Software Engineering Ethics
ConfidentialityEngineers should normally respect the confidentiality of their employers or clients irrespective of whether or not a formal confidentiality agreement has been signed.CompetenceEngineers should not misrepresent their level of competence. They should not knowingly accept work which is out weights their competence.

6-Software Engineering Ethics
Intellectual property rightsEngineers should be aware of local laws governing the use of intellectual property such as patents, copyright, etc. They should be careful to ensure that the intellectual property of employers

and clients is protected.Computer misuseSoftware engineers should not use their technical skills to misuse other people's computers. Computer misuse ranges from relatively trivial (game playing on an employer's machine, say) to extremely serious (dissemination of viruses).

7- ACM/IEEE Code Of Ethics
The professional societies in the US have cooperated to produce a code of ethical practice.Members of these organisations sign up to the code of practice when they join.The Code contains eight Principles related to the behaviour of and decisions made by professional software engineers, including practitioners, educators, managers, supervisors and policy makers, as well as trainees and students of the profession.

8- Rationale for Code Of Ethics
Computers have a central and growing role in commerce, industry, government, medicine, education, entertainment and society at large. Software engineers are those who contribute by direct participation or by teaching, to the analysis, specification, design, development, certification, maintenance and testing of software systems.Because of their roles in developing software systems, software engineers have significant opportunities to do good or cause harm, to enable others to do good or cause harm, or to influence others to do good or cause harm. To ensure, as much as possible, that their efforts will be used for good, software engineers must commit themselves to making software engineering a beneficial and respected profession.

9-ACM/IEEE Code Of Ethics
Software Engineering Code of Ethics and Professional PracticeACM/IEEE-CS Joint Task Force on Software Engineering Ethics and Professional PracticesPREAMBLEThe short version of the code summarizes aspirations at a high level of the abstraction; the clauses that are included in the full version give examples and details of how these aspirations change the way we act as software engineering professionals. Without the aspirations, the details can become legalistic and tedious; without the details, the aspirations can become high sounding but empty; together, the aspirations and the details form a cohesive code.Software engineers shall commit themselves to making the analysis, specification, design, development, testing and maintenance of software a beneficial and respected profession. In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the following Eight Principles:

10- ACM/IEEE Code Of Ethics
1. PUBLIC - Software engineers shall act consistently with the public

interest.2. CLIENT AND EMPLOYER - Software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest.3. PRODUCT - Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.4. JUDGMENT - Software engineers shall maintain integrity and independence in their professional judgment.5. MANAGEMENT - Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.6. PROFESSION - Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.7. COLLEAGUES - Software engineers shall be fair to and supportive of their colleagues.8. SELF - Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.

11- Project Management Ethics
Similar to software engineering ethics, there are project management ethics.The "Code of Ethics" is a written set of guidelines issued by the Project Management Institute (PMI) to help project managers act in accordance with the primary values and ethical standards of project management profession.There are four values that were identified as most important to the project management community.

12- PMI Code Of Ethics Each section of the Code of Ethics and Professional Conduct includes both aspirational standards and mandatory standards.Aspirational standards describe the conduct that we strive to uphold.Mandatory standards establish firm requirements. Practitioners who do not conduct themselves in accordance with these standards will be subject to disciplinary procedures before PMI's Ethics Review Committee.

13- PMI Code Of Ethics Responsibility is our duty to take ownership for the decisions we make or fail to make, the actions we take or fail to take, and the consequences that result.Respect is our duty to show a high regard for ourselves,, others, and the resources entrusted to us. Resources entrusted to us may include people, money, reputation, the safety of others or environmental resources.

14- PMI Code Of Ethics Fairness is our duty to make decisions and act impartially and objectively. Our conduct must be free from competing self interest, prejudice, and favoritism.Honesty is our duty to understand the truth and act in a truthful manner both in our communications and in our conduct.

What are ethics in the workplace?

Workplace ethics refers to a specific set of moral and legal guidelines that organizations may abide by. These guidelines typically influence the way employees and customers alike interact with an organization—in essence, workplace ethics guide how organizations serve their clients and how they treat their employees.

For example, if a company has expressed that they are committed ethically to fulfilling the promises that they make, they may establish robust support processes that address this specific policy and help customers feel cared for. From here, the same company may create specific incentive programs to encourage employees to produce high-quality work and make sure that they follow through on fulfilling such promises when goals are met.

When organizations create explicit ethical codes, they may design their processes and procedures to support such initiatives. In most cases, organizations employ workplace ethics to improve the lives and productivity of stakeholders specifically. In some situations, though, organizations may create ethical codes that simultaneously benefit the public's perception of their operations. Here are a few examples of common ethics organizations may establish in the workplace:

- **Accountability**
- **Responsibility**
- **Equality**
- **Transparency**
- **Trust**
- **Fulfilling promises**
- **Loyalty**
- **Fairness**
- **Cooperation**
- **Dedication**
- **Discipline**
- **Professionalism**
- **Sustainability**
- **Legality**

Why ethics in the workplace is important
Workplace ethics are an incredibly important part of forming a successful organization with satisfied and loyal team members. High ethical standards can help stakeholders, like employees, investors, customers and other individuals involved with workplace operations feel that the organization is

safeguarding their interests. By purposefully building ethical guidelines in their structure, organizations can keep their employees' best interests in mind while maintaining a positive influence on those they impact through their processes.

In turn, employees and other stakeholders will typically follow suit and maintain the organization's best interests through acting ethically in their day-to-day duties. For example, if an employee is treated fairly and understands an organization's commitment to accountability and environmental sustainability, they are typically less likely to commit environmentally harmful behavior that may contribute negatively to an organization's public image. With this, workplace ethics help establish a reciprocal relationship that benefits organizations at large and the individuals influenced by organizational operations.

This type of initiative may help organizations and employees alike enjoy particular advancements, like heightened productivity and increased employee satisfaction. When employees understand and perceive their organization's commitment to high ethical standards, they may become more devoted in their roles and express pride in being part of such an organization. This type of transformation can be key in fostering organizational effectiveness. This mode of conduct is often referred to as organizational citizenship—an employee behavior phenomenon where team members voluntarily pledge themselves to acting positively, constructively and with growth in mind.

Benefits of using ethics in the workplace

There are various benefits to using ethics in the workplace. Leaders, stakeholders and the general public alike can experience significant improvements when organizations hold themselves to high ethical standards. Here are a few of the primary benefits that result from employing ethics in the workplace:

Employee satisfaction

When organizations express their commitment to maintaining high ethical standards, they usually treat employees better and encourage staff to act laterally under the same premises. These ethical standards help establish a certain expectation for how organizational operations affect stakeholders' wellbeing and personal interests. When organizations and stakeholders follow through in upholding ethical standards, they can create a workplace environment where individuals feel respected, heard and satisfied in their roles. With this higher rate of satisfaction, organizations can often reduce

staff turnover and more easily attract new, talented candidates to work for them.

Maintaining legal compliance

Often, the ethical standards that organizations set out for themselves correspond directly with legal guidelines. For example, a manufacturing company that expresses a strong commitment to eco-friendly practices sustainability may also be subject to complying with legal guidelines for sustainable waste removal procedures to avoid environmental pollution. Therefore, when organizations establish strong ethical codes of conduct, they often fall in line with the legal regulations set out for them by official governing bodies and receive the dual benefit of complying with their legal obligations.

Improved public reputation
When organizations set out clear ethical standards for their workplace, they can typically enjoy an improved public image. In recent years, consumers and society more generally have become increasingly concerned with how organizations treat their employees and act accountably toward the public.
For instance, as consumers have become more interested in buying eco-friendly products that guarantee less harm for the natural environment, they have started to examine the ways companies manufacture and market products. This movement has led to the creation of a new consumer market for green products and services in which sustainable companies are viewed more favorably. Therefore, acting ethically can significantly improve an organization's public image and avoid potential criticisms that would arise through unethical behavior.

Project Management Software

Best Software for Project Management of 2023

- **ClickUp**: Best for agile development teams
- **Monday.com**: Best for startups on a tight budget
- **Asana**: Best for collaboration tools
- **Zoho Projects**: Best for integrations
- **Smartsheet**: Best for workflow automation
- **Notion**: Best for content creators
- **Airtable**: Best for data-driven companies

- **Teamwork**: Best for client-facing service providers
- **Wrike**: Best for artificial intelligence (AI) features
- **Jira**: Best for product development teams

What are the 3 types of project management software?

There are four main types of project management software—individual, collaborative,integrated and cloud-based.

Why is project management software used?

What's the Purpose of Project Management Software? Project management
software is designed to help businesses and individuals track projects, tasks and schedules. It's a great tool for staying organized and ensuring your team remains on task.

What Is Microsoft Project?

Microsoft Project is project management software that's used to create schedules, project plans, manage resources and keep track of time. It has features such as Gantt charts, kanban boards and project calendars for project management professionals.

Microsoft Project is also known by other names such as MS Project or Project Professional, which is the software's current official name. There are also other Microsoft Project products with similar names such as Project Online, Project Server and Project for the Web. You can access those products by acquiring a Microsoft Project Plan subscription, which has three pricing tiers to choose from.
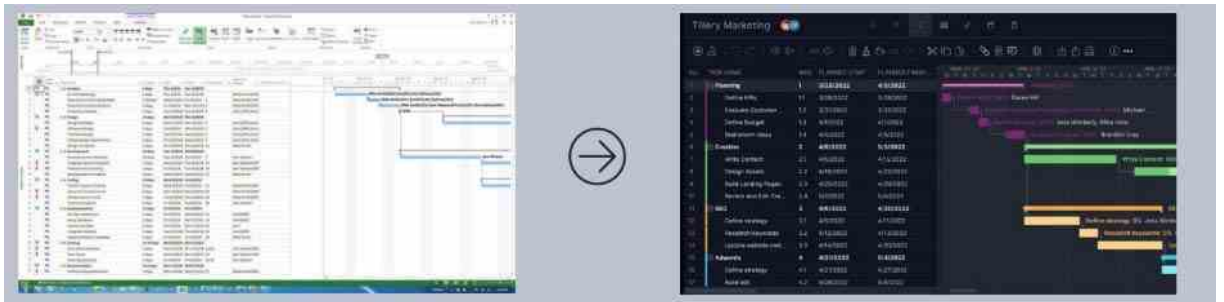
Microsoft Project Views

Like ProjectManager, Microsoft Project offers multiple views for project managers and teams though its platform is not nearly as collaborative. Here's a simple description of MS Project's offered views.

- **Grid View: A project view that is used to plan and manage projects with a task list.**

- **Board View: A visual kanban board view that helps with managing workflow and status.**

- **Timeline View: The traditional Gantt chart is used for scheduling tasks over a project timeline.**

Microsoft Project Features

There are plenty of features that project managers and their teams need to better manage their work and MSP has a number of them. However, to get a full picture, here's a list of the key features available to customers who are willing to pay the price.

- **Project Planning: Use Gantt charts and kanban boards to plan work. Microsoft Project's planning features are much more robust than those of Microsoft Planner.**

- **Communication & Collaboration: Teams can work together on projects. Alternatively, you can use Microsoft Teams for a more cost-effective communication solution.**

- **Coauthoring: Stakeholders and team members work together to edit and update task lists and schedules.**

- **Reporting: Pre-built reports that can track progress, resources, programs and portfolios.**

- **Roadmap: Track programs and project portfolios.**

- **Timesheets: Collect project and non-project time for payroll and invoicing.**

- **Resource Management: Manage resources by requesting and assigning tasks.**

Plans and Pricing

Microsoft Project evolved from desktop software to a subscription-based product portfolio. You can choose between three monthly license plans: Project Plan 1, project plan 3 and Project Plan 5. Here's a quick overview of what you get with these plans.

- **Desktop Version: To get the on-premises version of Microsoft Project, you'll need to pay $679.99 for Project Standard 2021 and $1,129.99 for Project Professional 2021.**

- **Project Plan 1: For $10 per user per month, you only get to use Project Home, and Project for the web. Two light versions of Project Professional and Project Online. This is mostly recommended for team members.**

- **project plan 3: For $30 per user per month, you get to use a package that's sufficient to manage projects, but has no project portfolio management features. You can use the desktop client Microsoft Project and Project Online.**

- **Project Plan 5: For $55 per user per month, this is everything Microsoft Project has to offer: Project for the web, Project Online and Desktop client.**

-

- **Microsoft Project Features, Benefits, Strengths**
- **Project, task, and time management**
- **Microsoft Project for the web offers several work views. It has a grid view to plan and manage projects with a hierarchical grid view of tasks, a timeline view or Gantt chart to visually track project dates, dependencies, and assignments in a timeline view, and a board view with out-of-the -box and custom task boards for visually tracking project tasks, workflow, and statuses. Users can set dependencies between tasks and establish important milestones for effective tracking. Project Home allow users to track and manage deliverables using start and end dates and automated scheduling, while task scheduling provides a bird's-eye view of projects. Users can plan, manage, and track deliverables and phases by using summary tasks. They can also add and use local custom fields to tasks in a project.**
- **Collaboration and resource management**
- **Project for the web users can collaborate by using Microsoft Teams with its integration. Coauthoring features allow stakeholders and team members to simultaneously build, edit, and update task lists and project schedules. Project managers can set up and manage a project team easily by adding and removing members and setting the working calendar. Higher plans let users build visual interactive roadmaps across projects.**
- **Reporting, mobility, customization, integration, and more**
- **Microsoft Project for the web stores its data in Microsoft Dataverse. Users can read and create reports from its data using ready-to-use or custom Power BI reports, dashboards, and portals. Graphical indicators provide a more visual way to understand tasks status and assignments, among others. Users can build custom mobile project applications using PowerApps. Project for the web has out-of-the-box apps to view a project, create a new project, add new, or edit existing project data. They can also customize views and forms and use custom columns. Connect with third-party apps to view, create, update, or delete project data.**
- **What is the Price of Microsoft Project?**
  Microsoft Project offers several plans for different needs. Plan 1 at $10 per user per month offers simple visual tools for

quickly managing projects and teams. Features include multiple views, smart scheduling, visualized timelines, and Microsoft Teams integration for collaboration. Plan 3 at $30 per user per month includes project management and publishing tools such as pre-built templates from within Project or Office.com, roadmaps for visualizing progress across projects, baselines for tracking and comparing actual progress to the original plan, and reports and customizations. Plan 5 at $55 per user per month includes all features from lower plans plus demand management, enterprise resource management, and portfolio analysis and optimization. Plans 3 and 5 include Project for the web, Project Online, and Project Online desktop client. On-premise Microsoft Project 2019 versions are also available.

- **A Systems View of Project Management**
  - **What Is a Systems Approach?**
- **The Three-Sphere Model for Systems Management Understanding Organizations**

Three-Sphere Model for Systems Management
Understanding Organizations

What is three-sphere model for system management?

The Three-sphere model of system management deals with the Business, Organization and Technology issues that are related to the project completion and success. Business Issues: Business Issues are the unexpected situations which are aroused in a project when the business goals are not achieved in the scheduled time.

Three-Sphere Model for system management:

The Three-sphere model of system management deals with the Business, Organization and Technology issues that are related to the project completion and success.

Business Issues:

Business Issues are the unexpected situations which are aroused in a project when the business goals are not achieved in the scheduled time. Such financial goals, supporting staff and opposing staff, competency, etc.

Organizational Issues:

Organization issues are the unexpected situations that are aroused in a project when there are issues regarding stakeholders, staff, approaches that should be followed to complete a project.

Technology Issues:

Technology Issues are the issues aroused by using new technology, low skilled people, and not compatible hardware

Three-sphere model of systems management

The three sphere of project management is an important tool towards managing information technology projects. The three main sphere of project management include the following sphere; business, organization and technology.

Business costs. A project manager should calculate the overall costs the project is going to undertake. The business costs will include both the monetary expenses that will be involved in the implementation of the project. Also, the business costs will include the overall monetary benefit the project is going to bring to a business. For example, in the purchase of laptops for hospital, the business costs will include the total value for both the hardware, and he software

Technology. Another aspect of project management is the technology sphere. Project managers should select the relevant technologies that are effective and efficient. Such technologies should reduce the overall costs for managing the projects. There are various changes that are being experienced in the information technology field; hence, relevant technologies should be adopted (Reschke et al, 1990).

For example, in creating a database management system for a college, then, a project manager should adopt the relevant technologies. The adopted technologies should be in apposition to provide more functional data management abilities like data mining. For instance, the project manager should consider adopting sophisticated data management applications like oracle databases.

Resources. Resources are those materials that aid in the implementation of the project. Resources are an important ingredient in the process of project management. In order to have a viable project, then, project managers

should select project resources more carefully, and with due diligence it deserves. Relevant technologies required to complete the project should be identified, and assigned to the relevant people (Grun, 2004). Resource allocation should also involve the process of training the resource users on how to effectively use the resources. This will lead to a reduction in the overall cost of the project because of the optimal usage of resources

A good example of an information technology project that was conducted is the implementation of an automated staff login system at the University of California. The business aspect of the project was to increase employee performance hence leading to a high customer service delivery. The project was intended to ensure that employees of the institution are always present at workplace and performing the duties assigned to them in due time. This was to eventually increase employee productivity in the institution, and also increase the level of customer satisfaction.

The technological issues that were witnessed included the adoption of a relevant technology that will not only monitor the login system but also manage the leave status of employees. The system was also required to help manage the leave status of employees and also allow employees apply for leave online. Such a platform also required the presence of an intranet that will allow employees to login and apply for leave forms as well as check their leave status.

Also, the other technological issue that was experienced was the issue of employee identification. Employees were to be uniquely identified by the system without any errors. The system was supposed to identify the employees given a unique identification. This could only be achieved by using a bio-metric application that identified employees depending on their finger prints.

The major organization issue that was identified is the issue of employee resistance. Most employees of the institution felt that they are being monitored which deprived them the freedom they required. They noted that, they required some degree of freedom, and they could as well be more productive without the system. Also, the employees noted that, they are driven by a sense of maturity, and they did not require the system in order to perform their duties on a full time basis
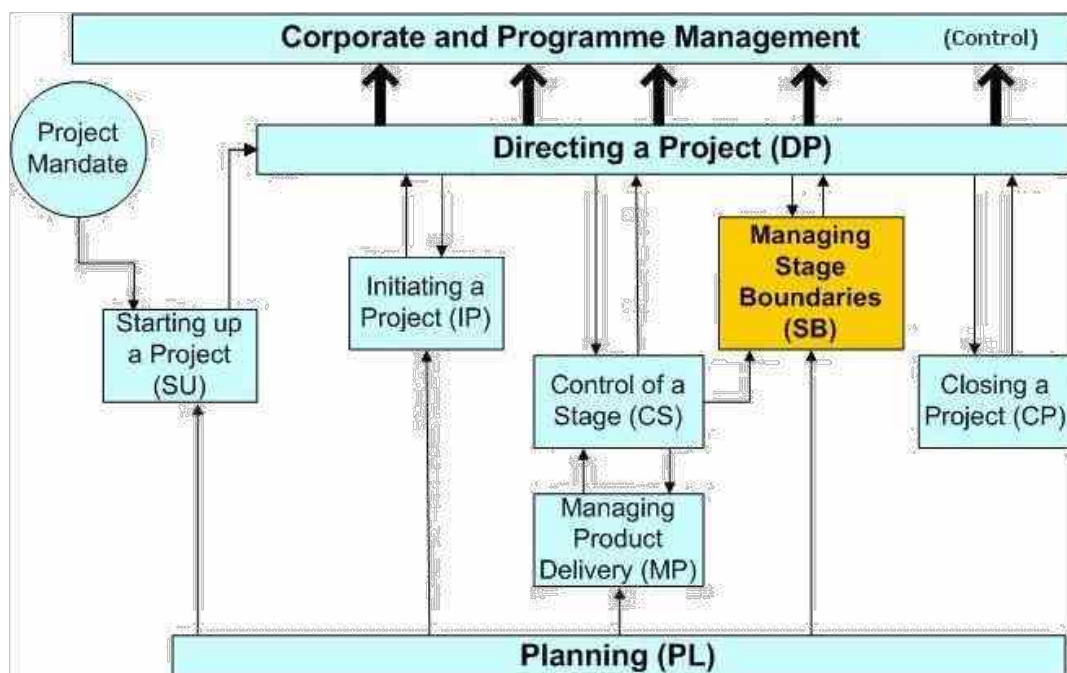
PRINCE2 Methodology

PRINCE (Projects in Controlled Environments) 2 is a well-structured approach to managing projects. The approach was developed in 1996 which integrated the IBM's managing the implementation of the total

project (MITP) and the PROMPT method to project management. The PRINCE 2 method has well and clearly defined framework that assists project managers to effectively manage projects. The system provides a guideline on how managers should guide, and manage people and activities in a project (Office of Government commerce, 2009).

The system also provide protocols on how to supervise and design a project, and the relevant measures that can be taken in order to adjust the project in case it is deviating from the expected course. In the PRINCE 2 method of project management, the entire project is sub-divided into smaller units with inputs, and outputs Project managers prefer the PRINCE 2 method because of a number of reasons. Firstly, the method allows easier project management because the entire project is subdivided into smaller manageable units. This allows for close monitoring since, the project is undertaken under an organized and controlled mannerSecondly, most managers prefer the PRINCE 2 method because it reduces the complexity associated with a project. The project describes, and distinguishes the various management responsibilities which are adapted to suit the complexity of the entire project

The following diagram indicates the PRINCE 2 process model.

PRINCE 2 method involves the following steps; stating a project, initiating a product, directing a project, controlling a project, managing stage

boundaries, managing product delivery, and closing a project(Great Britain, 1997).

There are various organizations that have effectively used the PRINCE 2 methodology of project management. The UK government has in the recent past constantly used the method in its projects management endeavors
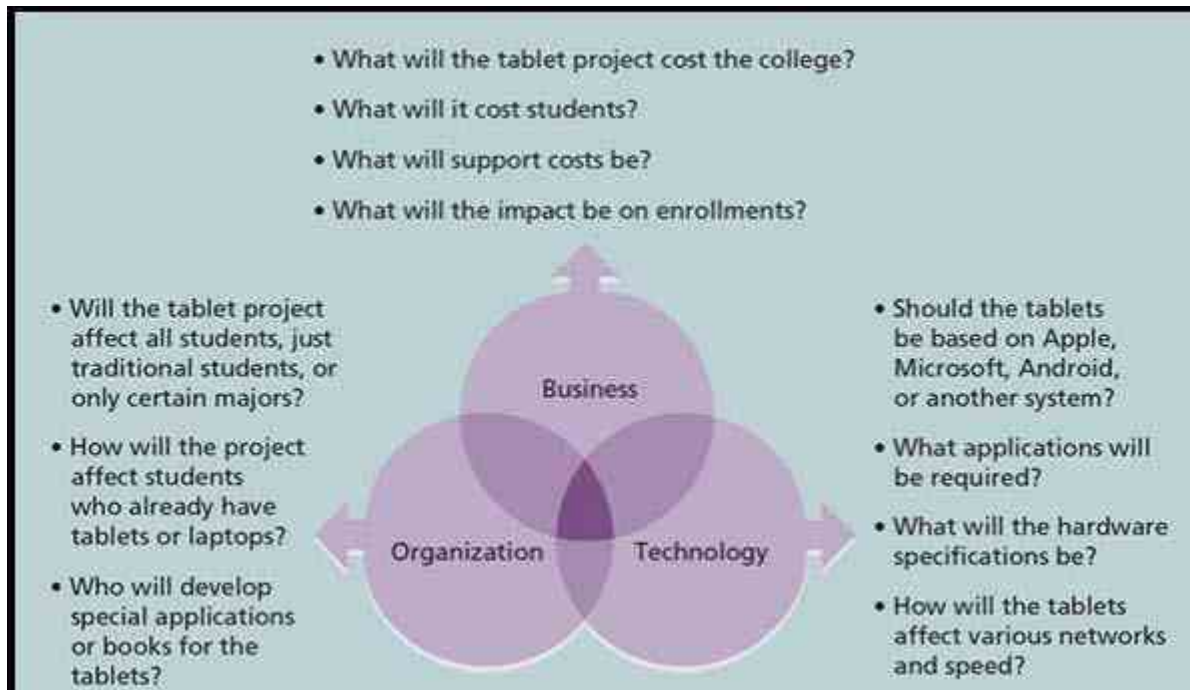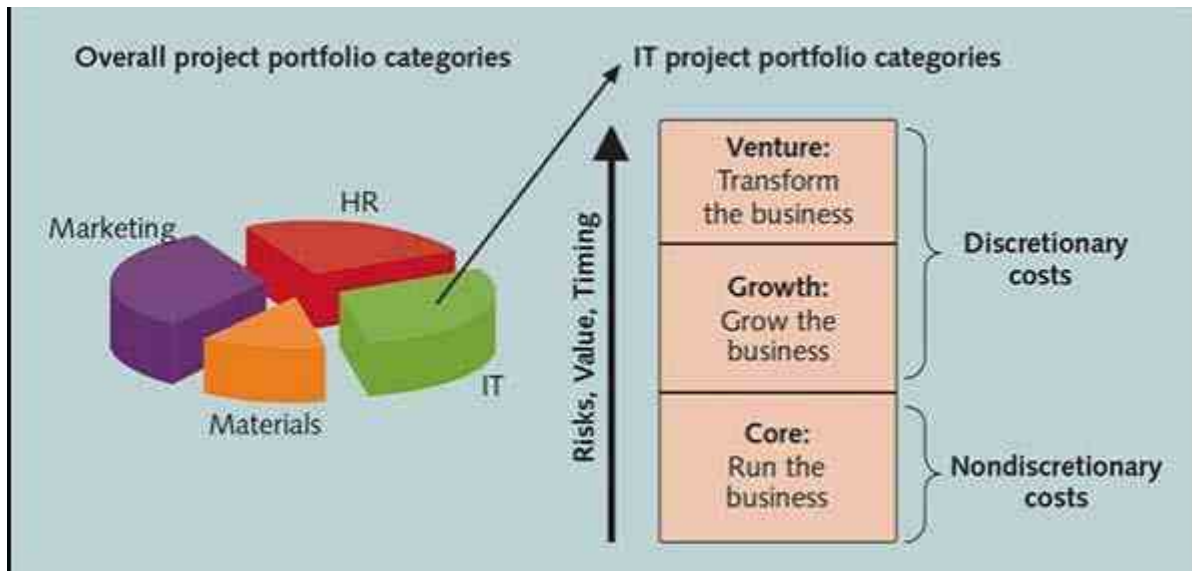
What is organization understanding?

Definition: This is the ability to understand the workings, structure and culture of the organization as well as the political, social and economic climate in which the organization operates.

Contents Anchors

Organizations such as companies, governmental institutions, NGOs, and hospitals are an important building block of our society. Most of us spend a considerable portion of our (working) life in some sort of organization. Whether we are happy, successful, depressed, or angry depends to a great extend on what we achieve and experience in our organizational life. There is no doubt that organizations have a profound impact on all of us.

many cases however, we don`t achieve what we expected to achieve and don`t really understand why things didn`t work out as planned.

The very basis of navigating in an unknown environment is to make oneself comfortable with its characteristics. This inevitably leads to the questions what an organization is and how it works as the very foundation of any management intervention. Unfortunately, there is no simple answer to this question but a set of different ones. Depending on which one you choose, it provides you valuable insights into how organizations work.

What is an organization? Ways to understand organizations and how they function.

Organizations as machines
Organizations are observable entities that consist of tangible and intangible elements such as individuals, machines, buildings, and processes. They process input factors in a pre-defined way to output factors.

Organizations as complex social-technical systems
Organizations are complex and dynamic systems. While their building blocks are as well individuals, machines, processes and buildings, the way those elements are interrelated is impossible to fully comprehend.

Organizations as social constructions
Language in form of any type of communication creates, shapes and changes our understanding of the world as we experience it. Organizations are an element in a so-called "social reality".

We will have a look at three different ways to understand organizations, what they are and how they work:

- **Organizations as machines**
- **Organizations as complex social-technical systems**
- **Organizations as social constructions**

Going through each of them we will address their characteristics and derive recommendations for professionals like you.

Organizations as machines

One of the most prominent ways to understand organizations is the so-called machine metaphor (Wiener, 1961). It is based on the understanding that organizations are observable entities that consist of tangible and intangible elements such as individuals, machines, buildings, and processes. Following this internal logic, organizations as machines process input factors in a pre-defined way to output factors.

As with any type of machine, organizations can be controlled and steered by pushing the right button and pulling the right lever. Thus, the organization's reaction to any kind of management intervention is predictable and be planned upfront.

Examples of management interventions that rely on the machine metaphor include top-down driven financial planning processes, planned change initiatives, and traditional problem-solving activities.

Organizations as complex and dynamic systems

Progress in organizational science and the limits of the machine metaphor has led to a new way of understanding organizations. This new way assumes that organizations are complex and dynamic systems. While their building blocks are as well individuals, machines, processes and buildings, the way those elements are interrelated is different.

In contrast to the machine metaphor, the internal logic that defines how those elements relate to each other is complex, dynamic and thus impossible to fully comprehend (Luhmann et al., 2013). Consequently, it is hard control and steer organizations with simple cause-effect management interventions. The fact that this internal logic changes over time makes it even harder to predict how an organization is going to respond to a specific management intervention.

- **The Four Frames of Organizations**
- **Organizational Structures**
- **Organizational Culture**

Four Frames of Organizations

What are the frames for organization?

The four frames -- structures, symbols, people, and power -- are different lenses for understanding an organization. In particular, they can be used together as a way to operationalize culture within a STEM department, because they draw attention to key areas of focus

Four-frame model to diagnose organizational issues?

1

Structural frame

2

Human resource frame

3

Political frame

4

Organizations are complex and dynamic systems that require constant analysis and adaptation to achieve their goals and overcome their challenges. One of the most useful tools for diagnosing organizational issues is the four-frame model, developed by Lee Bolman and Terrence Deal. This model helps you to view an organization from four different perspectives: structural, human resource, political, and symbolic. By applying the four-frame model, you can identify the root causes of problems, understand the needs and interests of different stakeholders, and design appropriate interventions and solutions. In this article, you will learn how to use the four-frame model to diagnose organizational issues and improve your organizational behavior skills.
Top experts in this article
Experts who add quality contributions will have a chance to be featured. Learn more

Earn a Community Top Voice badge
Add to collaborative articles to get recognized for your expertise on your profile. Learn more
Start a contribution

See what others are saying
1Structural frame

The structural frame focuses on the formal aspects of an organization, such as its goals, roles, tasks, policies, procedures, hierarchy, and coordination. It assumes that an organization is a rational system that can be designed and optimized to achieve efficiency, effectiveness, and alignment. To apply the structural frame, you need to consider questions such as what are the main objectives of the organization, how are tasks divided and assigned among members and units, how are resources and information distributed and controlled within the organization, how are performance and outcomes measured and evaluated by the organization, how are rules and regulations enforced and communicated by the organization, and how are conflicts and changes managed and resolved by the organization. Answering these questions can help diagnose strengths and weaknesses of the organizational structure, identify gaps between goals and activities, and suggest necessary changes to improve organizational performance.

2Human resource frame

The human resource frame focuses on the interpersonal aspects of an organization, such as its culture, values, norms, motivation, satisfaction, learning, and development. This frame assumes that an organization is a social system that can be influenced and improved by the people who work in it. To apply this frame, it is necessary to ask questions such as what are the main beliefs and attitudes of members and leaders of the organization, how are their needs and expectations met and fulfilled, how are their skills and talents utilized and developed, how are relationships and interactions fostered and maintained, how is feedback and recognition given and received by members and leaders of the organization, and how is diversity and inclusion promoted and supported by the organization. By answering these questions, you can assess the strengths and weaknesses of organizational culture, determine the sources of motivation and satisfaction, as well as suggest changes to enhance organizational behavior and climate.

3Political frame

The political frame of an organization focuses on its power and influence, such as its stakeholders, interests, agendas, coalitions, conflicts, negotiations and decisions. This framework assumes that an organization is a political system that can be shaped and contested by actors with different goals and resources. To apply the political frame, one should ask questions such as: who are the main stakeholders of the organization? What are their interests and agendas? What sources and types of power do they have or seek? How are conflicts and competitions among stakeholders manifested and handled? How are negotiations and collaborations conducted and facilitated? How are decisions and policies made and implemented? Answering these questions can help diagnose the strengths and weaknesses of organizational politics, identify opportunities and threats for each stakeholder group or individual, and suggest changes to improve organizational governance and strategy.

4Symbolic frame

The symbolic frame focuses on the meaning and identity aspects of an organization, such as its vision, mission, values, stories, symbols, rituals, and ceremonies. It suggests that an organization is a cultural system that can be interpreted and created by members who share a common purpose and sense of belonging.

To apply the symbolic frame, you need to consider questions like: what is the main vision and mission of the organization? What are its core values and principles? What stories and symbols represent and communicate its identity and history? How are emotions and feelings expressed and managed? How are innovations and changes initiated and embraced? By answering these questions, you can diagnose the organizational symbolism's strengths and weaknesses, identify the sources and effects of meaning and identity, as well as propose changes and improvements to enhance organizational creativity and adaptation.

Organizational Structures Organizational Culture

10 types of organizational structures (+ org charts for implementation)

What is an organizational structure?

An organizational structure outlines how responsibilities and roles are assigned and grouped throughout an organization.
At some point, you have likely seen an organizational chart for your company. And we can probably guess what it looked like.

The typical org chart looks like a pyramid, your C-level executives at the top with lines stretching down to middle management and finally staff-level employees.
But not every company functions best with a hierarchical organizational structure. Many types of organizational charts exist because many types of organizational structures exist.
In this post, we go through the 10 common types of org structures and reasons why you might consider each of them.

1. Hierarchical org structure
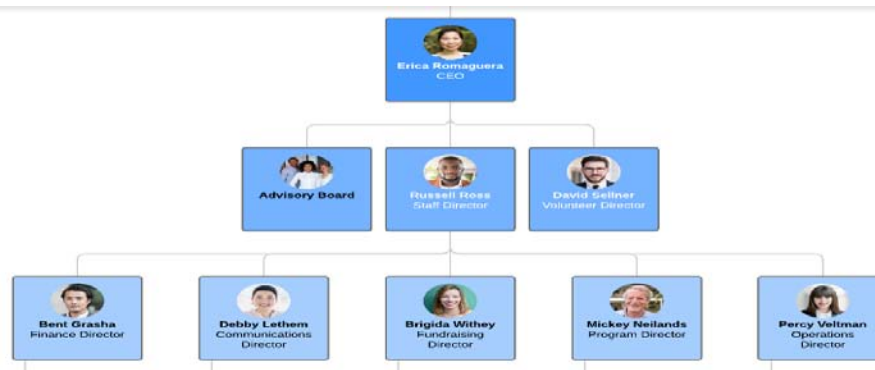
The pyramid-shaped organizational chart we referred to earlier is known as a hierarchical org chart. It's the most common type of organizational structure—the chain of command goes from the top (e.g., the CEO or manager) down (e.g., entry-level and lower-level employees), and each employee has a supervisor.

Pros

- Better defines levels of authority and responsibility
- Shows who each person reports to or who to talk to about specific projects
- Motivates employees with clear career paths and chances for promotion
- Gives each employee a specialty
- Creates camaraderie between employees within the same department

Cons

- Can slow down innovation or important changes due to increased bureaucracy
- Can cause employees to act in the interest of their department instead of the company as a whole

  Can make lower-level employees feel like they have less ownership and can't express their ideas for the company

2. Functional org structure
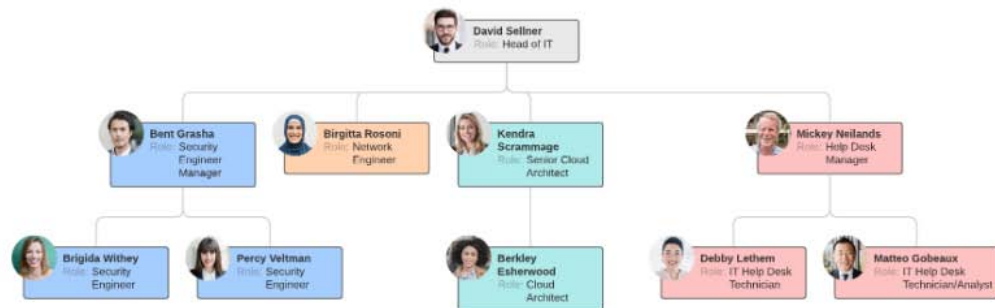
Similar to a hierarchical organizational structure, a functional org structure starts with positions with the highest levels of responsibility at the top and goes down from there. Primarily, though, employees are organized according to their specific skills and their corresponding function in the company. Each separate department is managed independently.

Pros

- **Allows employees to focus on their role**
- **Encourages specialization**
- **Help teams and departments feel self-determined**
- **Is easily scalable in any sized company**

Cons

- **Can create silos within an organization**
- **Hampers interdepartmental communication**
- **Obscures processes and strategies for different markets or products in a company**

3. Horizontal or flat org structure

Horizontal or flat org chart example (click on image to modify online)

A horizontal or flat organizational structure fits companies with few levels between upper management and staff-level employees. Many startup

businesses use a horizontal org structure before they grow large enough to build out different departments, but some organizations maintain this structure since it encourages less supervision and more involvement from all employees.

Pros

- **Gives employees more responsibility**
- **Fosters more open communication**
- **Improves coordination and speed of implementing new ideas**

Cons

- **Can create confusion since employees do not have a clear supervisor to report to**
- **Can produce employees with more generalized skills and knowledge**
- **Can be difficult to maintain once the company grows beyond startup status**

4. Divisional org structure
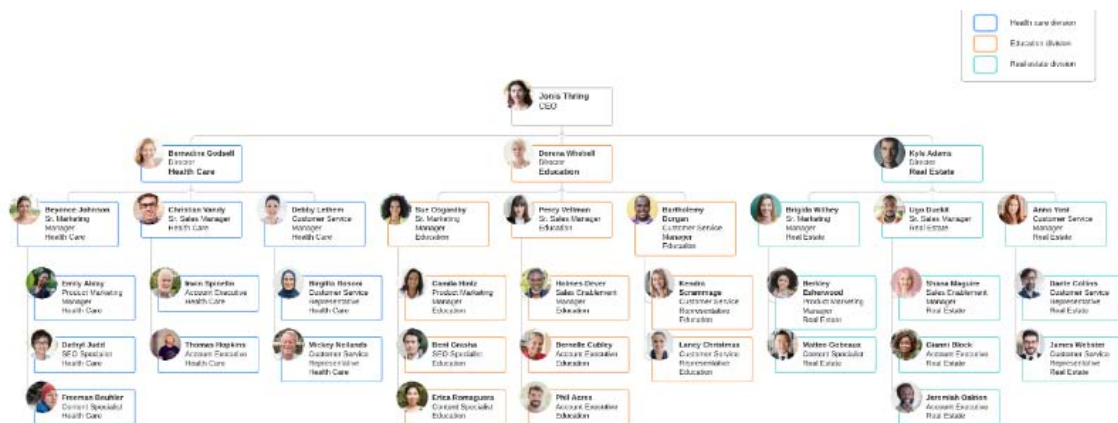
In divisional organizational structures, a company's divisions have control over their own resources, essentially operating like their own company within the larger organization. Each division can have its own marketing team, sales team, IT team, etc. This structure works well for large companies as it empowers the various divisions to make decisions without everyone having to report to just a few executives.

Depending on your organization's focus, there are a few variations to consider.

Market-based divisional org structure

Divisions are separated by market, industry, or customer type. A large consumer goods company, like Target or Walmart, might separate its durable

goods (clothing, electronics, furniture, etc.) from its food or logistics divisions.

Market-based divisional org chart example (click on image to modify online)

Product-based divisional org structure

Divisions are separated by product line. For example, a tech company might have a division dedicated to its cloud offerings, while the rest of the divisions focus on the different software offerings—e.g., Adobe and its creative suite of Illustrator, Photoshop, InDesign, etc.

Product-based divisional org chart example (click on image to modify online)

Geographic divisional org structure

Divisions are separated by region, territories, or districts, offering more effective localization and logistics. Companies might establish satellite offices across the country or the globe in order to stay close to their customers.

Geographical divisional org chart example (Click on image to modify online)

Pros

- **Helps large companies stay flexible**
- **Allows for a quicker response to industry changes or customer needs**
- **Promotes independence, autonomy, and a customized approach**

Cons

- **Can easily lead to duplicate resources**
- **Can mean muddled or insufficient communication between the headquarters and its divisions**
- **Can result in a company competing with itself**

5. Matrix org structure

Matrix org chart example (click on image to modify online)

A matrix organizational chart looks like a grid, and it shows cross-functional teams that form for special projects. For example, an engineer may regularly belong to the engineering department (led by an engineering director) but work on a temporary project (led by a project manager). The matrix org chart accounts for both of these roles and reporting relationships.

Pros

- **Allows supervisors to easily choose individuals by the needs of a project**
- **Gives a more dynamic view of the organization**
- **Encourages employees to use their skills in various capacities aside from their original roles**

Cons

- **Presents a conflict between department managers and project managers**
- **Can change more frequently than other organizational chart types**

6. Team-based org structure
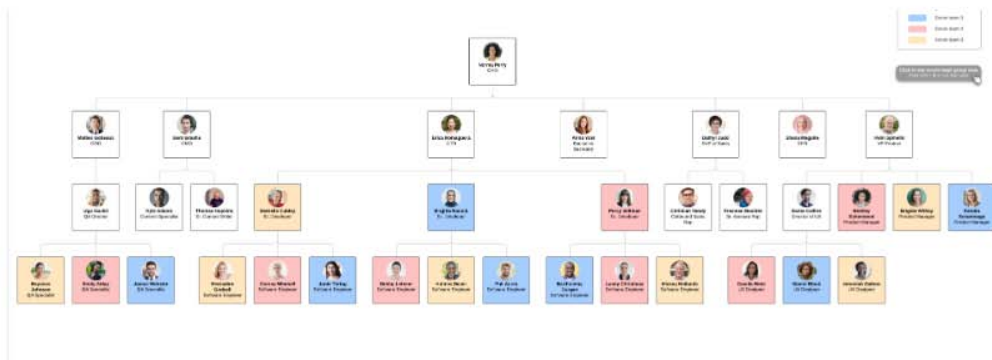
Team-based org chart example (click on image to modify online)

It'll come as no surprise that a team-based organizational structure groups employees according to teams—think **Scrum teams** or **tiger teams**. A team organizational structure is meant to disrupt the traditional hierarchy, focusing more on problem-solving, cooperation, and giving employees more control.

Pros

- Increases productivity, performance, and transparency by breaking down **silo mentality**
- Promotes a growth mindset
- Changes the traditional career models by getting people to move laterally
- Values experience rather than seniority
- Requires minimal management
- Fits well with agile companies with Scrum or tiger teams

Cons

- Goes against many companies' natural inclination of a purely hierarchical structure
- Might make promotional paths less clear for employees

See why forming tiger teams is a smart move for your organization.

7. Network org structure
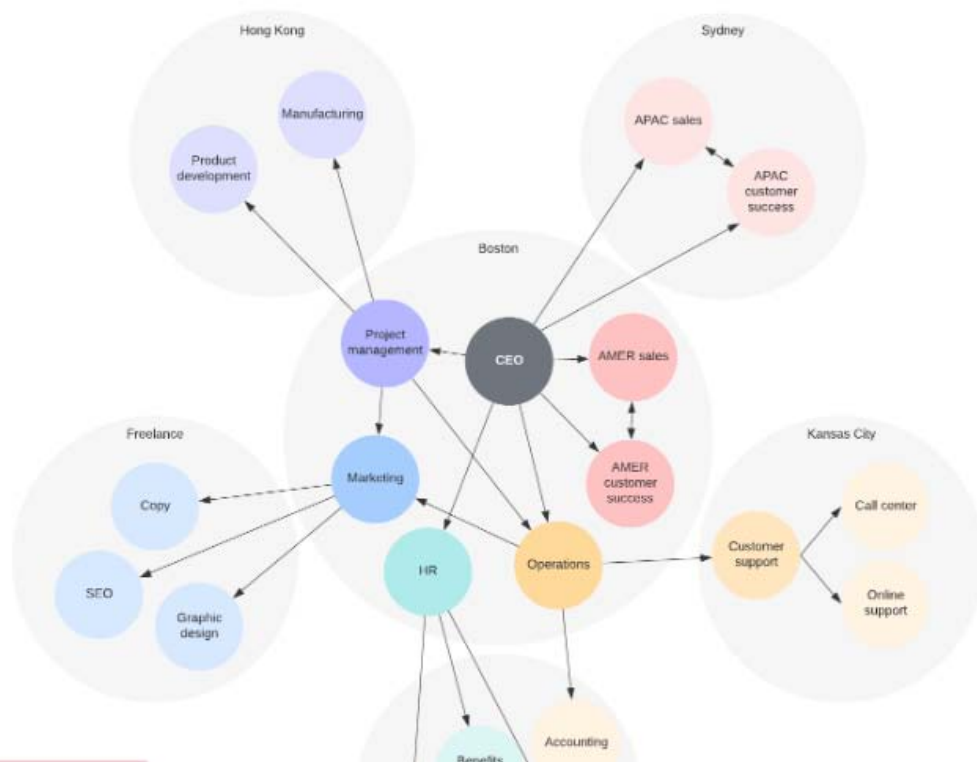
Network org structure example (click on image to modify online)

These days, few businesses have all their services under one roof, and juggling the multitudes of vendors, subcontractors, freelancers, offsite locations, and satellite offices can get confusing. A network organizational structure makes sense of the spread of resources. It can also describe an internal structure that focuses more on open communication and relationships rather than hierarchy.

Pros

- **Visualizes the complex web of onsite and offsite relationships in companies**
- **Allows companies to be more flexible and agile**
- **Give more power to all employees to collaborate, take initiative, and make decisions**
- **Helps employees and stakeholders understand workflows and processes**

Cons

- **Can quickly become overly complex when dealing with lots of offsite processes**
- **Can make it more difficult for employees to know who has final say**

Consider the needs of your organization, including the company culture that you want to develop, and choose one of these organizational structures.

8. Process-based structure
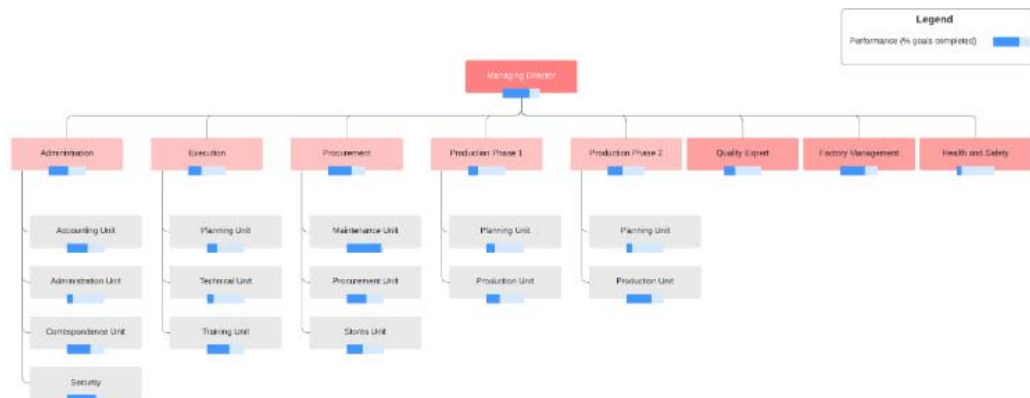
Process-based structure example (click to use template)

A process-based structure organizes employees into groups or departments based on steps of a process. The leader of the company is listed at the top, as they oversee all processes. Each step of the process has a supervisor and employees who do work in that process. The chart reads from left to right. One process can not begin until the process before it is completed.

Pros

- **Can lead to faster and more efficient processes**
- **Promotes teamwork within departments and across departments**

Cons

- **Can lead to barriers between departments**
- **Can lead to miscommunication between departments, especially during handoffs**

9. Circular structure
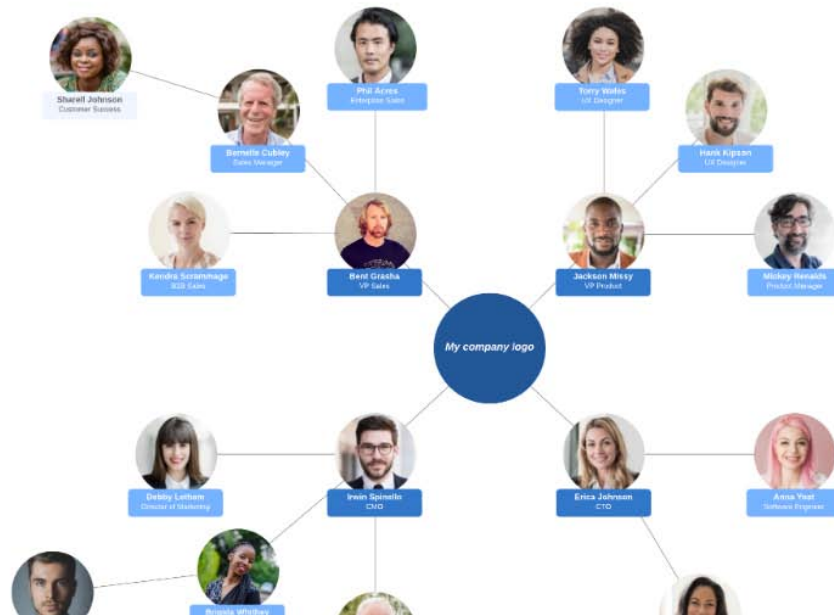
Circular org chart example (click to use template)

A circular organizational structure puts leaders of the organization at the center rather than the top so they can share information outward rather than pass it down a chain of command. Employees in different departments are also seen as part of a larger whole rather than siloed off by department.

Pros

- **Promotes the flow of information across the organization**
- **Promotes communication and collaboration between employees and departments**

Cons

- **Can cause confusion around who to report to, especially for new employees**
- **Can take longer to make decisions**

10. Line structure

A line structure is one of the simplest organizational structures as authority flows from top to bottom. Each department is ran by a manager and works toward a common organizational goal.

Pros

- **Reporting structure is clear**
- **Stable environment**

Cons

- **Can be inflexible**
- **Can limit innovation and specialization**
- **Can lead to managers having a lot of power**

- **Focusing on Stakeholder Needs**
- **The Importance of Top Management Commitment**

Focusing on Stakeholder Needs

Understanding stakeholder needs throughout a project is essential to success. Not only does it prevent costly roadblocks, but it can also help you gain more support. However, stakeholder expectations are constantly growing and data now plays a critical role in understanding their interconnected web of needs.

How do you focus on stakeholders?

Leaders and stakeholders love to influence decision-making, which helps them understand the project at a deeper level as they represent it to their peers. So, an excellent way to engage stakeholders is by inviting them into critical decision-making in an organized manner.

What's a stakeholder?

Stakeholders can include customers, employees, community members, politicians, media, shareholders, suppliers, investors, government departments, regulators, neighboring businesses and nearby residents. Plus all their extended networks of families, friends and colleagues. These people all:

- Have their own goals and objectives
- Make important decisions that may affect your organization
- Have lives that may be affected by your organization's decisions
- Are financially or physically better or worse off when things change
- Are connected to a wider network of people who are, in turn, affected by any changes and decisions

So, why do stakeholders matter? And why would you want to engage them?

The importance of stakeholder engagement

Don't underestimate the importance of stakeholders. If you can engage most (or all) of your stakeholders, it can massively benefit both your organization and the people you impact. Specifically, stakeholder engagement can help:

- Empower people – Get stakeholders involved in the decision-making process

- **Create sustainable change** – Engaged stakeholders help inform decisions and provide the support you need for long-term sustainability
- **Build relationships** – Create mutually beneficial relationships, build on existing relationships or foster new ones
- **Build a better organization** – Engaging with stakeholders can bring important issues to light and encourage your organization to develop corporate social responsibility
- **Increase success** – Engaging influential groups (who might otherwise hold you back) and turning them into supporters and advocates can boost your chances of success
- **Educate** – Stakeholders can be a valuable source of information for your organization, and they may learn something from you, as well To sum it up, stakeholder engagement can help your organization (and the people around it) achieve better outcomes, whether it's education, connection, engagement or profit.

The importance of stakeholder identification

If stakeholders are so important, the next question becomes… who are your stakeholders?

The importance of stakeholder identification cannot be overstated. If you know who your stakeholders are, you'll be in a much better position to manage and engage them, and turn them into advocates and supporters.

There are a lot of different ways to do your stakeholder identification, but usually the best place to start is with a brainstorming session. Ask yourself "what individuals or groups of people are likely to be affected by my organization or project?" and "who might influence the project or organization, or the people involved in it?" and then write down anyone that comes to mind.

From there, expand on each individual or group and map out anyone they're connected to who might also get the flow-on effects.

It's normal to start with a list of stakeholders, but then add to it over time – there are usually more potential stakeholders than you think.

Are some stakeholders more important than others?

By now, you've probably got a large (and growing) list of stakeholder groups. If you've got just a small team to manage them, it can quickly get overwhelming. So, once you've identified your stakeholders, it's a good idea to prioritize them.

The importance of stakeholder groups, and the approach you take to engaging each group, will depend on the outcomes you need to achieve and the resources you have available to achieve them.

Depending on your organization, you might focus on the groups most closely connected to your objectives. For example, if you're a business with a goal to increase your profits through a new initiative, your most important stakeholder group will probably be your customers. Or if you're a government organization working on a large development project, your most important stakeholder groups would be those people most likely to oppose your project. That way, you can help change their sentiments from negative to neutral or positive.

One technique you can use to prioritize stakeholders is stakeholder mapping. This involves classifying stakeholders based on their level of Influence, impact and interest. From there, you can develop engagement strategies according to the stakeholder mapping groups you've created.

Essential Tools for Effective Stakeholder Management

It's important to be well-informed about the **necessary features** when considering an investment in stakeholder engagement software. Below are some key features to keep in mind.

- Tracking contact details – So you know who's who, and how to reach them quickly
- Tracking communication right across the team – See who in your organization has been talking to each stakeholder and what they said, so you don't ask them the same questions twice
- Follow up – Use email integration and task management to ensure no stakeholders slip through the cracks

- **Sentiment tracking – See at a glance where stakeholder groups sit on a scale from negative to positive, and track changes to sentiment over time If you are searching for an efficient tool to track and manage essential stakeholder information, look no further than Simply Stakeholders. Our platform offers all the necessary features and more, with a streamlined onboarding process and customizable pricing options. Avoid overwhelming complexity and try Simply Stakeholders today. Book a Demo!**

Need for Organizational Commitment to Information Technology

What is the need for organizational commitment?

Business organizations in their work environment, aspire to create a high level of performance and low levels of absenteeism and turnover. Organizational commitment is considered a key factor in achieving this objective, however, it can be conditioned by several factors, among which is the psychological contract.

Why is information technology important to organizations?

Information technology is now used in daily operations of any business. IT has enabled an ease of doing business by managing overheads, regulating recruitment, dealing with market uncertainty, managing inventory, monitoring employee performance, dealing with employee grievances and so much more.

Why is IT important to be committed to an organization?

Committed employees are highly productive. They believe in the organization, its goals, vision, mission, and the leadership team. These employees not only demonstrate high levels of productivity, but they also ensure their colleagues and team members to display the same.

What is the role of an IT organization?

**An IT organization is responsible for deploying, monitoring and managing a broad range of enterprise applications, including both internal applications used by employees, such as HR, productivity and collaboration applications, as well as external applications used by clients or customers, such as web portals
IT organization (information technology organization)**

An IT organization (information technology organization) is the department within a company that's charged with establishing, monitoring and maintaining information technology systems and services.

In the broadest terms, an IT organization is a multifaceted business entity that facilitates almost all aspects of enterprise operations. Although the specific duties and goals of an IT organization vary depending on the size and goals of the enterprise, a typical IT organization involves the following:

- IT infrastructure. This includes the servers, storage, networks and other physical components and logical constructs, such as <u>virtual machines</u> or software-defined networks, needed to host applications, store data and connect the infrastructure to users. An IT infrastructure can be implemented locally in a traditional data center, remotely within a <u>colocation</u> facility or public cloud provider, or a mix of these options. The purpose of an IT infrastructure is to run business applications.

- Applications. This includes a broad range of software, such as business applications, including databases, human resources (HR) and finance software, design and collaboration software, and business email; all platforms and software designed for users, such as revenue-generating business websites, application programming interfaces (<u>APIs</u>) and applications; the software development toolchain, such as <u>integrated development environments</u>, version control and testing tools; and all tools and platforms the IT organization uses to monitor and maintain the IT infrastructure. All applications depend on the IT infrastructure.

- IT staff. This includes IT administrators, engineers, managers and executives, such as the chief information officer (CIO) or chief technology officer (<u>CTO</u>), who are tasked with planning, implementing, maintaining and updating the IT infrastructure and applications to further the needs of the business and its users. The <u>growth of DevOps</u> and other Agile software development and deployment paradigms means that developers are increasingly part of the IT organization -- not just as application creators, but also as operations experts who deploy and monitor applications created for the business.

- Users. These include employees who depend on enterprise applications for daily work, as well as business partners, customers and client users

who provide revenue for the enterprise. Without users, there would be no purpose or benefit to an IT organization.

What does an IT organization do?

Today's IT organizations can be complex and far-reaching entities tasked with an array of goals and responsibilities that are essential to the successful operation of a modern enterprise. Many of those varied responsibilities can be categorized into the following six principal activities:

1. **Build and manage the IT infrastructure. The IT organization is responsible for planning, designing, building, monitoring and maintaining the infrastructure, including the servers, endpoints, storage and networks that support the organization's applications and IT services. Modern infrastructure includes traditional local data centers, as well as hybrid and public cloud infrastructures. Even though an IT organization might not be involved in the design and construction of cloud infrastructures, it's responsible for designing and implementing how those cloud or third-party resources and services are assembled for business use.**

2. **Deploy and manage applications. An IT organization is responsible for deploying, monitoring and managing a broad range of enterprise applications, including both internal applications used by employees, such as HR, productivity and collaboration applications, as well as external applications used by clients or customers, such as web portals, APIs and revenue-producing platforms. This responsibility is increasingly shared with DevOps and other Agile software development teams.**

3. **Store, manage and protect data. Data is one of the most valuable assets that a business can possess, and an IT organization is responsible for ensuring that data is stored reliably within the infrastructure, accessed safely and protected from loss due to system failure, security breaches or disaster. This often includes data classification to understand what data is present, where it's located, its importance to the business and the retention requirements that apply to each type of data. IT organizations often**

collaborate with data owners and legal teams to build security and retention guidelines that ensure business data compliance.

4. **Manage and maintain security.** Security is a broad term, but the goal has evolved into multipronged initiatives for IT organizations. Security efforts are required for user accounts, employing credentials to ensure that only authorized users can access the IT infrastructure, applications and data. Security implements monitoring and [countermeasures to identify and mitigate intrusions](#) or blunt data theft. Security oversees application and data integrity to find and eliminate viruses and other malware. This involves using complex security tools and carefully crafted security practices.

5. **Provide training and support.** IT organizations are typically responsible for providing new and ongoing training to employees on such topics as account access, acceptable use policies, data access and protection, or compliance. In addition, the IT organization is the go-to team for technical questions, support and application help.

6. **Strategic growth and transformation.** Businesses rely on IT resources and services to function. As technology evolves and new technologies emerge, the IT organization is often responsible for reviewing and evaluating hardware and software to identify new uses and competitive advantages for the enterprise and its business goals. It's the IT organization that makes recommendations for upgrades and new platforms that can enhance the organization's ability to do more business faster, yielding better business outcomes at lower costs.

How is an IT organization structured?

An IT organization is typically designed as a hierarchical relationship of roles and responsibilities intended to serve the information technology needs of the business and its user base. In general terms, an IT organizational structure comprises the following three general levels:

1. **Executive level.** The top of the IT organization includes a CIO, CTO or other technology leader who reports to a chief executive, such as the chief

executive officer or president. The executive is primarily responsible for translating the needs of the business into strategic goals for IT teams.

2. Manager level. The management level can include leaders for each IT department, including the infrastructure team, operations team and applications team. Other relevant teams could include a customer relationship management team, analytics team, services team, and project and development teams. The exact number of teams can vary, depending on the size and complexity of the organization. IT managers report to the executive level.

3. Execution level. These are the many varied IT professionals tasked with handling the day-to-day tasks involved in their specific roles. For example, an operations team might include system engineers and administrators, while an infrastructure team might involve technicians, network engineers and administrators. Similarly, a project team might have a project leader who directs numerous staff.

The Importance of Project Phases and Management Reviews

Management review allows an organisation to make informed decisions using the Key Performance Indicators driven by their management system; identify opportunities for improvement and review and manage business risks.

Importance of project management lifecycle

The project management lifecycle provides a structured approach for managing a project from initiation to completion. Primarily, it ensures that all the necessary steps and processes are followed, thereby increasing the chances of achieving project objectives within the desired timeframe and budget.

Breaking down the project into distinct phases allows for better control and monitoring of progress, resource allocation, and risk management.

Here are some of the reasons why project management lifecycles are important.

1. Clarity and structure

It provides a clear framework and structure for managing projects, ensuring that all aspects are properly planned and executed. This helps in avoiding confusion, maximizing efficiency, and minimizing risks.

2. Goal alignment

The lifecycle helps in aligning project goals with the overall objectives of the organization. It ensures that project outcomes contribute to the strategic goals, enhancing the value and relevance of the project.

3. Scope management

The lifecycle facilitates effective scope management by clearly defining project requirements, deliverables, and objectives. This helps in avoiding scope creep and ensures that the project remains focused and on track.

4. Resource optimization

Through proper planning and resource allocation at each stage, the lifecycle ensures **optimum utilization of resources**, including manpower, time, and budget. This helps in preventing resource wastage and improves project efficiency.

5. Risk mitigation

The lifecycle incorporates risk assessment and management throughout the project. It enables proactive identification and mitigation of potential risks, ensuring that they are addressed and minimized at the earliest stages.

6. Stakeholder engagement

The lifecycle emphasizes stakeholder identification and engagement throughout the project. It ensures that stakeholders are involved, their needs are addressed, and communication channels are established to foster collaboration and support.

7. Continuous improvement

The lifecycle promotes continuous improvement by encouraging learning from each project phase. Lessons learned are documented and shared, enabling better decision-making and enhanced project management practices in future projects.

- **The Context of Information Technology Projects**
  - **The Nature of IT Projects**

Careers for IT Project Managers

Context of Information Technology Projects

What is the context of a project?

IT project management is the process of managing, planning, and developing information technology projects. Project managers can use software to move through the five phases of the IT project management life cycle and accomplish complex tasks more effectively. IT project managers are adaptable and resourceful leaders.

What is information technology?

Information technology (IT) is the use of any computers, storage, networking and other physical devices, <u>infrastructure</u> and processes to create, process, store, secure and exchange all forms of electronic data. Typically, IT is used in the context of business operations, as opposed to technology used for personal or entertainment purposes. The commercial use of IT encompasses both computer technology and telecommunications.

The Harvard Business Review coined the term information technology to make a distinction between purpose-built machines designed to perform a limited scope of functions, and general-purpose computing machines that could be programmed for various tasks. <u>As the IT industry evolved</u> from the mid-20th century, computing capability increased, while device cost and energy consumption decreased, a cycle that continues today when new technologies emerge.

What does information technology encompass?

The IT department ensures that the organization's systems, networks, data and applications all connect and function properly. The IT team handles three major areas:

1. **deploys and maintains business applications, services and infrastructure (servers, networks, storage);**

2. **monitors, optimizes and <u>troubleshoots the performance of applications</u>, services and infrastructure; and**

3. **Oversees the security and governance of applications, services and infrastructure.**

Most IT staff has different responsibilities within the team that break into several key areas including:

- **Administration. Administrators handle the day-to-day deployment, operation and monitoring of an IT environment, including systems, networks and applications. Admits often perform a range of other duties such as software upgrades, user training, software license management, procurement, security, data management and observing adherence to business process and compliance requirements.**

- **Support. Help desk staff specialize in answering questions, gathering information and directing troubleshooting efforts for hardware and software. IT support often includes IT asset and change management, helping admins with procurement, handling backup and recovery of data and applications, monitoring and analyzing logs and other performance monitoring tools and following established support workflows and processes.**

- **Applications. Businesses rely on software to perform work. Some applications are procured and deployed from third parties, such as email server applications. But many organizations retain a staff of skilled <u>developers that create the applications</u> and interfaces -- such as APIs -- needed to deliver critical business capabilities and services. Applications might be coded in a wide array of popular languages and integrated with other applications to create smooth and seamless interactions between different applications. Developers might also be tasked with creating interactive business websites and building mobile applications. The trend toward agile or continuous development paradigms require developers to be increasingly involved with IT operations, such as deploying and monitoring applications.**

- **Compliance. Businesses are obligated to observe varied government- and industry-driven regulatory requirements. IT staff play a major role in securing and monitoring access to business data and applications to ensure that such resources are used according to established business governance policy that meets regulatory requirements. Such staff are deeply involved with security tasks and routinely interact with legal and business teams to prevent, detect, investigate and report possible breaches.**

Information technology components and functions

Why is information technology important?

It's been said that data is what powers industries worldwide. That may be hyperbole, but few businesses -- large or small -- can remain competitive without the ability to collect data and turn it into useful information. IT provides the means to develop process, analyze, exchange, store and secure information.

Data processing plays a significant role in these core business practices, among others, including:

- product development and design;

- marketing and market research;

- sales and invoicing;

- customer development and retention;

- accounting and taxes;

- human resources and payroll; and

- Regulatory compliance.

Computing has penetrated practically every part of business and much of our personal lives. The ubiquity of computing -- also referred to as <u>pervasive computing</u> -- is another reason why IT is critical. Computing devices have evolved well beyond personal computers and servers. Today, all businesses and most individuals have and use multiple computing devices, including phones, tablets, laptops, game consoles and even doorbells, thermostats, vacuums and many kitchen appliances.

Virtually all these devices, many of which are part of the IoT, tap into the internet, which interconnects billions of devices worldwide. It's a complex and, potentially, perilous environment that requires IT expertise for management, security, maintenance and reliability.

Examples of information technology

So how is IT actually involved in day-to-day business? Consider five common examples of IT and teams at work:

1. Server upgrade. One or more data center servers near the end of their operational and maintenance lifecycle. IT staff will select and procure replacement servers, configure and deploy the new servers, backup applications and data on existing servers, transfer that data and

applications to the new servers, validate that the new servers are working properly and then repurpose or decommission and dispose of the old servers.

2. **Security monitoring.** Businesses routinely employ tools to <u>monitor and log activity in applications, networks and system</u> IT staff receive alerts of potential threats or noncompliant behavior -- such as a user attempting to access a restricted file -- check logs and other reporting tools to investigate and determine the root cause of the alert and take prompt action to address and remediate the threat, often driving changes and improvements to security posture that can prevent similar events in the future.

3. **New software.** The business determines a need for a new mobile application that can allow customers to log in and access account information or conduct other transactions from smartphones and tablets. Developers work to create and refine a suitable application according to a planned roadmap. Operations staff posts each iteration of the new mobile application for download and deploy the back-end components of the app to the organization's infrastructure.

4. **Business improvement.** A business requires more availability from a critical application to help with revenue or business continuance strategies. The IT staff might be called upon to architect a <u>high-availability</u> cluster to provide greater performance and resilience for the application to ensure that the application can continue to function in the face of single outages. This can be paired with enhancements to data storage protection and recovery.

5. **User support.** Developers are building a major upgrade for a vital business application. Developers and admins will collaborate to create new documentation for the upgrade. IT staff might deploy the upgrade for limited beta testing -- allowing a select group of users to try the new version -- while also developing and delivering comprehensive training that prepares all users for the new version's eventual release.

Software vs. hardware

IT includes several layers of physical equipment (hardware), virtualization, management systems, automation tools, operating systems, other system software and applications used to perform essential functions. User devices, peripherals and software can be included in the IT domain. IT can also refer to the architectures, methodologies and regulations governing the use and storage of data.

Software

There are two categories of software: system software and applications. System software encompasses the computer programs that manage the basic computing functions. They include the following:

- OSes;
- BIOSes;
- boot programs;
- assemblers; and
- Device drivers.

Business applications include:

- databases, such as SQL Server;
- transactional systems, such as real-time order entry;
- email servers, like Microsoft Exchange
- web servers, like Apache and Microsoft's Internet Information Services (IIS);
- customer relationship management, such as Oracle NetSuite and HubSpot; and
- enterprise resource planning systems, such as SAP S/4HANA.

These applications make use of programmed instructions to manipulate, consolidate, disperse and otherwise work with data for a business purpose.

Mobile applications that run on smartphones, tablets and other portable devices typically connect with cloud or data center applications over the internet. These applications have expanded the scope of computing and created a new category of software and telecommunications that requires special expertise to maintain.

Hardware

There are many different types of computer hardware. Computer servers run business applications. Servers interact with client devices in the <u>client-server model</u>. They also communicate with other servers across computer networks, which typically link to the internet.

Storage is another type of hardware. It's any technology that holds information as data. Storage may be local on a specific server or shared among many servers, and it may be installed on premises or accessed via a cloud service. Information that is stored can take many forms, including file, multimedia, telephony, and web and sensors data. Storage hardware includes volatile random-access memory (RAM) as well as non-volatile tape, hard disk drives and solid-state drives.

Telecom equipment, comprising network interface cards (NICs), cabling, wireless communications and switching devices, connect the hardware elements together and to external networks

Abstracting hardware and software

IT architectures have evolved to include virtualization and cloud computing, where physical resources are abstracted and pooled in different configurations to meet application requirements. Clouds may be distributed across locations and shared with other IT users, or they can be contained within a corporate data center, or some combination of both deployments.

Volatility is a characteristic of virtualized resources, enabling them to <u>expand and contract as needed</u>. Subscription-based cloud or locally installed resources, such as storage or composable architectures, can spin up resources, such as servers, OSes and application software, as needed and then release them when processing is complete.

Information technology vs. computer science

When researching careers in IT, you're likely to come across the term <u>*computer science*</u>. While there is overlap between IT and computer science, the two are distinct disciplines with different courses of study to prepare for careers in either area.

Information technology

IT is generally associated with the application of technology to deal with business issues. As such, the IT workforce is oriented toward developed technologies such as hardware systems, OSes and application software. Proficiency in IT is required to identify the hardware and software components that should be used to enhance a specific business process. IT pros work with a variety of technologies, such as server OSes, communications devices and software, and applications.

<u>Preparation for an IT career</u> requires basic courses in hardware and software systems. IT degree programs may include subjects such as:

- **business analysis**
- **project management**
- **telecommunications**
- **network administration**

Computer science

Computer science focuses on the logic and design of the underpinnings of the components that IT experts use to assemble business systems. A strong

mathematics background is required to pursue a computer science career. Much of the work in computer science involves developing the algorithms and logic and <u>writing the low-level code</u> that enables computer systems to address business problems.

Computer scientists may participate in the hardware and software engineering work required to develop products. They are also likely to delve into more abstract technologies, such as artificial intelligence (AI) and machine learning (ML).

<u>A course of study in computer science</u> requires a foundation in computer concepts and advanced mathematics. It may be complemented with subjects such as:

- AI and ML
- neural networks
- security systems
- data analytics
- user experience

Careers in information technology

A team of administrators and other technical staffers deploy and manage a company's IT infrastructure and assets. IT teams depend on a range of specialized information and technology skills and knowledge to support equipment, applications and activities. Third-party contractors and <u>IT vendor support</u> personnel augment the IT team.

The information technology profession is extremely diverse. IT workers can specialize in fields such as software development; application management; hardware components; server, storage or network administration; network architecture; and more. Many businesses seek IT professionals with mixed or overlapping skill sets.

There is a wide array of IT careers, each with varying technological and managerial requisites. Among the most common IT job titles are the following:

- **Chief information officer** (CIO). This person is responsible for IT and computer systems that support the goals of the business.
- **Chief technology officer** (CTO). This person sets the technology goals and policies within an organization.
- **IT director.** This person is responsible for the function of the business's technology tools and processes. This role may also be called IT manager or IT leader.
- **System administrator** (sys admin). This person configures, manages, supports and troubleshoots a multiuser computing environment. Within a business, this role can be divided up by technology, requiring an administrator or team dedicated to server, desktop, network administration, virtualization, or other components and technologies.
- **Application manager.** This person's role centers on the provisioning and management of a high-value business application, such as Exchange.
- **Developer or software engineer.** This person or team writes, updates and tests code for computer programs to meet internal or customer-facing business objectives.
- **Chief IT architect or IT architect.** This person examines and changes IT functions to best support the business.

IT skills and certifications

A successful IT career will involve developing several technical skills. For the current IT job market, these 10 skills are among those most in demand:

1. cybersecurity
2. cloud computing
3. edge computing and IoT
4. IT automation
5. software development
6. big data management and data analytics

108

7. **DevOps**

8. AI

9. ML

10. mobile application development

In the pursuit of these IT disciplines, it is advantageous to earn certification to demonstrate proficiency in specific technologies and areas of expertise.

Examples of IT Projects
A Systems View of Project Management

Introduction to IT project management

IT project management is the process of planning, organizing and delineating responsibility for the completion of an organizations' specific information
Technology (IT) goals.

What is the importance of IT project management?

The importance of project management in organizations can't be overstated. When it's done right, it helps every part of the business run more smoothly. It allows your team to focus on the work that matters, free from the distractions caused by tasks going off track or budgets spinning out of control

Project management overview?

'Project management' provides structure and control of the project environment so that the agreed activities will produce the right products or services to meet the customer's expectations. Projects are temporary

structures which must be properly managed and controlled in order to meet their stated objectives.

What are the 5 stages of project management?

Five stages of project management

- **initiation.**
- **planning.**
- **execution.**
- **closure.**

What are the three 3 main elements of project management?

The project management triangle is made up of three variables that determine the quality of the project: scope, cost, and time. The triangle demonstrates how these three variables are linked—if one of the variables is changed, the other two must be adjusted in order to keep the triangle connected.

IT PROJECT MANAGEMENT objective
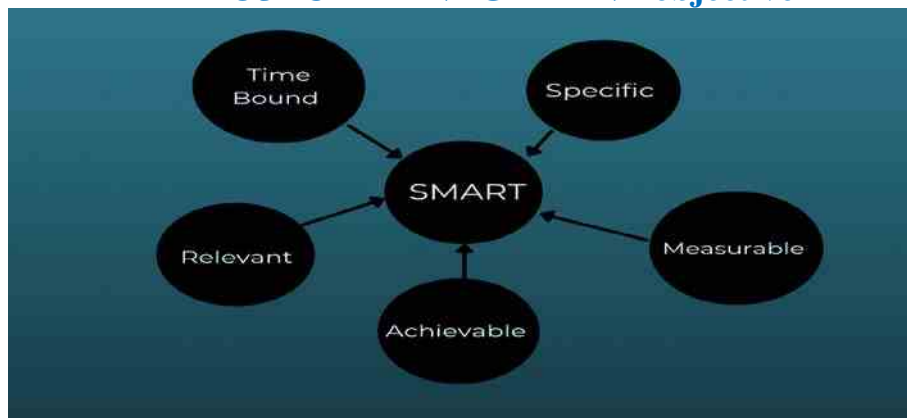
Before we learn Project Management, let's understand:

What is a Project?

A project is a temporary endeavor undertaken to create a unique product, service or result. A project is defined as temporary because it has a defined beginning and end time, and it is unique because it has a particular set of operations designed to accomplish a goal

The primary characteristics of a project are:

- **It has a definite start and end point**

- **Once the end point is reached, the project is over**
- **It is attempting to achieve something new**
- **Project must meet the customer or stakeholder requirements**

In this Project Management tutorial, we will learn:

- **What is Project Management?**
- **Objectives of Project Management**
- **Project Management Methodologies**

What is Project Management?

Project Management is a discipline to plan, organize, motivate, and control the resources to achieve specific project goals. The main objective of project management is to achieve project goals and targets while keeping in mind the project scope, time, quality, and cost. It facilitates the project workflow with team collaboration on a single project.

Project management actually began in the early 1950s. The need for project management arose after observing the benefits of organizing work within the project and the critical need to coordinate across different departments and professionals.

Project management mainly deals with these ten areas

- **Integration**
- **Cost**
- **Human resources**
- **Stakeholder management**
- **Scope**
- **Quality**
- **Communications**
- **Time**
- **Procurement**
- **Risk Management**

Objectives of IT Project Management

While preparing a project, you should look into these perspectives, which helps to give a much better understanding of the whole process.

Following are the main Software Project Management Objectives:

- **How does the project fit into the organization?**

- **How will the project evolve over time?**
- **What skills are required to manage the project successfully?**
- **Development and Implementation of procedures**
- **Efficient communication, collaboration, and productive guidelines**
- **Achieve project goals within the estimated time with high quality**
- **Allocate and optimize necessary resources to meet project goals**
- **Meet the exclusive needs and requirements of the client**
-

IT Project Mananagement Organization and project management

gement Methodologies

Here are the various methodologies available for Project Management:

1. **Prince2**
2. **Agile**
3. **Six Sigma**
4. **Scrum**
5. **Kanban**
6. **Lean**
7. **Waterfall**

We will look each of this into in a later part of the tutorial. Various tools are available to track project tasks and measure accomplishments during the project. These include Gantt charts, PERT charts and Work down structures.

Improving organizational project management (OPM) is both a journey and an investment. However, no one willfully undertakes a transformational journey that disrupts lives where the vision is not clear and the associated benefits are not defined. Benefits drive change. The conceptual understanding of potential benefits initiates and fosters change. Implementing Organizational Project Management: A Practice Guide (PMI, 2014a) mentions at a high level that there are benefits associated with developing OPM capability. Understanding those benefits and the context of OPM maturity models is key to determining if OPM improvement is the desired solution. This paper serves as a primer for the identification or feasibility stage of the transformation initiative and supports "Step 1—Determine Commitment to Critical Success Factors" (p. 12) of Implementing Organizational Project Management. It is also intended to help the reader develop the business case in terms of costs and the potential benefits that underpin a feasibility analysis for an OPM

initiative. Most importantly, it aids in senior management's validation of its vision and answer to the question, "Why change?"

Vision

Mission

Organizational Strategy and Objectives

Portfolio Management Strategic Planning and Management of Projects, Programs, and Operations

Management of On-Going Operations (recurring activities) Producing Value

Management of Authorized Programs and Projects (projectized activities) Increasing Value Production Capability

Strategy Development

Linkage & Oversight

Strategy Delivery

Organizational Resources

OPM framework showing the linkage between strategy and execution. Once an organization has achieved standardized and measured processes, the tools available in process quality management and process excellence, such as Lean and Six Sigma, can be applied for ongoing improvement of OPM over time. A term that is used to describe the level of an organization's ability to deliver the desired strategic outcomes in a predictable, controllable and reliable manner is OPM maturity.

OPM models and the organization
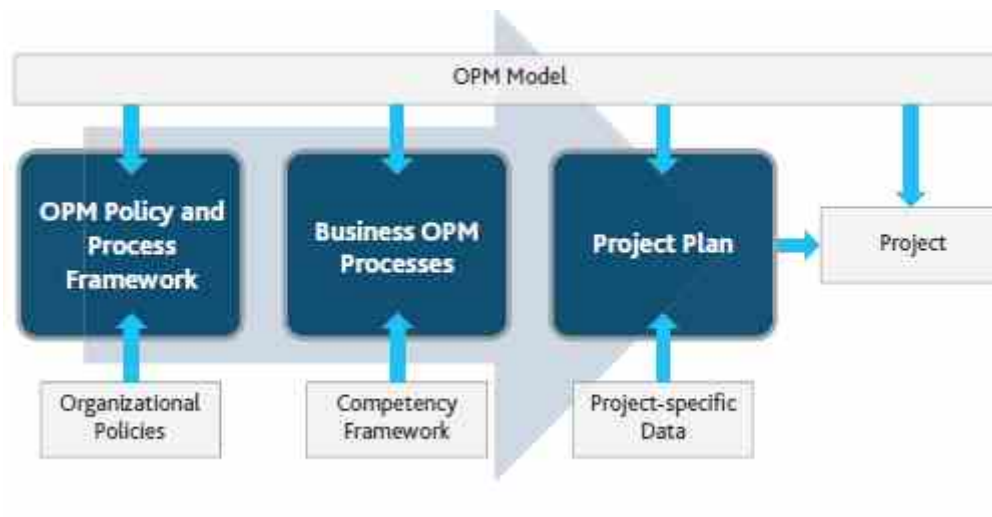
An OPM model is a capability excellence model for evaluating an organization's project management processes and supporting infrastructure. Organizational policies play a key role since they define the organizational need for OPM processes and set the culture and guiding principles of the organization. Organizational policies underpin the authority for expending resources on OPM processes and supporting infrastructure, and also are the foundation guidance with which the organization is expected to comply

To aid in consistent compliance with the framework policies, OPM processes are established for the project, program and portfolio practitioners and stakeholders. Another important consideration is the level of detail required for each process. The appropriate level of detail relies heavily on the competency development of the process user and the degree of project complexity. The level of process detail is sufficient when it is both understood by the user and provides a sufficient amount of rigor to deliver the expected outcome. For example, landing an aircraft is an expert process that is very repeatable, but the conditions vary greatly due to weather, and aircraft and airport characteristics.

Path between improvement projects and strategic objectives

Capabilities
A set of project deliverables enabling an organization to deliver a desired outcome
They can be a service, function or operation that enables the organization to exploit opportunities. Capabilities exist prior to transition.

Examples
- New project planning approach
- Oranizational setup of a factory to reduce waste
- An improved tool

Benefits
Measurable improvements providing a business advantage. Benefits can be both tangible and intangible, and are often interconnected and stakeholder-specific.

Examples
- Increase of market share
- Shorter time to market
- Higher employee retention

Outcomes
A new operational state achieved after transition of capabilities into live operations. Normally affecting real world behavior or circustances, they are the manifestations of the future state implementation.

Examples
- Project plans comply with improved approach
- Waste is handled according to new setup
- New tool is being used by the organization

(Diagram labels: Strategic Objectives, End Benefits, Intermediate Benefits, Outcomes, Capabilities, Deliverables, Improvement Projects)

Summary

- **Project management is the discipline of planning, organizing, motivating and controlling resources to achieve specific goals.**
- **Project management deals with various aspect of projects like**
  - **Cost**
  - **Human resources**
  - **Stakeholder management**
  - **Scope**
  - **Quality**
  - **Communications**
  - **Time**
  - **Procurement, etc.**
- **Various tools used to track project tasks and measure accomplishments during the project include Gantt charts, PERT charts, etc.**

- **There are various methodologies that are available for project management like Prince2, Agile, Six Sigma, etc.**

1. **Project planning. Build comprehensive project plans and organize tasks.**
2. **Agile project management. Manage backlogs, create workflows and execute sprints.**
3. **Project scheduling. Schedule and assign work to bring your project in on time.**
4. **Resource scheduling.**
5. **Team management.**
6. **Work management.**
7. **Time tracking.**

How does project management work in IT industry?

IT project management is the process of managing, planning, and developing information technology projects. Project managers can use software to move through the five phases of the IT project management life cycle and accomplish complex tasks more effectively. IT project managers are adaptable and resourceful leaders.

What is IT project management?

IT project managers are adaptable and resourceful leaders. Carrying complex projects over the finish line isn't an easy task, but the right leader does it time and time again.

As an IT project manager, you create user-friendly and flexible technology for consumers while also tracking the progress of your team members.

How do you do it all, we wonder? We're guessing your secret is [IT project management software](.).

Having the right IT management software can be the key to project success. Our guide outlines what IT project management is and provides tips for managing IT projects.

What is IT project management?

IT project management is the process of managing, planning, and developing information technology projects. IT projects exist within a variety of industries, including software development, information security, information systems, communications, hardware, network, databases, and mobile apps.

IT project developers deliver a product or service, while managers handle IT project management. Managers are in charge of communicating expectations and keeping projects on track and on budget to ensure the IT projects run smoothly.

What are the 5 phases of IT projects?

As an IT project manager, you can accomplish complex tasks more effectively using the five phases of IT project management. Each phase has different milestones that drive the project life cycle forward. Whether you're managing sprints for an **Agile project** or process rollouts—map out your next project using the five phases below.

1 Initiation phase

Determine need and assess viability

2 Planning phase

Set budget, identify risks, and create clear goals

3 Execution phase

Create deliverables, delegate tasks, and keep communication open

4 Monitor and control phase

Track team progress and monitor project with PM software

5 Closure phase

Assess what went well and what didn't

What Is an IT Project?

An information technology (IT) project is a type of project that deals with IT infrastructure, information systems or computers. Examples of an IT project include web development, software development, mobile app development, network configuration, software implementation, hardware installation, database management, and IT emergency recovery.

What Is IT Project Management?

IT project management (ITPM) is the planning, scheduling, execution, monitoring and reporting of IT projects. While many industries focus exclusively on IT projects, IT is unique in that most, if not all, industries have some level of an IT component. Since they are often very wide in scope, IT project managers must deal with risk, interdependent integrations, software updates, scope creep and so on. Therefore, IT projects require more than the typical project management tools and skills to complete.

[Specialized IT project management software](#) complete with online Gantt charts, kanban boards, dashboards and reports provide the essential functions necessary for successful IT projects.

ALL	TASK NAME	DURATION	PLANNED START
1	⊟ **Ideation**	**4 days**	**3/24/2022**
2	Market Research	1 day	3/24/2022
3	Product Requireme...	2 days	3/25/2022
4	Feasibility Analysis	1 day	3/29/2022
5	Stakeholder Feedba...	1 day	3/29/2022
6	⊟ **Design**	**14 days**	**3/30/2022**
7	Engineering Drawings	4 days	3/30/2022
8	3D Rendering	2 days	4/5/2022
9	3D Printed Prototype	7 days	4/7/2022
10	Stakeholder Feedba...	1 day	4/18/2022
11	⊟ **Prototyping**	**11 days**	**4/6/2022**
12	CNC Part Creation	1 day	4/19/2022
13	Product Assembly	1 day	4/20/2022
14	Durability & Stress T...	7 days	4/6/2022
15	⊟ **Pre-production**	**96 days**	**4/21/2022**
16	New Production Eq...	3 days	4/21/2022
17	Supply Chain Sourci...	1 day	4/26/2022

ProjectManager has everything you need to enhance IT planning, scheduling and rollouts.

What Are the Six Phases of an IT Project?

The six phases of an IT project are based on the six phases of **project management**, which are used in conjunction with the IT phases to manage the project. They are as follows:

Initiation

During the first phase of an IT project, one must ask "why is this project needed?"—in other words, the objective of the project must be identified. Then, a **project proposal**, including a business plan, that meets the needs of the project must be written. In addition, a **feasibility study** might be conducted to ensure the proposal is airtight.

Definition

After the project proposal has been approved, the project moves into the definition phase. This is where the objectives of the project are finalized and the requirements for a successful project are identified. The project scope can also be outlined, and a **project plan** may be created during this phase. Budgets are also set, and resources are determined.

Design

The design phase of an IT project is when the project team sets out to find the best solution for achieving their goal. This includes creating multiple designs and prototypes. Once a suitable design has been chosen, specifications for the development team are created and shared.

Development

The development phase is when the development team is assigned tasks and **project management tools** are selected. Additionally, technicalities are outlined, raw materials are requested and so on. The main goal of this

phase is to make the entire plan as crystal clear as possible to avoid issues in the implementation phase.

Implementation

The implementation phase is where the final deliverable of the IT project is developed; unsurprisingly, this is often the longest phase of the project. The project team sets out to complete their tasks, while the manager **monitors and controls the work**, resources, cost, quality and risk.

Follow Up

Finally, once the implementation phase is complete, the final project is delivered to the customer/client/stakeholder. The follow up phase is all the work that comes after the project is delivered, and includes setting up support teams, training the end-users, creating a postmortem and ultimately ending the project.

Most IT projects and their phases are managed with a traditional, structured **waterfall** methodology. An **agile** framework, though, can minimize risk when adding functionality. DevOps deployment can be a good fit within an organizational culture. Rapid application development (RAD) is a low-investment, high-quality process.

What Does an IT Project Manager Do?

An **IT project manager** is responsible for overseeing an organization's IT department and managing teams to execute IT projects on time and within budget. Some of the duties of an IT project manager include:

- Setting project goals and creating plans to meet them
- Maintaining the **project schedule** and budget, creating status reports

- **Managing resources, including the team, equipment, etc.**

- **Assigning tasks to team members**

- **Developing strategy to deliver projects on time and within budget**

- **Using IT project management tools to track progress and performance**

- **Assessing project risks**

- **Developing IT risk management strategies**

- **Leading regular meetings with team and stakeholders**

IT project managers are expected to have advanced knowledge of computers, operating systems, and network and service desk administration. They must also be good communicators and be able to clearly explain complex technical issues. Other required skills include experience with scheduling, budgeting and resource planning.

While the skill sets of project managers across different industries are generally the same, an IT project manager is unique in that they're focused solely on the IT needs of an organization. But like all project managers, the way an IT project manager handles their varied duties and responsibilities is with the help of robust IT project management software.