



Project Management

Assessment Two

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Assessment 2 – Research (Online)

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Instructions:

This is an individual assessment. Answer all the questions on the document provided by your Trainer.

Duration:

Trainer will set the duration of the assessment.

Multiple-choice Questions:

- 1) What advice do we give about factoring in the commitments of project stakeholders when making your own plans?
 - a) Consult student timetables to see when they might be free to attend data collection sessions.
 - b) Ask external organizations what the most convenient times would be for you to visit
 - c) Neither of these
 - d) Both A and B



Stakeholder Template

STAKEHOLDER DETAILS				STAKEHOLDER ORGANIZATION			STAKEHOLDER ASSESSMENT			
Stakeholder Type	First Name	Last Name	Job Title/Job Role	Org (L1)	Org(L2)	Org (L3)	Ability to Impact / Influence Project	Level of Support for Project	Availability	Details on Stakeholder's Current State Situation
Influencer	John	William	Sales Specialist	Sales	US Sales Group	Selling Team	High	Low	Low	
Sponsor	Samuel	Habib	Executive VP	Sales	Europe Sales Division	Marketing Sales Team	Mid	High	High	Samuel is looking forward to the benefits the project will provide and is very aware of the WIFM and how the software will make his job easier. He has high level of time availability, so we are going to see if he would be willing to help manage the Change Champion's network.
Department Head	Denise	Smith	Head of Marketing	Marketing	Australia Marketing Division	Executive Team	Mid	High	Low	Denise supports the project and is willing to help with opposition management among the executive team. However, her time availability is low, so we will need to make things as easy as possible for her so she can engage when needed in short time increments.
Change Agent / Champion	Charlotte	Craven	Human Resources Recruitment	HR	Northwest	Talent Team	Low	High	Mid	Charlotte needs to be onboarded to the Change Champions Network. She's excited to be a part of the network, and although she does not have any past change management experience, she is willing to learn. Her position is very influential and has a high impact on the project, so we want to make sure she's well trained and utilized to facilitate acceptance of the change in the HR division.
Director	Helga	Mortens	Purchasing Director	Facilities	Northeast	Purchasing Team	High	Mid	Mid	
Manager	Ekua	Kimathe	Maintenance Supervisor	Facilities	Northeast	Maintenance Team	Low	Low	High	Ekua is in a department with a low impact from this project, and has a low impact/influence on project. His level of support at the moment is low because of his experience with past change projects not going well. He admitted to not "really reading the emails" about this project so doesn't know much about it.

Comment: Project stakeholders include project team members, project sponsors, company executives, clients and customers, end-product users, suppliers and vendors, contractors, community members etc.

Project stakeholder management involves creating a stakeholder management strategy that addresses expectations, resolves conflicts, and ensures stakeholder needs are met. A stakeholder management plan is normally created to help manage stakeholders and their interests. The primary components of a stakeholder management plan are prioritization of stakeholders, stakeholder expectations, communication rules and action plans.

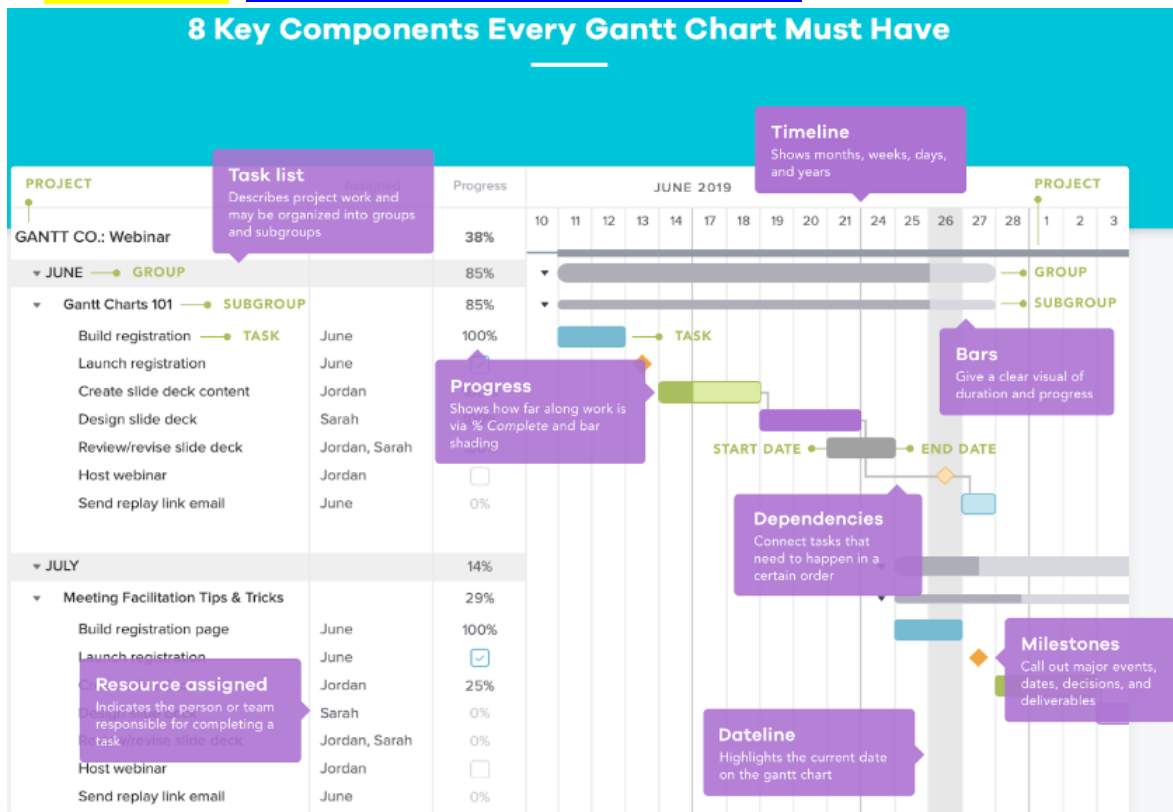
Web Reference: <https://www.airiodion.com/stakeholder-management/>

- 2) Which of the following are essential components of a GANTT chart used to plan your project?

- Your home telephone number
- Your supervisor's home telephone number
- The email address for the chair of the ethics committee
- None of the above

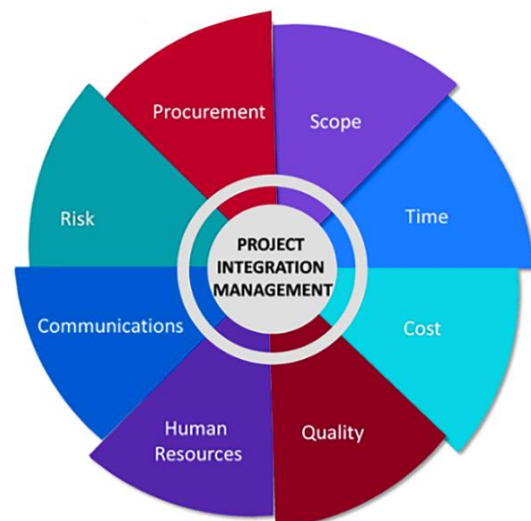
Comment: A Gantt chart is made up of nine components including task lists, datelines, timelines, bars, milestones, dependencies, progress and resources assigned.

Web Reference: <https://www.teamgantt.com/what-is-a-gantt-chart>



- The intended outcome of strategy/projects integration is
 - Clear organization focus
 - Best use of scarce organization resources
 - Improved communication across projects and departments
 - Both A and C are correct
 - A, B, and C are all correct

Comment: The aims of project integration management is to provides coordination and synchronization throughout the project lifecycle, ensures the projects run smoothly, clear understanding of their roles and responsibilities, measures and monitoring the project's progress, making more clear decisions, managing and controlling the



performance, ensures due dates, result, project lifecycle, and the benefits management plan are aligned.

Moreover, project integration management is one of 10 areas of project management.

Web Reference: 1 <https://www.icertglobal.com/What-is-the-Importance-of-Project-Integration-Management-to-Ensure-Project-Success/detail> 2 <https://www.techno-pm.com/2020/09/project-integration-management.html>

4) Which of the following questions does the organization's mission statement answer?

- a) What are our long-term strategies?
- b) What are our long-term goals and objectives?
- c) How do we operate in the existing environment?
- d) What do we want to become?
- e) All of these are answered by the mission statement



Comment: A mission statement is a combination of what your business or non-profit does and how and why it does it. In other words, it is a short summary of an organization's core purpose, focus, and aims. A mission statement usually is comprised of a brief description of what the organization does and its key objectives.

Web Reference: 1. <https://www.thebalancesmb.com/how-to-write-a-mission-statement-2948001>
2. <https://sprigghr.com/blog/alignment-direction/the-difference-between-mission-and-vision-statements/>

5) Which of the following is not one of the requirements for successful implementation of strategies through projects?

- a) Allocation of resources
- b) Prioritizing of projects
- c) Motivation of project contributors
- d) Adequate planning and control systems
- e) All of these are requirements



Comment: Strategy implementation is the process of turning plans into action to reach a desired outcome. While developing a strategy is one of the first steps to implementing organizational change, the implementation itself is vital to project success.

There are seven steps of strategy implementation, which are to set clear goals and define key variables, determine roles and responsibilities and relationships, delegate the work, execute the plan and monitor the progress and performance and provide support, take corrective

actions like adjusting and revising, get closure on the project and agreement on the output, conduct a retrospective¹.

Web Reference: 1. <https://onlinelibrary.wiley.com/doi/abs/10.1002/jsc.2298>
2. <https://online.hbs.edu/blog/post/strategy-implementation-for-managers#:~:text=Strategy%20implementation%20is%20the%20process,efficiently%2C%20effectively%2C%20and%20consistently>

- 6) Which of the following is the reason(s) why project managers need to understand their organization's mission and strategy?
- a) To make appropriate decisions and adjustments
 - b) To be effective project advocates
 - c) To be able to get their job done
 - d) Both A and B are correct**
 - e) A, B, and C are all correct

Comment: A project manager's duty is to assess a project and deem the constraints practical or otherwise and best utilize resources in the desired period. For any work, that is important for the progress of the project to achieve successful completion of the project, the manager needs to have full control and visibility of all project-related work and take action immediately when identifying something is not progressing on track. Project management strategies are project managers' methods to unite their teams and help everyone understand the goals and needs of the project, as well as how the manager wants each part of the project to progress.

Web Reference: 1. <https://www.slingshotapp.io/blog/project-management-strategies-for-successful-execution>
2. <https://www.youtube.com/watch?v=rBSCvPYGnTc>

- 7) Which of these is the highest priority and first strategy required for any organizational change
- a) Communication**
 - b) Stress management
 - c) Negotiation
 - d) Learning



¹ **retrospective** [ˌretrəˈspektɪv] adj. 回顾的；追溯的；向后看的 n. 作品回顾展出

e) Employee involvement

Comment: It is vital to develop the right strategies for management change including communicating honestly, engaging employees, showing positivity, enacting visionary change, being persistent and using online tools and resources. Another web source also shows that key elements in a change management strategy include planning, transparency, communication, involvement, a road map and training.

Web Reference: 1. <https://online.maryville.edu/blog/organizational-change-management-guide/#what-is>
2. <https://www.cascade.app/blog/change-management-strategy>



8) Which of the following is not a procedure to obtain an understanding risk in the planning stage (described in ISA 315):

- a) Inquiries of management
- b) Analytical procedures
- c) Observation and inspection
- d) Procedures for sampling audit tests

Comment: According to 'A Guide to the Project Management Body of Knowledge (PMBOK Guide)', 7 processes are included in the

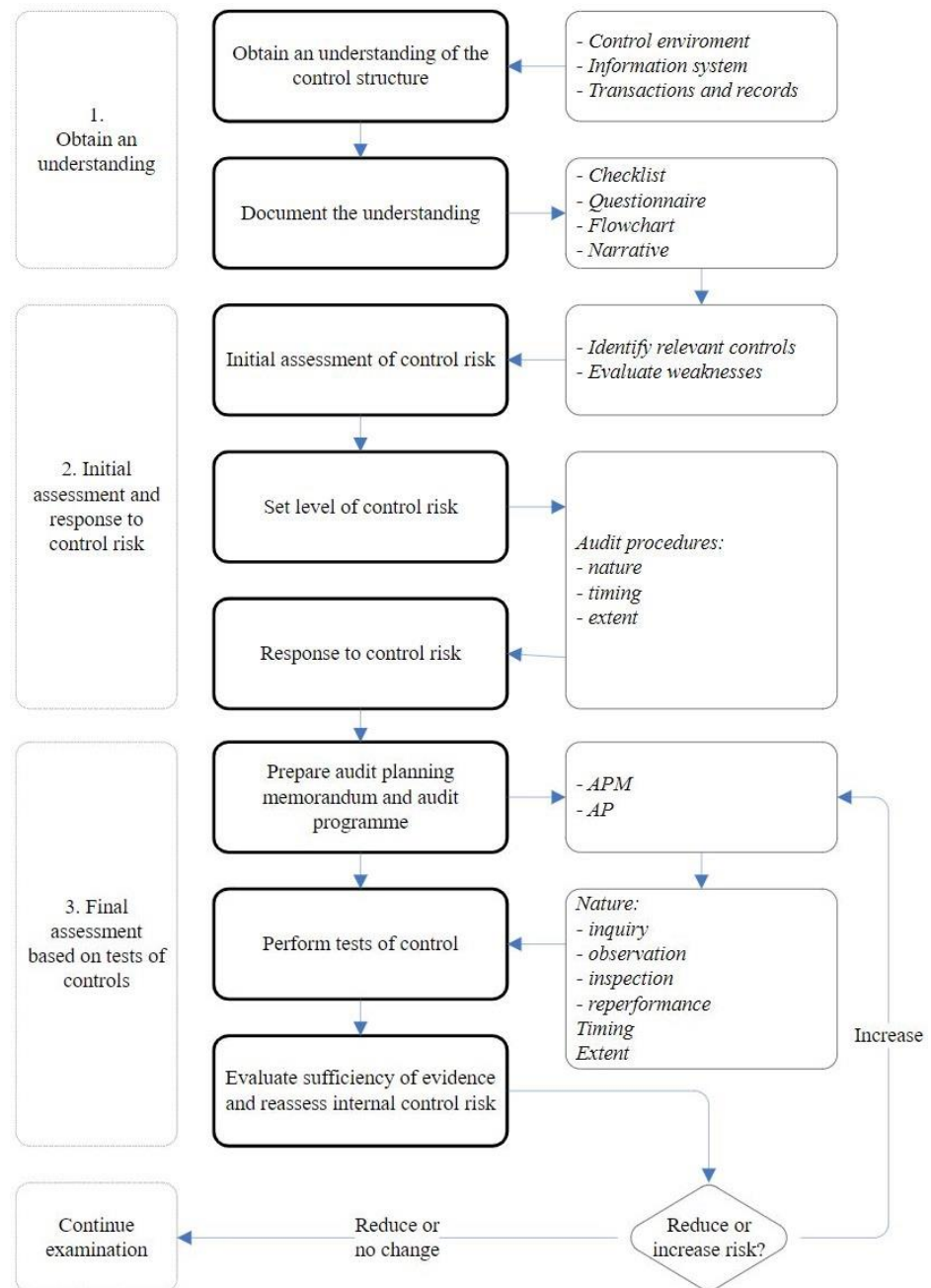
project risk management area, which are to plan risk management, identify risks, perform a qualitative risk analysis, perform a quantitative risk analysis, plan risk responses, implement risk responses, monitor risks. From the part of identify risks, expert judgment, data analysis, team skills are found to prove the selective options above are right.

Web Reference: <https://www.projectengineer.net/project-risk-management-according-to-the-pmbok/>

Identify Risks		
Inputs	Tools & Techniques	Outputs
1. Project management plan 2. Project documents 3. Agreements 4. Procurement documentation 5. Enterprise environmental factors 6. Organizational process assets	1. Expert judgment 2. Data gathering * Brainstorming * Checklists * Interviews 3. Data analysis * Root cause analysis * Assumption and constraint analysis * SWOT analysis * Document analysis 4. Interpersonal and team skills * Facilitation 5. Prompt lists 3. Meetings	1. Risk register 2. Risk report 3. Project documents updates

9) Assessment of control risk includes three steps. Which of the following is not one of these steps?

a) Obtaining an



understanding of internal controls and documentation of the controls

b) Evaluate sufficiency and appropriateness of audit evidence

- c) An initial assessment and response to assessed risk based on the design of internal controls resulting in an audit planning memorandum and audit plan
- d) A final assessment based upon test of controls of operating effectiveness

Comment: There are three steps of placing reliance on controls – one of principles of the test of controls, which include obtaining an understanding of the control structure, initial assessment and responses to control risk, final assessments based on tests of controls.

Web Reference: <https://methodology.eca.europa.eu/aware/GAP/Pages/CA-FA/Examination/Tests-of-controls.aspx>

10) Which of the following are not common internal control documentation techniques used by auditors?

- a) Questionnaires
- b) Company internal control manuals
- c) Narrative descriptions
- d) Check lists

Comment: Internal control documentation can take various forms, including flowcharts, policy and procedure manuals, and narrative descriptions, internal control questionnaires, risk and control matrices.

Web Reference: 1. <https://www.youtube.com/watch?v=MrTKjvxHdTo>

2.

https://www.researchgate.net/publication/334749304_Internal_Auditor_Back_to_Basics_Documenting_Internal_Controls

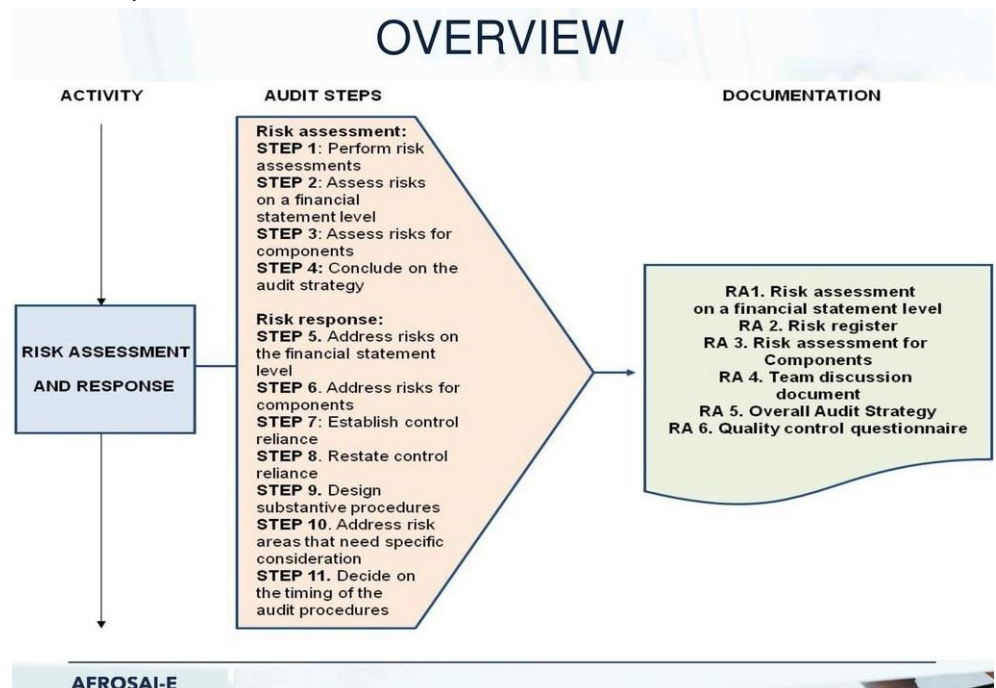
Documenting Internal Control Understanding

An auditor must document their understanding of internal control on every audit. Can be documented with:

- Questionnaires
- Narratives
- Flowcharts

11) Overall response to assessed risk may include:

- a) Identify the absence of key controls (where controls are lacking)
- b) Identify existing controls
- c) Incorporating additional elements of unpredictability in the selection of further audit procedures to be performed
- d) Determine potential material misstatements that could result



Comment: The overall responses to address the assessed risks of material misstatement may include emphasizing to the audit team the need to maintain professional, assigning more experienced staff or using specialists, providing more supervision, or incorporating additional elements of unpredictability in the selection of further audit procedures to be performed. Additionally, the auditor may make general changes to the nature, timing, or extent of further audit procedures as an overall response.

Web Reference: 1. <https://us.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/au-c-00330.pdf>

2. <https://pornazi.com/slide/14263067/>

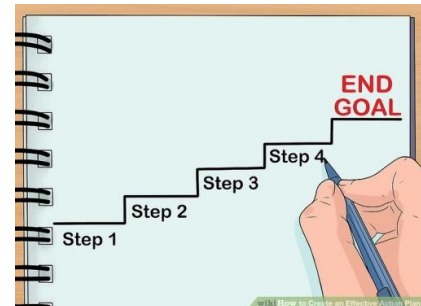
12) Action plan Should be

- a) Specific
- b) Countable
- c) Realistic
- d) Achievable

Comment: An action plan is a detailed plan outlining actions needed to reach one or more goals.

Alternatively, businessdictionary.com defines an action plan as a "sequence of steps that must be taken, or activities that must be performed well, for a strategy to succeed".

Web Reference: https://en.wikipedia.org/wiki/Action_plan



13) Which of the following is not a function of Project Management Tool?

- a) Plan a project
- b) Manage Tasks
- c) Manage Issues
- d) Time Tracking
- e) None of above



Comment: The key features of project management tools include planning and scheduling, communication and collaboration, documentation, resource management, risk management, budgeting, reporting, quality management and project administration.

Web Reference: <https://www.edureka.co/blog/project-management-tools/>

14) John, the project manager for the ERP Project, is about to complete the project phase review. The completion of a project phase is also known as which of the following?

- a) A lesson learned
- b) A kill point
- c) Earned value management
- d) Conditional advancement

Comment: Enterprise resource planning (ERP) is a process used by companies to manage and integrate the important parts of their businesses. A typical ERP implementation plan can be divided into six phases, each with specific objectives. Every business is unique, so the phases may vary somewhat depending on the company, and they also may overlap.

Web Reference: <https://www.netsuite.com.au/portal/au/resource/articles/erp/erp-implementation-phases.shtml#:~:text=The%20six%2Dpart%20ERP%20implementation,%2C%20testing%2C%20deployment%20and%20support.>

ERP Implementation Stages

1. Discovery and planning. A cross-functional project team gathers input about different business groups' requirements and the issues that the ERP system needs to solve.

2. Design. Analyze existing workflows, how you'll customize the software and how to migrate data to the new system.

3. Development. Configure the software to business requirements performance, prepare training materials and documentation, and begin to import data.



6. Support. The project team ensures that users have the support they need, and continues to upgrade the system and fix problems as needed.

5. Deployment. After completing configuration, data migration and testing, go live!

4. Testing. Progressively test the functions of the system and fine-tune development to address any problems that emerge.

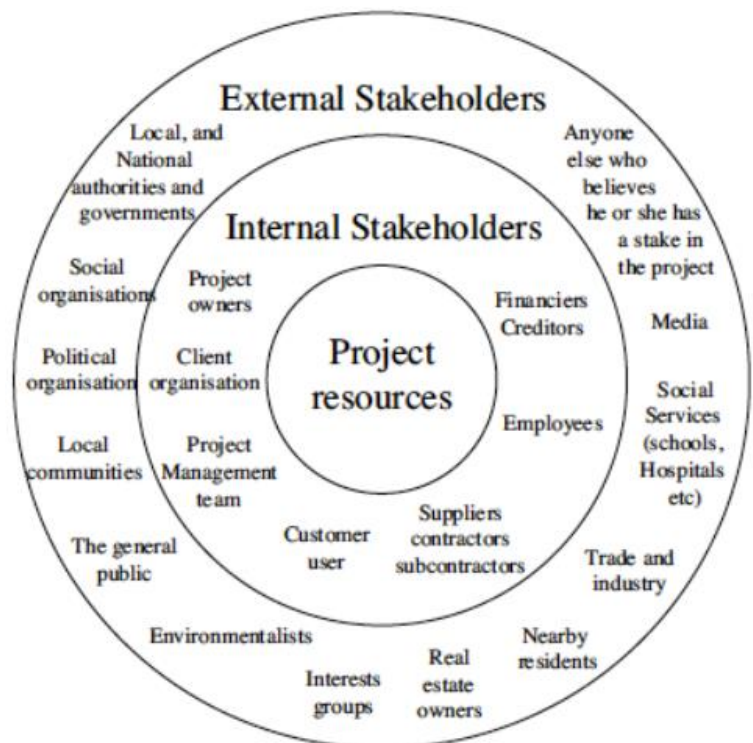
15) Which of the following is not a key stakeholder in a project that creates a service internal to an organization?

- a) The project manager
- b) External customers
- c) Project vendors
- d) Project team members

Comment: Typically in construction one divides stakeholders into internal and external parties. The internal stakeholders are defined as a stakeholder that is in legal contract with the project or finances the project. They can also be defined as primary stakeholders. The internal stakeholders can be broken down to two categories, the demand side and the supply side.

The external stakeholders have a direct interest in the project without being legally bound by a contract to the project. The external stakeholders are also described as secondary stakeholders and can be divided into two categories – private and public.

Web Reference: http://wiki.doing-projects.org/index.php/Managing_Stakeholders_in_Construction



16) Managing a project is best described as which one of the following?

- Establishing direction
- Functional controls over the project team and stakeholders
- Consistently producing key results expected by stakeholders
- Motivating and inspiring the project team to produce results that are expected by project stakeholders

WHAT IS PROJECT MANAGEMENT?

PROJECT	PROJECT MANAGEMENT
A temporary endeavor undertaken to create a unique result <i>network upgrade</i> <i>build an office</i> <i>develop a new vaccine</i>	Application of knowledge, skills, tools, and techniques to project activities to meet project requirements

Comment: 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.

Web Reference: 1. <https://www.4pmti.com/what-is-project-management/>
2. <https://www.apm.org.uk/resources/what-is-project-management/#:~:text=Project%20management%20is%20the%20application,a%20finite%20timescale%20and%20budget.>

- 17) You are the project manager for your organization. Influencing your organization requires which of the following?

- An understanding of the organizational budget
- Research and documentation of proven business cases
- An understanding of formal and informal organizational structures
- Positional power

Influences of Organizational Structure on Projects

Project Characteristics	Organizational Structure Type				
	Functional	Matrix			Project
		Weak Matrix	Balanced Matrix	Strong Matrix	
Project manager's authority	Little or none	Limited	Low to Moderate	Moderate to high	High to almost total
Percent of performing organization's personnel assigned full-time to project work	Virtually none	0-25%	15-60%	50-95%	85-100%
Who controls the project budget	Functional manager	Functional manager	Mixed	Project manager	Project manager
Project manager's role	Part-time	Part-time	Full-time	Full-time	Full-time
Common title for project manager's role	Project Coordinator/ Project Leader	Project Coordinator/ Project Leader	Project Manager/ Project Officer	Project Manager/ Program Manager	Project Manager/ Program Manager
Project management administrative staff	Part-time	Part-time	Part-time	Full-time	Full-time

PMBOK® Guide, 2000, 19, and PMBOK® Guide 2004, 28.

Comment: For Project Managers, a company's organizational structure type will

affect how resources are allocated to the project and will be a factor in how much influence the Project Manager will have within the organization.

Organizational structure is an enterprise environmental factor that can have an effect on the availability of resources and influence how projects are conducted. There are three basic types of organizational structures - functional organizational structure, matrix organizational structure and project-based organizational structure.

Web Reference: 1. <https://www.project-management-skills.com/organizational-structure-types.html>
2. <https://www.gristprojectmanagement.us/guide/organizational-influences-on-project-management.html>

18) What is the difference between a standard and a regulation?

a) Standards are mandatory; regulations are not.

b) Standards are optional; regulations are not.

c) Regulations and standards are essentially the same.

d) Regulations are usually mandatory; standards may be seen as guidelines.

Comment: A regulation is a requirement for your project. You have to follow regulations. Regulations include applicable laws and legal requirements. A standard is a guideline.

Your project should follow guidelines because they are there for a reason, but if you can justify why you need to approach something in a different way, then you don't have to follow the standard.

	Legal requirements	Standards
Adoption	Mandatory	Voluntary
Application	Specific to some food sectors (animal origin food, slaughterhouse, etc.)	Generic for any type of organization in the meat chain
Scope	Defines (legal) limits for some requirements	Gives a framework for managing certain issues (quality / food safety)
Audit methods	Defines methods/methodologies for testing certain issues	Does not prescribe any methods, tests, controls or inspection
Assessors	Inspection services	Trained auditors
Assessment program	Unannounced	Announced (audit program)
Payment	From the budget	By the Auditee
Criteria	Legislation	Standards + legislation

Web Reference: 1. <https://www.linkedin.com/pulse/standards-vs-regulations-lezli-engelking/>

2. <https://www.projectmanagement.com/blog/blogPostingView.cfm?blogPostingID=52929&thisPageURL=/blog-post/52929/The-Difference-Between-Regulations-and-Standards#> =

19) Which of the following is an example of a deliverable at the end of the requirements-gathering phase in a software design project?

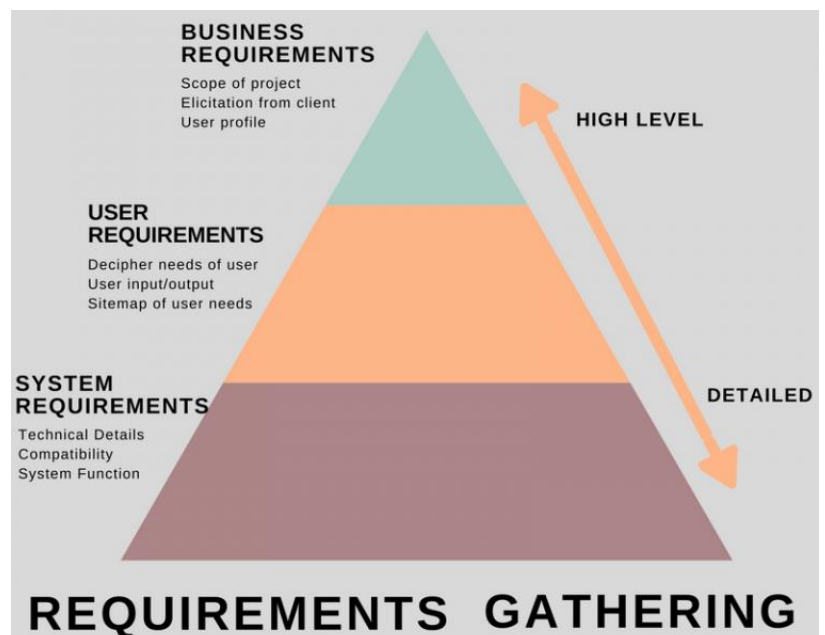
a) Responsibility matrix creation

b) Detail design document

c) Business needs

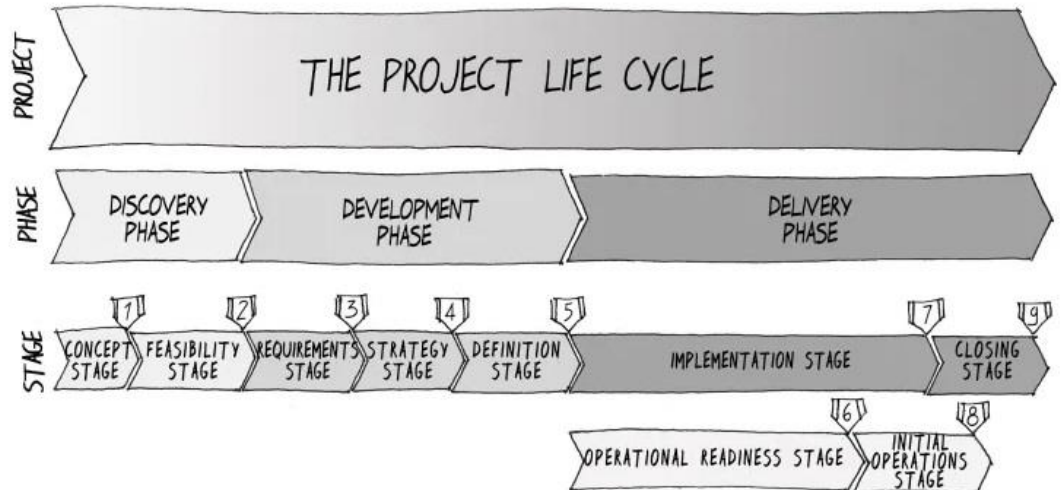
d) Project team assembled

Comment: Requirements gathering is a key step that must be completed before starting a project. There are 3 steps covered in this step, which include business requirements namely business needs, user requirements and system requirements. Gathering requirements aim at gathering information and content on your client's branding, objectives, target user, and the client's overall needs for the product.



Web Reference: 1. <https://digitalmarketing.temple.edu/agervasio/2017/07/18/requirements-gathering-types-and-methods/>
2. <https://www.justinmind.com/blog/gathering-requirements/>

- 20) At what point in a project would a kill point be acceptable?
- When a project team member is not performing as planned
 - When a project reaches the end of a project phase
 - When a project reaches the end of its budget
 - When a project manager determines the project team cannot continue



Comment: The kill point is the stage gate or phase review. At the review, the progress of the project is evaluated and a decision is made whether to continue or cancel the project. Some call these review points "Kill Points" while others call them stage gates. To manage projects, a project life cycle model is needed and shown above, with stage gates in which you can find the numbered symbols.

Web Reference: <http://blog.sukad.com/manage-projects-or-execute-projects/>

- 21) Of the following, which is not an exit criterion?
- Customer sign-offs
 - Quality metrics
 - Stakeholder analysis
 - Regulatory inspections

Comment: Exit criteria are the criteria or requirements that must be met before the completion of a specific task or process. It is predefined set of conditions that must exist before a unit of project work can be deemed completed. It is used a process control mechanism to verify that a process or sub-process has been completed and that its productise of acceptable quality.

Web Reference: <https://www.shresthanischal.com.np/2021/02/difference-between-exit-criteria-and.html>

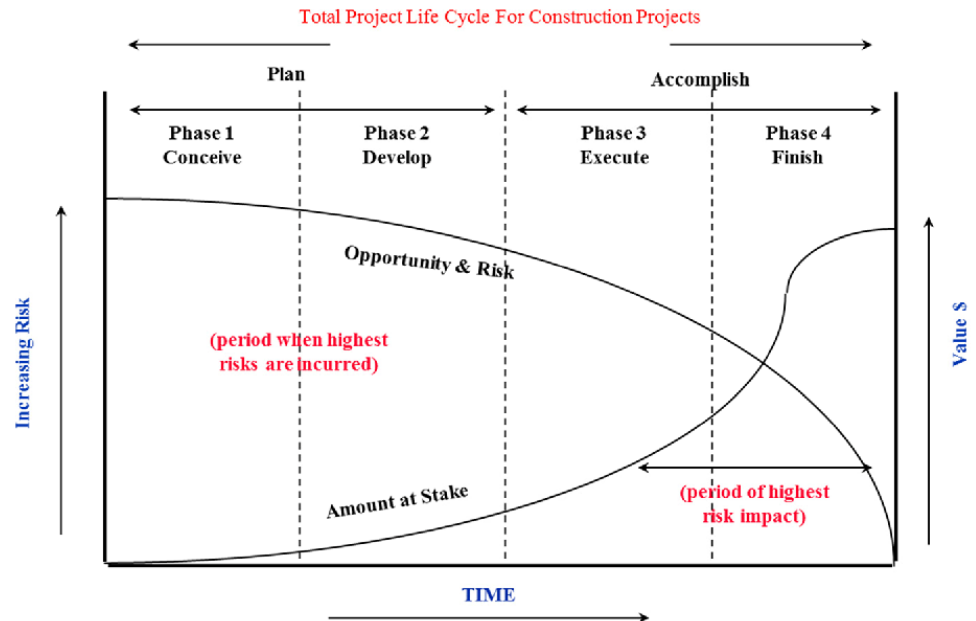
Exit Criteria
Exit criteria define when to stop testing such as at the end of a test level or when a set of tests have achieved specific goal.
Exit criteria are the criteria or requirements that must be met before completion of a specific task or process.
Exit criteria should be met before a process of unit of task is deemed to be completed.
It should be used as preventive tool during the completion of process.
It should analyze and prevent delivery of output which doesn't yield any success to process.
Sample Criteria:
→ All 100% components test executed with at least 90% pass ratio.
→ No extreme and critical outstanding defects in features.

- 22) At which point is the risk of failure the least but the consequence of failure the highest?
- During the early stages
 - During the middle stages
 - During the final stages
 - Risk of failure is even across all project phases

Comment: In the early stages, risk management can be conducted at the low cost because it is usually strategic and creative and limited to focusing on identifying and exploiting opportunities while project concepts are not accurately defined. During the execution and completion stage, risk management becomes more difficult and ineffective because of the potential considerable additional cost in the project.

All the stages of the project lifecycle should be considered very well during the identification of risk so that the risks can be analysed properly and the best occasion plan could be developed for each stage of the project life cycle.

Web Reference: <https://www.semanticscholar.org/paper/The-Importance-and-Use-of-Risk-Management-in-Stages-Rad-Yamini/53fe5d71055d89e0b200a8d24282127ab3243e8d>



23) In project estimation, project manager has to provide an expert judgement, which are considered of the following EXCEPT:

- Impact of inflation over the project lifecycle
- Required labour and labour rates
- Material costs and assumptions
- Costs of quality
- All of above
- None of above

Comment: Project managers do an estimation of the project cost as per the scope of activities

that they plan to perform in the project and as per the timelines that they estimate.

The project cost is the total cost that will be incurred over a project lifecycle. The estimation covers all sorts of direct costs and indirect costs. The main components of project cost are the cost of materials, equipment, and human resources, including labor and new hiring, pre-planning costs, and finally, the operating costs. Proper budgets impact the total scope of each and every phase and activity of any project.

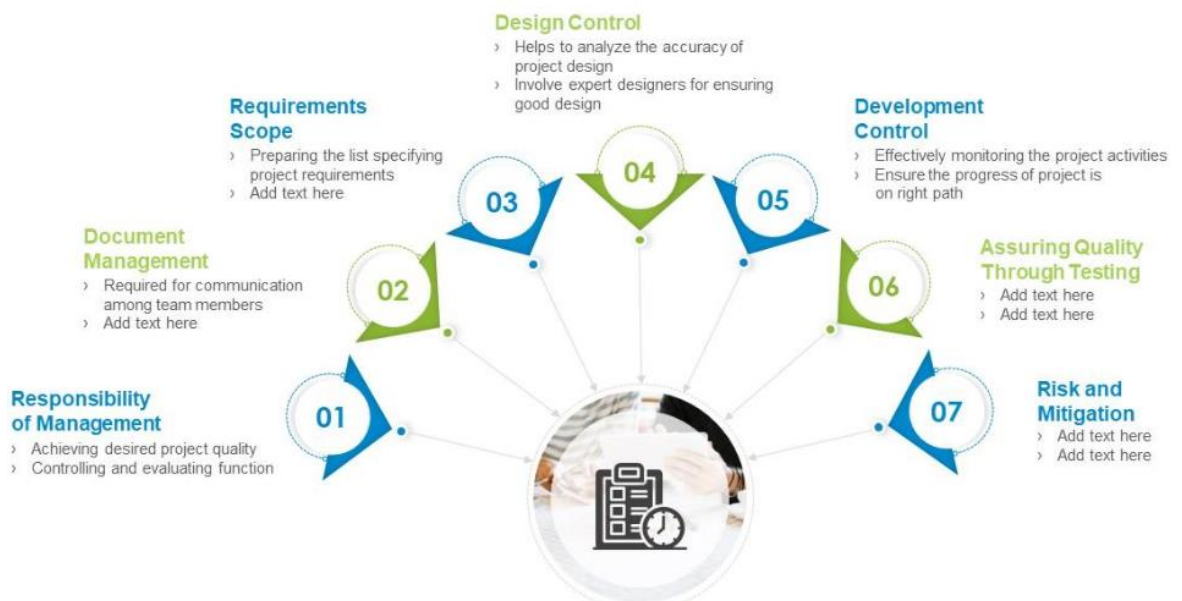


ESTIMATION OF PROJECT COST		
PROJECT COST is the total cost that will be incurred over the life cycle of a project. The main components are the cost of materials, human resources including labor & new hiring, pre-planning costs, and the operating costs		IMPORTANCE <ul style="list-style-type: none"> To determine financial viability Constant evaluation & control Remind to adhere to budget
TECHNIQUES		
Analogous Estimation This makes use of past results to estimate costs of a current project. Here, correct entry & storage of past cost data in a database is essential.	Parametric Estimation It uses past data as well as statistical models to estimate project costs. The accuracy in this technique is higher than analogous estimation	Bottom-up Estimation In this technique, we break down a project into smaller component & manager will then make a cost estimate for each smaller parts.
Top-Down Estimation This technique is of use when project manager have actual amount in hand within which they have to complete the project.	3-Point Estimation It makes use of 3 different scenarios for the estimation of project cost, that is, optimistic, pessimistic & most likely	

Web Reference: <https://efinancemanagement.com/investment-decisions/estimation-of-project-cost>

24) Which component is/are included in Quality Management Plan

- a) Quality objectives
- b) Key project deliverables
- c) Quality standards
- d) Quality control and assurance activities
- e) All of above



Key Components of Project Quality Plan

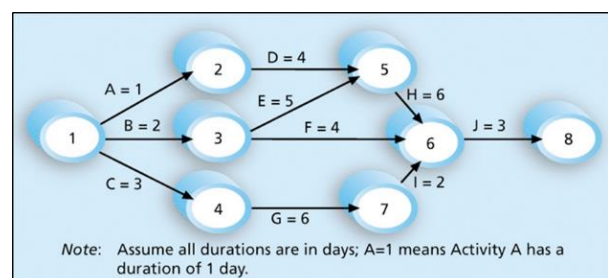
Comment: A Quality Management Plan (QMP) documents the process for ensuring quality measures are implemented on a project by defining quality methodology, standards, criteria, activities, expectations, tools and resources, reporting and corrective actions. The purpose of the QMP is to describe how quality will be managed throughout the project's lifecycle.

The key quality components of QMP are shown as follows, project deliverables and processes, deliverable quality standards, customer satisfaction, quality control activities, process quality standards, stakeholder expectations and quality assurance activities.

Web Reference: <https://acqnotes.com/acqnote/careerfields/quality-management-plan-qmp>

25) What's an activity sequencing

- a) The process for identifying and documenting dependencies among schedule activities
- b) The process for identifying critical activities
- c) The process for identifying ordering and schedule activities
- d) The process for planning the project



Comment: Activity sequencing reviews all activities in the WBS with the goal of identifying relationships between them and classifying all the timing relationships among tasks. These relationships (aka "linkages", "dependencies", "predecessors"). Task timing relationships are important because they control task sequencing and task start and end dates. There are four types of task relationships: A finish-to-start relationship, A start-to-start relationship, A finish-to-finish relationship, A start-to-finish relationship. Activity sequencing could help make your project stage very clear and easy to follow the project progress. The process for identifying and documenting dependencies among schedule activities

Web Reference: https://www.e-education.psu.edu/geog871/l5_p4.html

Learning Notes as below:

What is a project?

According to the PMBOK (Project Management Body of Knowledge) 3rd edition, A project is defined as a *"temporary endeavour with a beginning and an end and it must be used to create a unique product, service or result"*. In other words, it's a temporary initiative that is agreed on, planned and executed to achieve a specific goal.

Project management basic

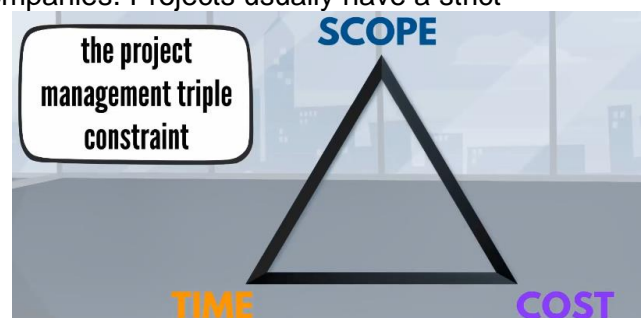
Project management triple constraints

There are triple main constraints in project management, which are time, scope and cost.

Time refers to a project being a temporary initiative. It is distinct from normal business operations in that. It has a predetermined start and end date. Normal operations are characterized by routine work in established companies. Projects usually have a strict expiry date.

The output of a project together with the work to create is called **project scope**. The scope of each project is unique. They can be project outputs that are similar, for example, building the exact same house but in a different place.

The third key attribute is the **cost** which is the resources specifically dedicated to accomplishing the goal in mind.



These three attributes form the **project management triple constraint**. Time, scope and cost are dependent on each other after determining them at the start. if one of them changes, it will trigger a change in one or both of the others.

Triggers of starting business needs for projects

There are a few key triggers that will start a business into executing a project, which is discussed as follows.

There might be a **market need**. This is when your company wants to develop a product to address their client's needs or to keep up with the competition.

There could be a **business need**. During the financial crisis, for example, many companies had to execute projects to reduce costs, optimize processes or increase revenues by expanding the customer base just to stay in business.

The demand for a project may arise from **technological advancement**. Technology may advance to the point where your business can be automated, or your products need to change.

- MARKET NEED
- BUSINESS NEED
- TECHNOLOGICAL ADVANCEMENT
- CUSTOMER REQUEST
- LEGAL REQUIREMENTS
- SOCIAL NEEDS
- ECOLOGICAL CONSIDERATIONS

PROJECT =



A project may come as the result of a **customer request**. Say if a key customer requires a tailored service or product. For example, you are a car dealer, and your biggest client is a taxi company and they request making your internal systems more compatible with theirs. You are likely to approve such a project.

Or due to **legal requirements** such as regulations and laws changing, the business would need to comply. Social media is a prime example, where laws and regulations are constantly updating as their technology and features advance. You've probably noticed the general data privacy regulations introduced in the EU. Right? if not, just check your email inbox.

They could also be **social needs**. These can be anything from digging tunnels to extending hospitals to building an Eiffel Tower. Anything that a government or organization can do to satisfy a social need.

Lastly, there are **ecological impact considerations**. Companies are often required and obliged to improve their industrial processes to reduce emissions. Many countries have found to only allow electric cars on the road by a certain year, a massive project for car manufacturers.

Prioritizing projects

The demand will require a project proposal and the owner of this proposal will need to put it to the attention of higher management to compete for the limited resources of the organization. Management will then review the projects and decide which ones to execute, which to discard and which to postpone for a later date.

Urgency is a key factor when selecting projects.

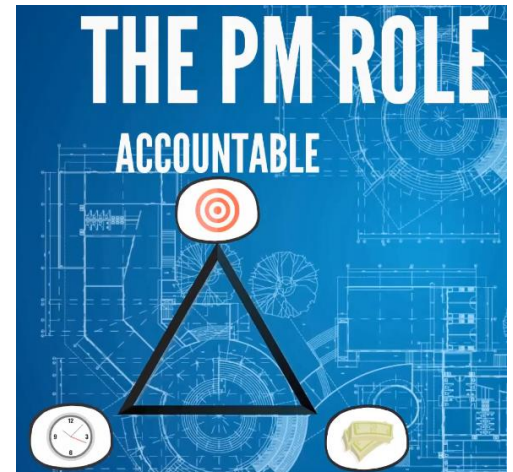
This process is referred to as **project selection**. It's an essential task for top management. They must select the projects which bring the most value to the company. When the Board of Directors is presented with several possible projects, they often select a few of them and add them into a project portfolio. The Board of Directors then dabbles in what is called **project portfolio management**. This is the process of prioritizing projects and the administration and control of large sets of projects and programs. Basically the objective is to achieve the results and combine resources across projects in an optimal way.

Project manager

Once a project has been selected by the Board of Directors as the current initiative. It's assigned to project managers to make sure that project execution is successful.

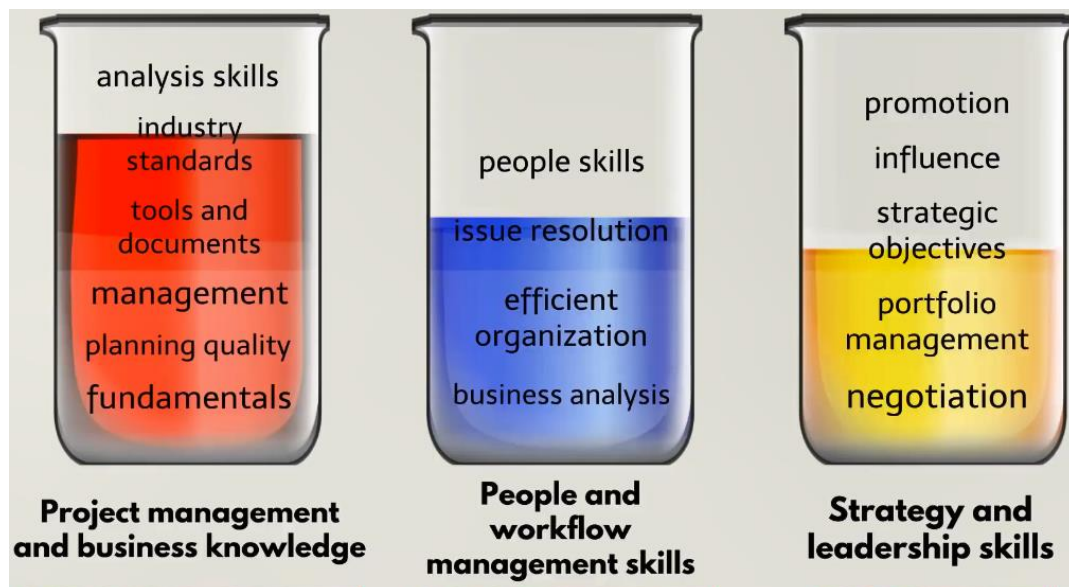
A project manager will be accountable for the project's success. He implicitly agrees to work within these constraints and still meet the goal. It is the project manager's duty to assess a project and deem the constraints practical or otherwise. In real life, however, the time and resources will usually be just enough to complete the goal. The project manager's job then is to best utilize them.

Project managers are accountable not only for their own tasks, but also all the tasks that other parties must work on and complete. For any work, that is important for the ongoing progress of the project, the manager needs to have full control and visibility of all project-related work and take action immediately when identifying something is not progressing on track.



Project manager skills

There are countless attributes that a project manager will have both professional and personal, which lead them to be responsible for complicated projects. Three major skill sets are displayed and discussed below.



The first set is the **project management and business knowledge** starting with project manager fundamentals, leading project work, addressing project situations and knowledge of the project lifecycle. Then you've got planning quality, management of project critical areas, effective communication, and work with project management tools and documents. Moreover, business analysis skills, business acumen and awareness and knowledge of the project managing industry standards are vital parts.

Secondly, **people and workflow management skills** are indispensable, which include business analysis, building an efficient organization of project work, defining team members'

responsibilities and the due date, issue resolution skills, people skills working with stakeholders and motivating the project team.

The third part is **strategy and leadership skills**. These include negotiation, managing the program of projects and project portfolio, working towards the strategic objectives of the overall program, influencing shareholders and promoting the values and benefits of the project or program to the business strategy.

Project management History

Ancient Egypt

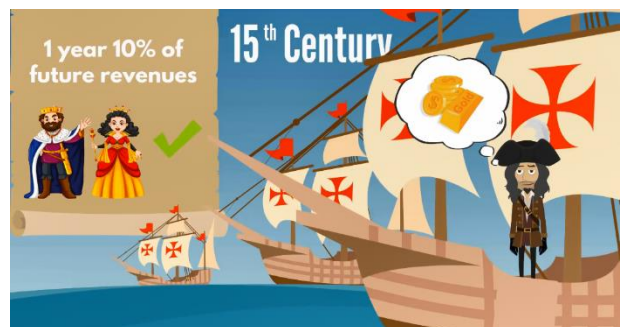
For Great **Pyramids** in Egypt as one of seven wonders of the world, its construction was no doubt a massive endeavor with a unique result. Great amounts of materials and workforce were employed and it is supposed that the innovative plan and management were engaged to organize and execute the construction work.



15th century

The well-known overseas expeditions to find new lands and resources started in this 15th century. One particular project manager - **Christopher Columbus** had tough times finding the budget for his initiative to find a path through the West to Asia. His budget was three ships and a timeline of one year with a request of 10% of future revenues from any discoveries.

He departed in 1492 and made the first steps toward the discovery of the American continent



19th century

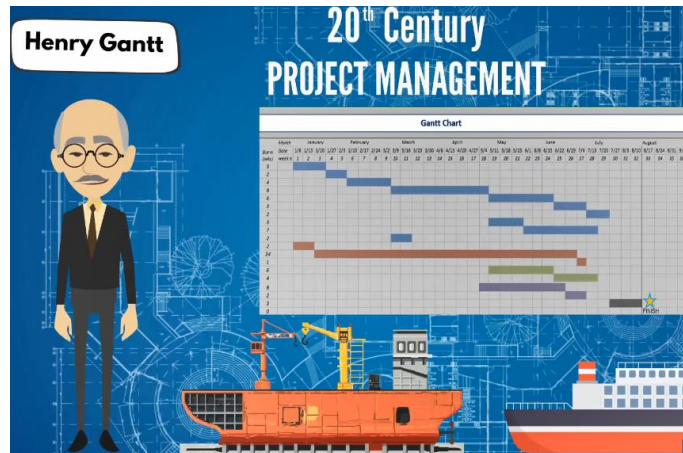
Automation and mass production started the fastest technological growth in the Industrial Revolution. It changed the ways of Trade and industries. The economy and society had varied considerably. The competition started growing, and the better use of time and resources employed for given work became much more critical.



20th century

Project management was developed greatly in 20th century.

Henry Gantt, one of the forefathers of project management, created a simple and ingenious table that illustrates activities that need to be performed on the vertical axis and a time indicator on the horizontal axis. It also was prominently used during World War I to plan and track the progress of Navy ship construction.



The revolutionary **Critical Path Method (CPM)** was invented by DuPont and Remington Rand corporations in the late **1950s**. The CPM helped project managers calculate the fastest way to complete a project. Together with the expected durations, it helps project managers identify the best way to sequence the activities in their project.

In the 1960s, project management was established as a profession. Two associations were founded, the International project management association (**IPMA**) and a few years later the project management institution (**PMI**). Their goal was and still is to develop the project management discipline and to establish standards, best practices, tools and guidelines.



Project management in the future

21st century

In the 21st century, businesses have progressed technologically and expanded geographically like never before. What is exceptional about today's projects is the amount of complexity around the desired result. You can imagine the difference between opening a physical store versus an online one, designed connection speed, online payments, security, client data, regulations, customer service and so on. The activities, people and risks to consider become so much more.

The life cycle of a project

There are **five terminologies** being discussed in this part.

Project management office

Project management office (**PMO**) is responsible for managing, coordinating and consulting project-related work. In the PMO, it consists of project and program managers, project coordinators, analysts and more, all working to ensure the projects of the organization are properly managed. The types of PMO vary in size and structure from company to company.



It's usually the organizations that are more dynamic and changing which require a PMO to govern project work. Companies that work predominantly with projects are structured in a way they can easily form teams to execute projects while industrial companies rarely need to maintain a significant PMO unit.

The role and importance of a PMO unit can also be diverse. A PMO will have a strategic role if they are responsible for project selection and project portfolio management. Or it can have a more execution-focused role when given the responsibility to lead the project management.

Project team

The project team are the experts responsible for the execution of the work, for example, developers on a software project or designated managers. They can be from different departments and can also include external employees or companies and vendors.



Usually, **joint teams** are created to connect employees from more than one company. This is one way to ensure the project team has broader expertise and the capabilities to deliver a more complex project.

Project stakeholder

Project stakeholders include all individuals or organizations who participate in a project can influence or are influenced by the project work and results. There are two types of project stakeholders: internal project stakeholders and external project stakeholders. Internal project stakeholders can be management, customers, competitors, vendors, and clients while external project stakeholders are the ones who could influence the project work even without being involved in the project.



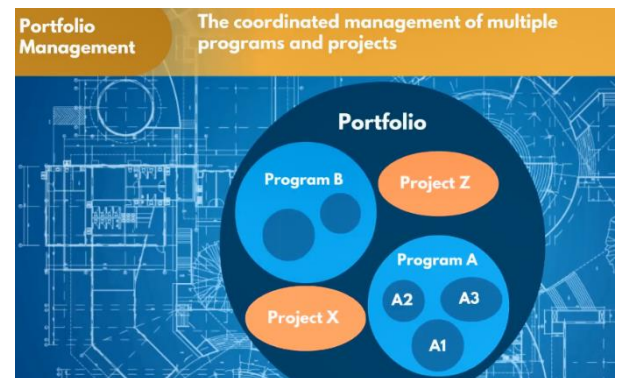
Program management

Program management is the coordinated management of multiple projects which have similarities such as similar goal, similar resources etc. By managing them as a program, the organization gains advantages by realizing efficiencies and synergies.



Project portfolio management

Project portfolio management refers to the coordinated management of multiple programs and projects. For example, in a pharmaceutical company, there are loads of separate research projects for new drugs, and such corporations really need strong portfolio management to follow this huge work and resources.



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