

Essentials of Project Management

Why we study PM?

- It enhances business performance
- It is a time and cost saver
- It optimizes resources in an organization
- It serves as a personal development tool
- It serves as a leadership tool
- It is important for effective utilization of resources
- It is important for development of resources
- It incorporates innovations
- It helps integrate varied interest groups
- It brings stability in the society
- PM makes money

Unit 1

Introduction to Project Management

Brainstorming ...

- What is the difference between today's investment business and ancient investment achievements
- What are the major things that we need to have for a given activity to be successful?

- Champions of project management suggest that humankind has achieved a lot through history
- The earliest achievements include; Egyptian Pyramids, the Great Wall of China and the Axumite Civilization and Lalibela, and the like
- But as to how they were managed remains rather vague
- In fact, project management then and now are totally different in several respects
- Captives and conscripts must have involved in the past. As a result, early achievements were results of involvement of vast armies of people.

Drivers of the evolution of modern management

- Development of management thought: **Thomas Owen, Frederick Taylor, Henry Gantt and Henri Fayol**
- Creation of special tools and techniques
- Development of information and communication technologies
- Socio-economic and political influences
- Expanding scope of project management
- Growing competition and complexity

Evolution of Management Thoughts

- Growing competition and complexity of managing large business organizations gave a push to the development of management concepts and principles.
- Competition gave rise to factors like
 - Technology innovations
 - Modernity
 - Increase in capital investment
 - Freedom at national and international markets

Evolution of Management Thoughts contd.....

- Complexity came because of:
 - Increase in the size of business organizations
 - High degree of division of labor and specialization
 - Pressure of various conflicting groups
- ✓ All these have demanded the efficiency in management process which cannot come by trial and error methods but by developing and applying sound management concepts and principles

“Management is the process of designing and maintaining an environment in which individuals, working together in groups, accomplish their aims effectively and efficiently.”

This definition implies the following

- A process
- Universal application
- Applicable to all managerial levels
- Common aim- creating profits
- Effectiveness and efficiency

Critical Reflection

- How do we efficiently organize people at work with new technologies of production and large markets?
- How do we hire, pay, and coordinate people at work to gain productivity?
- How do we do all of these to create economic wealth (profit)?

General Management Skills

- Leading
- Communicating
- Negotiating
- Problem solving
- Influencing the organization

Leading

- Establish direction
- Align people
- Motivate and inspire

Communicating

- Written and oral, listening and speaking
- Internal, external
- Formal, informal
- Vertical and horizontal
- Customer orientation (listening to the customers needs and requirements)

Negotiating

- Conferencing with others to come to terms or reach an agreement
- Assisted negotiation
 - Arbitration/Mediation
- Working with the customer to insure needs (project goals) are met
- Insuring customer satisfaction

Negotiation during project life

- Scope, cost, and schedule objectives
- Changes to scope, cost, and schedule objectives
- Contract terms and conditions
- Assignments
- Resources

Problem Solving

- Distinguish between causes and symptoms
- Problems can be
 - Internal/external
 - Technical/managerial
 - Interpersonal

Decision making

- Analysis to generate viable solutions
- Can be made or obtained (e.g. from the customer)
- Time relevance (too early or too late may not work)

Influencing the Organization

- Ability to get things done
- Understand the formal and informal structures of all the organizations involved
 - The performing organization
 - The customer
 - Contractors
 - Etc.

Critical Reflection

Can project management training guarantee project success?

Argue for or against.

Why a project ?

- Reducing costs
- Increasing revenues
- Eliminating waste
- Increasing productivity and efficiency
- Taking advantage of market opportunities
- Filling social needs; improving service to customers or clients
- Responding to the activities of competitors

Why a project?

- Responding to external changes (e.g development of new technology)
- Responding to government initiatives or new laws or political consideration
- Resource availability –opportunity to make profitable use of available resource, and
- Natural calamity – hedging against the adverse effects of natural events as drought or floods

Defining a Project?

- What exactly is a project? You hear the word used all the time at work, as well as at home.
- An **intervention** that consists of a **set of planned, interrelated activities** designed to achieve **defined objectives** within a **given budget** and a **specified period of time**.
- A series of activities aimed at bringing about clearly specified objectives within a defined time-period and with a defined budget.
- Projects can be viewed as having four essential elements: a specified timeframe, an orchestrated /arranged approach to co-dependent events, a desired outcome, and unique characteristics.

What is a Project?

- A project is a complex set of activities where resources are used in expectation of returns and which lends it to planning, financing and implementing as a unit.
- It usually has a **well defined sequence of activities/** of investment and production activities and a **specific group of benefits** that can be identified, quantified and valued either socially or monetarily.
- A project also has **boundaries** which make it to be distinguishable from another project. In addition to its time sequence of investments, production and benefits, the project normally has a **specific geographical location**, with **identifiable targets and beneficiaries**.

Defining a Project?...

1. A project is an exception. Unlike routines /procedures, projects involve investigation, compilation, arrangement, and reporting of findings in some way that provides value. The answers to the basic project questions cannot be found in the routines of your department, which is what makes it exceptional. The processes involved with the project fall outside your department's "normal" range of activities and functions.

2. Unique Activities

- The activities in a project must be *unique*. A project has never happened before, and it will never happen again under the same conditions. Something is always different each time the activities of a project are repeated. No two projects are the same. Projects differ from each other with regard to time and space, deliverables or outputs as well as other characteristics of the projects.

Defining a Project?...

- 3. *Project goals and deadlines are specific.*** Recurring tasks invariably are developed with departmental goals in mind.
- Projects have identifiable starting and stopping points. Whereas departmental routines are general in nature, project activities are clearly specific.
 - Projects have a specified *completion date*. This date can be self-imposed by management or externally specified by a customer or government agency.
 - All projects have start-up and close-down stages.
 - However, projects may often have intended and unintended social, economic and environmental impacts that far outlast the projects themselves.

Defining a Project?...

4. ***The desired result is identified:*** A project is well defined only when a specific result is known.
- By comparison, departmental routines involve functions that may be called “process maintenance.”
 - That means that rather than producing a specific outcome, a series of recurring routines are aimed at ensuring the flow of outcomes (e.g., reports) from one period to another.

Defining a Project?...

- 1. A project is a sequence of unique, complex, and connected activities having one goal or purpose and that must be completed by a specific time, within budget, and according to specification.**
 - This definition tells you quite a bit about a project.
 - To appreciate just what constitutes a project take a look at each part of the definition.
- 2. Project activities are related, regardless of departmental routines.** Projects are rarely so restricted in nature that they involve only one department. The characteristics of a department involve related routines, but projects are not so restricted. Thus, a project is likely to involve activities that extend beyond your immediate department, which also means that your project team may include employees from other departments. **Highly interactive with other agencies**
 - Project execution involves a high degree of interaction with agencies within (internal departments) and outside the organization (e.g. suppliers, government agencies, etc.).
 - Need-based/problem driven: A project is generally initiated by a perceived need in an organisation

Defining a Project?...

Connected Activities/Interdependencies.

- Connectedness implies that there is a logical or technical relationship between pairs of activities.
- There is an order to the sequence in which the activities that make up the project must be completed.
- They are considered connected because the output from one activity is the input to another.
- A project consists of a number of interrelated activities that are performed sequentially or in parallel.
- What is needed as input in order to begin working on this activity?
- What activities produce those as output?

Defining a Project?...

- The output of one activity or set of activities becomes the input to another activity or set of activities.
- Specifying sequence based on resource constraints or statements such as “Abebe will work on activity B as soon as he finishes working on activity A” should be avoided because they establish an artificial relationship between activities. What if Abebe wasn’t available at all? Resource constraints aren’t ignored when you actually schedule activities.
- The decision of what resources to use and when to use them comes later in the project planning process.

Defining a Project?...

Complex Activities

- The activities that make up the project are not simple, repetitive acts, such as mowing the lawn, painting the house, washing the car, or loading the delivery truck. They are *complex*. For example, designing an intuitive user interface to an application system is a complex activity.

Sequence of Activities

- A project comprises a number of activities that must be completed in some specified order, or *sequence*.
- An *activity* is a defined chunk of work.
- The sequence of the activities is based on technical requirements, not on management prerogatives. To determine the sequence, it is helpful to think in terms of inputs and outputs.

Defining a Project?...

Progressive Elaboration

- Projects are developed in steps
- This means that the project scope will be broadly described early in the project and becomes more explicit and detailed as the project team develops better and more complete understanding of the objectives and deliverables.
- We learn more and more about the project as it goes on.

Defining a Project?...

One Goal or Purpose

- Projects must have a single *goal*, for example, to design an inner-city playground for ADC (Aid to Dependent Children) families. However, very large or complex projects may be divided into several *subprojects*, each of which is a project in its own right. This division makes for better management control.
- A project has a purpose and all aspects of the project articulation must support that purpose.

Defining a Project?...

Within Budget

- Projects also have *resource limits*, such as a limited amount of people, money, or machines that are dedicated to the project.
- While these resources can be adjusted up or down by management, they are considered fixed resources to the project manager.

According to Specification

- The customer, or the recipient of the project's deliverables, expects a certain level of functionality and quality from the project.
- These expectations can be self-imposed, such as the specification of the project completion date, or customer-specified, such as producing the sales report on a weekly basis.

Defining a Project?...

- Although the project manager treats the specification as fixed, the reality of the situation is that any number of factors can cause the specification to change.
- For example, the customer may not have defined the requirements completely, or the business situation may have changed (this happens in long projects).
- It is unrealistic to expect the specification to remain fixed through the life of the project.
- Systems specification can and will change, thereby presenting special challenges to the project manager.

Defining a Project?...

High Degree of Activity

- Especially during the execution stage, a project involves several hectic activities.

Conflict

- A project may be impacted by competing activities with respect to resource needs or management focus.

Life Cycle

- A project has different phases and is completed in stages

Defining a Project?...

High level of uncertainty & risk

- As a result of its uniqueness, dependency on other agencies and its relatively long-term nature; a project is faced with a lot of uncertainty and risk

Teamwork/multi-skill

- Projects require a team of people with different skills to get the job done

Types of Projects

- Basically three types of projects can be identified depending upon how new resources committed to them relate to existing economic activities.
- ***First the largest type of project, around which project analysis grew up, involves new investment***
- New investments are designed to establish a new productive process independent of previous lines of production.
- They often include a new organization, financially independent of existing organizations.
- ***Secondly there are expansion projects which involve repeating or extending an existing economic activity with the same output, technology and organization.***

Types of Projects...

- ***Thirdly there are updating projects which involve replacing or changing some elements in an existing activity without major change of output.***
- Updating projects involve some change in technology but within the context of an existing, though possibly reformulated organization.
- With changing economic circumstances the balance between these types of projects may change.
- Whatever type of project is being analyzed, the effect of using new resources has to be distinguished from the effect of existing operations.
- The incremental resource cost has to be identified, that is that will be committed in a project over and above what would otherwise have been used.
- Similarly the incremental benefits, the additional benefits over and above what would otherwise have occurred, have to be identified.
- Both incremental costs and incremental benefits have to be valued.

Types of Projects...

- For new investments the whole of the output and the whole of the costs will be incremental for expansion and updating projects, the effects of the new resources have to be separated from the effects of the existing resources.
- Project costs are generally easier to identify and estimate than project benefits.
- Costs may be met directly by a particular institution; benefits are frequently more diverse.
- **A distinction can be drawn between directly productive and indirectly productive projects.**
- The former are those where the **immediate costs and benefits accrue to a single organization**; a consequence is that this organization is able to calculate and commit any resulting surplus to new activities.

Types of Projects...

- **Indirectly productive projects** broadly speaking are those where the benefits received from new resources do not accrue to the organization responsible for carrying the costs.
- In these circumstances, any resulting surplus is not concentrated in the hands of a single organization.
- Most infrastructure projects, such as roads are indirectly productive; the benefits accrue to users and producers whilst costs are met by government.
- Of course, several projects, especially large ones, may be a mixture of directly and indirectly productive activities, for example, a rural development project involving both increases in agricultural output through farmer investment as well as roads, schools and other infrastructure facilities.

Projects

- The importance of the distinction between directly and indirectly productive projects is that benefits from new resources are more difficult to estimate in the case of indirectly productive projects. Nonetheless, whenever possible they should be incorporated in the project statement.

Project Parameters

- Five constraints operate on every project:
 - **Scope**
 - **Quality**
 - **Cost/ budget**
 - **Time**
 - **Resources**
- These constraints form an interdependent set; a change in one can require a change in another constraint in order to restore the equilibrium of the project.
- In this context, the set of five parameters form a system that must remain in balance for the project to be in balance.
- Because they are so important to the success or failure of the project, it is better to discuss them individually.

Project Parameters

Scope

- Scope is a statement that defines the boundaries of the project. **It tells not only what will be done but also what will not be done.** In the information systems industry, scope is often referred to as a *functional specification*. In the engineering profession, it is generally called a *statement of work*. Scope may also be referred to as a document of understanding, a scoping statement, a project initiation document, and a project request form. Whatever its name, this document is the foundation for all project work to follow. It is critical that scope be correct.
- **Beginning a project on the right foot is important,** and so is staying on the right foot. **It is no secret that scope can change.** You do not know how or when, but it will change. Detecting that change and deciding how to accommodate it in the project plan are major challenges for the project manager.

Project Parameters

Quality

- Two types of quality are part of every project:
- The first is ***product quality***. This refers to the quality of the deliverable from the project. The traditional tools of quality control are used to ensure product quality.
- The second type of quality is ***process quality***, which is the quality of the project management process itself. The focus is on how well the project management process works and how can it be improved. Continuous quality improvement and process quality management are the tools used to measure process quality.
- A sound quality management program with processes in place that monitor the work in a project is a good investment. Quality management is one area that should not be compromised. The payoff is a higher probability of successfully completing the project and satisfying the customer.

Project Parameters

Cost

- The **monetary** cost of doing the project is another variable that defines the project. It is best thought of as the budget that has been established for the project.
- This is particularly important for projects that create deliverables that are sold either commercially or to an external customer.
- Cost is a major consideration throughout the project management life cycle. The first consideration occurs at an early and informal stage in the life of a project.
- The customer can simply offer a figure about equal to what he or she had in mind for the project.
- Depending on how much thought the customer put into it, the number could be fairly close to or wide of the actual cost for the project.

Project Parameters

Time

- The customer specifies a time frame or deadline date within which the project must be completed. To a certain extent, cost and time are inversely related to one another. The time a project takes to be completed can be reduced, but costs increase as a result. Time is an interesting resource. It can't be inventoried. It is consumed whether you use it or not.
- The objective for the project manager is to use the future time allotted to the project in the most effective and productive ways possible.
- Future time (time that has not yet occurred) can be a resource to be traded within a project or across projects. Once a project has begun, the prime resource available to the project manager to keep the project on schedule or get it back on schedule is time. A good project manager realizes this and protects the future time resource jealously.

Project Parameters

Resources

- *Resources* are assets, such as people, equipment, physical facilities, or inventory, that have limited availabilities, can be scheduled, or can be leased from an outside party. Some are fixed; others are variable only in the long term.
- In any case, they are central to the scheduling of project activities and the orderly completion of the project.

Project Parameters

Risk

- Project managers manage projects in uncertain situations.
- **Project risk:** the likelihood of the occurrence of an uncertain event, usually a negative one that may adversely affect the successful completion of a project. **Unlike uncertainties, likelihood of occurrence can be attached to risks**
- Project risk indicates that projects travel through rough roads.
- **This makes the field of project mgt very distinct and requiring competitive knowledge, skills, tools and techniques.**
- In many cases, project management may spend much time in an attempt to adapt to unpredicted change.
- So, we should plan for things that could happen (positive or negative) and deal with them when they do.

Self-check Exercise

Which constraint is affected? ■ Scope, Risk, Quality, Cost/ budget, Time, Resources

1. The project was running late, so the project manager decided to release it on time even though it was missing some of its features'-----Time
2. The team wanted to add more testers to find defects, but the project manager overruled them. _____S_____
3. A construction project manager assumed that the weather would cooperate with the plans to complete the job, but thunderstorms have derailed the project. _____Risk
4. The company did not have enough money to invest in the project, so they had to draft people from other departments to work part time to get the job done. _____Resource
5. The project manager did not take software license fees into account, which caused the budget to balloon out of control. C/B
6. About halfway through the project, the project manager realized that she would start another project soon. She then went through the schedule to try to find ways to speed up the deadline. _____Time

Examples of Projects

- Constructing a road, building or facility
- The expansion of primary education in a given region/locality or reforming school curriculum,
- Organising an event, like a wedding or a party
- Case management, like social work or legal issue
- Working on solving organisational problems like inefficiency
- Renovating an old house
- Restructuring a system
- Developing a new software application
- Creating a new radio/ **media** advertisement
- Conducting marketing research, etc.
- Running a campaigning for political office
- Building a water system for a community

Difference between projects

One project could be different from another in the following respects:

1. Size and number of separate activities
2. Number of various skills, departments and people involved
3. Amount of time involved
4. Number of different activities involved
5. Amount of money involved
6. Impact on the organisation and customers
7. Control procedures
8. Communication procedures

Operational works Vs. projects

Operations	Projects
<ul style="list-style-type: none">❑ Repetitive❑ Eternal❑ Evolutionary❑ Equilibrium❑ Stable resources	<ul style="list-style-type: none">❑ Unique❑ Finite❑ Revolutionary❑ Disequilibrium❑ Transient

Similarities:

- performed by people
- constrained by limited resources
- planned, executed and controlled

Strategic Plans Vs. Projects

- Projects are undertaken as a means of organising activities that are impossible to address within the normal operational limits of the organisation.
- Strategic plans have a longer term orientation
- An organization may be working on its longer term strategy without temporarily having a project
- Thus, projects are usually a means to achieve the organisation's strategic plan.

Programmes Vs. Projects

- **A program** is a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. larger in scope and may involve several projects.
- E.g. A construction firm may contract a program to connect rural villages to urban centres with asphalt roads.
 - This program may design several road projects.
- Ethiopia's Food Security Programs (FSP) (e.g. 2010-2014) reflects on women's poverty and food insecurity status:
 - pays attention to women's constraints such as work burden related to water shortage, lack of access to credit and extension services, lack of information (on family planning and income generation), and issues of malnutrition.
 - Intervention projects to address the constraints and ensure women's benefit: improving health, expanding livelihood opportunities (income diversification); public works project & sub-projects to ease women's burden in order to ensure their participation as well as benefit from public work interventions (e.g. assigning women to tasks that are less physically demanding, or to attend nutritional classes or other activities that might be beneficial to them and their children)

The Links between Projects and Programs

- It is necessary to distinguish between projects and programs because there is sometimes a tendency to use them interchangeably.
- While a project refers to an investment activity where resources are used to create capital assets which produce benefits over time and has a beginning and an ending with specific objectives, a program is an on-going development effort or plan.
- A program is therefore a wider concept than a project. It may include one or several projects at various times whose specific objectives are linked to the achievement of higher level of common objectives contained in the program.

The Links between Projects and Programs

- Perhaps the distinction between projects and programs would be clear if we see the basic characteristics of projects.
- **Projects in general** need to be **SMART**.
- **S – Specific**
- A project needs to be specific in its **objective**. A project is designed to meet a specific objective as opposed to a program, which is broad. A project has also specific **and clear set of activities**. Projects have well defined sequence of investment and production activities and a specific group of **benefits**. A project is also designed to benefit a specific **group of people**.
- **M - Measurable**
- Projects are designed in such a way that investment and production activities, **costs and benefits** expected should be **identified** and as much as possible be **valued** (expressed in monetary terms) in financial, economic and if possible social terms.

The Links between Projects and Programs

- Though it is sometimes difficult to value especially secondary costs and benefits of a project, attempt should be made to measure them. Measurable costs and benefits must lend themselves for valuation and general projects are thought to be measurable. **Makes objective M & E possible.**
- **A – Area bounded**
- As projects have specific and identifiable group of beneficiaries, so also have to **have boundaries**. In designing a project, its area of operation must clearly be identified and delineated. Though some secondary costs and benefits may go beyond the boundary, its major area of operation must be identified. Hence projects are said to be area bounded.

The Links between Projects and Programs

R – Real

- Planning of a project and its analysis must be made based on **real information**. Planner must make sure whether the **project fits with real social, economic political, technical, etc situations within the budget limit**. This requires detailed analysis of different aspects of a project.

T – Time bounded

- A project has a **clear starting and ending point**. The overall life of the project must be determined. Moreover, investment and production activities have their own time sequence. Every **cost and benefit streams** must be identified, quantified and valued and be **presented year-by-year**.

Self-check Exercise

- Describe at least three typical features which differentiate projects from the routine works of an organization.
- Mention some programs that encompass projects.
- Which ones are projects and which ones are operations?
 - A. Building an extension on a house.
 - B. Shelving books at the library.
 - C. Baking a wedding cake.
 - D. Watering your plants twice a week.
 - E. Knitting a scarf.
 - F. Organizing a large conference
 - G. Going to the gym three times a week.

Reflection

- What do you think are the major causes of project failure? Illustrate your discussion by citing an incident from your professional experience.

Examples showing lack of Planning

1. A sanitation project is started because people are dying of diarrhea. But people believe that diarrhea is caused by evil spirits. **Why does the project fail?**
2. An agricultural project wants to help very poor people. An agriculturalist starts a program of vegetable growing. While the project is technically very successful, very poor people do not benefit because they have no land. **Why does the project fail?**
3. A fisheries project digs ponds, but they do not hold enough water because the soil does not contain enough clay. **Why does the project fail?**
4. A microfinance project is launched to help women engage in Agriculture by giving access to credit without detailed analysis of the intra-household power relations. What may cause such projects to fail?

Causes of Project Failure

Projects often fail for the following reasons:

1. Only the project team is interested in the end result.
2. No one is in charge.
3. The project plan lacks structure.
4. The project plan lacks detail with respect to all the management functions and tools.
5. The project is under-budgeted.
6. Insufficient resources are allocated.
7. The project is not tracked against its plan.
8. The project team is not communicating.
9. The project strays from its original goals.

Who should plan? **Reflection**

- A key question in the process of planning is 'who should be involved?'
 - Think through the following situations in terms of time, decision-making, conflict, responsibility, knowledge, ownership, resources and motivation
1. Imagine a manager in a relief and development organization. What are the advantages of the manager planning a project alone? What are the disadvantages?
 2. Imagine a few members of staff of a relief and development organization planning a project together. What are the advantages? What are the disadvantages?
 3. Imagine members of staff of a relief and development organization planning a project with community members. What are the advantages? What are the disadvantages?
 4. Which of the above situations is best? Why?

A Project?

- Has a specific objective
- Limited time and budget
- Has interrelated activities
- Has geographical boundaries
- Identify beneficiaries
- Is not a routine / procedure
- Defined results
- *Project activities are related*
- *Consider stakeholders specification*
- *Need to consider quality, scope, cost, time and resource*
- *Must be measurable*

Project life cycle

- Project life cycle defines the stages/phases that link the beginning of a project to its end.
- Project managers of organisations can divide projects into stages to organise better management control with relevant connections to the ongoing functions of the performing organisation.
- The process of planning and managing projects can be drawn as a cycle. Each phase of the project leads to the next

Project life cycle

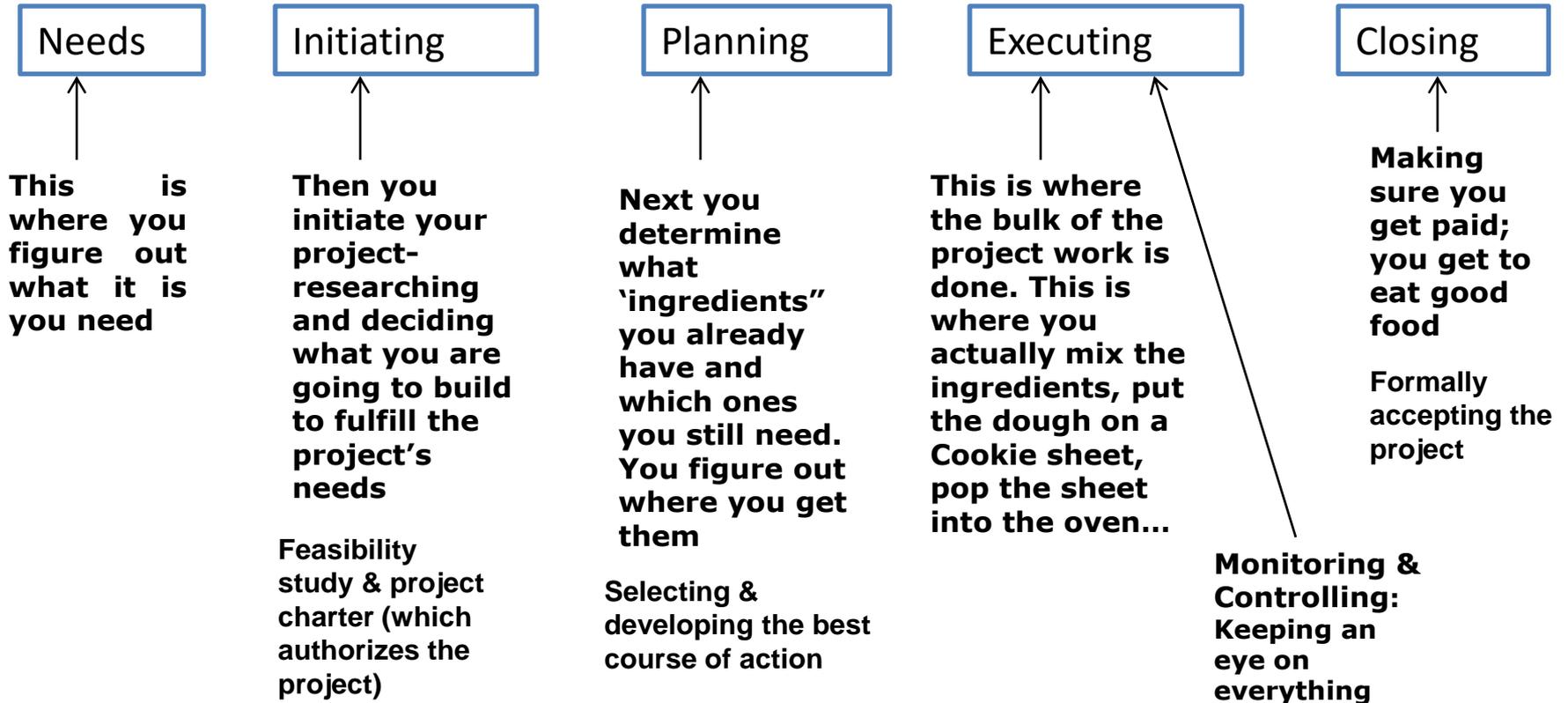
Projects can be conceived on the basis of:

- Needs – to make available to all people in an area minimum amount of certain basic material requirements or services. A needs assessment survey establishes the urgency for intervention;
- Market demand –domestic or overseas;
- Resource availability –opportunity to make profitable use of available resource.
- Technology – to make use of available technology
- Natural calamity –hedging against the adverse effects of natural events as drought or floods; and
- Political consideration

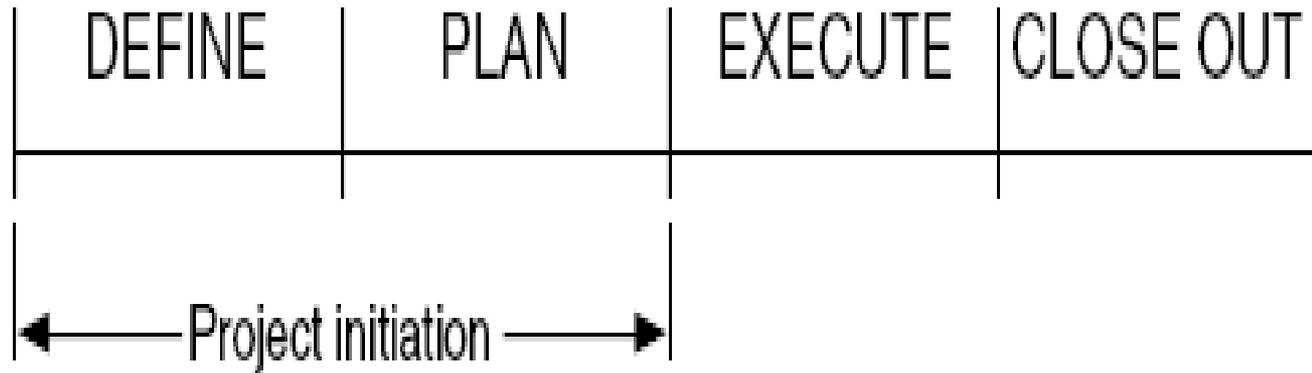
Project life cycle

Feasibility study	Design & development phase	Execution phase	Commissioning & handover phase
Identify the need for a project. Initiate the project & carry out a feasibility study	Develop the project's concept & produce detailed designs & specifications, & a detailed project management plan outlining how to make the project	Make the project, facility or product as per the design & project management plan	Confirm the project has been made to the design and plan. Con firm the project works within the intended configuration. Handover the project to the client

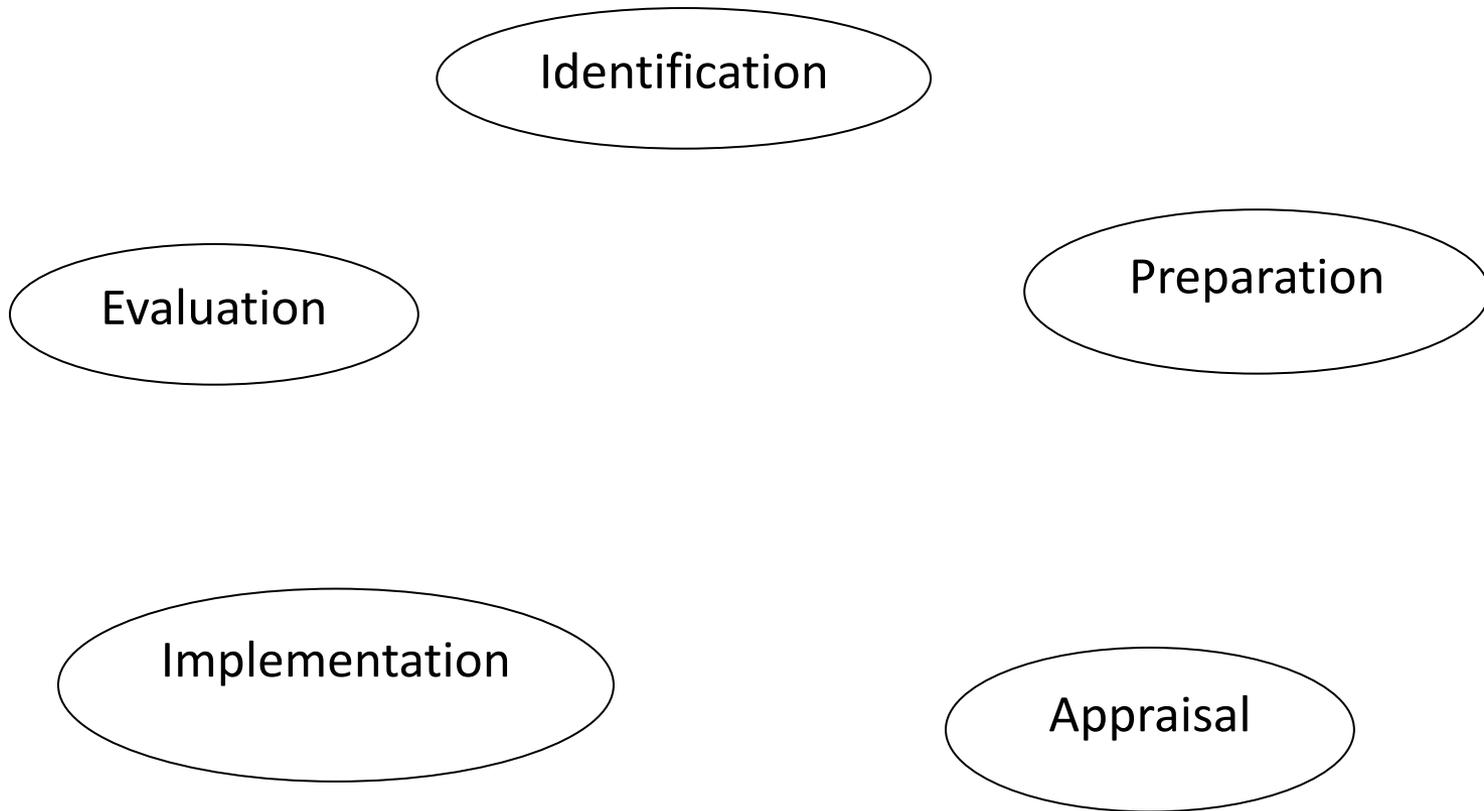
Projects are like recipes

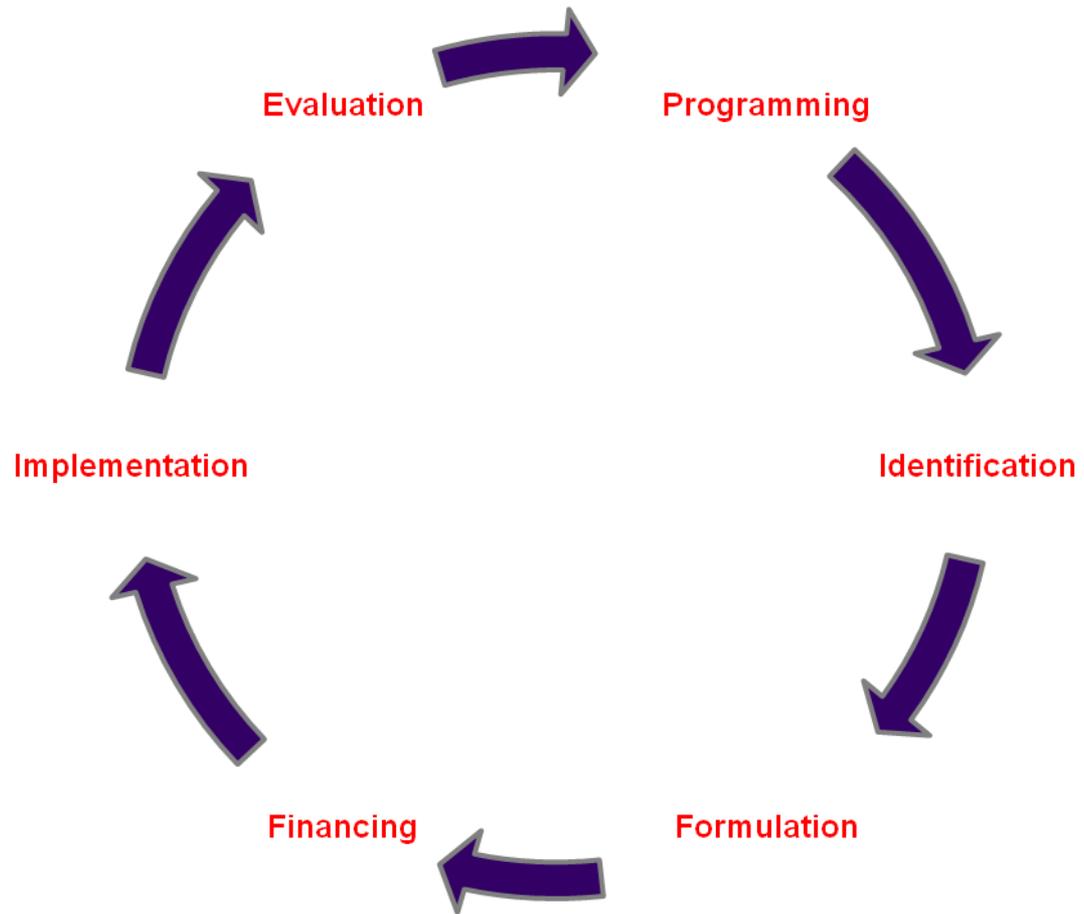


Project life cycle



Project life cycle





Project Cycle...

- During the **Programming** phase, the situation at national and sectoral level is analyzed to identify problems, constraints and opportunities which development cooperation could address.
- This involves a review of socio-economic indicators, and of national and donor priorities. The purpose is to identify and agree on the main objectives and **sectoral priorities** for development cooperation, and thus to provide a relevant and feasible programming framework within which projects can be identified and prepared. For each of these priorities strategies will be formulated that take account of the lessons of past experience.
- During the **Identification** phase, ideas for projects and other development actions are identified and screened for further study. This involves consultation with the intended beneficiaries of each action, an analysis of the problems they face, and the identification of options to address these problems. A decision can then be made on the relevance of each project idea (both to the intended beneficiaries and to the programming framework), and on which ideas should be further studied during the Formulation phase.

Project Cycle...

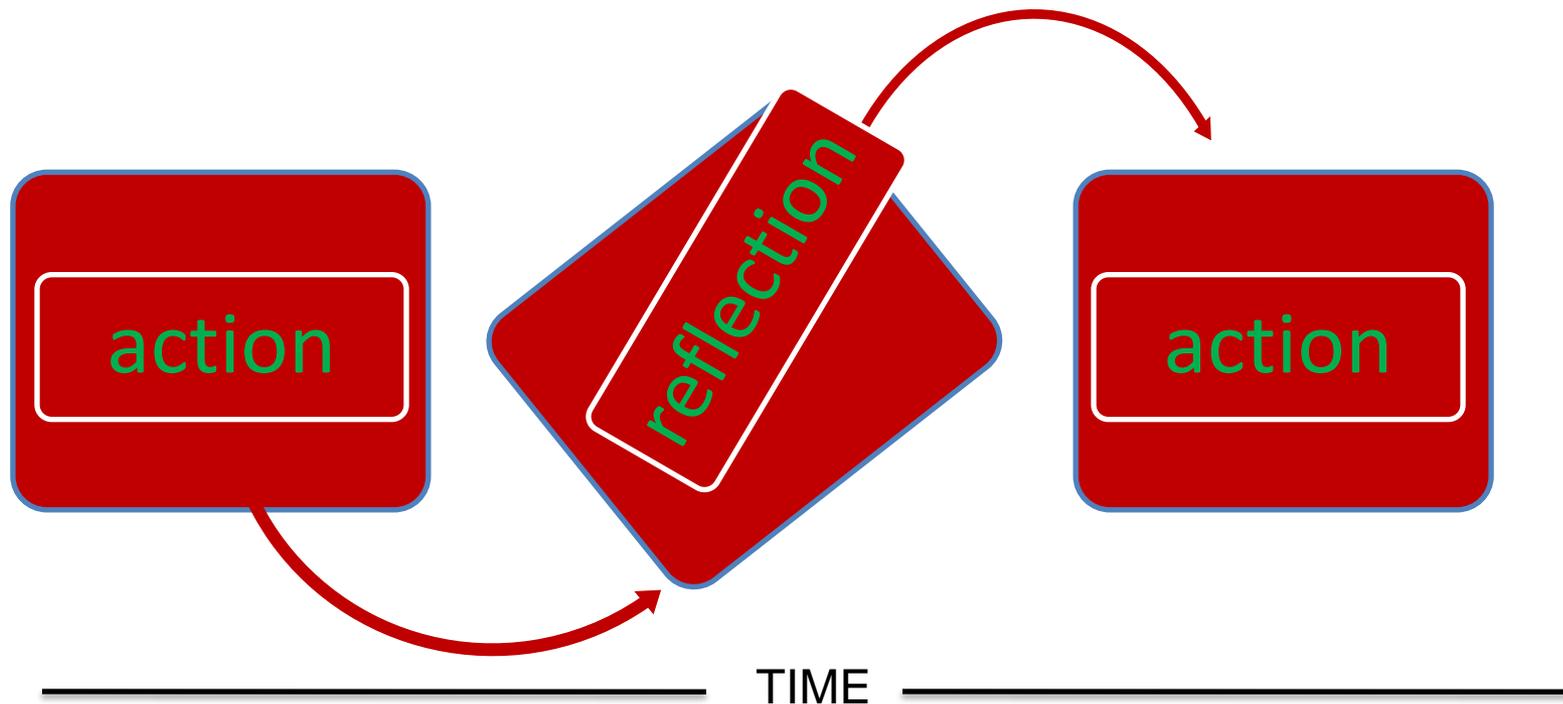
- During the **Formulation** phase, relevant project ideas are developed into operational project plans. Beneficiaries and other stakeholders participate in the detailed specification of the project idea that is then assessed for its **feasibility** (whether it is likely to succeed) and **sustainability** (whether it is likely to generate long-term benefits for the beneficiaries). On the basis of this assessment, a decision is made on whether to draw up a formal project proposal and seek funding for the project.
- During the **Financing** phase, project proposals are examined by the funding agency, and a decision is taken on whether to fund the project. The funding agency and partner country agree the modalities of implementation and formalize these in a legal document which sets out the arrangements by which the project will be funded and implemented.

Project Cycle...

- During the **Implementation** phase, the project is mobilized and executed. This may require the tendering and award of contracts for technical assistance or works and supplies. During implementation, and in consultation with beneficiaries and stakeholders, project management assesses actual progress against planned progress to determine whether the project is on track towards achieving its objectives. If necessary the project is re-oriented to bring it back on track, or to modify some of its objectives in the light of any significant changes that may have occurred since its formulation.
- During the **Evaluation** phase, the funding agency and partner country assess the project to identify what has been achieved, and to identify lessons that have been learned. Evaluation findings are used to improve the design of future projects or programs. Although in the generic cycle the evaluation phase comes after implementation, it is common practice also to conduct a mid-term evaluation during implementation, to identify lessons that can be applied during the remaining life of the project.

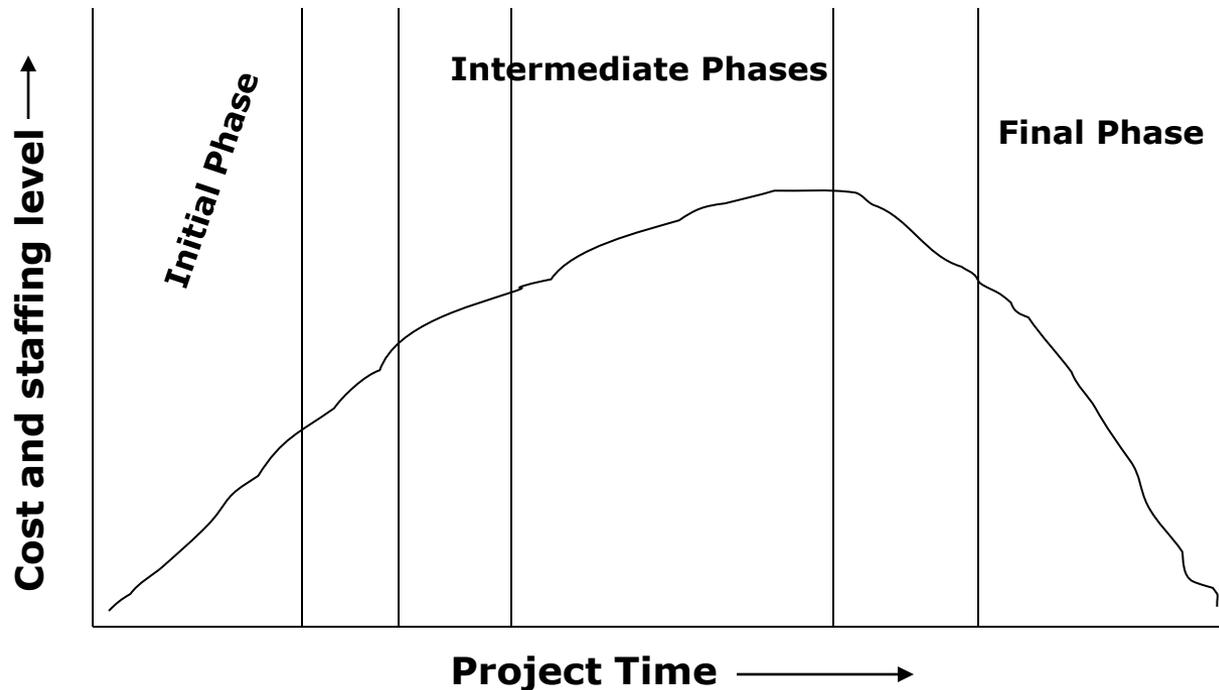
Project Cycles...

Project planning is an ongoing process, which involves learning by reflecting and acting



Project Cycle Management

- Cost and staffing levels are low at the start, peak during the immediate phases, and drop rapidly as the project draws to a conclusion
- Level of uncertainty or risk of failing to achieve objectives is high at the start



Project Cycles...

Stage 1: Project Conception

- At this stage, an idea regarding a required intervention in a specific area to address an identified problem is formed or developed. This idea is usually hatched through discussion by specialists and local leaders in a community as a need-based issue and crystallized into a proposal.

Stage 2: Problem Identification

- the issue that a project could address. Potential projects arising from the ideas crystallized in the first stage above are determined.

Project Cycles...

- The information in the proposal from project conception may be submitted by an individual or community representative to an agent or agency capable of identifying a institution to provide the necessary support to realize the expectation.
- The type of information provided at this stage is usually general and descriptive.
- The information is basically provided to justify an intervention through an expression of a felt need in the area.
- In many ways, stages 1 and 2 are so interlinked that some prefer to consider both as forming the “identification phase”.

Project Cycles...

- Problem identification involves appreciative enquiry:
 - ❖ Needs assessment
 - ❖ Capacity assessment: identify strengthes and weaknesses

Need: Normative:- a situation defined by an expert

Felt:- ascertained by clients

Expressed:- a demand for service

Comparative:- an inferred measure of need

- **Needs Assessment:** -
 - ✓ **the project should come out of what people say they want and not from assumptions that we make**
 - ✓ Circumstances change: there may be new people, new needs, old needs might have been addressed, problems might affect people differently
 - ✓ Needs assessment gives people an opportunity to prioritize their needs
 - ✓ Tools that enable communities identify their needs include:
 - Listening, Interviewing, Focus groups, Community mapping

Project Cycles...

Steps in needs assessment:

1. Clearly understand: purpose, budget and time
2. Identify the specific information you need to acquire
3. Determine if the information already exists or can be obtained with your resources
4. Design the methodology and instrumentation (if necessary)
5. Collect and analyze data
6. Prepare the report

Project Cycles...

Capacity Assessment: to identify strengthes and weaknesses

- It involves six types of assets
 - ✓ Human- skills
 - ✓ Social-relationships, political structures, networks, community centers, local primary schools
 - ✓ Natural-land, trees, water, air, climate, minerals
 - ✓ Physical-buildings, transport, water supply, sanitation, energy sources, telecommunication
 - ✓ Economic-money, savings, revolving funds, grain stores
 - ✓ Spiritual-faith
 - ✓ Entrepreneurial ability

Project Cycles...

- Once project ideas have been identified, the process of project preparation and analysis starts.
- **Stage 3: Project preparation**:- it must cover the full range of technical, institutional, financial and economic conditions necessary to achieve the project's objective.
- Critical element of project preparation is identifying and comparing technical and institutional alternatives for achieving the project's objectives. Different alternatives may be available and therefore, resource endowment (labor or capital) would have to be considered in the preparation of projects.
- Preparation thus require feasibility studies that identify and prepare preliminary designs of technical and institutional alternatives, compare their costs and benefits, and investigate in more details the more promising alternatives until the most satisfactory solution is finally worked out. It involves generally two steps:
 - ❖ Pre-feasibility studies
 - ❖ Feasibility studies

Project Cycles...

- The major difference between the pre-feasibility and feasibility studies is the amount of work required in order to determine whether a project is likely to be viable or not.
- If the preliminary screening suggests that the project is prima facie worthwhile, a detailed analysis of the marketing, technical, financial, economic, and ecological aspects is undertaken.
- The focus of this phase of capital budgeting is on gathering, preparing, and summarizing relevant information about various project proposals, which are being considered for inclusion in the capital investment.
- Based on the information developed in this analysis, the stream of costs and benefits associated with the project can be defined.

Project Cycles...

- At this stage a team of specialists (Scientists, engineers, economists, sociologists) will need to work together.
- At this stage more accurate data need to be obtained and if the project is viable it should proceed to the project design stage.
- The final product of this stage is a feasibility report. The feasibility report should contain the following elements:
 - Market analysis
 - Technical analysis : location and site, plant size, technology, inputs, infrastructure, man power
 - Institutional and organizational analysis
 - Financial analysis : IRR, PAY BACK PERIOD
 - Economic analysis : cost benefit analysis
 - Social analysis, and
 - Environmental analysis: identify the environment, its short run and long run impact on the environment,

Project Cycles...

- Project preparation stage involves a more thorough exercise of collection of data and information on the proposed project.
- The exercise is conducted by personnel with technical and analytical skills in consultation with the target and beneficiary community.
- All this stage of the cycle the objective of the project is defined and alternative solution described.
- The project preparation contains the design of a set of operational proposals that are technically, financially and economically feasible.
- Decisions are made on the scope of the project, location, site and size, among others.
- The detail of a feasibility study depends on the complexity of the project and on how much is already known about the proposals.

Project Cycles...

- In fact a succession of increasingly detailed feasibility studies are sometimes called for in complex projects.
- The feasibility studies provide an opportunity to shape the project to fit its physical and social environment and exclude preparation relatively poor alternative ways of achieving the project goal.
- A careful preparation may cost up to 10 percent of the total project investment but this is absolutely necessary to ensure the project's effectively.

Stage 4: Project Appraisal

- Analysis of a proposed project to determine its merit and acceptability in accordance with established criteria. This is the final step before a project is agreed for financing. It checks that the project is feasible against the situation on the ground, that the objectives set remain appropriate and that costs are reasonable.

Project Cycles...

- Project appraisal involves a further analysis of the proposed project. At this stage, a critical review of the proposal is undertaken.
- The systematic and comprehensive review is usually undertaken by an independent team of experts in consultation with the stakeholders of the project.
- The feasibility study would enable the project analyst to select the most likely project out of several alternative projects. Selection follows, and often overlaps, analysis. It addresses the question - is the project worthwhile?
- Wide ranges of appraisal criteria have been developed to judge the worthwhile of a project. They are divided into two broad categories, viz., non-discounting criteria and discounting criteria.

Project Cycles...

- To apply the various appraisal criteria suitable cut off values (hurdle rate (difficulty rate), target rate, and cost of capital) have to be specified. The level of risk pursued influences these.
- Despite a wide range of tools and techniques for risk analysis (sensitivity analysis, scenario analysis Monte carol simulation, decision tree analysis, portfolio theory, capital asset pricing model, and so on), risk analysis remains the most intractable part of the project evaluation exercise.
- This exercise also involves the undertaking of detailed engineering design; manpower and administration requirement as well as marketing procedures should be finalized.

Project Cycles...

- This provides an opportunity to re-examine every aspect of the project plan to assess whether the proposal is justified before large sums are committed.
- The appraisal process builds on the project plan but may involve new information if the appraisal team feels that some of the data used at preparation or some assumptions are faulty.
- The implications of the project on the society and the environment are also more thoroughly investigated and documented.
- Similarly, the technical design, financial measures, commercial aspects, incentives, economic parameters are thoroughly scrutinized. On the basis of an appraisal report, decisions are made about whether to go ahead with the project or not. The appraisal may also change the project plan or develop a new plan.

Project Cycles...

Stage 5: Project Selection

- After appraisal, the visible project proposals are chosen for implementation on the basis of the priorities of the stakeholders and the available resources. For instance, Treasury may impose a ceiling on the ministries with a big portfolio of investments, calling for prioritization of the core and lower priority projects.

Stage 6: Negotiation and Financing

- Once the project to be implemented is agreed on for donor funded projects, discussions are held on funding and associated aspects of funding such as conditionals for grants, repayment period and interest rates of loans, flow of funds, contributions from stakeholders and if there is co-financing or not.

Project Cycles...

- This culminates into an Agreement Document for the project which binds all the parties involved during implementation of the project.

Stage 7: Planning for Implementation

- This is the stage either before actual implementation begins or before the start of a new implementation phase of the project.
- The exercise is conducted at the level of the project and involves the implementers, the beneficiaries and the funding agency or all stakeholders.
- The exercise involves enabling the realism of project objectives, scope, financial arrangements and implementation schedule given the overall resource structure of the project and the working environment. The likelihood of further changes occurring either in design or physical and policy environment to affect the project are also discussed.

Project Cycles...

- During the exercise, the team should define, as clearly as possible, the objectives and hierarchy of objectives.
- One technique for defining and analyzing the objectives is the Logical Framework Approach or Goal Oriented Project Planning (GOPP).
- It allows definition of activities, or inputs, outputs and objectives with corresponding verifiable indicators and assumptions to attain the goals of the project.
- A plan of operation for a specified period is usually desirable to form a basis for activities to be undertaken during the plan period.

Stage 8: Implementation

- This is the crucial stage of any project since the objective of the earlier effort in the stages above was to have projects to be undertaken.

Project Cycles...

- At this stage, activities of the project are actually carried out and funds are disbursed to facilitate the activities.
- The management should ensure that the project is carried out according to the design.
- However, depending on the physical and policy environment, there may be need for flexibility in response to the reality on the ground. Monitoring of progress and reporting, therefore, becomes crucial implementation is a process of refinement or learning from experience and actually be considered as a “mini cycle” within the larger project cycle.
- The implementation period usually has three phases the investment period, the development period, and full development. This forms the life of the project. The investment period refers to when the major project investments are undertaken and could take one to three years, depending on the nature of the project.

Project Cycles...

- Project implementation is a phenomenon by which project studies are translated into reality within their specified time and budget.
- As much, the implementation phase is very crucial to the success of the project.
- The success at this stage demonstrates the effectiveness of the planning and execution capability of the project promoter.
- Project implementation involves a number of activities which are interrelated.
- This stage could be divided into, among others, scheduling, financing, negotiation and contracting, discussing, constructor training, building, installation and commissioning.
- If any one of these are not undertaken properly, the progress of the implementation will be affected adversely.

Project Cycles...

- The development period occurs as the production peaks up and continues until the project ends. Both financial and economic analyses of the project relate to the time horizon.

Factors affecting Implementation

1. Technical factors: know-how about technology
2. Economic and financial factors: credit, subsidies, pricing
3. Commercial factors: marketing of outputs, supply of inputs
4. Socio-cultural factors: tradition, kinship, social structure
5. Political factors: power structure, leadership patterns
6. Institutional, organizational and managerial factors
7. People's participation
8. Integration and coordination; both vertical and horizontal

Project Cycles...

Stage 9: Monitoring and Reporting

- This should be an on-going activity during implementation. Monitoring can be carried out by the beneficiaries, the managing staff, supervisory staff and the project management staff. The aim should be to ensure that the activities of the project are being undertaken on schedule to facilitate implementation as specified in the project design. Any constraints in operationalizing the design can quickly be detected and corrective action taken.
- Are the right inputs being supplied/delivered at the right time?
- Are the planned inputs producing the planned outputs?
- Are the outputs leading to the achievement of the planned objectives?
- Is the policy environment consistent with the design assumptions?
- Are the project objectives still valid?

Project Cycles...

Stage 10: Evaluation

- This stage involves a systematic review or examination of the elements of success and failure in the project experience during the project life to learn how better to plan for the future.
- This implies that evaluation is a continuous exercise during the project life and is much related to project monitoring. Monitoring provides the data on which the evaluation is based.
- However, formalized evaluation is undertaken at specified periods.
- There is usually a mid-term and a terminal evaluation.
- Evaluation can also be undertaken when the project is in trouble as the first step in a re-planning effort.

Project Cycles...

- Evaluation can be done internally or by external reviewers.
- Some organizations have monitoring and evaluation units.
- Such a unit can provide project management with useful information to ensure efficient implementation of projects, especially if it operates independently and objectively, because what the unit needs is to judge projects on the basis of objectives, original project design and the reality on the ground (the operating physical and policy environment).
- With no free hand, the feedback mechanism will be stifled and information be “held-back” instead of being “fed-back”.
- The aim of evaluation is largely to determine the extent to which the objectives are being realized.

Project Cycles...

- This phase regards evaluation of success or failure elements of a project with relevance to the future usually takes place throughout the project, but sometimes only at the end undertaken by sponsoring company, agency, etc.
- Are or have objectives being/been met? If not, were the objectives realistic?
- Was the technology proposed appropriate?
- Were the institutional, management arrangements suited to the conditions?
- Were the financial aspects carefully worked out?
- Were the economic aspects carefully explored?
- Did management quickly respond to changes?
- Was its response carefully considered and appropriate?
- How could the project's structure be changed to make it more flexible?

Steps to write a project

- **Project title:** on the first page (project title, Name of the organization: Prepared by: that means the name of participants and also partners, place and date of the project compiled, to whom the proposal is given/ to the donor
- **Content:** if your proposal is more than 10 pages give table of content
- **Project contacts:** list those individuals who are involved with the project and can be contacted. Be sure to include their contact address
- **Project summary:** why are you doing this project? What will you be doing? How will you be doing it? Who will be doing it? Where will it be done? How long will it take? How much will it cost
- **Project background and statement of the problem/ rationality:** explain what needs/problems you are trying to solve, and why these needs/ problems are worth solving. You should also provide a brief setting and history behind the project. This shouldn't be more than one page . Include references to supporting documentation, such as research papers and articles, past project evaluation report . Show why priority needed

Steps to write a project

- Project objective
- Project methodology: this section details the plan for how the project objective will be achieved and how anticipated problems will be managed
- Inputs or resources used including man power with the required qualification
- Work breakdown and task time estimates: list all activities and the task broken down. Use GanttProject
- Identify stakeholders and Project deliverables: products, information, reports that will be delivered to the client at the end and throughout the life of the project and the estimated delivery date
- Project risk management and opportunities : : major risks you might face. Make sure to address each risk likelihood of occurring and its impact on the project
- Project cost : like salary, fringe , travel, supplies, equipment, overhead cost (indirect cost)
- E.g Item ... suppliercatalog num Quantity unit price Total
- Additional financial statements: source of funding like donors, a profit and loss statement
- Communication with and coordination with sponsor: monitoring and evaluation schedule : establish form of communication(visit),
- availability of infrastructure
- Marketing analysis: marketability of the product
- Economic analysis: its economic gains
- Financial analysis: pay back period, BCR, IRR
- Social analysis: its contribution to the society
- Environmental analysis: its short run and long run impact on the environment like noise, air , wildlife , land , water
- Expected results
- Team qualification : in addition you may also write a one page resume for each member (not necessary)
- Conclusion
- Appendix

Assignment

- Prepare a project proposal following the standard procedures
 - ❖ Choose a project topic
 - ❖ Why you choose the topic?
 - ❖ Scope of your project : geographic, beneficiaries and activities
 - ❖ List the major milestones in your project
 - ❖ Write only a summery for your project
 - ❖ Who are your stakeholders
 - ❖ How much it cost
 - ❖ How long it takes to complete your project
 - ❖ What resource you need
 - ❖ What are the opportunities and risks to your project
 - ❖ Is it environmentally friendly
 - ❖ What are the expected results ?

What is Project Management?

- It is the application of **knowledge, skills, tools and techniques** to project activities to **meet project requirements**.
- It's a process of managing resources in such a way that a project is completed within defined scope, quality, time, and cost constraints.
- Applying both the science and art to planning, organising, implementing, leading and controlling the work of a project to meet the goals and objectives of an organisation.

- The **process of** defining a project, developing a plan, executing the plan, monitoring the progress against the plan, overcoming obstacles, managing risks, and taking corrective actions.
- The process of managing the competing demands and trade-offs between the desired results of the project (scope, performance, quality) and the natural constraints of the project (time and cost).
- The process of leading a team that has never worked together before to accomplish something that has never been done before in a given amount of time with a limited amount of money.

Project Management

In general, project management refers to

- Identifying requirements: the issues the project is attempting to address ___ **the problem**
- Establishing clear and achievable **objectives**
- Balancing the competing demands for quality, scope, resources, time and cost
- Adapting the specification, plans, and approach to the different concerns and expectations of the various stakeholders.

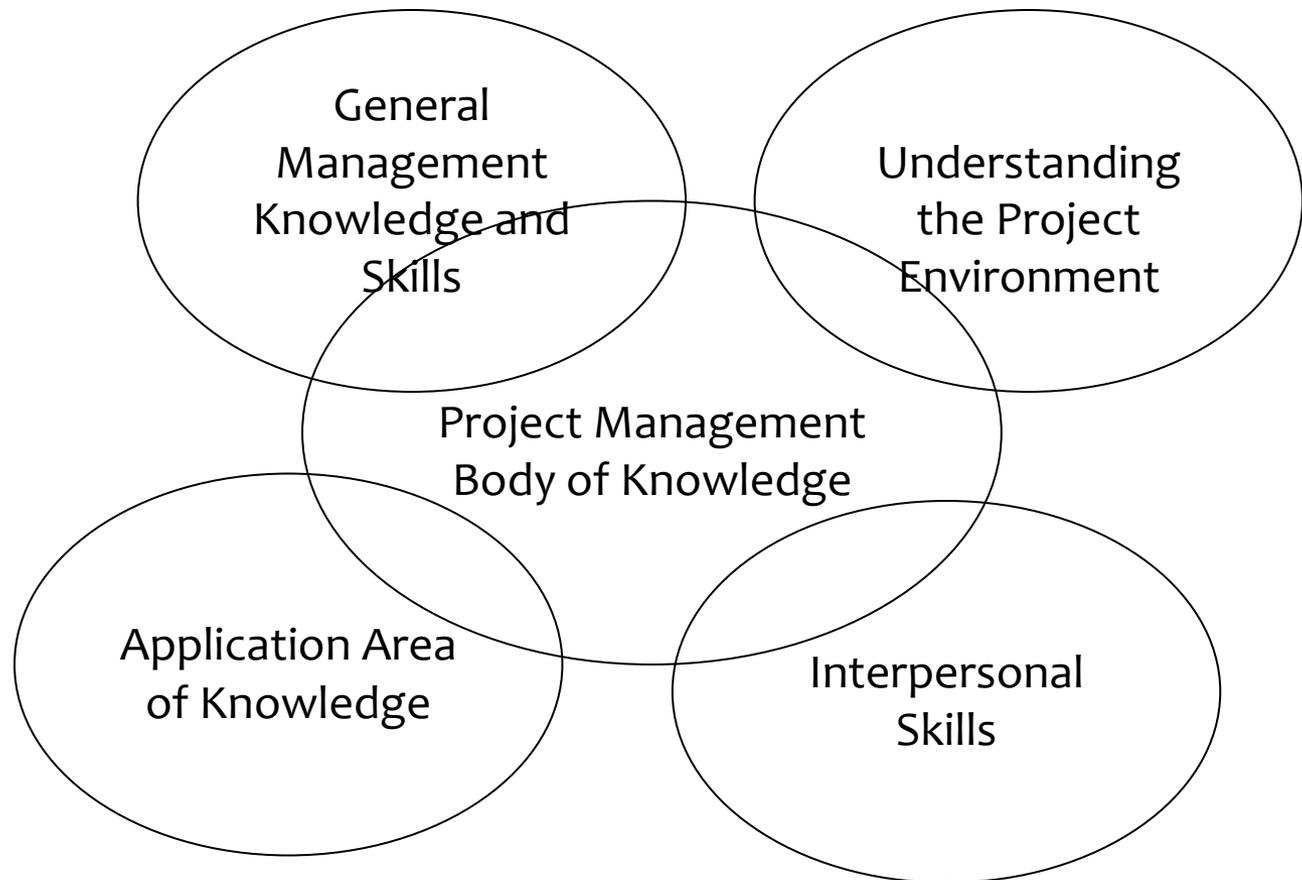
Projects & Risks

- Project managers manage projects in uncertain situations.
- **Project risk:** the likelihood of the occurrence of an uncertain event, usually a negative one that may adversely affect the successful completion of a project. **Unlike uncertainties, likelihood of occurrence can be attached to risks**
- Project risk indicates that projects travel through rough roads.
- This makes the field of project mgt very distinct and requiring competitive knowledge, skills, tools and techniques.
- In many cases, project management may spend much time in an attempt to adapt to unpredicted change.

Areas of Expertise Project Management Involves

- Project management involves knowledge, tools, techniques and skills that are unique to it,
 - E.g. Work breakdown structures, PERT
- It requires understanding and use of knowledge and skills from at least ***five areas of expertise***.
- These are:
 - The project management body of knowledge
 - Application area knowledge, standards and regulations
 - Understanding the project environment
 - General management knowledge and skills
 - Interpersonal skills.

Areas of Expertise a Project Team Needs



Understanding the Project Environment

- A project should consider how it affects people and how people affect it.
- Projects are undertaken in social, economic and environmental contexts.
- They also have intended and unintended impacts on the contexts.
- Further, the contexts have the power to influence the projects.
- Therefore, it is very essential to **consider projects in their cultural, social, international, religious, political, physical environmental and economic contexts.**
- Thus, a project should consider:
 - how it affects people and how people affect it
 - applicable international, national, regional, and local laws and customs, and the political atmosphere
 - how it will affect physical surroundings

Application Area Knowledge, Standards and Regulations

- These are divisions of projects that possess common significant components in such projects.
 - These divisions or categories are not needed or available in all projects.
- Such areas of application are mostly defined in terms of:
 1. Operational departments and supporting disciplines (e.g. legal, production, inventory, marketing, logistics, and personnel)
 2. Technical elements (e.g. software development or engineering, or construction engineering)
 3. Management specialisations (e.g. government contracting, community development and product development)
 4. Industry groups (e.g. automotive, chemicals, agriculture and financial services)

General Management Knowledge & Skills

- Project management also embraces the basic functions of general management: **planning, organising, staffing, executing and controlling.**

A. Planning: involves identifying alternative courses of action/activities and selecting the most efficient course of action to achieve the objective(s); it includes translating long-term organizational goals into short term objectives and targets; it also involves identifying the constraints and resource needs of the specific activities and risks involved (including intended ways to minimize them) in the achievement of the project objective(s) i.e. Budgeting.

- Involves understanding inputs and outputs/outcomes
- Resource needs relate to inputs e.g. People, land, materials, equipment (machinery, buildings, vehicles , tools, etc.).
- E.g. transforming resources into goods/services: ingredients (fruits like blackberries)+ the recipe (know-how)+ the equipment + the space --→ the jam (output)
- This is a simple example.

- Consider a catering manager who manages the use of catering resources to produce the right number and quality of meals. The manager will be judged by what is achieved. The **number and quality** of the meals will determine the manager's *effectiveness* (doing the right job or the job you are supposed to be doing) whereas **the way the job was done** will determine the *efficiency* (doing the job right or in the way that consumes fewest resources).
- Two managers can achieve the same number of meals of the right quality, using different levels of ingredients (resources) but the one who consumes the fewer resources will be the more efficient.

Activity

- list the main resources which are available to you in your work and the goods or services that you produce/provide.
- write down the measures by which you are judged and comment on the adequacy of such measures.

- There are various **ways of measuring the success of transforming inputs into outputs**
- **Measuring inputs:** focuses on the efficiency of your use of resources. **Quantity:** did you use the fewest resources possible to achieve the outputs?
- **Measuring the output:** focuses on the number and quality of the product/services that are produced or supplied. With the catering manager in mind, we could ask how many meals were made, and how appetizing were they?
- **Measuring outcome:** include the long term results of the transformation. Outcome measures have assumed new importance in value-based organizations where managers, users and donors are all interested in the long-term benefits of an activity

A project's and hence a project manager's achievement should be judged by what has been achieved and by the cost of the achievement.

- Getting the job done remains the project manager's primary purpose but that manager must keep an eye on the cost
 - achieving objectives at any cost is a rule that is rarely applied

- ❑ **Identifying resource needs in planning implies identifying the costs involved.**
- ❑ **Monetary measurement** of costs is being used as the common unit of account for both the inputs & outputs
 - Such accounting (attaching money value) helps us to answer the question of whether the production of the good or service is worthwhile. However, it is subjective and provides only a framework for valuation
 - However, there are difficulties in attaching monetary values to some inputs (esp. when the inputs are less directly related to the level of output e.g. heating bills) and outputs (esp. services and **humanitarian activities** involving **saving people's lives** which has no market price). Even with the measurement issues, the **project management should focus on the cost minimizing route**

Activity

How adequate do you think are money values as a measure of the value of the outputs and what complementary measures can you suggest?

B. Organizing: involves **mobilizing the resources necessary for executing the planned activities:**

- people
- financial
- inputs/materials
- other resources: space, equipment, facilities

C. Staffing: involves issues of job design, staff recruitment, motivation

- **Job design:** may be caused by introduction of new techno, implementation of a new policy, move to a new building, provision of new product or service. It may involve:

1. Job rotation (allowing people to rotate between jobs a regular intervals)

Activity: could you beneficially adopt job rotation among your subordinates? Give reasons.

2. Job enlargement: involves amalgamating several tasks into a single job

3. Job enrichment: involves change aimed at increasing the level of responsibility of the employees

- Argue against job enlargement, job rotation, job enrichment

Staff recruitment: involves

- knowing one's responsibility and authority in the recruitment process
- Job analysis (analyzing the job systematically and in detail),
- job description (describing the job and stating what the job holder is responsible for & required to do), and
- job specification (to specify the kind of person needed to fill the job described: precise about the skills, knowledge, qualifications, attributes required for the job)
- identifying sources of recruits and advertising
- handling applications, selection procedures
- making decisions

Three factors to consider in order to improve motivation at work

1. The link between effort and performance: weak link undermines motivation; managers should ensure that people have the ability, resources and clear goals to ensure that effort leads to the desired performance

Activity: think of a person who works for you. Is there any way in which you could improve training, resources or the way in which objectives are set to strengthen the link between effort and performance?

- Discuss the matter with this person. How does your perception compares with theirs?

2. The link between performance and outcomes

(rewards/punishments): it is important that people believe there is a clear link between performance and reward. Is there any way you as a manager can do to create or strengthen links between performance and outcome (e.g. link praise & performance)

– The **types of outcome** available:

- Intrinsic: self-respect, sense of achievement, feeling of having learned something, feeling of having done something worthwhile, feeling of having contributed something necessary to an enterprise, fatigue
- **Extrinsic: pay, status** (with, outside company), fringe benefits, praise, promotion, pleasant working conditions, variety, move to different work, social punishment, loss of pay, free time

3. Linking praise and performance

E.g., one of my previous bosses never once praised my performances during the year in which I worked for him. Yet I found out much later that he had been impressed by it. Despite these experiences, I still find it difficult to praise those who work for me

- If you are not in the habit of praising good performance, it might be worth making an **effort to notice** and **comment** on it.
- **Please try to praise good performance**

Activity: think of someone who works for you. List the three most important things that you expect that person to put into their work and what you think are the three most important rewards the person experiences from this work

- Now, if you can, ask this person what they think are the 3 most important things they expect to put into the work and the 3 most important things they expect to get out of it; compare the two lists. Do your expectations coincide? If not how do you think you could improve the psychological contract?
- Think of your own psychological contract. How is it enhanced and/or undermined by your boss?

D. Executing: involves the actual implementation of the project activities to achieve the set targets and objectives

E. Controlling: involves checking project outcomes against initially set objectives, identifying gaps & challenges, and taking corrective measures in time

- **reactive:** analysing and taking measures after the problem occurred. **Older style**
- **proactive:** on-going follow-up of processes and outcomes; participatory when it involves stakeholders at various levels

Interpersonal Skills

The following interpersonal skills are essential in project management:

- **Effective communication skills:** two way communication; recognizing ones strengths and weaknesses
- **Leadership:** being influential on things that matter; style (autocratic, democratic; laissez-faire) factors behind appropriate style (the leader, the led, the task, the context); functions (strategic function, tactical function, interpersonal function); participation (consultation, consent, consensus); delegation

Project Management Knowledge Areas

1. Project Integration Management
2. Project Scope Management
3. Project Time Management
4. Project Cost Management
5. Project Quality Management
6. Project Human Resource Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management