Unit 1:

Understanding the Essence of Project and Project Management

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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 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 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, 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.

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 “Lemma 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 Lemma 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.
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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.

Relationship between project-program-portfolio-operation

- There exists a relationship between project program portfolio operations management in large organizations undertakings several projects at a time.

- This relationship is natural and beneficial for organization's to effectively use the common resources.

- **To better understand the relationship among project program portfolio operations management, first let's define each of them and then the relationship**.

Project

- A project is temporary endeavor to create a unique product, service, or result.

- Temporary mean a project has definite start and finish date.

- A project may take several years to complete depending upon the complexity, scope, and context of the project.

Program

- A program is a collection of similar type of projects and are collectively managed to gain the benefits of being managed together over managing them individually.

- For example, government start reconstruction and rehabilitation program in the flood or earth quake affected areas in a country.

- Projects included in the program may be of type; construction and development of educational institutions, construction and development of health care facilities, repairing or new construction of roads, settlement plan of displaced persons, and infrastructural development etc.

Portfolio: projects, programs, sub-portfolios and operations are collectively managed to achieve organizational strategic goals and objectives.

- Portfolio ensure effective use of company's resources.

Operations: operations are ongoing and continuous activities (day to day activities) of an organization.

- For example, operation of power plants, manufacturing and assembling of cars etc. these are ongoing and continuous (24/7) activities.

- Launching of new and specialized featured car, or construction, erection and commissioning of power plants equipment are the part of project. As these are one time activities.

- Project management frameworks, processes, methodologies, models, tools and techniques and standards provide foundation to achieve organizational goals and objectives.

- A **project** may have three different scenarios like ***stand-alone project*** (construction of a single house), ***part of a program*** (new city development), ***part of a portfolio***.

- Project managers, program managers and portfolio managers interact with each other **when a project is the part of program or portfolio.**

- Organizational overall goals and objectives may be based on successful completion of number of projects.

- In this type of organizations, projects are grouped into one program and assigned a program manager to manage this program.
- A program may have sub-program(s). large projects are not the part of program; these are called **megaproject**.

- According to Project Management Institute (PMI), ***A project may be categorized as mega project if it has a cost of 1 billion US dollars or more, 1 million or more people affected by the project, and a project having lifecycle of many years.***

- Organizations may **use project portfolio** to manage sub-portfolios, programs, subprograms and projects being undertaken at any specified time.

- In large organizations, there is strong binding/ relationship of project, program, portfolio, and operations management.

Following figure diagrammatically shows the relationship of project program portfolio operations management.

Project program portfolio operations

- Program management, portfolio management and operations management differ from project management due to their **activities, life cycles, goals and objectives, focus, outcomes and benefits**.

- Often portfolios, sub portfolios, programs, sub programs, projects, and operations are engaged with the similar stakeholders and they have to share the same resources of an organization, requirement of share resources may result in the conflict (multiple projects demand the same resource at the same time) in the resource allocation.

- To **avoid resource conflict**, there is a need of effective coordination among **portfolio manager, program manager** and **project manager**.

- Organization wide portfolio may have projects, programs, and sub portfolios.
- For example, in the above figure, project 1, program A and portfolio A is under the organizational portfolio. Program A has sub program A1 and project 3, and portfolio A has program B. Program A1 has project 2 while program B has project 4.

- In the above figure, project, program, portfolio is in the same organization and some resources are common for all. Resources may be of *human, material, financial and physical* type.

- **Portfolio management** is used to manage programs and projects to achieve portfolio, program, project and organizational strategic goals and objectives.

- **Portfolio management** also ensue the effective and meaningful coordination among portfolio manager, program manager, and project manager.

- This coordination is beneficial for effective use of precious resources like human resource, material resource, financial resource and physical resource etc. resources are allocated to the projects or programs through prioritization.

- Prioritization may be **based** on risk associated with the projects or programs, schedule requirements, and resource requirements etc.
- A project of high priority acquires or use the resources first and low priority projects will acquire or use the same resources later on.

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.

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
Repetitive	Unique
Eternal	Finite
Evolutionary	Revolutionary
Equilibrium	Disequilibrium
Stable resources	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. Projects may not have a desired end, at least in the forseable future.
- 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 IGAs 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?

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
- 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.