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CERTIFICATION COURSE

# Project Management for Managers

Lec – 29

Technical Analysis

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# Outline

- **Manufacturing process / technology**
- **Technical arrangements**
- **Materials and inputs**
- **Product mix**
- **Plant capacity**
- **Location and site**
- **Machineries and equipments**
- **Structures and civil works**
- **Environmental aspects**
- **Project charts and layouts**
- **Project implementation schedule**
- **Need for considering alternatives**



# Manufacturing Process/Technology

**For manufacturing a product / service often two or more alternative technologies are available (Steel – Bessemer process or open hearth, Cement- Dry or wet, Soap – semi or fully boiled process).**



# Choice of Technology

**The choice of technology is influenced by a variety of considerations:**

- **Plant capacity (relationship b/w capacity and technology???)**
- **Principal inputs: (quality of limestone – dry or wet process)**
- **Investment outlay and production cost (effect of alternative technologies on these two should be observed)**
- **Use by other units (how it is yielding profits)**
- **Product mix**
- **Latest developments (obsolescence should be minimized)**
- **Ease of absorption ( high end tech may take long time and trained people)**



# Should we always use latest technology?

**Appropriate:**

**Evaluate technology in terms of :**

- 1. Whether it utilizes local raw material and manpower**
- 2. Whether it protects ecological balance**
- 3. Whether it is harmonious with social and cultural conditions.**



# Technical Arrangements

**When collaboration is sought, the following aspects of the agreement must be worked out in detail?????.**



# Technical Arrangements

- The nature of support to be provided by the collaborators during the designing of the project, selection and procurement of equipment, installation and erection of the plant, operation and maintenance of the plant, and training of project personnel
- Process and performance guarantees in terms of plant capacity, product quality, and consumption of raw materials and utilities.



- The price of technology in terms of one time licensing fee and periodic royalty fee
- The continuing benefit of research and development work being done by the collaborator.
- The period of collaboration agreement
- The assistance to be provided and the restrictions to be imposed by the collaborator with respect to exports
- If the technical collaboration is backed by financial collaboration, the level of equity participation and the manner of sharing management control.
- Assignment of the agreement by either side in case of change of ownership
- Termination of the agreement or other remedies when either party fails to meet its obligation





## Material Inputs and Utilities

An important aspect of technical analysis is concerned with defining the materials and utilities required, specifying their properties in some detail, and setting up their supply programme.

Materials and utilities may be classified into four broad categories:

- Raw materials (Agricultural products, mineral products, livestock or forest products, and marine product)
- Processed industrial materials and components (parts, components, sub-assemblies)
- Auxiliary materials and factory supplies (chemicals, packaging matl, oils, grease, paint, varnishes)
- Utilities (power, water, steam, fuel)

