

JYOTHISHMATHI INSTITUTE OF TECHNOLOGY & SCIENCE



# Construction planning & Management

Presented by

**K.BHAGYA**

Assistant professor

Civil Department

# Importance of Construction Planning & Management

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# INTRODUCTION



As the name suggest two words : **Construction Planning & Construction Management** ,which are co-related with each other. In common it meant that we have to execute the plan of construction by means of various management techniques. Our presentation is based upon the importance of modern technology in **Construction Management, Construction Planning, Construction Equipment, Construction Contract, Safety Management, Earthquake management and also Universal Management** with the fabricated system of Building Construction in Indian context which can be considered as important for the survival in the present scenario of civilization.

As we know that with the tremendous development taking place in this modern period of Science and Technology, Management are of vital importance. Without Planning and Management we can't complete the work of construction within our time and cost. So to move rapidly the work of development of World or particularly the developing nations like India, we have to participate in the modern work of construction with the foot step of planning and management by the help of modern technology.



## Objectives

- Completing the work within specified time and budget
- Evolving a reputation for high quality workmanship
- Providing safe working conditions for staff and workers
- Taking sound decisions at lowest practical management level through delegation of authority
- Motivating people to give their best
- Creating an organization that works as a team



## Functions

Deciding in advance what is to be done, how and in what order it is to be done. It involves :

- Crystallizing objectives
- Collecting and synthesizing information
- Developing alternatives within specified constraints
- Comparing alternatives in terms of objective feasibility and consequences
- Selecting optimum course of action
- Establishing policies, methods, systems, standards and budgets for objectives



## Organizing



- Dividing the work into component activities
- Designing job structures
- Defining targets and responsibilities
- Allocating resources
- Delegating specific tasks to individuals
- Establishing organizational chart for better coordination



## Co-ordinating

- Bringing together and coordinating the work of various departments
- Arranging regular meeting of departments





## Procuring

- Providing right quality resources at right time
- Preparing resource procurement schedules
- Developing specifications for required resources
- Deciding appropriate source of procurement
- Budgeting resources and arranging approvals and purchases
- Preventing wastage at site





## Directing or Leading

- Providing effective leadership
- Motivating participants behavior
- Communicating instructions and orders
- Providing suitable climate for subordinate's development





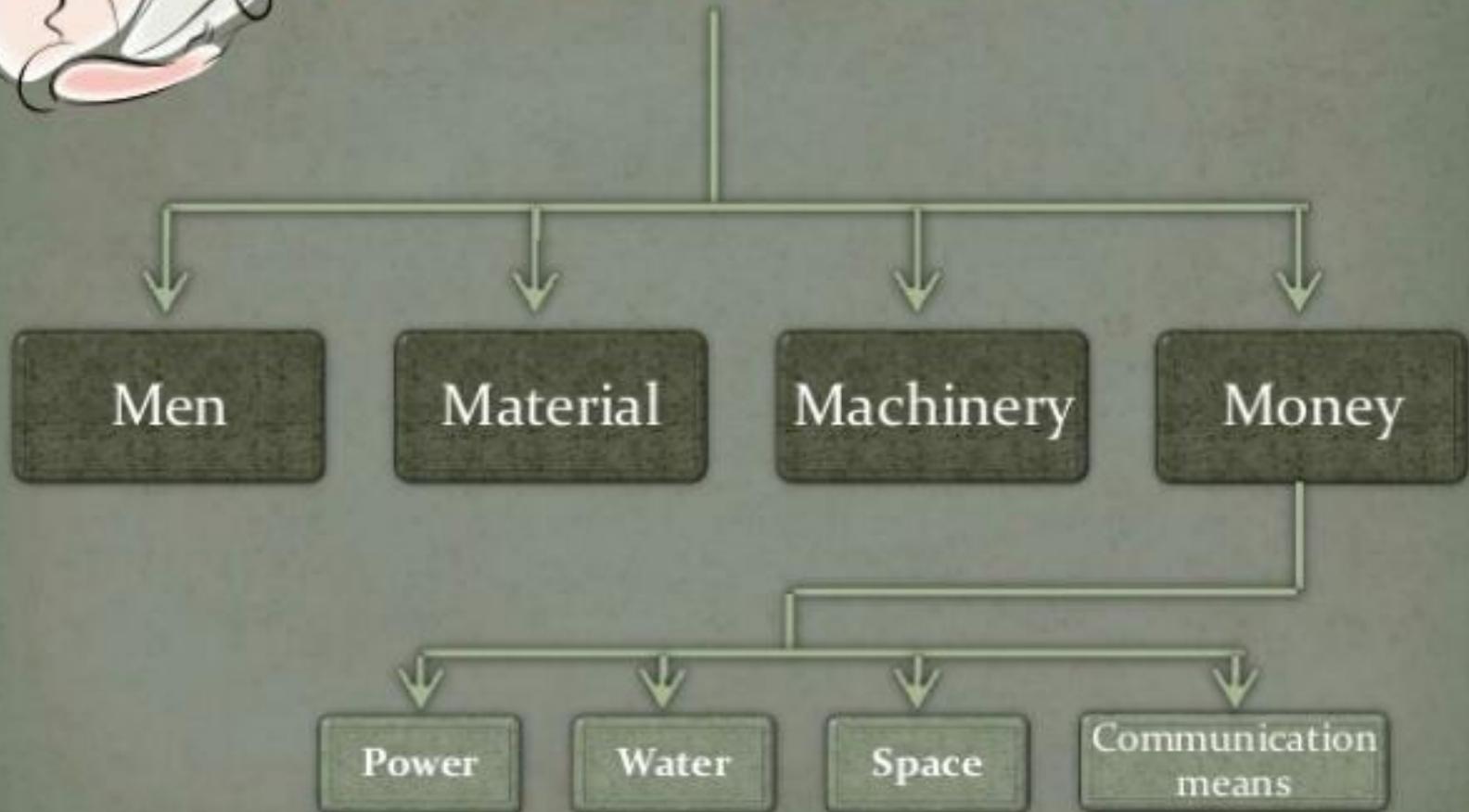
## Controlling



- Specifying the factors to be controlled
- Monitoring the performance in terms of progress, quality and cost
- Comparing actual and planned performance
- Analysis of shortfalls and implementation of suitable remedial measures
- Quick and accurate flow of information



# Constructional Resources





## MEN

- Work force – man power



- Technical and managerial personnel ( organization)





## Work force planning

- Work force is Skilled and unskilled labor.
- Timely employment of just required numbers of workmen of right trade and skill.
- Over-manning and under-manning both are bad.
- Sudden fluctuations in labor strength should be avoided.
- Describe work elements.





- Assess no. of workdays to be put every week/month.
- Draw a chart of manpower needed using CPM network.
- Adjust schedule and requirement avoiding sudden fluctuations.
- Ascertain availability of right trade and skill for recruitment.
- Maintain a reasonable ratio between supervisor and workmen.



## Technical and managerial personnel : organization

A social arrangement which pursues collective goals,  
which controls its own performance.





## Functions of Organization

- Give responsibilities to the group of employee.
- Provides adequate communication.
- Demarcates authority, responsibilities, and duties of each group and employee.
- Coordinates and controls activities of group and individual to achieve common objective.





## Materials

- Brick, stone, timber, cement, water, aggregate, paint, electrical fittings, lime, sand etc.
- Material schedule showing quantity, quality and time of delivery should be prepared with reference to work schedule
- Plan the adequate supply of material.





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- Requirements depends on type of project.
- Batching plant, mixer, trucks, vibrator, tractors, excavators and cranes etc.
- Equipment schedule or calendar should be prepared.
- Equipments can be transferred from one site to another or can be purchased new depending on economic analysis.
- Non-availability of right equipment or tool may lead to financial loss or can hold up the work.





## Money

- Most important resource
- All other resources depends on availability of funds.
- So financial resources should be planned very carefully.

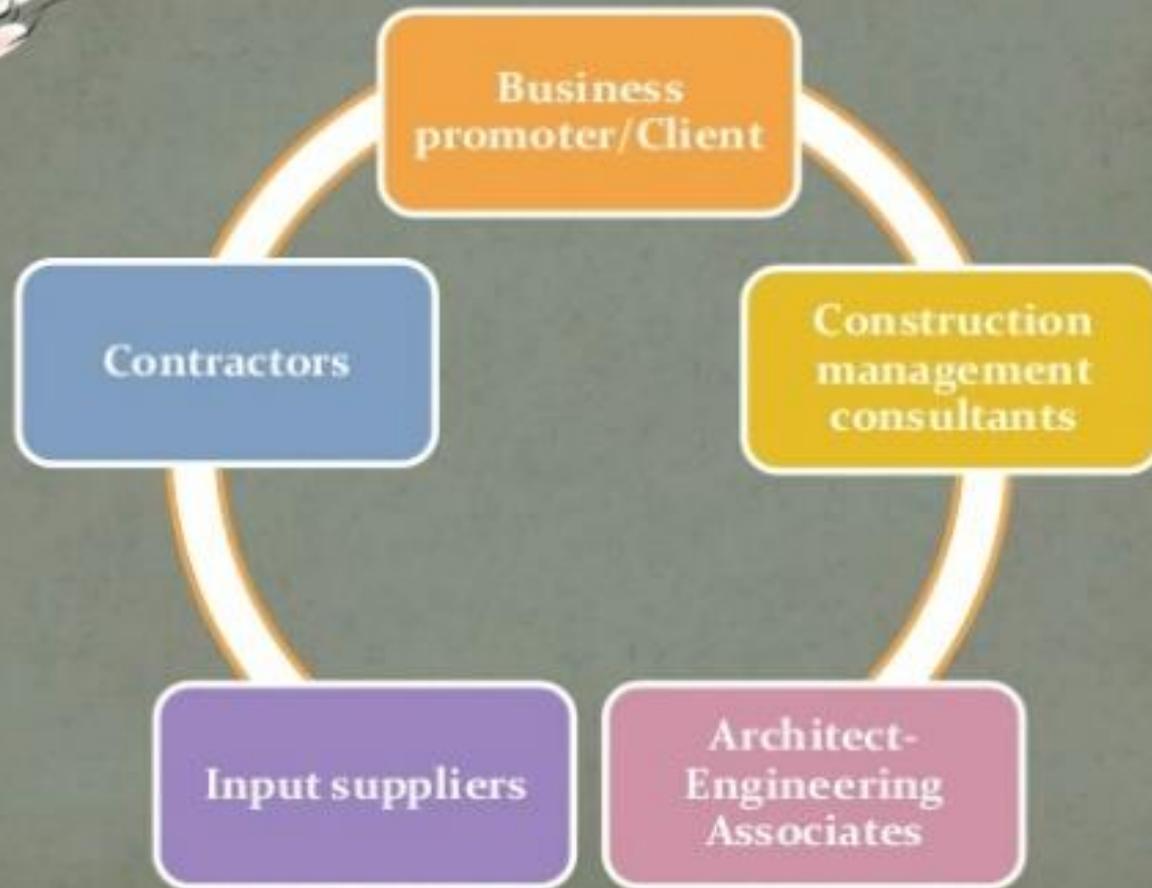




# CONSTRUCTIONS PARTICIPANTS



There are five main agencies actively associated with the execution of major works. These are:-





## Business promoter/Client

Also called the client, he is the potential owner of the construction facility. It is he who sponsors the work, finances their construction and utilizes the facility constructed. Client may be a govt. body, a public or private enterprises. Construction work can be executed through clients own organization or through contractors





## Construction management consultants



The emerging trend these days is to hire these consultants for rendering certain services on contract basis. Generally task assigned includes –

- (a) Project feasibility study, including cost estimates.
- (b) Site survey and soil investigation.



- (c) Estimating, initial planning and budgeting
- (d) Scrutiny and coordination of design and drawing work .
- (e) Processing prequalification of construction agencies, tendering and awarding contracts to the successful bidder.

(f) Designing project organization for executing works and developing standard operating procedures and systems.

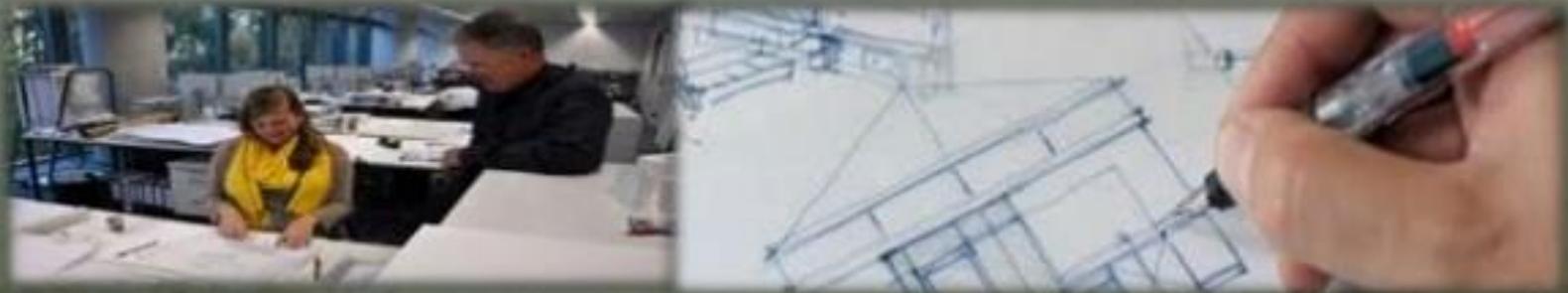
(g) Developing detailed construction plans, project schedules and performance measuring standards.

(h) Supervising works, including administration of contract and controlling of project time, cost and quality objectives.



## Architect-Engineering Associates

- An architect is an individual who designs the buildings, landscapes and other artistic features. The engineers associated with architects develop structural, electrical, mechanical and other specialist systems and designs. Architect-engineering associates are the firm involving both architects as well as engineers to provide complete design services under one roof.





## Input suppliers

- Construction process needs resources input. Construction inputs exist in the form of men, materials, machinery and money.





# Contractors

Construction contractors form the backbone of the construction business as they execute most of the construction work. In the competitive construction business, the contractor generally tends to specialize in particular area of construction.

**Contractors**  
new tools just for you.

Because your needs differ from the needs of architects and homeowners, we have created tools and information that address the needs and issues you face alone. Like "Product Installation Instructions" and "Warranty Information" even answers to "frequently asked questions." Our goal is simple, make your job easier so you spend less time searching and more time on your project.

# Contractors can be classified



- ❑ General contractors
- ❑ Building contractors
- ❑ Specialist contractors for various types of heavy infrastructure construction work like highways, bridges, dams etc.
- ❑ Specialist contractors for various categories of industrial works like power plants, process industries, etc.
- ❑ Specialist utility services contractors. These include electrical contractors, water supply and sewage disposal contractors, HVAC (heating, ventilation and air-conditioning) contractors.

# CONCLUSION

Finally after discussing the various aspects of “The importance of Construction Planning & Management”, we conclude that these are the very essential functions and part of any constructional project to get finished within time with estimated cost. So we should save our input and money with the proper planning and smart management skills.

THANK YOU