

Production Planning and control



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- PPC is defined as the **planning, direction and coordination of the firm's material and physical facilities** towards the attainment of predetermined production objectives in the most economical manner.
- PPC is a management tool, employed in direction of the **manufacturing operations** and their coordination with other activities of the firm. In the production system, it is primarily defined by the dimension of **quality, time and price.**

“PPC is the process of planning or deciding on the resources the firm will require for its future manufacturing operations and of allocating and time scheduling these resources to produce the desired products on time at the least total cost”

Factors determining PP procedures

- *Volume of production*
- *Nature of production process*
- *Nature of operations*
 - Manufacturing to order*
 - Manufacturing for stock and sell*
(*Mass production and Continuous*)

- *Product planning system*
- *Process planning system*

Production planning system

Product planning system

- *Market requirements*
- *Product specification*
- *Product idea*
- *Product research*
- *Product development*
- *Final product design*

- *Process R & D*
- *Process design*
- *Work station selection*
- *Work flow analysis*
- *Operation design*

Scope of PPC

- ✓ **Materials** - Procurement, Storage, inventory Control and issue
- ✓ **Methods** - Processes, operations and their sequences
- ✓ **Machines** - Loading of Jobs and Utilization
- ✓ **Manpower** - Workers and skills
- ✓ **Routing** - Flow of Work
- ✓ **Estimating** - Operations Time
- ✓ **Scheduling** - Time table of production, priority, sequencing and machine loading
- ✓ **Dispatching** - Authorizing the start of operations
- ✓ **Expediting** - Follow up and keeping record of progress made
- ✓ **Evaluating** - Assessing the effectiveness of operations

ROUTING

Routing is determining the exact path which will be followed in production. It is the selection of the path from where each unit have to pass before reaching the final stage. The stages from which goods are to pass are decided in this process.

In the words of ALFORD and BEATY –

“Routing is the specification of the flow sequence of operations and processes to be followed in producing a particular manufacturing lot.”

Scheduling is the determining of time and date when each operation is to be commenced or completed. The time and date of manufacturing each component is fixed in such a way that assembling for final product is not delayed in any way.

In the words of KIMBALL and KIMBALL –

“The determination of the time that should be required to perform each operation and also the time necessary to perform the entire series, as routed, making allowances for all factors concerned.”