19MEEC1015-PRINCIPLES OF MANAGEMENT

By

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Course Contents

- Process of controlling-Types of control-Budgetary and non-budgetary control techniques-Managing productivity-Cost control-Purchase control-Maintenance control-Quality control-Planning operations.

Controlling

Process of Controlling, Types of Control

Subject: Principles of Management

Unit: 5

Lecture:1

System and Process of Controlling

- Controlling
  - The measurement and correction of performance in order to make sure that enterprise objectives and the plans devised to attain them are being accomplished.
  - Without objectives and plans, control is not possible because performance has to be measured against some established criteria.

- The Basic Control Process
  - Establishing standards.
  - Measuring performance against these standards.
  - Correcting variations from standards and plans.

The Basic Control Process

- Establishment of Standards
  - Standards – Criteria of performance
  - Selected points in an entire planning program at which measures of performance are made so that managers can receive signals about how things are going and thus do not have to watch every step in the execution of plans
- Measurement of Performance
  - Measurements be done on a forward – looking basis so that deviations may be detected in advance of their occurrence and avoided by appropriate actions
- Correction of Deviation
  - By exercising their organizing function through reassignment or clarification of duties

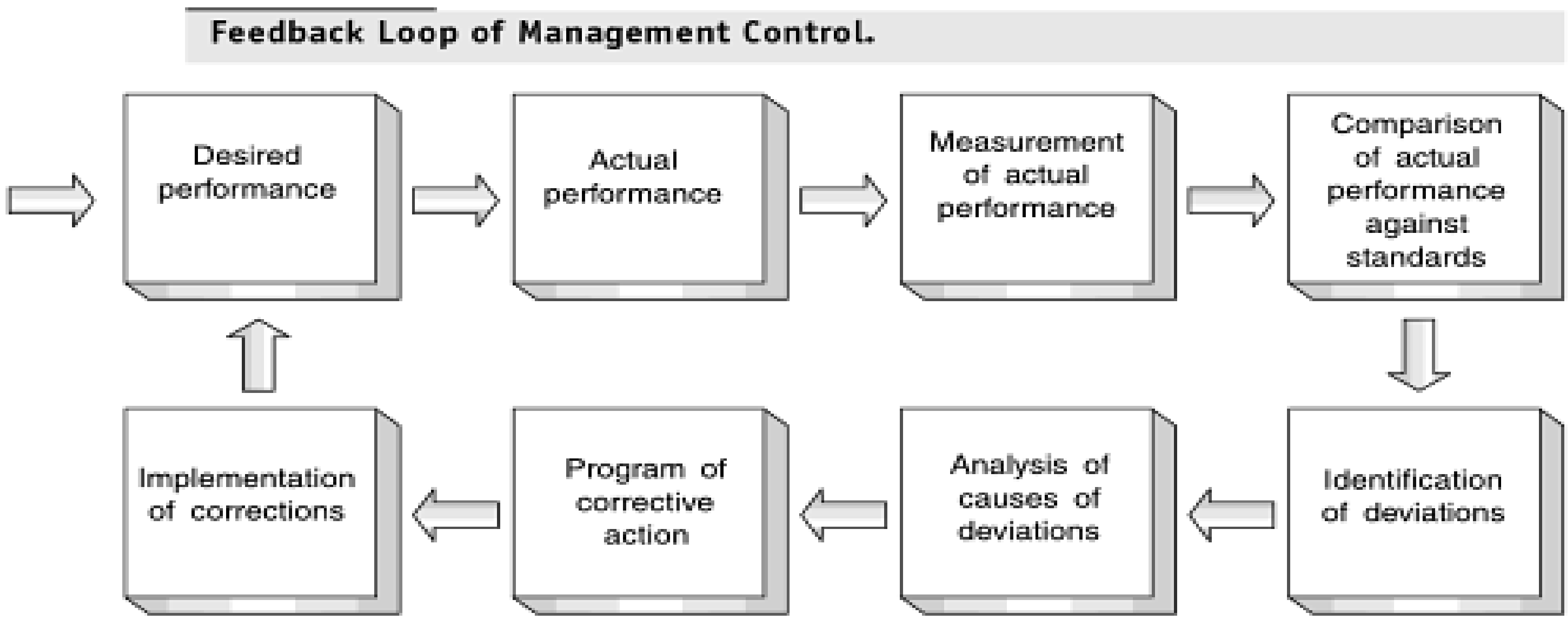
Critical Control Points, Standards, and Benchmarking

- Principle of Critical Point Control
  - Effective control requires attention to factors critical to evaluating performance against plans
- Types of Critical Point Standards
  - Standards are physical, cost, capital, revenue, program, intangible, goal, and strategic plans as control points for strategic control
- Strategic Control
  - Systematic monitoring at strategic control points and modifying the organization's strategy based on this evaluation
- Benchmarking
  - An approach for setting goals and productivity based on best industry practices
  - Three types – Strategic, Operational, and Management

Types of Controlling -Feedback Control

- Control as Feedback
  - Many systems control themselves through information feedback, which shows deviations from standards and initiates changes
  - Management control is usually perceived as a feedback system similar to the common house – hold thermostat

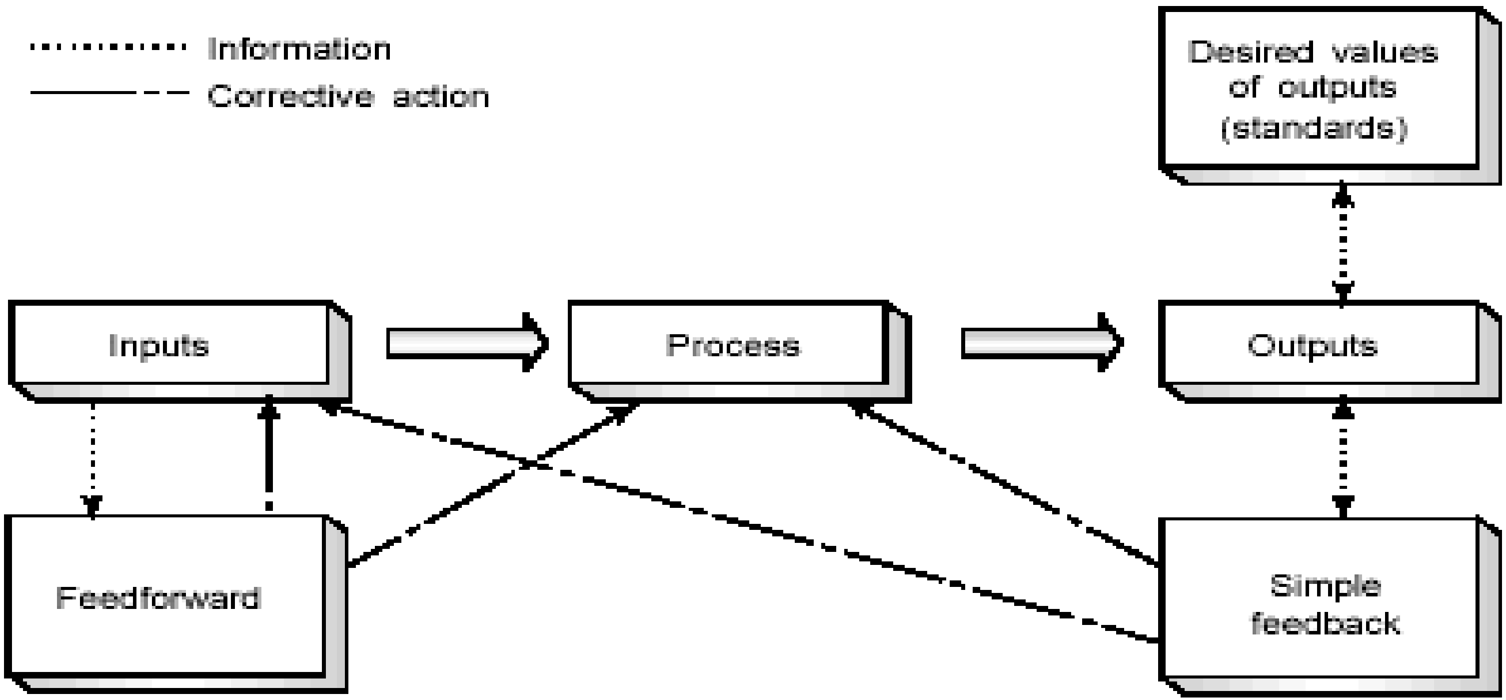
- Real Time Information and Control
  - Advances arising from the use of the computer and from electronic gathering, transmission, and storage of data is the development of real time information
  - Information about what is happening while it is happening
  - Real – time control in areas of importance to managers


Feedback Loop of Management Control.
Desired performance
Actual performance
Measurement of actual performance
Comparison of actual performance against standards
Identification of deviations
Analysis of causes of deviations
Program of corrective action
Implementation of corrections

Feed forward or Preventive Control

- Feed forward Systems
  - Monitor inputs into a process to ascertain if the inputs are as planned; if they are not, the inputs or the process is changed in order to obtain the desired results
- Requirements for Feed forward Control
  - Identify the more important input variables
  - Develop a model of the system
  - Take care to keep the model up to date
  - Collect data on input variables regularly, and put them into the system
  - Regularly assess variations of actual input data from planned – for inputs, and evaluate the impact on the expected end result
  - Take action to solve them

Comparison of Simple Feedback & Feed forward Systems



Control of Overall Performance

- Reasons for control of overall performance
  - Overall planning must apply to enterprise, so must overall control
  - Decentralization of authority
  - Overall control permits the measurement of an integrated area manager's total effort, rather than parts of it
  - Many overall controls in business are financial

Other Controls

- Profit and Loss Statement
  - Shows all revenues and expenses for a given time, so it is a true summary of the results of business operations
  - Limitations – Duplication of accounting records, allocating overhead costs, and time etc.,
- Control through Return on Investment
  - Measures both the absolute and the relative success of a company or company unit by the ratio of earnings to investment of capital
- Bureaucratic and Clan Control
  - Bureaucratic – Characterized by the wide use of rules, regulations, policies, procedures, and formal authority
  - Clan – Based on norms, shared values, expected behavior, and other cultural variables

Requirements of Effective Controls

- Tailoring Controls to Plans and Positions
  - Reflect the organization structure, showing who is responsible for the execution of plans and for any deviation from them and should be tailored to positions
- Tailoring Controls to Individual Managers
  - Individual Managers carry out their function of control
- Designing Controls to Point up Exceptions at Critical Points
  - Efficient control requires that managers look for exceptions, while effective control requires that managers pay primary attention to things that are most important
- Seeking Objectivity of Controls
  - Manager's or a Subordinate's personality may influence judgments of performance and make them less accurate

Requirements of Effective Controls contd….

- Ensuring Flexibility of Controls
  - If controls are to remain effective despite failure or unexpected changes of plans, they must be flexible
- Fitting the Control System to the Organizational Culture
  - Generalized and permissive control system will hardly succeed
- Achieving Economy of Controls
  - Controls must be worth their costs
- Establishing Controls that Lead to Corrective Action
  - An adequate control system will disclose where failures are occurring and who is responsible for them, as well as ensuring that corrective action is taken

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Controlling

Budgetary and Non-Budgetary Control Techniques

Subject: Principles of Management

Unit: 5

Lecture:2

The Budget as a Control Device

- Budgeting
  - The formulation of plans for a given future period in numerical terms
  - Financial terms – as in revenue and expense as well as capital budgets
  - Non-Financial terms – as in budgets of direct – labor – hours, materials, physical sales volume etc.,

- Types of Budgetary Control Techniques
  - Budgetary Control Techniques
  - Non-Budgetary Control Techniques

Budgetary Control Techniques

- Sales Budget
  - Expected volume of sales, flowing to a business enterprise over a specific future period of time.
- Production Budget
  - Anticipated production to be done in view of the resource availability.
  - Expressed in terms of Man-Hours and Machine- Hours.
- Production-Facilities Budgets
  - Materials budgets, Labor budget, Factory overheads budget, Administrative (or office) overheads budget, Selling and distribution overheads budget.
- Cash Budget
  - Anticipated cash receipts and cash disbursements; occurring during a specific future period of time – to find out the likely surplus or shortage of cash, during that period.
- Capital Expenditure Budgets
  - Budgets for plants, machines, equipments, furniture, etc.
- Balance-Sheet Budgets
  - Statements of forecast of capital account, liabilities and assets.

Advantages of the Budgetary Control System

- Expression of Planning in Definite Terms
- Comprehensive Managerial Technique
- Communication of Jobs (or Duties) through Budgets
- Instrument of Coordination
- Profit-Maximization Attempted through Cost-Control
- Fixation of Responsibility Facilitated

Limitations of Budgetary Control System

- Not Comprehensive
  - Qualitative aspects of managing cannot be fully and precisely made a part of it.
- Difficulty in Setting Rational Standards
- Danger of Over-Budgeting
  - Unwise decisions to meet the budget
  - Not invest in R & D, Capital investment for productivity etc.,
- Lack of Departmental Cooperation and Co-ordination
  - Personal differences and conflicting approaches.
- Umbrella for Inefficiency

Non-Budgetary Control Techniques

- Direct Personal Observation and Supervision
  - Advantage that corrective action by the manager could be taken on the spot.
- Written Reports
  - Manager prepares written reports on the performance of his subordinates; and submits these to higher authorities
- Statistical Reports and Analysis
  - Specialists prepares statistical reports and presents them in form of tables, ratios, percentages, correlation analysis, graphs, charts, etc. to higher management levels.
  - Such reports are prepared in areas like production, sales, quality, inventory etc.,
- Break-Even Analysis
  - Marginal costing - based on a classification of costs into fixed and variable categories.
- Ratio Analysis
  - Income Statement and the Position Statement by computing appropriate ratios.

Modern Techniques of Controlling

- Management Audit
  - Efficiency of the management's philosophies, policies, techniques etc
- Internal Audit (or Operational Audit)
  - Ensures a true and fair recording of the accounting information and also offers comments on various operational aspects of enterprise-life.
- Social Audit
  - Concerned with the measurement of social performance of an organization in contrast to it economic performance.
- Responsibility Accounting
  - Dividing a business organization into responsibility centers for achieving the targets.
- Human Resource Accounting (HRA)
  - Accounting for people in an organization i.e., to recruit, select, hire and train human assets and a measurement of the economic value of people to the enterprise.

Modern Techniques of Controlling Contd…

- Management Information System
  - A formal system of gathering, processing, and dispersing information internal and external to the enterprise in a timely, effective, and efficient manner to support managers in their jobs
  - Communication and the Management Information System (MIS) are the linkage that makes managing possible
- PERT and CPM
  - PERT (Programme Evaluation Review Techniques) and CPM(Critical Path Method) used the same basic concept and are being used for a wide range of planning and control problems.
  - Purpose of planning, scheduling and controlling the activities of various business projects.
  - Minimizes the interruption in work and in completing the project as per schedule

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Cost Control

Subject: Principles of Management

Unit: 5

Lecture:3

Cost Control

- Definition
  - Search for better and more economical ways of completing each operation.
  - Cost control is simply the prevention of waste within the existing environment.
- Aspects of Cost Control
  - Planning
  - Communication
  - Motivation
  - Appraisal
  - Decision Making

Advantages of Cost Control

- It helps the firm to improve its profitability and competitiveness.
- In the absence of cost control, profits may be drastically reduced despite a large and increasing sales volume.
- It is indispensable for achieving greater productivity.
- Cost control may also help a firm in reducing its costs and thus reduce its prices.
- If the price of the product is stable and reasonable, it can maintain higher sales and thus employment of work force.

Standards of Cost Control

- Mainly two types of standards are established to control costs. They are
- External Standards
  - External standards are applied for comparing performance with other organizations.
- Internal Standards
  - Internal standards, on the other hand, are used for the evaluation of intra firm cost elements like materials, labor, etc.
  - Includes Budgetary Control and Standard Costs.

Standard Costing

- Definition
  - Standard costing is one of the prominently used systems of cost control. It aims at establishing standards of performance and target costs which are to be achieved under a given set up working conditions.
- Basic Requirements of Standard Costing
  - Establish a meaningful standard.
  - System for measuring actual quantities and costs at the same level as the standard costs and quantities.
  - Allows corrective action to be taken.

Advantages and Limitations of Standard Costing

- Advantages
  - It provides means for cost reduction.
  - Variance analysis and reporting is helpful for taking corrective measures.
  - It helps in achieving optimum utilization of plant capacity.
  - It facilitates delegation of authority and fixation of responsibility.

- Limitations
  - Application of standard costs is quite difficult in practice.
  - Frequently, standards become rigid over time and do not keep pace with changes in conditions.
  - If the standards are outdated, loose, inaccurate and unreliable, they are more harmful.
  - Standard costing may be found to be unsuitable and costly in the case of firms dealing in non-standard products.

Basis of Setting Standard Costs – Variance Analysis

- Causes of Variances
  - Due to material cost, labor cost, sales and Overhead variance
  - Due to union negotiations, policy decision or changing composition of work force, labor rates or salary levels may change.
  - The product mix may change in a multi-product industry.
  - Investment in new capital and replacement of old equipments can have immediate effects on both operating costs and overheads.
  - Changes in the value of money.
- Computation and Analysis of variance
  - Magnitude of variation
  - Reasons for the occurrence
  - The factors responsible for it etc.,

Basis of Setting Standard Costs – Ratio Analysis

- Definition
  - Ratio analysis is mainly used as an external standard, that is, for comparing performance with the other organization in the industry. It can also be effectively used for comparing the performance of the firm over time.

- Commonly used Ratios for cost comparison
  - Net Profits/Sales, Selling Costs/ Costs of Sales, Material Cost/ Production Costs etc.,

Important Techniques for Cost Control

- Value Analysis
  - It is very helpful in industries where production is done on a large scale and in such cases even a fraction of savings in cost would help the firm significantly.

- Method Analysis
  - Method Study is a systematic study of work data and critical evaluation of the existing and proposed ways of undertaking the work.

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Managing Productivity

Subject: Principles of Management

Unit: 5

Lecture:4

Productivity

- Definition
  - The output – input ratio within a time period with due consideration of quality
  - Implies measurement
  - Quality Measurement in Information age is Wal – Mart

- Productivity Problems
  - Greater proportion of less – skilled workers with respect to the total labor force
  - Emphasis on immediate result
  - Workers' attitudes, and government policies and regulations
  - Productivity dilemma is the growing affluence of people, which makes them less ambitious

Measurement of Productivity

- Skill Workers
  - Person on a production line
  - Bricklayers, mechanics, and butchers
  - Measurement is easy

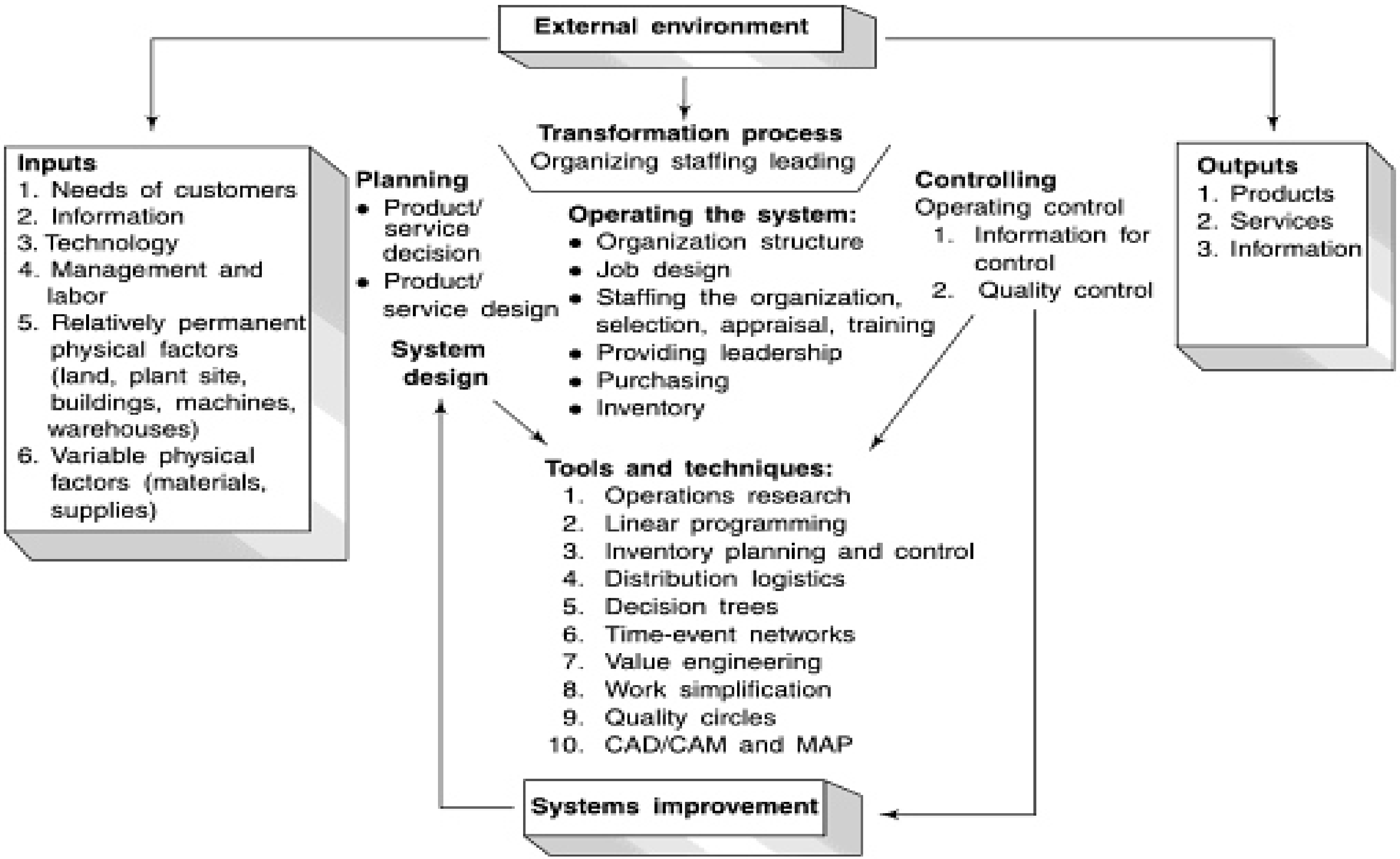
- Knowledge workers
  - Assistant to the manager with planning as his or her main function
  - Managers, engineers, and programmers
  - Difficult – quality of outputs is often hard to measure

Production and Operations Management

- Production Management
  - Deals with activities necessary to manufacture products
  - Expanded as purchasing, warehousing, transportation, and other operations until a product is available to the buyer

- Operations Management
  - Deals with activities necessary to produce and deliver a service as well as a physical product
  - Do not produce a physical output but provide some service as an output
  - Service providers are hospitals, doctors, consultant, airlines, restaurants, musicians and the great variety of retail stores

Figure 20.1
Operations Management System.



Tools and Techniques for Improving Productivity

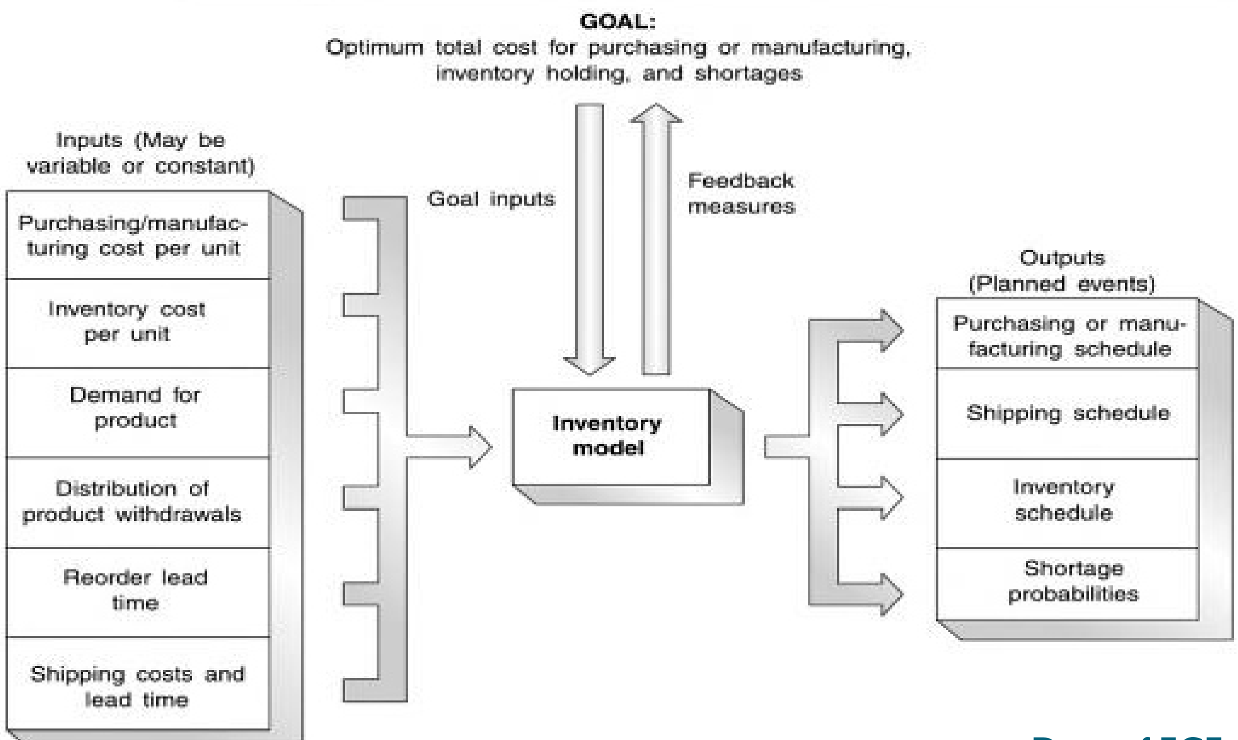
- Many tools and techniques available for improving manufacturing and service operations
  - Inventory Planning and control
  - Just – in time inventory system
  - Outsourcing
  - Operations research
  - Value engineering
  - Work simplification
  - Quality circles
  - Total quality management
  - Lean manufacturing
  - CAD & CAM

Tools & Techniques for Improving Productivity Contd…

- Inventory Planning and Control

Figure 20.2

Inventory Control Model.



Tools & Techniques for Improving Productivity Contd…

- Just – in – Time Inventory (JIT) System
  - The supplier delivers the components and parts to the production line only when needed and "just in time" to be assembled
  - Zero inventory and Stockless production (other names)
- Outsourcing
  - The contracting of production and operations to outside vendors that have expertise in specific areas
  - Tool for expanding a company and for maintaining a competitive position
- Operations Research
  - The application of scientific methods to the study of alternatives in a problem situation, with a view to obtaining a quantitative basis for arriving at a best solution

Tools & Techniques for Improving Productivity Contd…

- **Value Engineering**
  - The process of analyzing the operations of the product or service, estimating the value of each operation, and attempting to improve that operation by trying to keep costs low at each step or part
- **Work Simplification**
  - The process of obtaining workers' participation in simplifying their work
  - Training sessions are conducted to teach concepts and principles of techniques such as time and motion studies, work – flow analyses, and the layout of the work situation
- **Quality Circles**
  - A group of people from the same organizational area who meet regularly to solve problems they experience at work

Tools & Techniques for Improving Productivity Contd…

- Total Quality Management
  - Long – term commitment to continuous quality improvement, throughout the organization and with the active participation of all members at all levels, to meet and exceed customer expectations
- Lean Manufacturing
  - Continuous improvements with strategic breakthroughs
  - Aiming at zero defects
  - Responsibility for problems rests on everyone, especially management
- Computer – aided Techniques
  - Capturing the market quickly is crucial in the very competitive environment
  - Firms can respond more rapidly to the requests of customers with specific requirements

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Purchase Control, Maintenance Control

Subject: Principles of Management

Unit: 5

Lecture:5

Purchase Control

- Purchase control **is an element of material procurement**.
- Purchasing is an **important function of materials management** because in purchase of materials, a substantial portion of the company's finance is committed which **affects cash flow position of the company.**
- Success of a business is to a large extent influenced by the efficiency of its purchase organization.

Advantages of good purchase control

1. Continuous availability of materials
2. Purchasing of right quantity & right quality
3. Economy in purchasing
4. Development of business relationship
5. Finding of alternative source of supply
6. Fixing responsibilities to the supplier

Continuous availability of materials

- It ensures the continuous flow of materials. so production work may not be held up for want of materials.
- A manufacturer can complete scheduled production in time.

Purchasing right quantity & quality

- Purchase of right quantity of materials
  - **avoids locking up of working capital.**
  - **Minimizes risk of surplus and obsolete stores.**
  - **Avoids possibility of over-stocking and under-stocking.**

- Purchase of materials of proper quality and specification
  - **avoids loss in production.**
  - **prevents wastage of materials**
  - **reduces the cost of production.**

Economy in purchasing

By repeated purchasing over the period of time . . .

- **Specialized suppliers are identified**
- **Able to purchase materials at reasonable prices,**
- **Hence valuable contribution to the success of a business.**

Development of business relationship

Purchasing of materials from the best market and from reliable suppliers

- **develops business relationships.**
- **Hence smooth supply of materials in time**
- **Avoids disputes and financial losses.**

Finding alternative source of supply

- At times of a supplier fail to supply the materials, alternate sources of supply are identified to see that the production work is not disturbed.

Fixing responsibilities

Effective purchase control fixes the responsibilities to operating units and individuals connected with the

- **purchase,**
- **storage and**
- **handling of materials.**

Summary

In short, the basic objective of the effective purchase control is

* To ensure **continuous supply of requisite quantity** of material

* To **avoid** held up of production and **loss in production**

* To **reduce the ultimate cost** of the finished products.

Maintenance Control

*Maintenance department has to

- **exercise effective cost control,**
- **carry out the maintenance functions in a pre-specified budget**.

Example

First line supervisors must be apprised of the cost information of the various materials so that the maintenance functions can be met without extra expenditure .

Maintenance Control Contd…

* A monthly review of the **budget provisions and expenditures** incurred in respect of each centre/shop to be carried out.

- The **total expenditure to be uniformly spread over the year** for better budgetary control.
- some **budgetary provisions** must be set aside, to meet out **unforeseen exigencies**.

Example : overhauling of equipment has to be carried out due to unforeseen breakdowns.

Maintenance Control Contd…

* The controllable elements of cost such as **manpower cost and material cost** can be discussed with the concerned personnel, to reduce the total cost of maintenance.

* Emphasis should be given to **reduce the overhead expenditures**, as other expenditures cannot be compromised.

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Quality Control

Subject: Principles of Management

Unit: 5

Lecture:6

Introduction

Quality control is a process through which a business seeks to

* ensure that **product quality** is maintained.

* **manufacturing errors** are reduced or eliminated.

* It strives for an environment in which both **management and employees** work for perfection.

Quality control - Defined

- Quality Control (QC) may be defined as a system that is used to maintain a **desired level of quality** in a product or service.
- It is a systematic control of various factors that affect the quality of the product viz., **materials, tools, machines, type of labor, working conditions** etc.
- Quality control aims at **prevention of defects at the source**, relies on effective feedback system and corrective action procedure.

Characteristics of Quality Control

- To deliver a quality product to the clients **at the best cost**.
- To learn from other organizations so that **quality would be better** each time.
- To **avoid making errors** by proper planning and execution with the correct review process.

Quality Control Techniques

- **Quality assurance-** Quality is assured in each stage:- product design, raw material, process etc. ,
- **Failure testing** –It involves testing a product until it fails, under different environmental conditions viz., **humidity, vibration, temperature,** etc.
- **Statistical Control:** It involves **randomly sampling and testing** a portion of the output

Summary

In short, the basic objective of the quality control is

* To ensure **quality in the final product by ensuring quality from product design, raw material purchase, process** etc.,