
CONTROLLING
BUSINESS
SYSTEM
ANALYSIS
PROCESS
DECISION
MANAGERS
FACTORY
MANAGEMENT
CONTROLLING
RISK
DESIGN
SYSTEMS
PLANNING
INPUT
PRODUCTION
FACTORY
DATA
GOODS
INFORMATION
FUTURE
STRATEGY
CONTROL
DEVELOPMENT


quantity
place
objects
time
quality
costs
customers

The managerial function of controlling is the measurement & correction of performance in order to make sure that enterprise objectives and the plans devised to attain them are closely related.

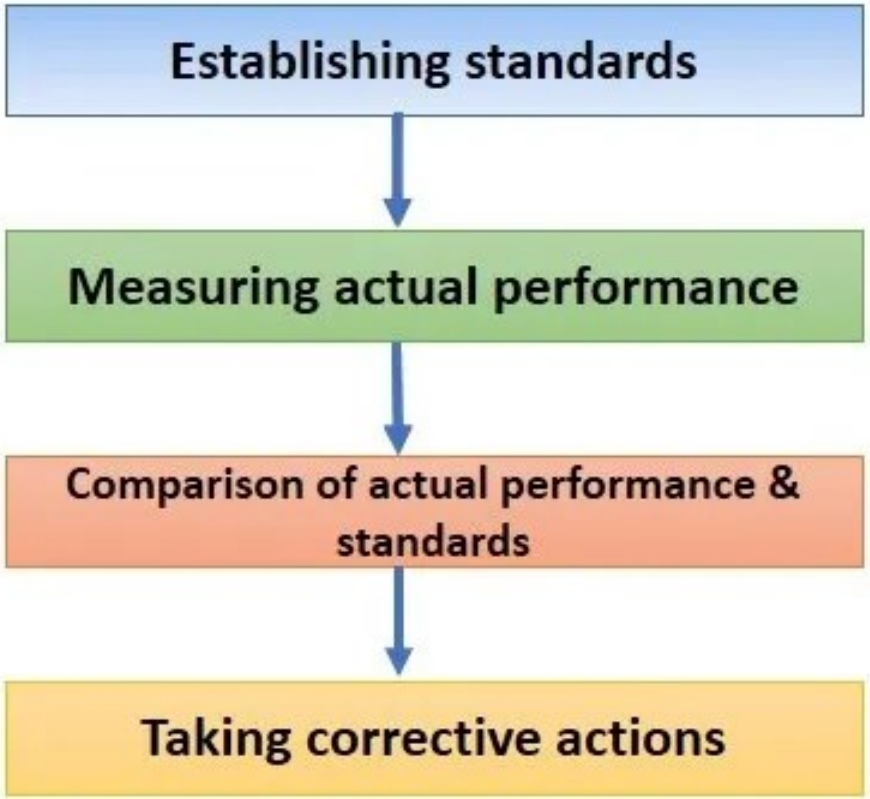
- Planning and controlling are closely related.
- Controlling is the function of every manager from president to supervisor in an organization.

**The Basic Control Process**:

It consists of the following three steps:

- ❖ Establishing standards.
- ❖ Measuring performance against these standards.
- ❖ Correcting variations from standards and plans.

# Process of controlling



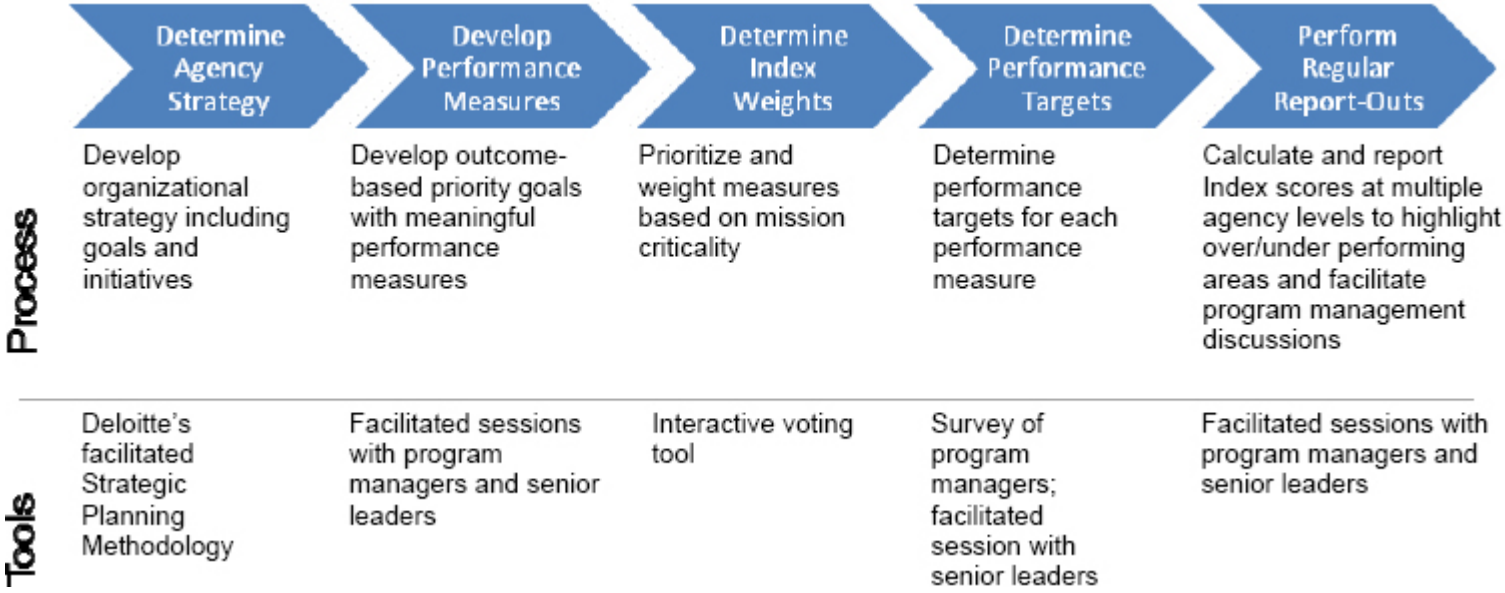
**Establishing Standards** –

- *Plans are the yardsticks against which managers device controls*. Hence controls require plans.
- Since plans vary in detail & complexity and since managers can not watch everything, special standards are established.
- Standards are simply criteria of performance.
- They are the selected points in entire planning program at which measures of performance are made so that managers can receive signals about how things are going & thus do not have to watch every step in the execution of plans.

- For the purpose of control a standard is defined as a unit of measurement that can serve as a reference point for evaluating results.
- Thus, in a broad sense, **goals**, **objectives**, **quotas**, and **performance targets** will also serve as 'standard' in the control process.
- Some specific standards are - **sales quotas**, **budgets**, **job deadlines**, **market share** and **profit margins**.

    - Physical standards might include quantities of products or services, number of customers or clients, or quality of product or service.
    - Technical standards might include specifying machine tolerances, acceptable levels of quality, items produced per hour on an assembly line and bid specifications developed by the engineering department.
    - Monetary standards are expressed in rupees and include labour costs, selling costs, material costs, sales revenue, gross profits, and the like.
    - Managerial standards include such things as reports, regulations and performance evaluation. All these must focus only on the key areas and the kind of performance required to reach specific goals.
    - Time standards might include the speed with which jobs should be done of the deadlines by which jobs are to be completed.

**Measurement of performance** – Measurement of performance against standards should ideally be done on a forward looking basis so that deviations may be detected in advance of their occurrence and avoided by appropriate actions. If standards are appropriately drawn & if means are available for determining exactly what subordinates are doing, appraisal of actual or expected performance is fairly easy. But there are many activities for which it is difficult to develop accurate standards and there are many activities that are hard to measure. More over, in the less technical kinds of work, not only many standards be hard to develop but also appraisal will be difficult.



Determining Performance Measurements:

Selling standards hardly serves any purpose unless some steps are taken to measure actual performance. While the first step in the control process establishes standard the second step asks managers and others to measure the performance is in line with the set standards.

In other words, the second step in control is to determine the appropriate measurement of performance progress.

Some relevant questions that crop up at this stage are:

1. What is the frequency with which performance has to be measured — hourly, daily, weekly, yearly?

2. What will be the exact form of measurement — a phone call, visual inspection, a written report?

3. Who has to be involved — the manager, an assistant, a staff department?

There are various ways of measuring performance:

(1) Observation,

(2) Reports, both oral and written,

(3) Automatic methods,

(4) Inspections, tests, or samples.

**Correction of Deviations** – standards should reflect the various positions in an organizational structure. If performance is measured accordingly, it is easier to correct deviations. Managers may correct deviations by redrawing the plans or by modifying the goals or may correct deviations by exercising the organizing function through reassignment of duties. They may also correct, by additional staffing, by selection & training of subordinates, or by that ultimate re-staffing measure (Firing), may correct through better leading also.

After evaluation, one of the three actions is usually appropriate:

**Maintain the Status Quo:**

One response is to do nothing, or maintain the status quo. This action is generally appropriate when performance more or less measures up to the standard.

**Correct the Deviation:**

It is more likely that some action will be needed to correct a deviation from the standard. If the cost-reduction standard is 4% and we have thus far managed only a 1% reduction, something must be done to get us back on track. We may need to motivate our employees to work harder or to supply them with new machinery.

**Change Standards:**

A final response to the outcome of comparing performance to standards is to change the standards. The standard may have been too high or too low to begin with. This is apparent if large number of employees exceeds the standard by a wide margin or if no one ever meets the standard.

# Critical Control Points & Standards:

The points selected for control should be critical. The principle of critical point control states that –

**“Effective control requires attention to those factors critical to evaluating performance against plans”.**

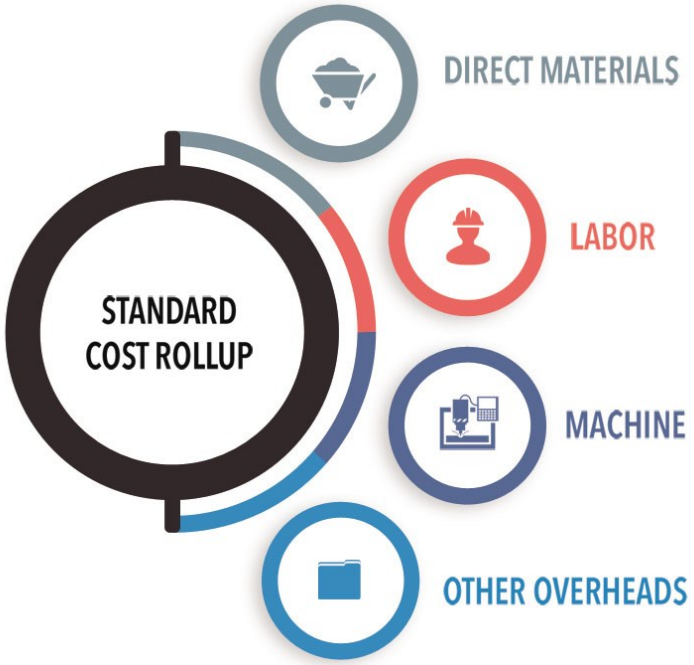
Following are the types of Critical Point Standards used:

- **Physical standards** –

They are **non-monetary** measurements and are common at the **operating level**, where **materials** are used, **labor** is employed, **services** are rendered and **goods** are produced.

They may reflect quantities such as **labor hours per unit of output**, **Kg of fuel per HP power generated**, **units of production per machine hour** etc. it may also reflect quantities such as **hardness of bearings, closeness of tolerances, durability of fabrics** etc.

- **Cost standards** – cost standards are **monetary** measurements, and like physical standards, are common at the operating level. They attach monetary values to the costs of operations. It reflects various costs as **direct & indirect cost per unit produced**, **labour cost per unit**, **material cost per unit**, **machine hour cost** etc.



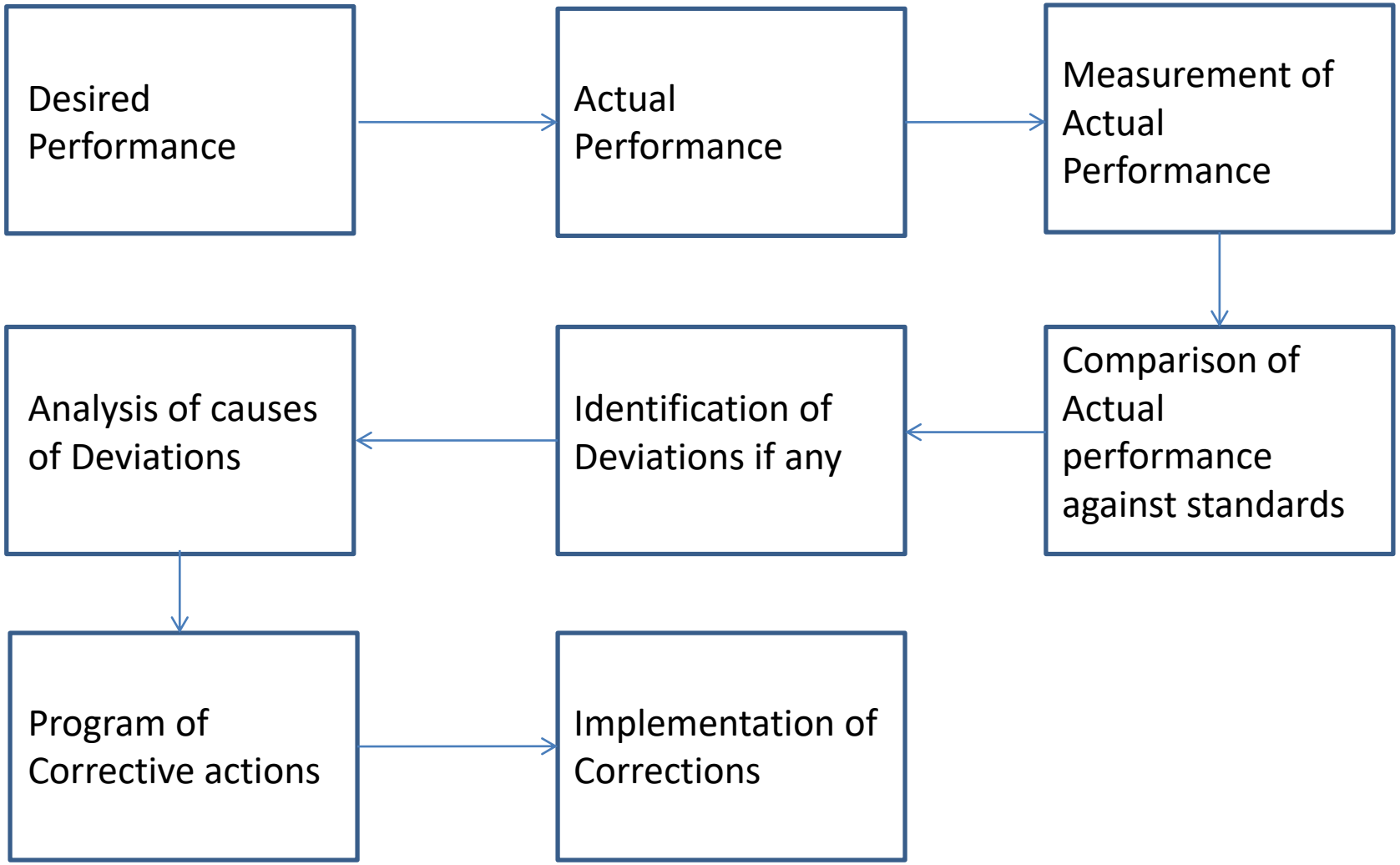
- **Capital standards** – there are a variety of capital standards, all arising from the application of monetary measurements to physical items. They have to do with the capital invested in the firm rather than with operating costs & are therefore **primarily related to balance sheet** rather than to income statement.
- **Most widely used capital standards are Return on Investment (ROI).**
- The Balance Sheet will disclose other capital standards such as
  - current assets to current liabilities ratio,
  - debt to net worth ratio,
  - fixed investment to total investment ratio,
  - receivables to payables ratio (Both cash & credit),
  - size & turnover of inventories.

- **Revenue standards –** they arise from **attaching monetary values to sales.** They may include standards such as **revenue per bus passenger mile**, **average sales per salesmen or customer** etc.
- **Program standards –** a manager may be assigned to install a variable budget from a program for formally following the development of new products, or a program for improving the quality of a sales force. Although a **subjective judgment** may have to be applied in appraising program performance, **timing & other factors** can be used as objective standards.

- **Intangible standards** – More difficult to set these standards since these standards are not expressed either in physical or monetary measurements.
  - What can one use for determining whether the advertising program meets both short & long run objectives?
  - Whether the public relations program is successful?
  - Are supervisors loyal to the company objectives? etc.

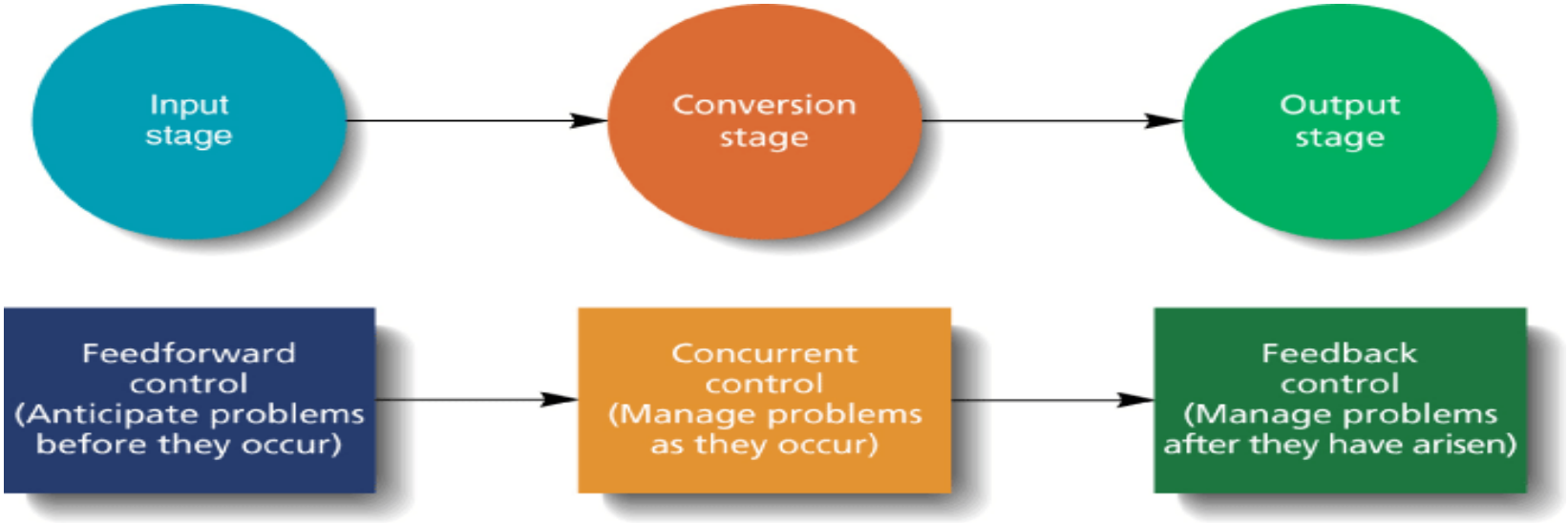
Many intangible standards exist in business. **Considerable judgment, trial & error,** and even an **occasion** may be used for setting and using the intangible standards.

- **Goals as standards –** the quantitative goals set by the organization act as standards, since these set goals are tangible and can be suitably used as standards for the purpose of control.
- **Strategic plans as standards –** strategic plans drawn by organizations may also act as standards and used as critical points for strategic control purposes.

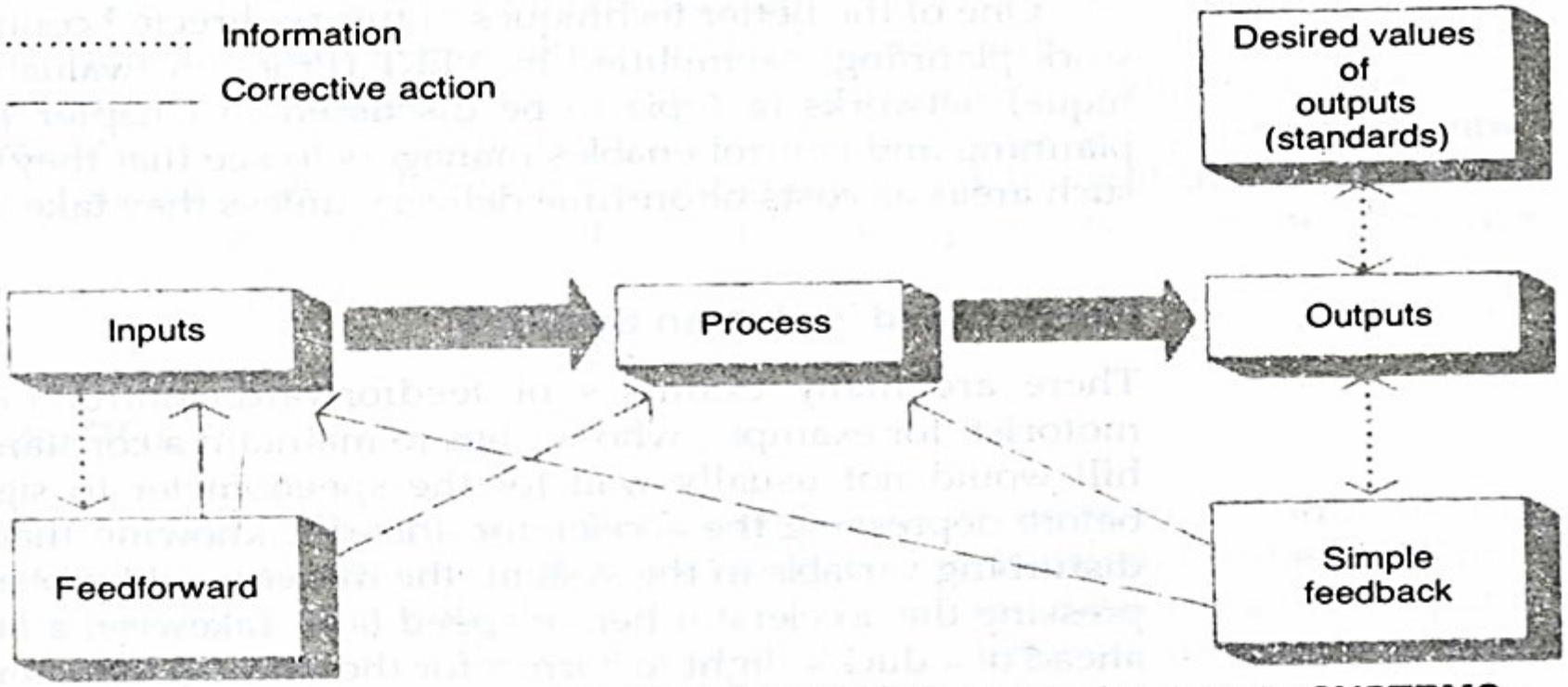



Feedback loop of Managerial control

# Three types of Control:



- Feed forward Controls
  - Control that allows managers to anticipate problems before they arise
- Concurrent Controls
  - Give managers immediate feedback on how efficiently inputs are being transformed into outputs
- Feedback Controls
  - Control that gives managers information about customers' reactions to goods and services




**COMPARISON OF SIMPLE FEEDBACK AND FEEDFORWARD SYSTEMS.**

## CONTROL TECHNIQUES:

**BUDGET:** It is a widely used device for managerial control. Budgeting is the formulation of plans for a given future period in numerical terms. Budgets are the statements of anticipated results either in **financial terms – as in revenue & expenditure statements**, or in **non-financial terms – as in budgets of direct labour hours, materials, sales volume, units of production** etc.

Budgets correlate planning & allow authority to be delegated without any loss of control. *Only when the plans are complete, coordinated & developed enough to be fitted into departmental operations can a useful departmental budget be prepared as a instrument of control.*

**Types of Budgets:**

Following types of budgets are used in control:

- **Revenue and expense Budget** – the most basic of these budgets is the sales budget, which is a formal & detailed expression of the sales forecast. Operating expense budget may deal with individual items of expense, such as travel, data processing, entertainment, advertising, telephone, insurance etc.
- **Time, Space, Material & Product Budget** – Many budgets are better expressed in quantities rather than in monetary terms.

Although such budgets are translated into monetary terms, they are much more significant at a certain stage in planning & control if they are expressed in terms of quantities. More common of these are **Direct labour hours, Machine hours (Time), Units of material (Material), Cu. ft space (Space) and Units produced/sold (Product).**

- **Capital Expenditure budget –** it outlines clearly **the capital expenditures for plant, machinery, equipment, inventories & other items.** It may be for the short term or the long term. But they are tied in fairly with long term planning, since a business takes a long time to recover its investments.

- **Cash Budgets –** It is simply a forecast of cash receipts and cash expenditure. The availability of cash to meet obligations as they fall due is indicated by the cash budget. It also indicates the availability of excess cash, thereby making it possible to plan for profit-making investment of surpluses.

**Dangers in Budgeting** :

- **Over-budgeting** – There is a danger of over-budgeting through spelling out minor expenses in detail and depriving managers of needed freedom in managing their departments.

- **Over-riding enterprise objectives/goals** – Another danger lies in allowing budgetary goals to become more important than enterprise goals. In this zest to keep within budget limits, managers may forget that they owe primarily to enterpise objectives.
- **Hiding inefficiency** – it may be used to hide inefficiencies of managers.
- **Causing Inflexibility** – it is one of the greatest dangers in budgets. flexibility in decisions will be lost due to budgets and decision will become rigid.

**Variable Budgets**:

- Dangers arise from inflexibility in budgets because maximum flexibility consistent with efficiency underlies good planning. Attention has been increasingly given to variable/flexible budgets. These budgets are designed to vary usually on as the volume of sales/ some other measure of output varies. Some costs do not vary with volume of output, particularly in the short period of time. Costs that vary with volume of output range from those that are completely variable to those that are only slightly variable.

| Item of expense | Monthly sales volume (000 ’s) | | | | |
|---|---|---|---|---|---|
| | 20 | 40 | 60 | 80 | 100 |
| Material<br>Labour<br>OH | | | | | |
| Cost of Production | | | | | |
| Engineering<br>R & D<br>S & D<br>Administrative expenditure | | | | | |
| Total costs | | | | | |
| Profit | | | | | |
| % Profit to sales | | | | | |

A typical variable budget is shown. A fixed budget will work as well with good plans and sales forecasts, a variable budget forces study of & preoccupation with, factors which translate workload into labour and expense need.

**Zero based Budgeting**:

- Another type of budgeting, the purpose of which has much in common with the purpose of a well operated system of variable budgeting, is zero base budgeting. The idea behind this technique is to divide enterprise programs into “packages” composed of goals, activities & needed resources & then to calculate costs for each package from the ground up.

By starting the budget of each package from base zero, costs are calculated afresh for each budget period, thus avoiding the common tendency in budgeting of looking only at changes from a previous period.

**Non-budgetary control devices**:

Some of the non-budgetary control devices are as follows:

- Statistical data
- Special reports and analysis
- Operational audit
- Personal observation

**Statistical Data**:

- Most managers understand statistical data the best when the data is presented in chart or graphic form, since trends and relationships are then easier to see. Moreover if data are to be meaningful, even when presented on charts, they should be formulated in such a way that comparisons to some standard can be made. Since no manager can do anything to history, it is essential that statistical reports show trends so that the viewer can extrapolate where things are going. Hence, most data when presented on charts, should be made available as averages to rule out variations due to accounting periods, seasonal factors, and the periodic variations.

**Special Reports and Analysis:**

- In control, special reports & analysis help in particular problem areas. Routine accounting & statistical reports furnish a good share of necessary information, there are often areas in which they are inadequate. It may be that some of the funds spent for elaborate information programs could be more profitably spent for special analysis.

**Operational Audit:**

- It is the regular and independent appraisal by a staff of internal auditors, of the accounting, financial & other operations of an enterprise.

Although often limited to the auditing of accounts, in its most useful form operational auditing includes appraisal of operations in general, weighing actual results against planned ones.

- **Personal Observation**:

  It is also called as “Managing by walking around” by some organizations.

**Time-event Network Analysis**:

- PERT – Program Evaluation & Network Technique.
- CPM – Critical Path Method.

Both are meant for planning and control of projects.

PERT is probabilistic & CPM is deterministic.

- GANTT Charts – show the time relationships between "events" of a production system.

## Control of Overall Performance:

There are many reasons for control of overall performance.

- First, just as overall planning must apply to enterprise or major division goals, so must overall controls be applied.
- Secondly, decentralization of authority – especially in product or territorial division creates semi-independent units, and these must be subjected to overall controls to avoid the chaos of complete independence.

- Thirdly, overall controls permit measure of integrated area manager's total effort, rather than parts of it.

  Overall controls are generally financial in nature.

**Budget Summaries and reports**:

- A widely used control of overall performance takes the form of summary of budgets.
- A **budget summary**, being a resume of all the individual budgets, reflects company plans so that sales volume, costs, profits, utilization of capital and return on investment may be seen in their proper relationships.

- In these terms it shows, top management how well the company as a whole is succeeding in meeting its objectives.
- For the best control through budget summary, a manager must first be satisfied that total budgets are an accurate and reasonably complete portrayal of the company's plans.
- Minor discrepancies should receive appropriately little attention. The purpose of a control system is to draw attention to important variations, and both the budget reports & the attention paid to them should reflect this.

- Managers should not under-estimate the value of the budget summaries in providing an effective means for overall control in situations of decentralized authority.
- Budget summaries furnish a means whereby enterprise objectives can be clearly & specifically defined & departmental plans can be made to contribute toward such objectives. The summaries hence, furnish a useful guide for **Corrective action**.

## Profit and Loss Control:

- Since the survival of a business usually depends upon profits & since profits are a definite standard against which to measure success, many company's use the income statement for divisional & departmental control.
- Since income statement is a statement of all revenues and expenditures for a given time, it is a true summary of the results of business operations.
- P & L control, when applied to divisions/departments, is based on the premise that if it is the purpose of the entire business to make a profit, each part of the enterprise should contribute to this purpose.

- Hence, ability of a part to make an expected profit becomes standard for measuring its performance.
- In P & L control, each major department/division details its revenue & expenses – normally including a proportionate share of company overhead – and calculates periodically its profit/loss. Some units have their own accounting groups , in others, the statement is prepared by the central accounting department.
- P & L control usually is practicable only for major segments of a company, since the paperwork involved in building up P & L statements for smaller departments tend to be too heavy.

- Also P & L control usually implies that the managers of a division/department have fairly wide authority to run their part of the business as they see fit, with profit the primary standard of success.
- The more integrated & complete the organizational unit, the more accurate a measuring stick of P & L control can be. Hence it works best in product & territorial divisions.
- Companies organized on a functional basis do occasionally employ P & L control.
- In most instances, P & L control is not applied to central staff & service departments.

**Limitations**:

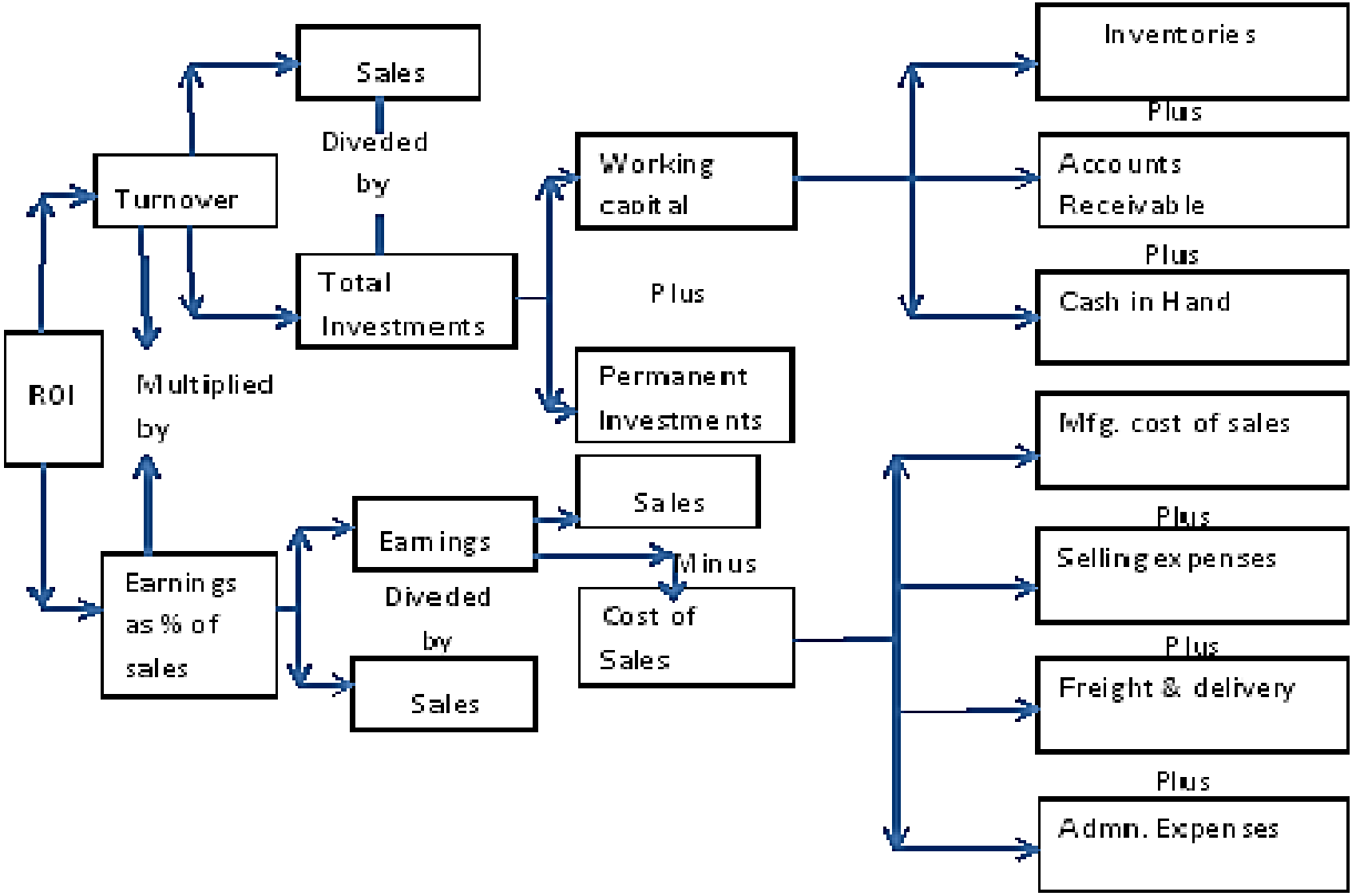
- High cost of accounting & paper transactions involving intra-company transfer of costs & revenues.
- Duplication of accounting records in several places.
- P & L control may be inadequate for overall performance.
- If it is carried very far in the organization, is that departments may come to compete with an aggressive detachment not helpful to enterprise coordination.

## Return On Investment Control:

- ROI technique is used to measure both absolute and relative success of a company or a company unit by determining the ratio of earnings to investment of capital.
- This tool regards profit not as a absolute but as a return (generally %) on capital employed in the business.
- The goal of a business is seen, accordingly not necessarily as optimizing profits but as optimizing returns from capital devoted to business purposes.

- The ROI control is best summarized in the chart form shown in the next slide. Hence analysis of variations in rate of return leads to every financial aspect of the business.
- In any control through ROI, the number of ratios and comparisons behind the yardstick figure can not be overlooked. Although, improvement of rate of return can come from higher % of profit to sales, improvement may also come from increasing the rate of turnover by lower price & reducing return on sales.

# Factors influencing ROI Control



**Advantages of ROI Control**:

- Like P & L control, it focuses managerial attention on the central/core objective of the business – making the best possible profit on the capital available.
- It is very effective where the authority is decentralized. It is not only an absolute guide to capital efficiency, but also offers possibility of comparing efficiency in the use of capital within the company and with other enterprises also.
- If the ROI control is complete and shows all the factors affecting the return, then it enables managers to locate the weaknesses. Ex: If inventories are rising, the rate of return will be affected.

**Limitations of ROI Control:**

- This method of control is not foolproof. Major difficulties involve availability of information on sales, costs and assets & proper allocation of investments and return for commonly sold or produced items.
- What constituents a reasonable return? Comparisons of rate of return are hardly enough, because they do not tell the top managers, what the rate of return should be?
- Over emphasis on the rate of return may lead to undesirable inflexibility (or rigidity) in investing capital for new ventures.

- Greater danger in ROI control, is that it can lead to excessive pre-occupation with financial factors within the firm or the industry. Undue attention on ratios and financial factors may lead to overlooking environmental factors such as social and technical developments.

**Direct Control and Preventive Control:**

Future actions can be taken broadly in 2 different ways. One way is to trace the cause of an unsatisfactory result back to the persons responsible for it & get them to correct their practices & ways of doing. This is DIRECT CONTROL.

The other way is to develop better managers who will skillfully apply concepts, techniques, principles etc. and who will look at managing from a system point of view, thus eliminating considerable results caused by poor management. This is referred to as PREVENTIVE CONTROL.

- In every enterprise, hundreds and even thousands of standards are built to compare the actual performance, in terms of quantity, quality, time and cost – with plans.
- A negative deviation indicates – in terms of goal achievement, cost, price, personnel, labour hours, machine hours etc. – that performance is less than good/ normal/ standard and the results are not confirming to plans & require control. This is the case of Direct Control.

Following are the common causes of negative deviations:

- Uncertainty

- Lack of knowledge, experience or judgment.
- Assumption that performance can be measured.
- Assumption that personal responsibility exists.
- Assumption that time expenditure is warranted.
- Assumption that mistakes can be discovered in time.
- Assumption that the person responsible will take corrective action suitably at right time.

Principle of preventive control states that:

“ the higher the quality of managers and their subordinates, the less will be the need for direct control”.

- For adapting preventive control in organizations, they must have wider understanding of managerial principles, functions, techniques and managerial philosophy.

The desirability of preventive control rests upon 3 assumptions as follows:

- Assumption that qualified, experienced managers make a minimum errors.

- Assumption that management fundamentals can be used to measure performance.
- Assumption that the application of management fundamentals can be evaluated.

Following are the disadvantages of Preventive Control:

- Higher accuracy is achieved in assigning personal responsibility.
- It encourages control by self control. Knowing that errors will be uncovered in an evaluation managers will themselves try to determine their responsibility correctly & make correctins voluntarily.

- Preventive control may lighten the managerial burden caused by direct control. Preventing problems from occurring often requires less effort than correcting them after deviations been detected.
- Psychological Advantage – Subordinate managers know what is expected of them., understand the nature of managing and feel a close relationship between performance and measurement.

## Developing Excellent managers:

Following are the major considerations in ensuring the development of excellent managers:

- **Instilling a willingness to learn** – managers need to be willing to learn and to take advantage of new knowledge & new techniques. This is very much required for their success & to overcome the limitations.
- **Accelerating Management Development** – it stresses on the urgent need of accelerated programs of mgmt. development. It implies not only more pertinent mgmt. seminars & conferences but also other means of transmitting to practicing managers in as simple a way as possible the new knowledge & tools in the field of mgt.

- **Planning for Innovation** – as competition becomes more sharper, as problem solving grows in complexity, and as knowledge expands, one expects that the managers of the future will have to place greater importance on planning for innovation.
- **Measuring & rewarding mgmt. effectively** – managers must be willing to work toward establishing objective measures of performance through both an analysis of verifiable results & a measurement of the abilities of individuals as managers. Managers of the future will give importance to objectively measuring managerial performance & rewarding good performance, imposing sanctions on a poor operation & providing corrective actions when it is indicated.

- **Tailoring information** – managers of the future will have to obtain the right information in the right form & at the right time (tailored information). This tailoring of information requires a high order of intelligence & design.
- **Expanding research & development in tools & techniques.**
- **Developing more managerial inventories.**
- **Creating strong intellectual leadership**.