

Decision-making



Content

- Meaning,
- Decision-making Environment
- Types of decision (Programmed & Non-Programmed)
- Difference between programmed and non-programmed,
- Decision making models,
- Problems in decision making,
- Decision making style,
- Herbert Simon's Model
- Tools of decision making

Learning Outcomes

- Have greater insight into decision-making processes
- Use that insight to make more effective decisions
- Possess a range of different perspectives on what counts as an 'effective' decision
- Be better equipped to understand and influence the decision-making processes of other individuals and groups
- Understand better how people perceive and decide about risk.



*"Be sure you are right -- then
go ahead."*

Davy Crocket.

Concept

- Decision-making is the act of making a choice among available alternatives.
- There are innumerable decisions that are taken by human beings in day-to-day life.
- Managerial functions like planning, organizing, staffing, directing, coordinating and controlling are carried through decisions.
- Decision making is possible when there are two or more alternatives to solve a single problem or difficulty.
- It is believed that the management without a decision is a man without a backbone. Therefore, decision making is a problem-solving approach by choosing a specific course of action among various alternatives.

TERMINOLOGIES

- **CRITICAL THINKING** – The ability to question philosophically and exercise careful judgement when evaluating a situation.



- **DECISION:** a conclusion or resolution reached after consideration

- **PROBLEM SOLVING** – A process whereby a dilemma is identified and corrected.
- **CREATIVITY** – Intellectual inventiveness.
- **SATISFICING** – A decision making strategy whereby the individual chooses a less than ideal alternative that meets minimum standards of acceptance.



A Challenge

**Please write a One Sentence
Definition of
DECISION MAKING.**



Definition

Decision Making:

The process of examining your possibilities options, comparing them, and choosing a course of action.



DEFINITION



Decision & Decision Making

A decision is a choice made between two or more available alternatives. Decision making is the process of choosing the best alternative for reaching objectives.

(Samuel C. Certo, 2003)

Decision making can be defined as a process of choosing between alternatives to achieve a goal. It is the process by which an individual chooses one alternative from several to achieve a desired objective.

(Manmohan Prasad, 2003)

Defination

“Decision-making involves the selection of a course of action from among two or more possible alternatives in order to arrive at a solution for a given problem”

“Decision making process can be regarded as check and balance system that keeps the organisation growing both in vertical and linear directions.”

Making Effective Decisions

Factors:

- Perception.
- Priority.
- Acceptability.
- Risk.
- Resources.
- Goals.
- Values.
- Demands.
- Style.
- Judgement.



Six C's of Decision Making

- 1. Construct.
- 2. Compile.
- 3. Collect.
- 4. Compare.
- 5. Consider.
- 6. Commit.



Six C's of Decision Making

- ⇒ **Construct** a clear picture of precisely what must be decided.
- ⇒ **Compile** a list of requirements that must be met.
- ⇒ **Collect** information on alternatives that meet the requirements.



Six C's of Decision Making

⇒ **Compare** alternatives that meet the requirements.

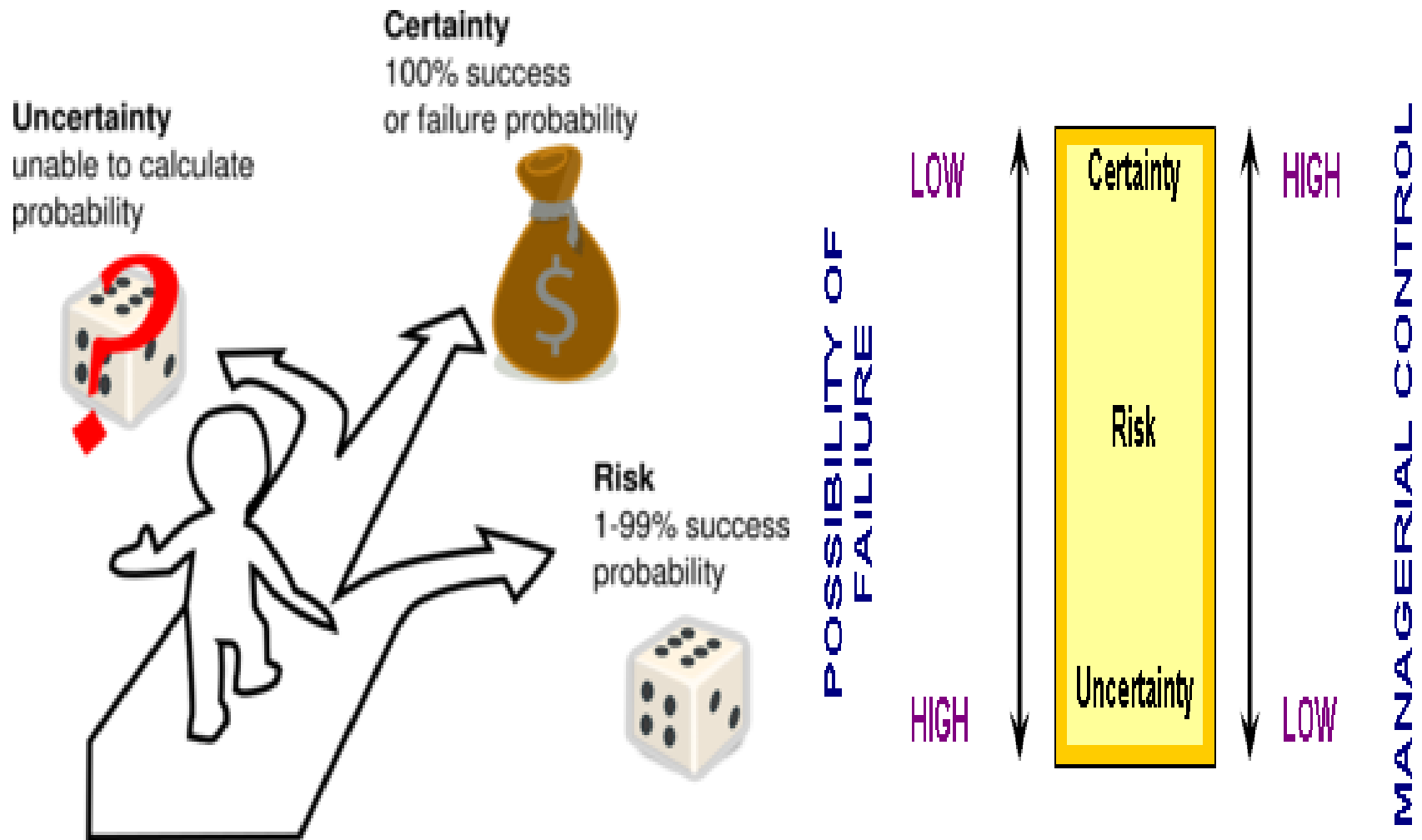


⇒ **Consider** the "what might go wrong" factor with each alternative.

⇒ **Commit** to a decision and follow through with it.

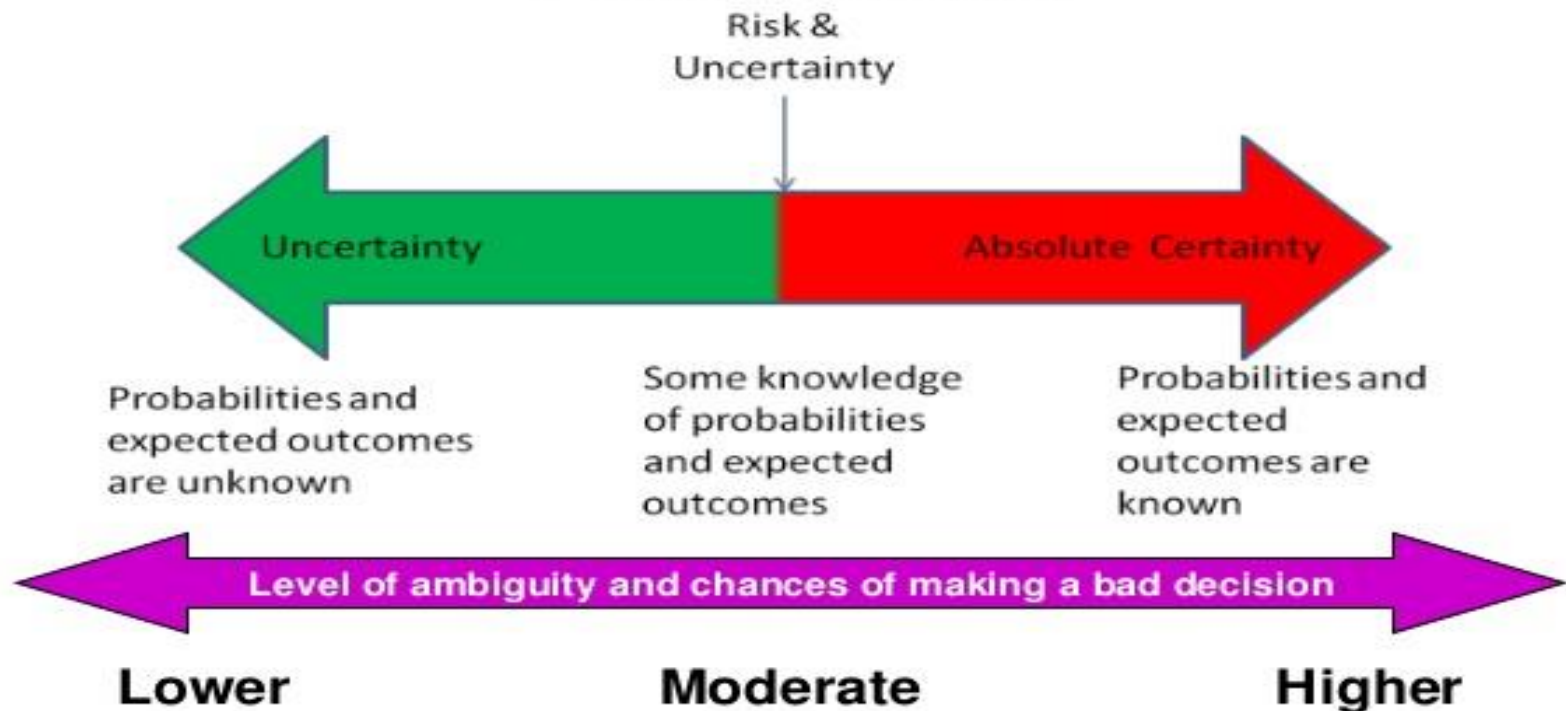


Decision-making Environment



Decision-making Environment

A View of Decision-Making Conditions



Decision-making Environment

Decision Making under Certainty

- Exact and complete information of the consequence of every decision option.
- Decision maker knows alternatives and their outcomes well.

Decision Making under Risk

- Available alternatives and their consequences are known but risky.
- Alternatives are assessed by calculating the expected probability value of their outcomes. The outcome with the maximum payoff is selected.

Decision Making under Uncertainty

- Decision maker is not aware of the risks or outcomes of the decision alternatives.
- Decision makers can use MaxiMin or Max-Max criterion.

Types of Decision-making

- ❑ Programmed Decisions
 - Managers take decisions for simple and straightforward problems (structured problems).

- ❑ Non-programmed Decision
 - Managers have to take decisions which are not routine but unique in nature for unstructured problems and are not supported by proper information and bear certain risks.

Types of Decision-making

❑ Strategic Decisions

- Decisions taken by the top-level management to fulfill organizational goals and objectives.

❑ Tactical Decisions

- Taken by the middle-level management and constitute allocation of roles and responsibilities to employees and formulating the budget for the department.

Types of Decision-making

❑ Major and Minor Decisions

- Major Decisions include acquisitions of organizations or mergers or diversifying into other business area and minor decision might range from granting leave to an employee to preparing monthly budget for the unit's expenditure .

❑ Individual and group Decisions

- Group Decision-making generally outperforms individual who make decision in isolation, but in some instances, individual decision-making can work wonders in an organization when group fails to arrive at a consensus.

Difference between programmed and non-programmed

Programmed Decisions:

1. These are for solving day to day and routine problems and are repetitive in nature.
2. Rules and procedures are described for taking these decisions.
3. These decisions remain consistent for a relatively longer period of time and over many situations.
4. These decisions are made for solving both simple and complex problems.
5. Decisions are of routine nature requiring no judgment.

Non-Programmed Decisions:

1. These are for solving non-repetitive tactical or unique problems.
2. Every decision will have to be taken separately by analyzing and evaluating each problem.
3. Every decision is different and there is no consistency.
4. Such decisions are for solving complex.
5. Such Decisions require judgment in each case.

Decision-making Models

❑ Classical Model:

- Managers have access to all possible types of information to reach a decision. If there is more than one alternative, the manager ranks the alternatives. Manager implement the best alternative and it is assumed that the manager knows what is best for the organization.

❑ Rational Model:

- This model assumes that there exists a problem, for which a decision has to be taken by first understanding the problem, identifying alternative constrained by legal and ethical norms, and technology, resource and budget constraint. An evaluation of these alternatives is done by considering the feasibility, satisfaction, and affordability parameters and the consequences of implementing the alternative

Decision-making Models

- Administrative Model:

Decisions are limited by people's cognitive limitations and are known as bounded rationality, which means that leaders tend to take decisions based on choosing solutions that meet minimum requirements and are good enough.

- Political Model:

An individual seeks to take decisions with an aim to satisfy their own or organization's interest or goals such as the stakeholders of the company. The tilt in the outcome of the decision is always in their favour.

Problems in decision making

- When the information is inadequate or incomplete



© Can Stock Photo - csp35463411

Problems in decision making

- When there is lack of information on political, social and economic variable



Problems in decision making

- To arrive at a rational decision, it is mandatory for a decision maker to be an expert in respective domain, should be highly intelligent and have farsightedness for future situation which generally is rarer.
- Decision should be impartial and closely align to organization's goal and objectives. Individual preferences and attitude often come in way of decision-making
- Decisions taken by managers are always accompanied by compromise and adjustments.

Decision making Style

- **Autocratic:**

The leader takes up the entire responsibility of making the decisions and will be held responsible for the outcome being good or bad. Generally, who imbibe autocratic style do not take suggestion from others.

Advantage: Quick decision-making .

Disadvantage: Solely depends on the decision-making ability of that individual.

- **Participative**

The leader involves the members of his team to take decision, though the total control resides with him. He makes the teams feel of actually taking ownership for finding solution to the problem.

Advantage: Group participation and involvement.

Disadvantage: Slow and time-consuming process and is somewhat less secured.

Decision making Style

- **Consultative:**

When a leader gives up total control of the decision to his team. Now if the entire team agrees to the decision, then the decision is said to be taken on consensus.

Advantage: Group consensus is 100%.

Disadvantage: Lot of effort is put in getting the employees to collaborate and work together

- **Democratic**

In this style of decision making, a leader allows his team to vote for a decision. The alternative which gets the majority of the votes is taken as the final alternative.

Advantage: Faster decision-making and certain amount of group participation.

Disadvantage: Any individual is not responsible for the outcome

Herbert Simon's Model

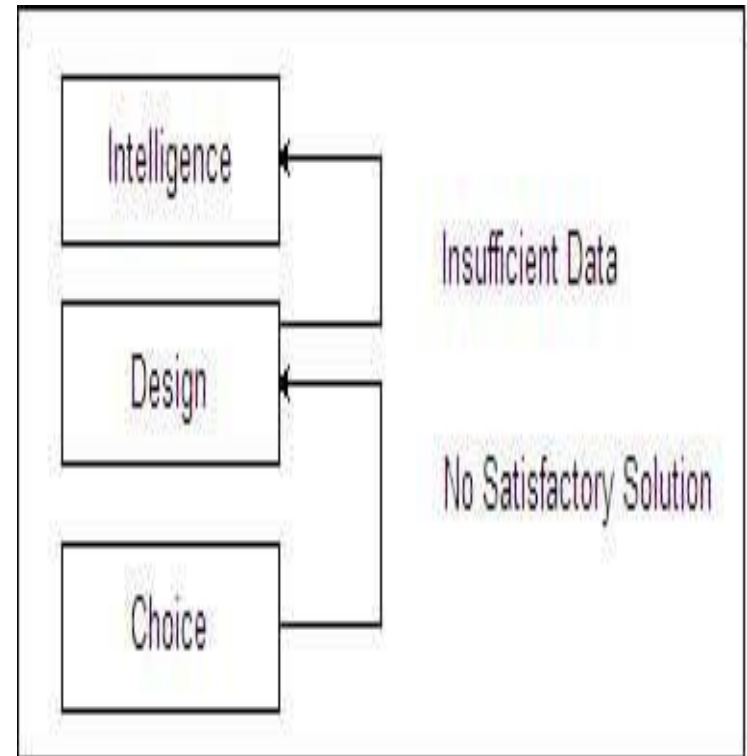
According to Herbert A. Simon, the decision-making process is basically divided into three branches:

- **Intelligence:** Intelligence which deals with the problem identification and the data collection on the problem
- **Design:** Design which deals with the generation of alternative solutions to the problem at hand.
- **Choice:** Choice which is selecting the 'best' solution from amongst the alternative solutions using some criterion.

Herbert Simon's Model

Intelligence Phase

This is the first step towards the decision-making process. In this step the decision-maker identifies/detects the problem or opportunity. A problem in the managerial context is detecting anything that is not according to the plan, rule or standard. An example of problem is the detection of sudden very high attrition for the present month by a HR manager among workers. Opportunity seeking on the other hand is the identification of a promising circumstance that might lead to better results.



Herbert Simon's Model

Design

Design is the process of designing solution outlines for the problem. Alternative solutions are designed to solve the same problem. Each alternative solution is evaluated after gathering data about the solution. The evaluation is done on the basis of criteria to identify the positive and negative aspects of each solution. Quantitative tools and models are used to arrive at these solutions. At this stage the solutions are only outlines of actual solutions and are meant for analysis of their suitability alone.

Choice Phase

It is the stage in which the possible solutions are compared against one another to find out the most suitable solution. The 'best' solution may be identified using quantitative tools like decision tree analysis or qualitative tools like the six thinking hats technique, force field analysis, etc.

QUANTITATIVE TECHNIQUES

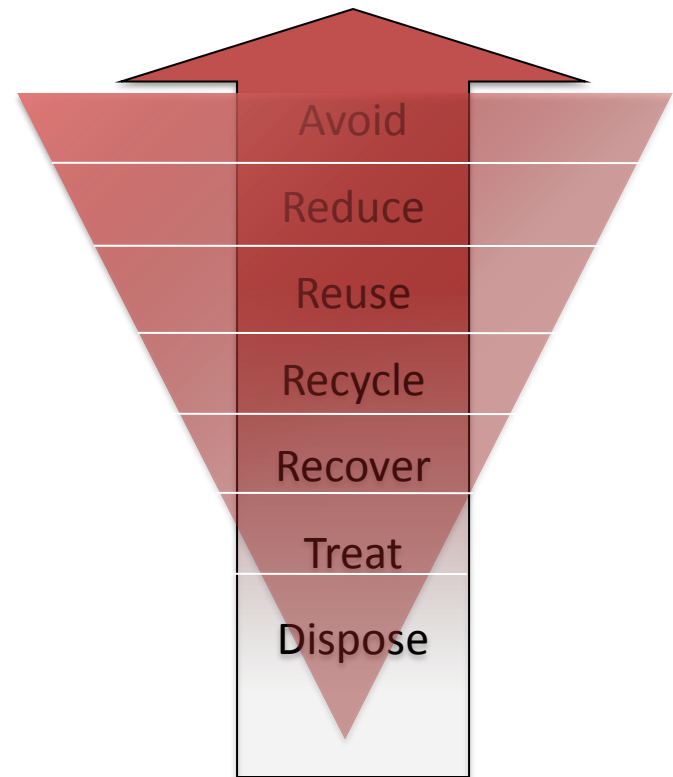
- ❑ Deterministic or EOQ model (rate of demand is constant) for satisfying consistent demand.
- ❑ Material requirement planning model for managing inventories.
- ❑ Just-in-time model for managing waste.

DETERMINISTIC OR EOQ MODEL

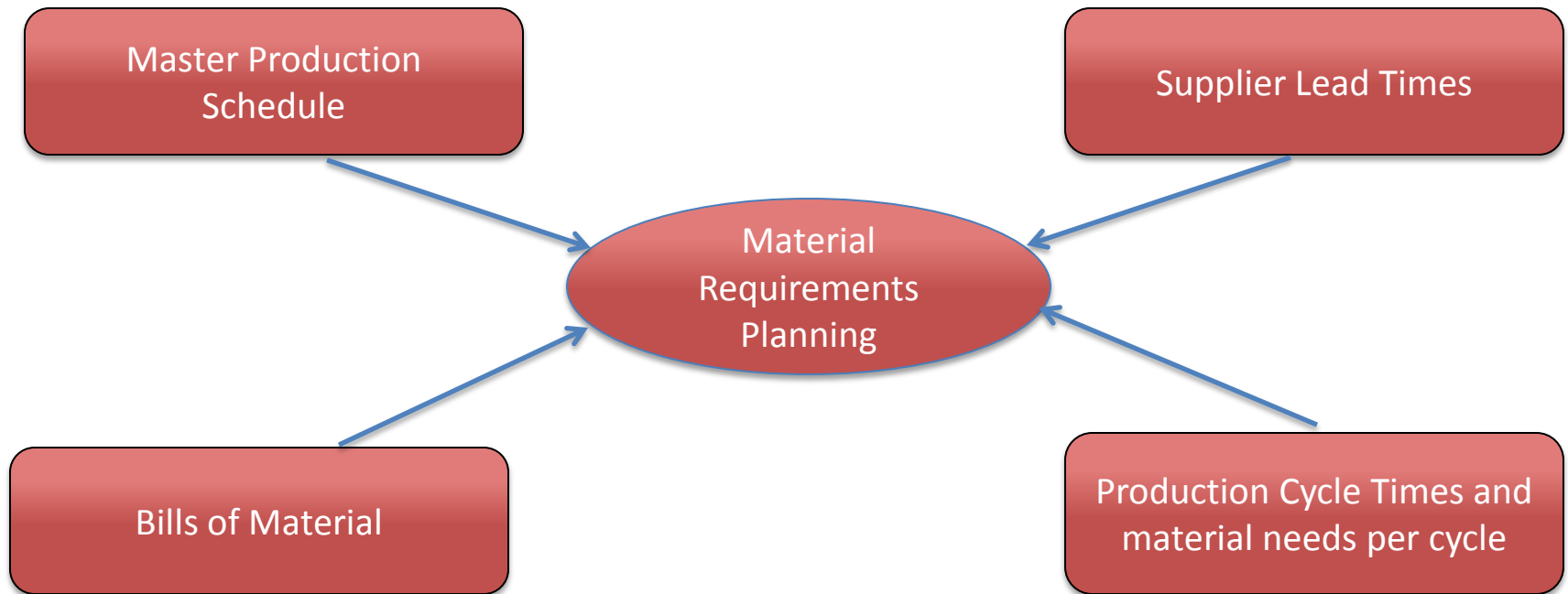
- In inventory management, economic order quantity (EOQ) is the order quantity that minimizes the total holding costs and ordering costs. It is one of the oldest classical production scheduling models.
- EOQ applies only when demand for a product is constant over the year and each new order is delivered in full when inventory reaches zero. There is a fixed cost for each order placed, regardless of the number of units ordered. There is also a cost for each unit held in storage, commonly known as holding cost, sometimes expressed as a percentage of the purchase cost of the item.

JUST-IN-TIME MODEL FOR MANAGING WASTE

- ❑ Just-in-time
 - Just-in-time is an approach that seeks to eliminate all sources of waste in production activities by providing the right part at the right place at the right time.



MATERIAL REQUIREMENTS PLANNING



❑ Production Management Processes

DECISION-MAKING TOOLS

☐ Grid Analysis Method

This technique is for doing analysis for each of the options based on the factors used to arrive at a decision.

☐ Decision Trees

It is a way of representing various decisions and its combinations for specific situations and mainly aims at representing action sequences. The decisions taken are based on the conditions, and then actions are executed.

☐ Break-even Analysis

The break-even Analysis helps business managers to take decisions related to goal setting, achieving targets in term of revenue, production, sales and cost optimization and so on.

A break-even analysis is the analysis of total cost versus total revenue of a business. If the total cost equates to the total revenue, then the business has achieved its break-even point.

DECISION-MAKING TOOLS

❑ Paired Comparison Analysis

This is useful when our priorities are not very discrete, the core data on which the decision has to be taken is missing or there are too many options which have to be ranked .

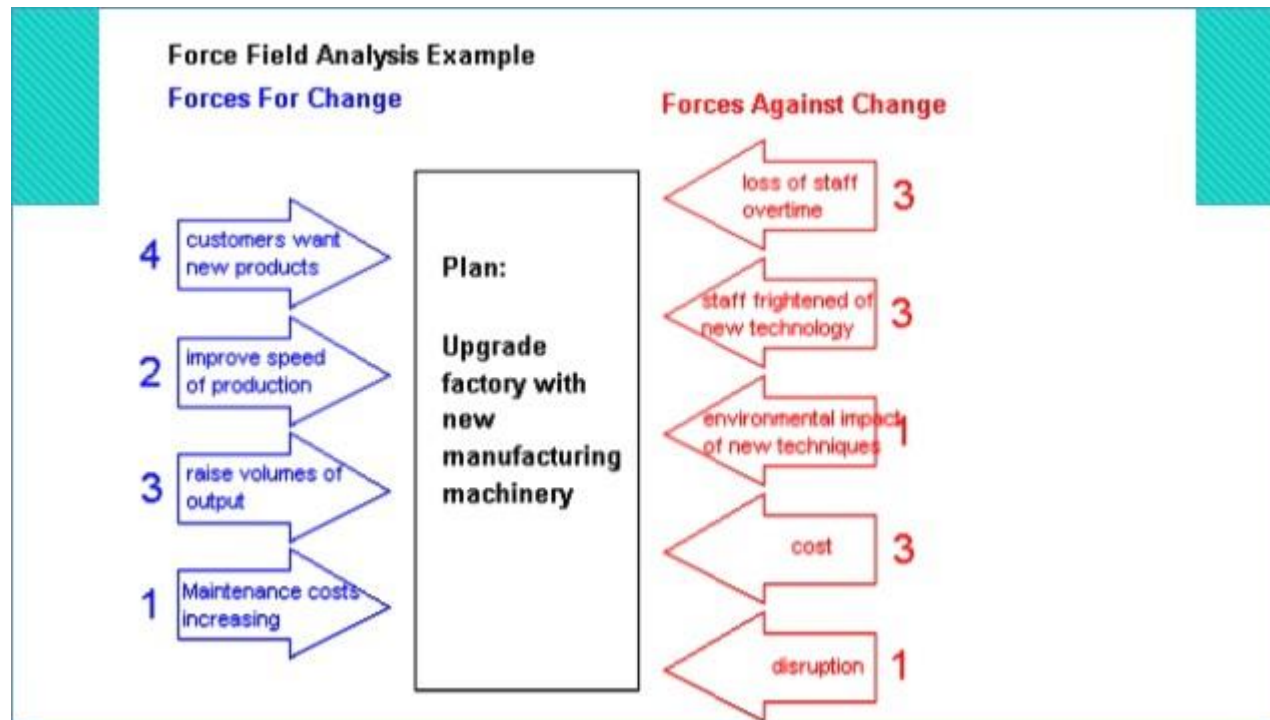
❑ Cost-Benefit Analysis

Cost-Benefit Analysis (CBA) estimates and totals up the equivalent money value of the benefits and costs to the community of projects to establish whether they are worthwhile. These projects may be dams and highways or can be training programs and health care systems.

DECISION-MAKING TOOLS

Force Field Analysis

This is a technique for looking at all the forces for and against a decision.



MCQ

1. Opening of new branch is an example of _____.

- A. programmed decision.
- B. non-programmed decision.
- C. individual decision.
- D. non-economic decision.

ANSWER: B

2. Non-programmed decision is also called _____.

- A. routine decisions.
- B. structured decisions.
- C. strategic decisions.
- D. operative decisions.

ANSWER: C

3. _____ is the general guideline for decision-making.

A. Policy.

B. Strategy.

C. Procedure.

D. Programme.

ANSWER: A

4. A solution to a problem that is arrived at through an unstructured process of decision making is called a:

- (a) Bounded rationality
- (b) Programmed decision
- (c) Non-programmed decision
- (d) Uncertainty

Answer -C

NEWS ROOM

SpiceJet dives into air cargo space; analysts say it may unleash price war

- Ajay Singh-owned SpiceJet on Monday took a big bet on the booming e-commerce market of India and dived into the air freighter business.
- The airline, which will have a separate division for the freighter business under the brand name SpiceXpress is betting on the increasing popularity of next-day delivery services that e-commerce players like Flipkart and Amazon are offering to customers.
- Ajay Singh, CMD, SpiceJet said while announcing that freighter will start operations between Delhi and Bengaluru - India's e-commerce hub. Airports in the first phase also include Guwahati, Amritsar, Kabul and Hong Kong. SpiceJet said it would ship perishables like farm fresh fruits and vegetables to the international destinations.