

CHAPTER 2: Modern Business Environment

Broad Contents of the Chapter are:

1. Brief on Modern Business Environment
2. Quality Costs and Total Quality Management
3. Business Excellence Models
4. Theory of Constraints and Throughput Accounting
5. Supply Chain Management
6. Gain Sharing Arrangement, Outsourcing etc.

Modern Business Environment:

During the past three decades, the business environment has drastically changed and that too rapidly. The I T revolution during this period has further propelled the change in environment of business. This is a challenge to business managers to understand business environment and formulate business plans and policies. The main feature has been the **transformation from Seller's Market to Buyer's Market.**

In case of Seller's market:

- **Price** was determined by Seller;
- **Response** time was determined by Distributor;
- **Quality** determined by Producer;
- **Performance** was dictated to customer

This has got transformed to Buyer's market due to several macro economic factors like ease in international transactions, technological developments, political and social changes etc. Features of buyer's market are:

- **Globalization** of world economy;
- Fierce **competition** across the globe;
- **Excess capacities** across the globe;
- **Managerial developments** of business;
- **Data and knowledge** availability;
- **Timely availability** of materials;
- **Ease of travel** and transportation etc.

The challenge for businesses today is to **satisfy and retain the customers** through the exceptional performance of their products and / or processes.

Cost of Quality:

Quality is concerned with conformance to specifications. Quality costs are

classified as costs of maintaining quality (cost of conformance) and cost of failure (Cost of non conformance). In simple terms, Cost of Quality is the sum of the costs related to prevention and detection of defects and the costs incurred due to occurrences of defects. These can be depicted as:

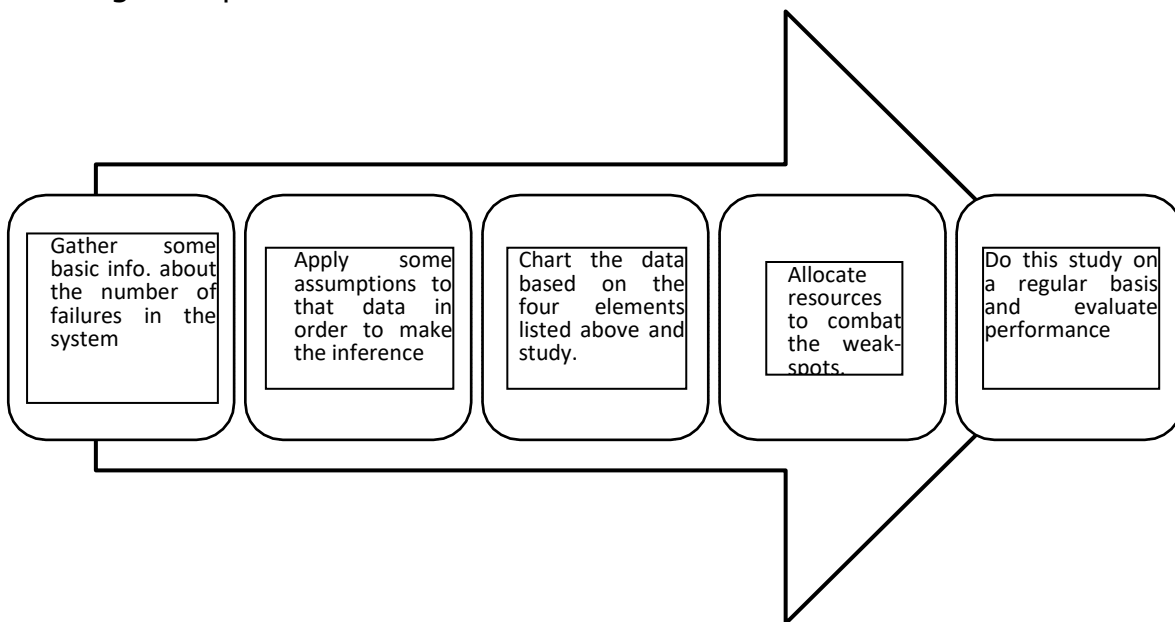
$$\begin{array}{c} \text{Cost of Quality (COQ)} \\ = \\ \text{Cost of Control} \\ \text{(Prevention Cost + Appraisal Cost)} \\ + \\ \text{Cost of Failure of Control} \\ \text{(Internal Failure Cost + External Failure Cost)} \end{array}$$

- **Prevention Costs:** These are planned costs and are incurred before the start of actual production. Prevention costs help in reducing failure and appraisal costs. Examples are:
Quality Planning, Quality assurance, Supplier evaluation, Capacity evaluations, Quality improvement meetings, Quality training and education costs etc.;
- **Appraisal Costs:** These costs are incurred to determine the degree of conformance of Quality requirements (i.e. Measuring, Evaluating, Auditing etc.) Examples are:
Inspection of incoming materials, inspection of process materials and finished products, Quality Audits, Supplier rating, Field testing, Calibration of measuring instruments etc.
- **Internal Failure Costs:** These are costs that are incurred to rectify the product or service defects that are identified before delivering to customer. Defects are those deviations of specifications which are not within the tolerance limits of the customer specifications. Examples are:
Scrap, Waste, Rework Costs, Shortages, Failure Analysis, Retesting, Delays etc.
- **External Failure Costs:** These are costs that are incurred to rectify the deficiencies found after delivery of products and services to external customers, which lead to customer dissatisfaction. Examples are:
Warranty claims and replacements, Sales Returns, Repairs of product returns, redressal of product complaints, Servicing of Recalled items, etc.

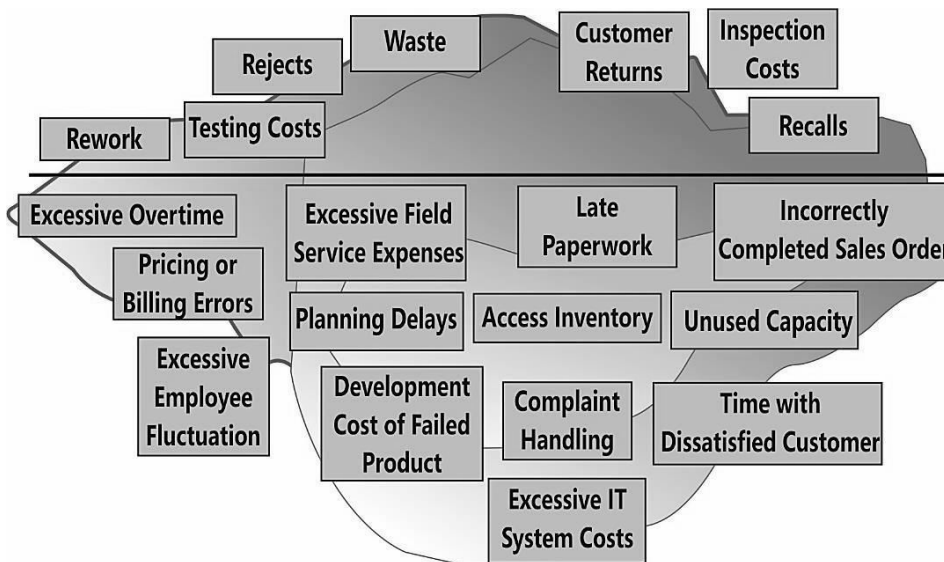
Cost of Quality can be measured in terms of hours or rupees. Best is to express the hours or money as percentage of total hours spent or rupees incurred.

Too much emphasis on quality and striving for zero defects through a program of continuous improvements may not be economically viable for the organisation. Cost of Quality may be far higher than the incremental revenue. This leads us to the scenario of a trade off point between cost of conformance and cost of non conformance. Depending on the actual scenario and objectives of the organisation, management may take a call to find the level of quality that needs to be maintained.

Prevention, Appraisal and Failure Model: P A F model is the widely accepted method for measuring and classifying Quality Costs. It has the following 5 steps.



Many of the Quality costs are hidden and are not easily quantifiable. This can be illustrated through Iceberg Model.



From the above it can be seen that very few quality costs are appearing above the water that are quantifiable and the costs that are below the water are very difficult to quantify. If the below costs are also quantified and considered while making decision, business will significantly improve.

Total Quality Management - T Q M:

This concept has started in 1950^s but gained momentum in 1980^s only. T Q M integrates all organisational functions viz., Design, Development, Research, Procurement, Production, Marketing, Distribution, Finance, HRM, Admn., etc. with the objective of Meeting Customer needs and thereby achieve organisational objectives.

TQM aims at improving the quality of organisations outputs, including goods and services, through continual improvement of internal practices. TQM's objectives are to *eradicate waste* and *increase efficiency*. This is done by ensuring that the production of the organization's product (or service) is apt the first time.

CIMA defines 'Total Quality Management' as "Integrated and comprehensive system of planning and controlling all business functions so that products or services are produced which meet or exceed customer expectations. TQM is a philosophy of business behaviour, embracing principles such as employee involvement, continuous improvement at all levels and customer focus, as well as being a collection of related techniques aimed at improving quality such as full documentation of activities, clear goal-setting and performance measurement from the customer perspective."

Main objective of TQM is to do the job right at the first time itself. It feels that Quality Costs are far less than the Opportunity cost of loss of sales, loss of customers, dissatisfaction of customers etc. This is a comprehensive management system focusing on:

- Meeting owner's / customer's needs, by providing quality services at a reasonable cost.
- Continuous improvement.
- Recognising role of everyone in the organization.
- Viewing organization as an integral system with a common aim.
- The way tasks are accomplished.
- Teamwork.

Six C^s / Seven C^s

The essential requirements for successful implementation of TQM are referred with acronym **7 Cs'** (In certain cases 6 Cs' also). They are:

1. **Commitment:** Total commitment must come from top management. Quality expectation must be made clear by the top management, together with the support and training required for its achievement.
2. **Culture:** Proper training must be given to effect changes in culture and attitude.
3. **Continuous Improvement:** TQM should be recognised as a continuous process and not merely a one-off program.
4. **Co-operation:** Employee involvement and co-operation should be sought in the development of improvement strategies and associated performance measures.
5. **Customer Focus:** The needs of internal customers (colleagues) and external customers (recipient of final product) should be the prime focus. Perfect service with zero defects is what is acceptable.
6. **Control:** Documentation, procedures and awareness of current best practices are essential if TQM implementations are to function appropriately.
7. **Communication:** Communication is very closely related to the quality process. Exchange of ideas in meetings results in improved decisions. Continuous Two way communication between Top management and operational management enables to institute remedial measures immediately.

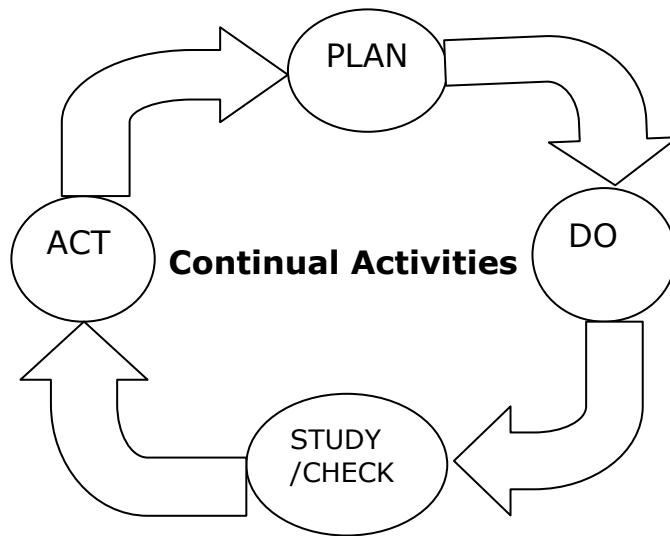
Deming's Philosophy: Edward Deming is treated as the Father of Quality Control. He says that only 15 percent of quality problems are actually due to worker error. The remaining 85 percent are caused by processes and systems, including poor management. Further, it is up to management to correct system problems and create an environment that promotes quality and enables workers to achieve their full potential. He also states that

identifying and eliminating poor quality is everyone's job. He outlined his philosophy in 14 points / principles which are as under:

- a. "Create constancy of purpose towards improvement". Replace short-term reaction with long-term planning.
- b. "Adopt the new philosophy". The implication is that management should actually adopt his philosophy, rather than merely expect the workforce to do so.
- c. "Cease dependence on inspection". If variation is reduced, there is no need to inspect manufactured items for defects, because there won't be any.
- d. "Move towards a single supplier for any one item." Multiple suppliers mean variation between feedstock. Constantly strive to reduce variation.
- e. "Improve constantly and forever". Improvement is a process and not a one off Program.
- f. "Institute training on the job". If people are inadequately trained, they will not all work the same way, and this will introduce variation.
- g. "Institute leadership". Deming makes a distinction between leadership and mere supervision. The latter is quota and target-based.
- h. "Drive out fear". Deming sees management by fear as counter-productive in the long term, because it prevents workers from acting in the organisation's best interests.
- i. "Break down barriers between departments." Another idea central to TQM is the concept of 'internal customer', that each department serves not the management, but the other departments that use its inputs.
- j. "Eliminate slogans". Another central TQM idea is that it's not people who make most mistakes - it's the process they are working within. Harassing the workforce without improving the processes they use is counter-productive.
- k. "Eliminate management by objectives". Deming saw production targets as encouraging the delivery of poor-quality of goods.
- l. "Remove barriers to pride of workmanship". Many of the other problems outlined reduce worker satisfaction.
- m. "Institute education and self- improvement".
- n. "Transformation is everyone's job".

P D C A Cycle / Deming Wheel:

The plan – do – check / study – act (PDCA) cycle describes the activities a company needs to perform in order to incorporate continuous improvement in its operation. This cycle, is also referred to as the **Shewhart cycle or the Deming wheel**. The circular nature of this cycle shows that continuous improvement is a never-ending process.



Plan: The first step in the PDCA cycle is to plan. Managers must evaluate the current process and make plans based on any problems they find and to improve current systems. They need to document all current procedures, collect data, and identify problems.

Do: The next step in the cycle is implementing the plan (do). During the implementation process managers should document all changes made and collect data for evaluation.

Study/Check: The third step is to study the data collected in the previous phase. The data are evaluated to see whether the plan is achieving the goals established in the plan phase.

Act: The last phase of the cycle is to act on the basis of the results of the first three phases. The best way to accomplish this is to communicate the results to other members in the company and then implement the new procedure if it has been successful.

Note that this is a cycle; the next step is to plan again. After we have acted, we need to continue evaluating the process, planning, and repeating the cycle again.

Implementation of TQM is a Strategic Decision. TQM should be implemented when the organisation is ready for it. Else, it should be delayed till it is ready. To successfully implement TQM immense efforts, time, courage, and patience is required. Successful implementation of TQM results in improved quality across all major processes and departments, higher customer retention, higher revenue on account of improved sales, and global brand recognition.

TQM appears to be similar with 6 Sigma improvement process, but they are different. TQM focuses on process improvements whereas 6 Sigma focuses on reducing defects.

Business Excellence Model – (BEM):

Business Excellence (BE) is a philosophy for developing and strengthening the management systems and processes of an organization to improve performance and create value for stakeholders. The essence of this approach is to develop quality management principles that increase the overall efficiency of the operation, minimize waste in the production of goods and services, and help to increase employee loyalty as a means of maintaining high standards throughout the business by achieving excellence in everything that an organization does (including leadership, strategy, customer focus, information management, people, and processes).

Business excellence principles emerged due to quality drive into all the functions of traditional business management. There are several business excellence models. However, all these models are more or less similar with common principles and with minor variations here and there. Popular Business Excellence Models are:

EFQM (European Forum for Qlty. Mgmt.) Excellence Model,
Baldrige Criteria for Performance Excellence
Singapore BE Framework etc.

EFQM (European Forum for Qlty. Mgmt.) Excellence Model: EFQM Excellence Model provides an all-round view of the organisation and it can be used to determine how different methods fit together and complement each other. Based on the needs of the organisation, this model can be used with other tools of improvement to attain sustainable excellence.

The EFQM model is a practical, non prescriptive tool that enables organizations to understand the cause and effect relationships between what their organisation does and the results it achieves. The EFQM model presents 3 integrated components:

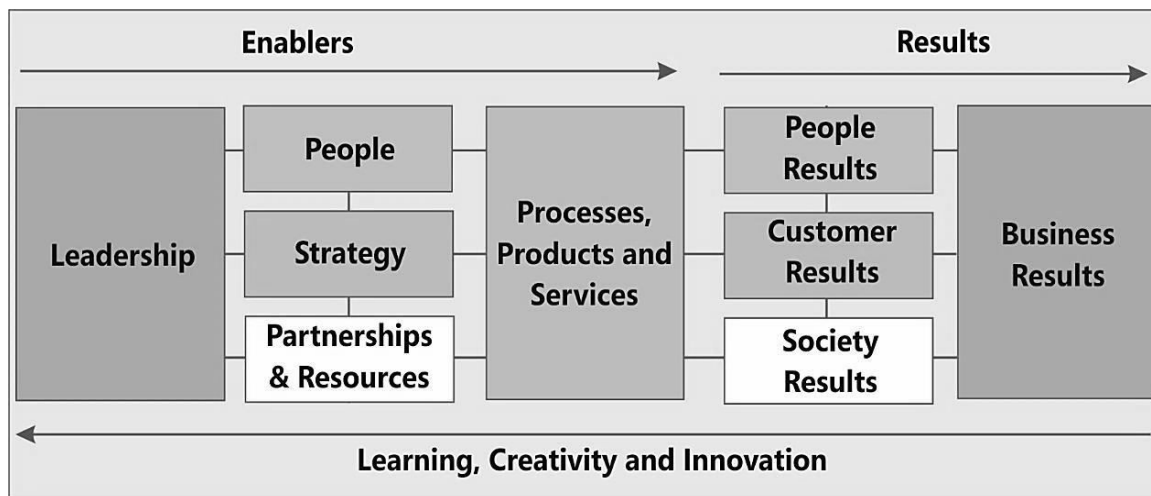
- The Fundamentals, Concepts of excellence
- The Criteria, Conceptual Framework
- The RADAR (Results-Approaches-Deploy-Assess-Refine), Logic Assessment Framework

The fundamental **Concepts of Excellence** are the basic principles that describe the foundation of any organisation. This has 8 core values that drive the business for sustainable success:

- A. Adding Value for Customers;
- B. Creating a Sustainable Future;
- C. Developing Organisational Capability;
- D. Harnessing Creativity & Innovation;
- E. Leading with Vision Inspiration and Integrity;
- F. Managing with Agility;

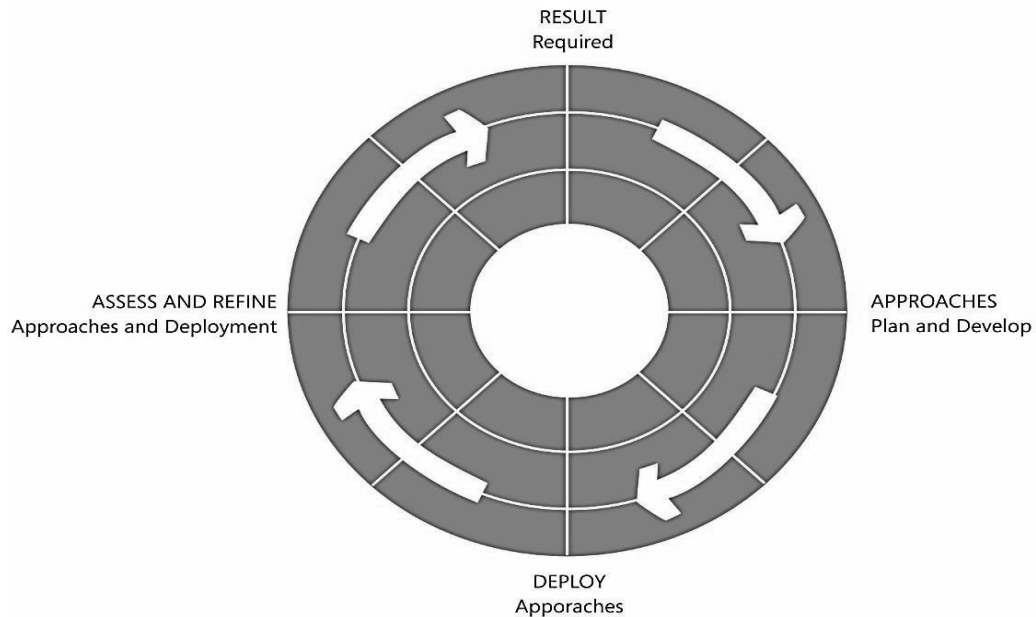
- G. Succeeding through the talent of people;
- H. Sustain Outstanding Results.

EFQM Model has **9 Criteria – 5 Enablers and 4 Results**. The 'Enabler' criteria cover what an organisation does. The 'Results' criteria cover what an organisation achieves. 'Results' are caused by 'Enablers'. All the 9 criteria can be depicted by the following diagram:



The dynamic nature of the model is emphasised by the arrows as shown in the diagram. The model helps the enablers by innovation and learning leading to improved results. The Model's nine boxes, shown above, represent the criteria against which to assess an organisation's progress towards excellence. Each criterion consists of a number of sub-criterion, which are indicative of what can be considered good practice. These are further evaluated using the RADAR (Results-Approaches-Deploy-Assess-Refine) logic assessment framework.

RADAR logic is Management and Evaluation Tool for analysing performance of an organisation. Under EFQM Model, this is used as a basic scoring system. This can be shown by the following diagram.



Baldrige Criteria for Performance Excellence: This model is taken as the basis for most of the other business models. This model has 7 Categories.

- A. Leadership,
- B. Strategic planning,
- C. Customer and market focus,
- D. Measurement analysis and knowledge management,
- E. Workforce,
- F. Process management and
- G. Business results.

Theory of Constraints (TOC)

Theory of Constraints is based on the principle of Optimised Production Technology (OPT). This theory states that profits are maximized by increasing the Throughput of the plant. It implies Bottleneck Resources / Activities should be fully utilised and Non Bottleneck Resources / Activities should not be fully utilised. Fuller utilisation of Non Bottleneck Resources / Activities leads to inventories build up but not increase in sales.

Operational Measures of TOC:

TOC focuses on revenue and cost management when Bottlenecks arise. 3 measures are used for this purpose:

Core Measures	Definition	Objective
Throughput (T)	❖ Throughput is the rate of generating	❖ Maximise

	money through sales. ❖ Throughput = (Sales – Variable Cost) / Time. Only RM is treated as Variable ❖ Labour Cost is treated as Fixed Cost	
Investment (I)	❖ Money required to convert Materials into Throughput ❖ Includes, Equipment, Facilities, Fixtures, Computers etc.	❖ Minimise
Operating Expense	❖ Means Labour Exp. + all Maint. & Op. Expenses	❖ Decrease

Under this system, Throughput is improved by following 5 Steps:

- A. **Identify System Bottlenecks / Constraints.**
- B. **Exploit Bottlenecks / Constraints Fully.** i. e. Bottlenecks / are to be utilised. Optimum product mix is to be based on Bottleneck as Key Factor.
- C. **Subordinate everything else to the decision at B.** If this is not done and production is based on Non-Bottleneck resource, it leads to built up of inventories.
- D. **Remove Bottlenecks / Constraints.** This can be done by increasing capacities by deploying more resources like additional machinery, working another shift or overtime etc.
- E. Repeat the above 4 steps for the new Bottleneck / Constraint.

Throughput Accounting (TA):

Throughput is defined as Sales – Raw Materials. Raw material alone is treated as variable cost. Labour and other expenses are treated as Fixed Costs.

$$\text{Throughput Ratio} = \frac{\text{Throughput per Bottleneck Minute}}{\text{Factory Cost per Bottleneck Minute}}$$

If Throughput ratio is greater than 1, then product is treated as profitable and vice versa. TOC / TA approaches are direct costing approaches and are suitable for short term Decision Making Process.

Advantages and Disadvantages of TOC & TA:

Advantages	Disadvantages
Reduction in inventory	Focus on Short Term Goals rather than Long Term Goals with ABC
More Productive machines	Emphasis is on increasing Sales & Volume as against Quality that is opposed to TQM
Can meet Short Lead times	Might result in loss of overall picture

	while looking at specific constraints
More Flexible	Focuses on Push approach as against Pull approach of JIT.
Better Customer Relationship and Better Product mix	Based on circumstances, operating expenses under TOC / TA are treated as Fixed which is similar to Marginal Costing

Supply Chain Management (SCM):

Global Supply Chain Forum (GSCF) defines SCM as, *"Integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders"*.

In other words all activities associated with the flow and transformation of goods from raw material to end user- is called supply chain.

It covers Vendors, Producers, Warehouses, Distribution Centers and Retailers. The movement of product from node to node involves activities such as:

Production Planning;

Purchasing;

Material Management;

Distribution;

Customer Service;

Forecasting etc.

Supply Chain Management (SCM) has 8 processes. Viz.

- A. Customer Relationship Management;
- B. Supplier Relationship Management;
- C. Customer Service Management;
- D. Demand Management;
- E. Order Fulfillment;
- F. Manufacturing Flow Management;
- G. Product Development and Commercialisation; and
- H. Returns Management.

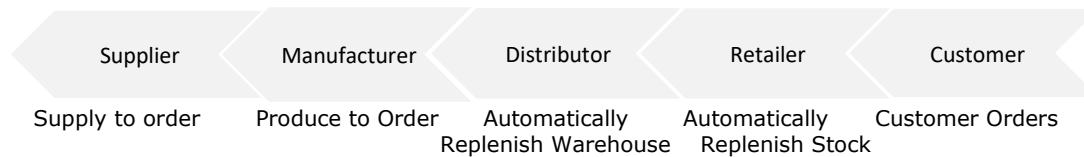
Push Model SCM:

Under Push model stocks are produced on the basis of anticipated demand which is determined by various Forecasting Techniques. Chain under Push Model will be as below:



Pull Model SCM:

Under pull model production is made against customer orders. This model is less product centric and more consumer focused. Chain under Pull Model will be as below:



ERP systems operated through internet technology is used under Pull Model. A Supply Chain begins from Supplier and ends with Consumer. In the process there will be flow of Information, Material and Finance. When the flow relates to Supplier, it is called **Upstream Flow** and when the flow relates to Consumer, it is called **Downstream Flow**.

Upstream Supply Chain Management: Management of transactions under upstream model (i.e. with Suppliers) will be as below:

- **Upstream SCM**
 - Relationship with Suppliers
 - Use of Information Technology
 - E-Sourcing
 - E-Purchasing
 - E-Payment

Relationship with Suppliers is changing rapidly in today's Global Economy. Several factors like Capabilities of innovation, Quality, Reliability, Agility, Cost, Speed of Delivery, Number of Suppliers available, Make or Buy Decisions etc. are considered.

Use of Information Technology: In today's ERP environment, E-Sourcing, E-Purchasing and E-Payment are common things. This process reduces time, cost and effort in operations. Further, accuracies will also be higher order. One major lacuna is, if the system breaks down for some reason, then it will have impact on all the operations. To a great extent, this lacuna can be overcome by having standby alternate channels.

Downstream Supply Chain Management: Management of transactions under downstream model (i.e. with Consumers) will be as below:

Downstream SCM

- *Relationship Mktg. (6 Mkts.):* Relationship Marketing differs from

Traditional Marketing. Features of Relationship Marketing are:

- A. Creates new value for customers and shares it with them;
- B. Recognises the key role of Customers as Buyers and also the parties who define the Values they wish to receive.
- C. Visualises to Design and Aligns the process
- D. Continuous cooperation between Buyers and Sellers.
- E. Recognises Customer Lifetime Value.
- F. Searches for the chain of Relations that can be drawn in an organisation.

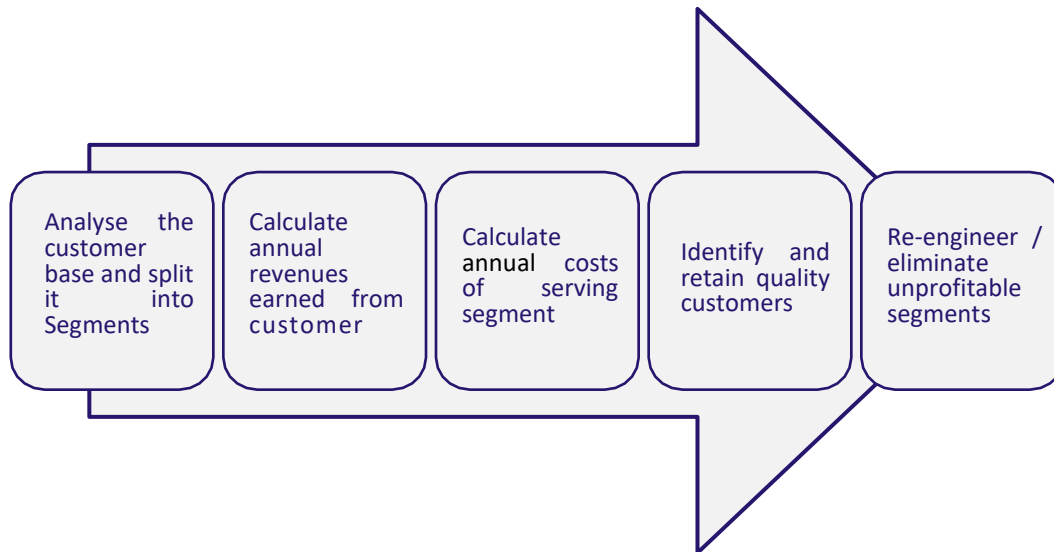
The 6 Markets that are considered under Relationship Marketing Model are:

- **Internal Markets:** Departments and staff have the ability to determine Customer Oriented Corporate Culture
- **Referral Markets:** This has 2 categories. Viz. Existing Customers who refer their Suppliers to others and Consultancy Firms who give References
- **Influence Markets:** These are entities or Individuals who have the ability to influence Marketing environment and include Financial Analysts, Shareholders, Business Press, Govt. etc.
- **Recruitment Markets:** These are Commercial Recruitment Agencies, Universities, Institutes etc. which provide access to Potential Employees with desired skills
- **Supplier's Markets:** These are the traditional Suppliers or Firms with which the Organisation strategic alliances to get benefits of Quality, Price, Timely Delivery etc.
- **Customer's Markets:** These are existing Customers and also includes Prospective Customers.

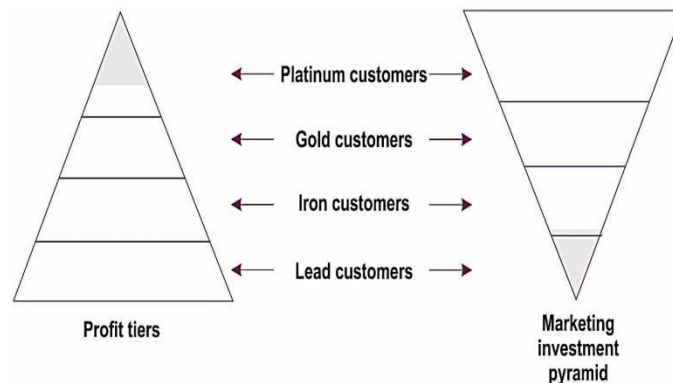
As per 6 markets model, Management should develop good relations with all the 6 markets for achieving the objective of Customer Retention.

- **Customers Relationship Mgmt:** This includes relations with Customers, Assisting in Customer retention and driving the sales growth. One satisfied customer brings 10 New Customers and Vice versa. CRM includes knowing the needs of Customer and thereby addressing such needs with best possible solution.
- **Analysis of Customers** and their behaviour: The different needs of various customers are to be studied. The needs of customers to be considered are Quality, Discount, Serviceability, physiological need, safety need, status / ego, social need etc.

- **Customers Account Profitability (CAP):** In many cases sources of revenue are identified but not the sources of profits. A customer contributing highly to revenue may not be contributing to profits and vice versa. Analysing customer account profitability involves following steps:



Customer Profitability Analysis is conducted through Activity Based Costing. Net profit from each customer is calculated as difference of Sales Value and the Cost of Sales. Then customers are divided into profit tiers as below:



Efforts are put to retain Platinum and Gold Customers. Iron customers are tried to get them converted to Platinum or Gold Customers and Lead Customers are phased out. Banks, Credit Cards, Telecom, Insurance Companies etc. use this method.

- **Customer Life Time Value (CLV):** Customer Life time value is the present value of net profit that we derive from a customer over the entire lifetime of relationship with that particular

customer. It is the net present value of the projected future cash flows from a lifetime of customer relationship. These require detailed analysis of the strength of relationships, the likelihood, frequency and amount of repeated or additional purchases, competitive products, customer loyalty etc. Thus, profit margins are then discounted at the firm's cost of capital or any other rate that may be determined by the organisation to arrive at the CLV.

- **Customer Selection, Acquisition, Retention & Extension:**

Customer **Selection** is done through the type of Customers we Target, their Value and the way we Reach them.

Customer **Acquisition** is done through Advtg., Direct Contact, Online partnerships, Mails, Viral Mktg. etc.

Customer **Retention** is done through knowing the needs of Customers and addressing the needs, offering Continuous Quality Service, Sending Mails etc.

Customer **Extension** is done through Repeated sales (ReSales), Sale of Similar Products (CrossSales), Sale of higher value products (UpSales) etc.

- *Use of Information Technology:* E-Business portals, Online Payment facilities, ERP Systems, Internet, LAN / WAN technologies, EDI models etc. are used.
- *Brand Strategy:* Use of any Specific Logo or Colour or Pattern of Colours, Special Method of packing etc. are used to make clear distinction of products from group of similar products.

Service Level Agreements (SLA)

These are the Agreements between the Customer and Service Provider. The Service Provider may be Internal or External. The SLAs' can be reviewed by any or both parties and amended as per mutual agreement. For this they need to have a free channel of communication. SLAs' have several clauses like Definitions, Purpose, Duration, Rewards, Penalties, Arbitration, Procedure for amendments etc.

Gain Sharing Arrangement:

Gain-sharing Arrangement is where a supplier agrees to perform its side of the contract with no guarantee of receiving a payment. Instead, any payment received is based upon the benefits that arise to the customer as a result of the successful completion of the supplier's side of the contract. This is a risky stance for the supplier, because it could spend a fortune and walk away with nothing. Alternatively, if the benefits to the customer are substantial, the supplier could find itself rewarded with a large return. In this way, the supplier can be described as taking an equity stake in the customer rather than entering into a contract with it. There must be no rewards for the suppliers to achieve a higher return through adversarial behaviour or by

hiding behind the contract. Gain-sharing deals are, on the face of it, a win-win situation for suppliers and their customers.

Out Sourcing Or Contracting out:

This is a process to reduce costs and to improve efficiency, wherein certain jobs or operations are outsourced to another party. The outsourced party can do the job within the premises or at an alternative place. Outsourcing is not restricted to manufacturing operations alone. it can be in service areas also like Security, Accounting and Computer jobs, Call center activities etc.

Advantages

- a. Helps in cost savings.
- b. Helps in reduction of investment in assets.
- c. Gives flexibility in staffing, manpower deployment etc.

Disadvantages:

- a. Loss of Sensitive data and Confidentiality.
- b. Difficult to have Control on outsourced operations.
- c. Handling by inexperienced workers may lead to Quality issues.