

TOTAL QUALITY MANAGEMENT

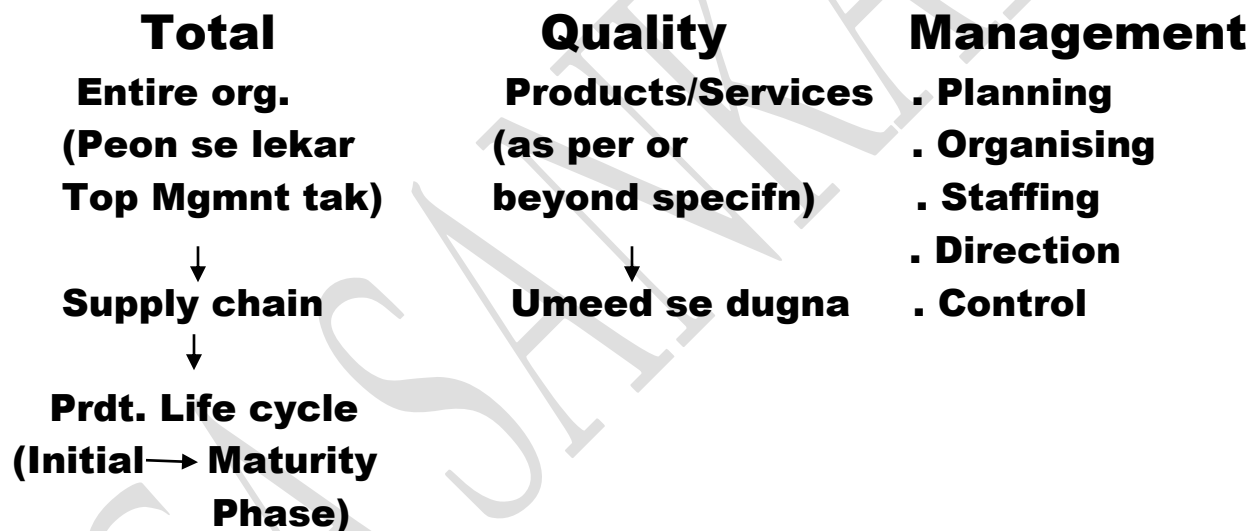
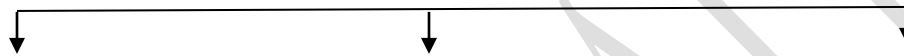


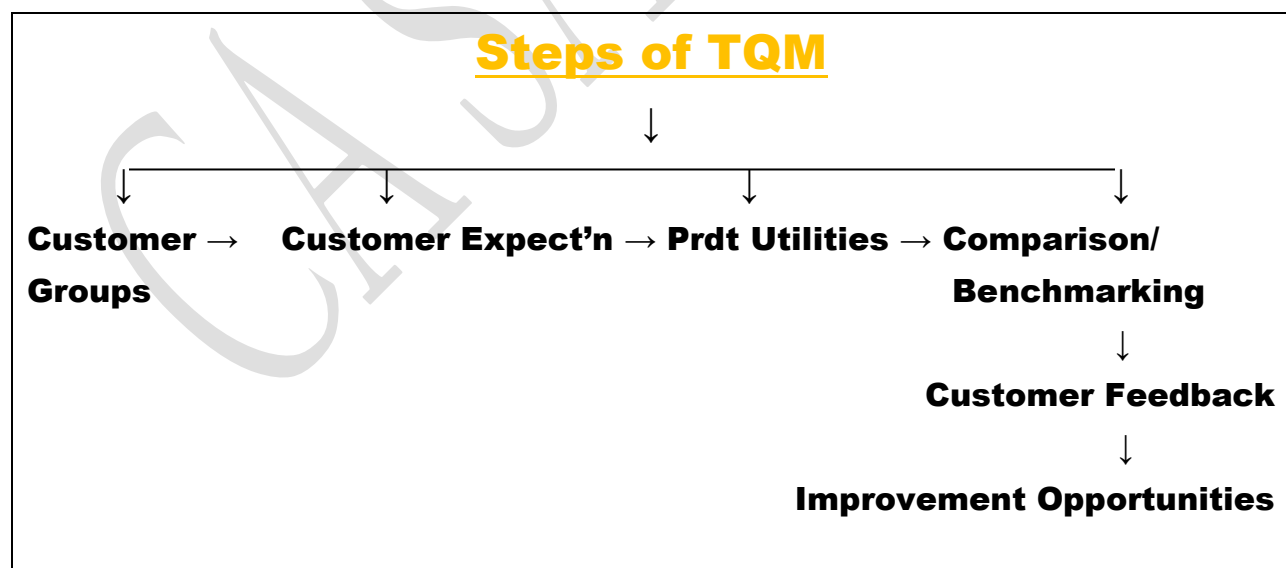
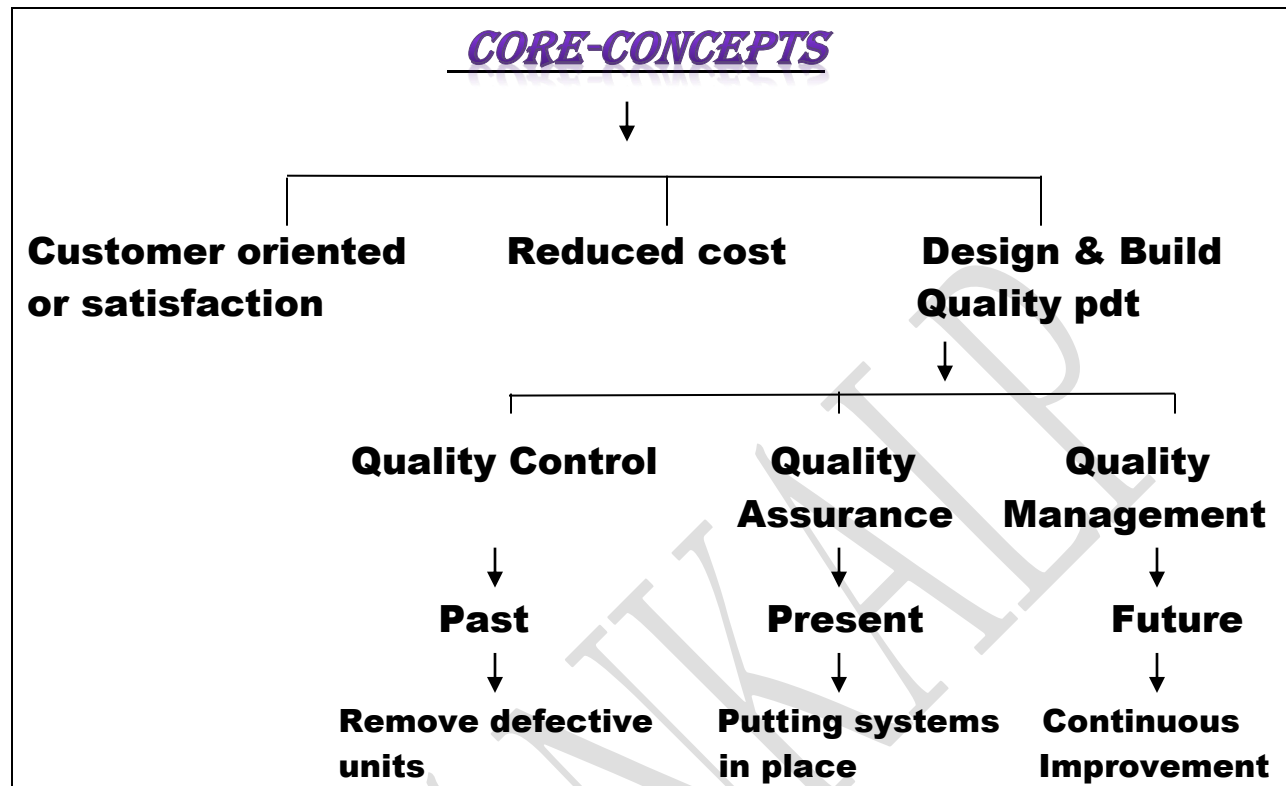
Continuous Improvement



[Quality of Product & Processes]

Naam kya diya hai? → TQM





Quality Cost or Cost of Quality

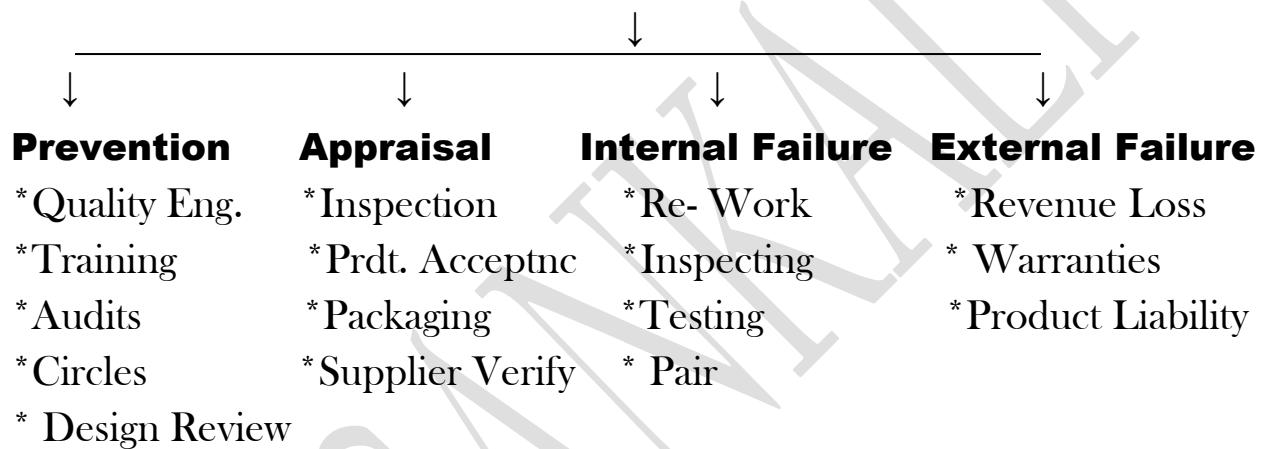


It is NOT a price of creating a Quality Product or Service. It is the Cost of NOT creating a Quality Prdt. or Service.

Example: Re -- Work of Mfd. Item (Volks wagen, Samsung)

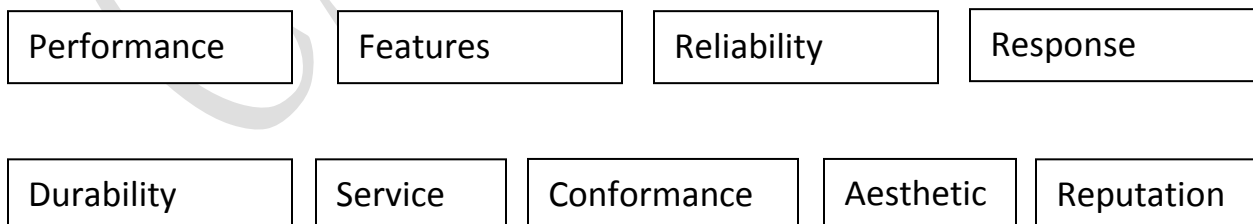
Re -- Testing

Re – Processing



DIMENSIONS OF QUALITY

When a product surpasses our expectations, we consider that as “Quality”.



6 STEPS QUALITY IMPROVEMENT PROCESS

- P** – Problem Identification (Area of customer satisfaction)
- R** – Ranking (Prioritize Opportunities & Problems)
- A** – Analyse
- I** – Innovation (creative thinking)
- S** – Solution preferred
- E** – Evaluation (effectiveness of action)

SIX C'S OF TQM

-  **Commitment**
-  **Culture**
-  **Continuous Improvement**
-  **Cooperation**
-  **Control**
-  **Customer Requirement**

TQM by Deming

“Father of Quality Control”



Deming Prize (Year 1951)



Philosophy of Deming



**15%
Workers**

**85%
Process/ System/
Poor Management**



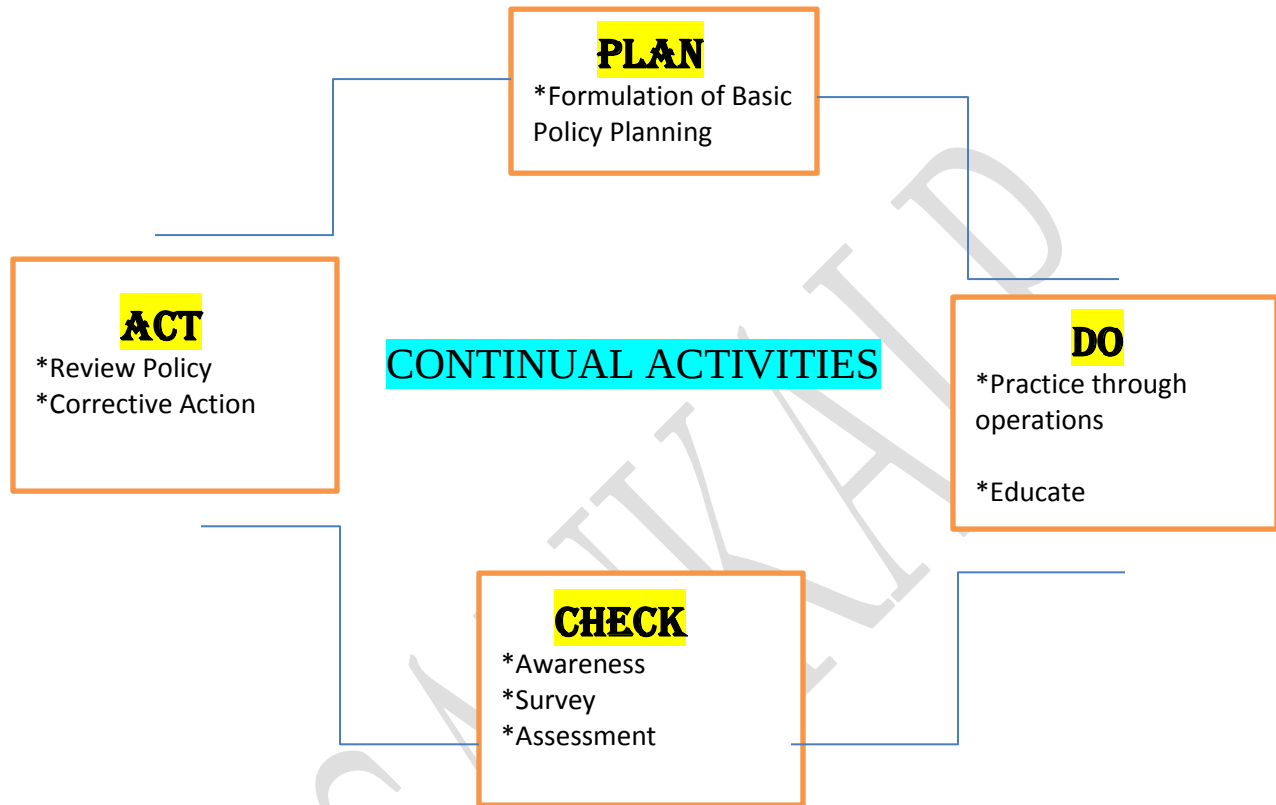
Correct System problems
Create an Environment
that promotes Quality

Deming 14 points: (Top 12 points)

- Long term Planning
- Institute Leadership
- On the job Training
- Single Supplier for 1 Item
- Be ready to Adopt New Philosophy
- Education and Self Improvement
- Involve Everyone (transformation is everyone's job)
- Drive out Fear
- Education and self-improvement
- Leadership
- Improve Constantly

Deming Wheel/ Shewart Cycle

(Continuous Improvement is a never ending process)



SIX SIGMA

(Bill Smith , Motorola 1986)

G.E. Whirlpool



Continuous Improvement



Organisational Culture



6 Sigma 99.999998% accurate

Or 0.002 defects/ million



Technically, (3.4 parts/ million)



Quality of products & services



Develops bottom line improvement

M Measure

A Analyse

I Improve

C Central

6	5	4	3	2	1
3.4	233	6120	66,807	3,08,537	6,90,000

BENEFITS OF 6 SIGMA



4 P'S OF QUALITY IMPROVEMENT

- PEOPLE
- PROCESS
- PROBLEM
- PREPARATION

TARGET COSTING

Origin —————> Japan in 1960's (Genka Kikan)

Concept

Product requirement and market analysis



Target Price – Target Profit



Gives us

Target Cost



Explore product and process design alternatives



Production



Continuous cost reduction

Set Target Selling Price

Customer expectation or market determined



Profit Margin



Target cost

(Target SP – Required profit margin)



Estimate current cost of new product



**Cost reduction target for each component and
production activity**

Cost Reduction TOOLS

↑ VA and

↓ NVA

Value Engineering

Value Analysis

Opportunities to modify

Detect

Design , reduce cost

Eliminate

Without reducing quality

Minimise

NVA

- **Eliminate unnecessary functions from production process.**
- **Better product design**
- **Substitution of parts**
- **Better way of doing things**

“ Kaizen” (Japanese Term)

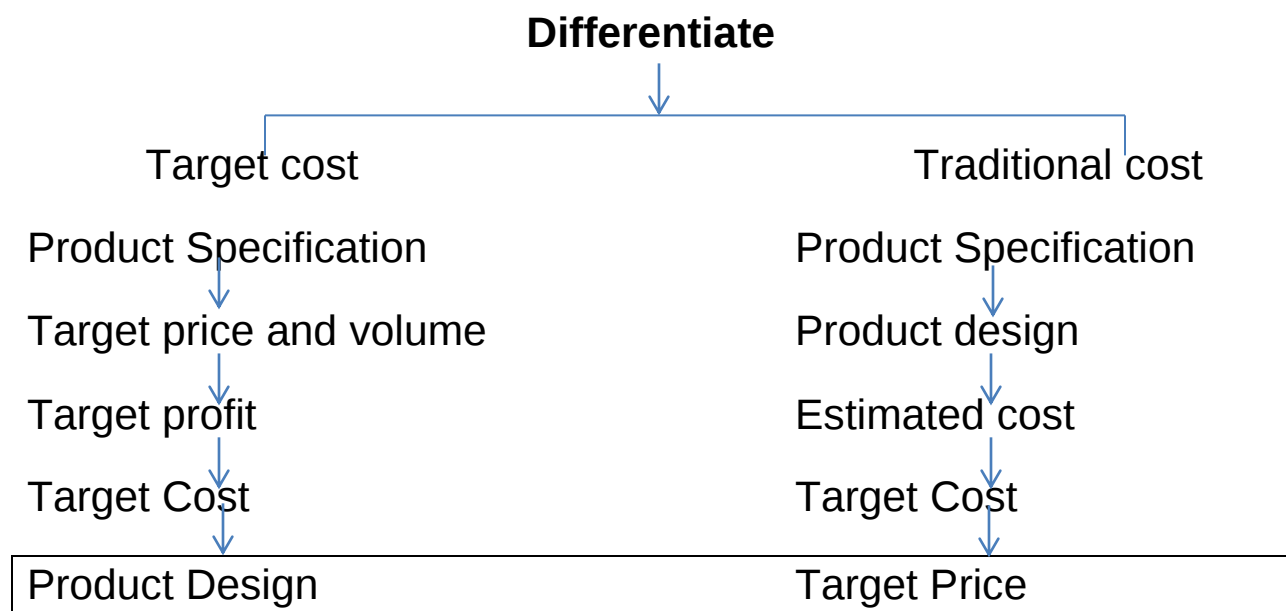
Cost Reduction steps used subsequent to issuing a new product Design



Elimination of Waste **[Production
Assembly
Distribution]**

[Continuous Improvement **[All aspects of an entity's
performance at ALL LEVELS]**

[Applied during Manufacturing stage focus on Production process]



LIFE CYCLE COSTING

LCC: Pattern of Expenditure, Sales, Revenue and Profit over the period from (New Idea Generation To Deletion Of Period)



Tracks and Accumulate costs



Over Products Entire Life Cycle



From Inception to Abandonment



Accumulate Product Costs over the Value Chain

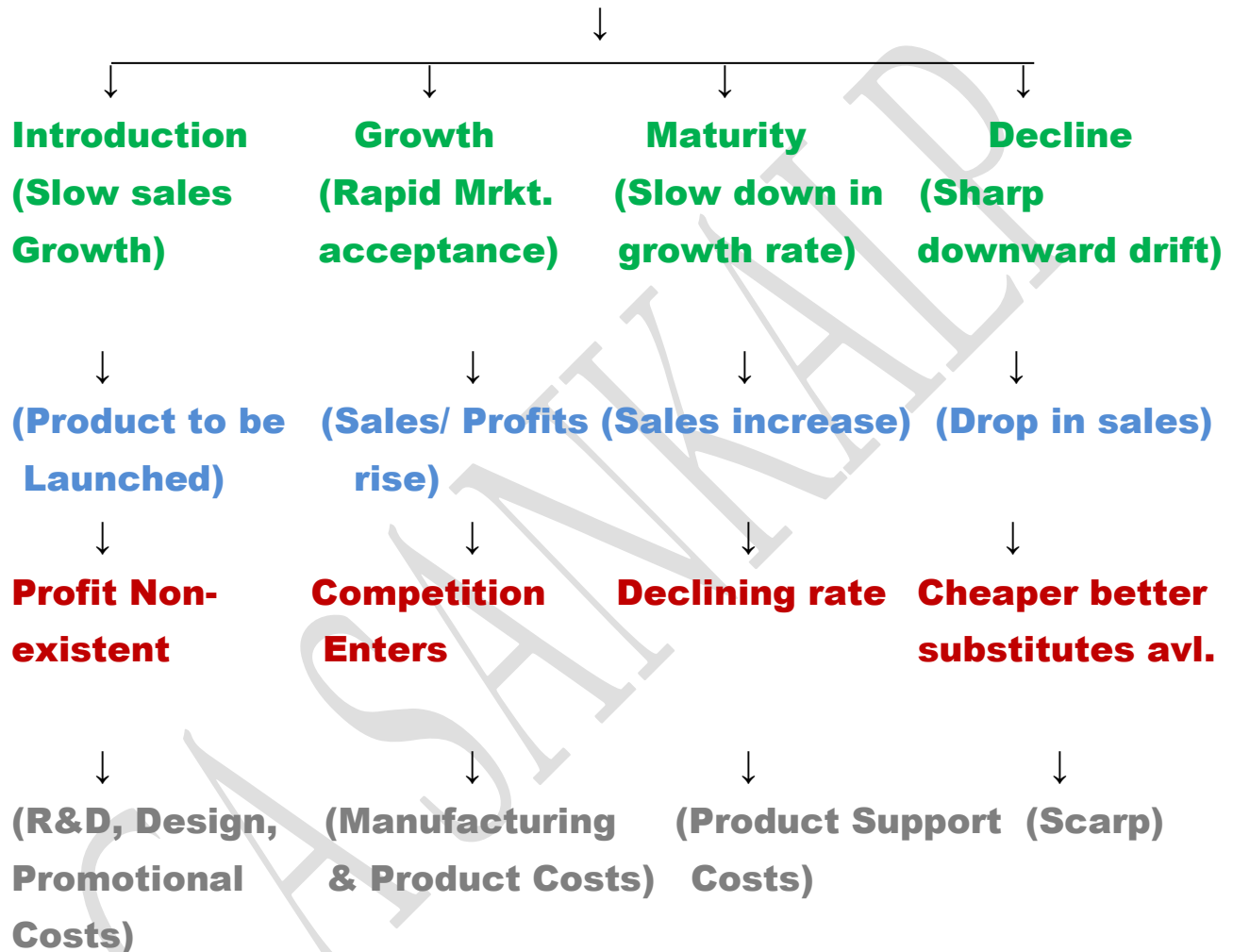


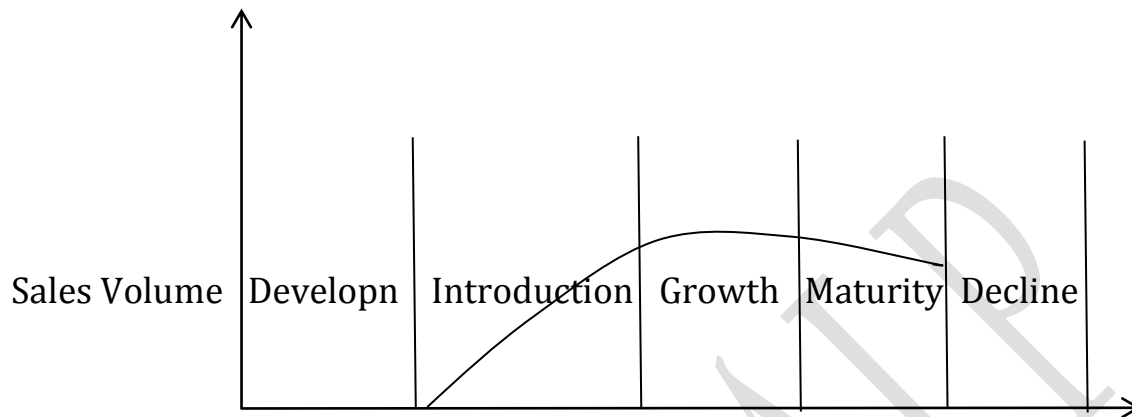
Process of managing all costs from “Product Design, Development, Manufacturing, Marketing, Service, Disposal”

Product Life Cycle

Relationship of Sales & Product Cost Work

4 Stages



Diagrammatic presentation of Product Life Cycle:**Benefits & Importance**

<u>Benefits & Importance</u>				
↓	↓	↓	↓	↓
Time based analysis	Cost based analysis	Pricing policy	Ease of decision making	Review

VALUE CHAIN ANALYSIS

Michael Porter, 1980's



Value Chain Means

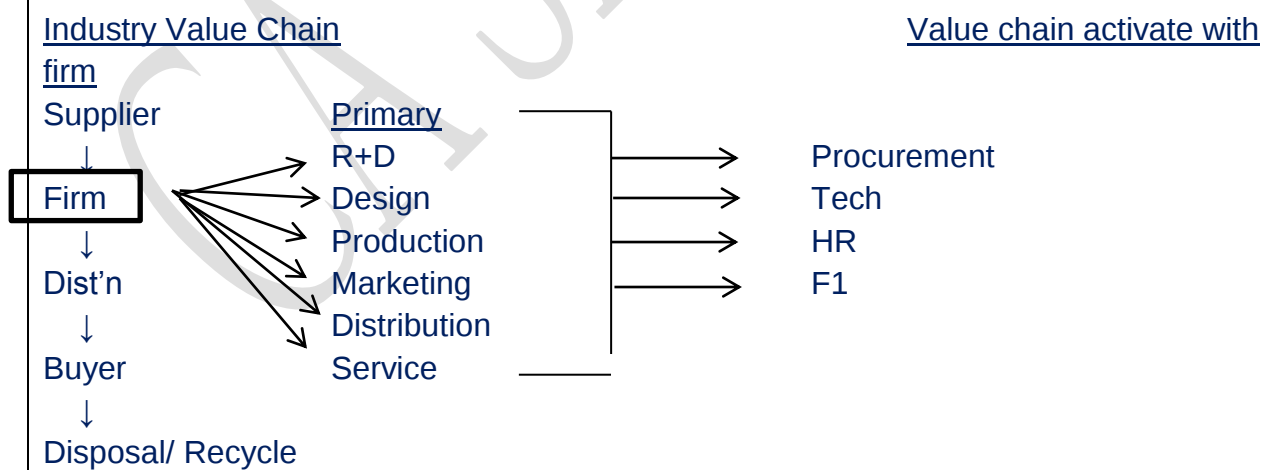
Internal Processes or activities, a company performs

“To Design, Produce, Market, Deliver and Support its product.”



S – Service (Install, Repair) (After sales) I – Inboard logistics (Material handling) M – Marketing & Sales (Channel mgmt) O – Operations (Inputs → Fp) O – Outbound Logistics (FG – sales & distribution)	P – Procurement (Pur of RM) T – Technology H.R. – selection, promotion, placement F.I. – Mgmt, Plan, Finance
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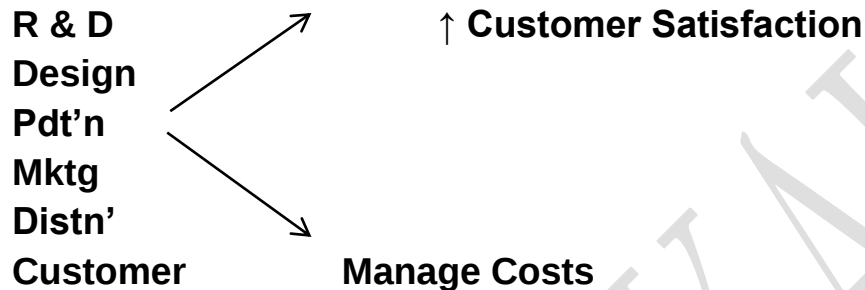
Industry Value chain and those within the firm are :



V.C. is the linked set of value creating activities from (basic RM and Components)

↓
To
(End Use of Product / Service)

6 Business Functions

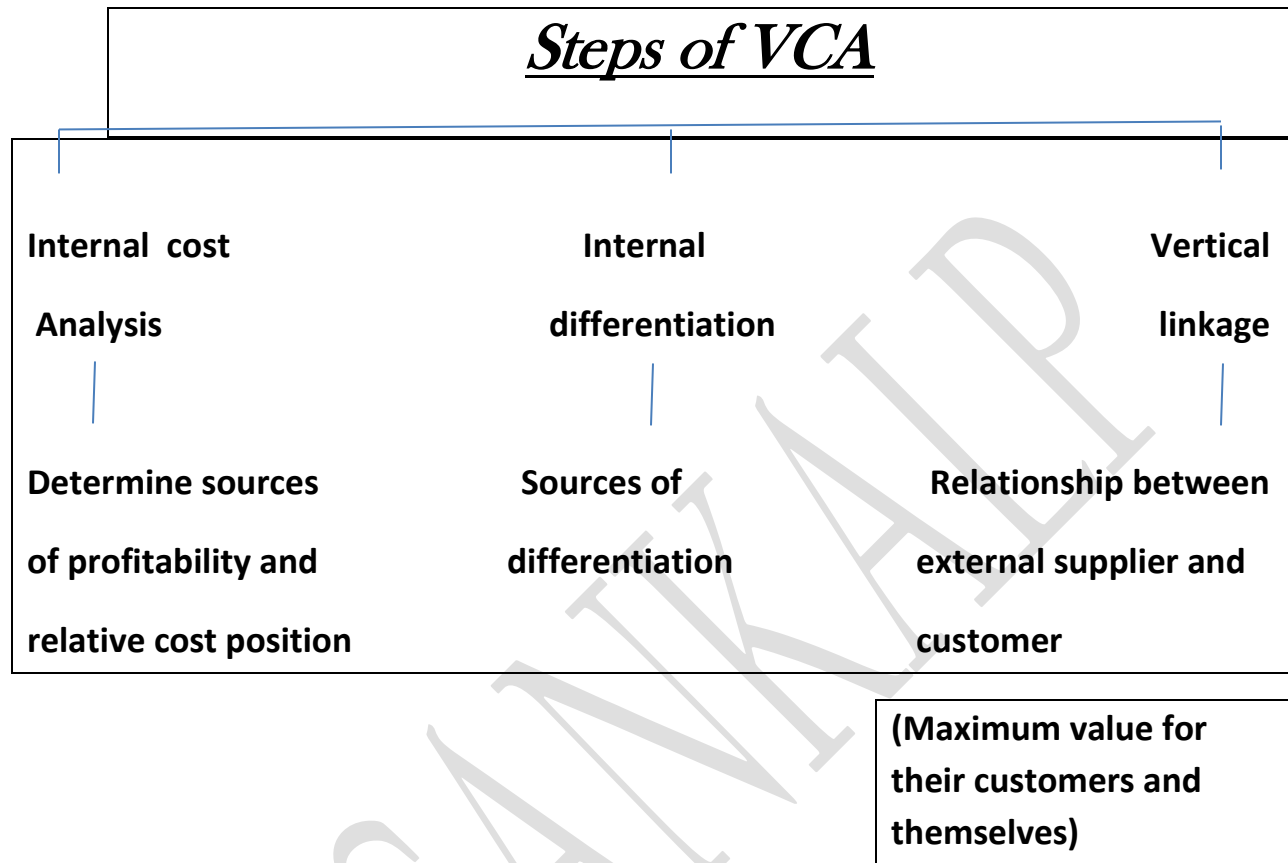


3 Useful Strategic frameworks



Value Analysis → Cost Reduction ?

- **Identify → Remove → Unnecessary Components**
- **Component Substitution**
- **Simplify Pdt design**
- **↑ Efficiency**

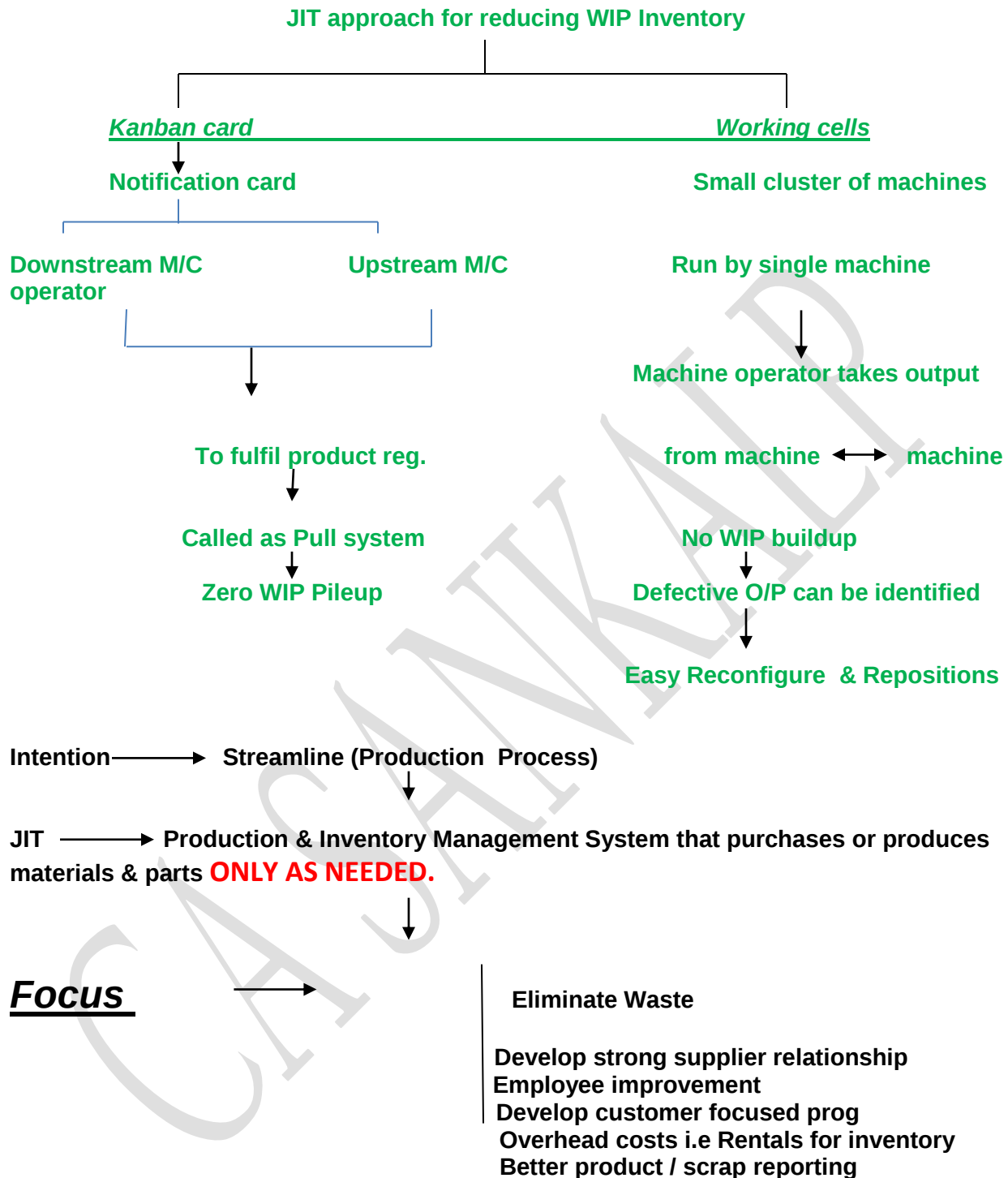


JUST IN TIME

Steps for JIT → Supplier Evaluation
↓
Assistance
↓
Inform system
↓
Direct Delivery

↓ **Decrease In amount of W.I.P**
+
Decrease In defects

Benefits and losses of JIT
➤ Increase in Purchase cost
➤ Increase in stock out cost
➤ Increase in ordering cost
➤ Decrease in storage cost
➤ Decrease in carrying cost



BACK - FLUSH A/C

In conventional product cost system, (Use Sequential tracking)

Costs are assigned as → DM → WIP → FG

Backflush → **ulta** → **First focus on output**

Allocate costs both

COGS

Closing Stock

CIMA: Cost A/c system which

Focuses on the output of an organization and then works back to attribute costs to **"stock and cost of sales"**

Data entry occurs in production process

System of Back Flush

✓ Total information of FG is entered into computer

Bill of Material Reconciliation → Components

Subtracted from opening inventory

Refer Video example.

The following corrections required :

- a) Production reporting
- b) Scrap reporting
- c) Inventory accuracy

Uniform costing



Like A.S.



(CAS) Cost A/c std's

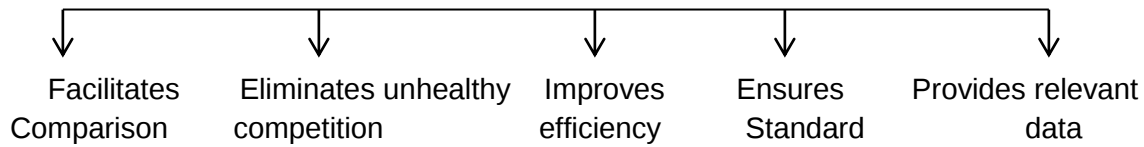
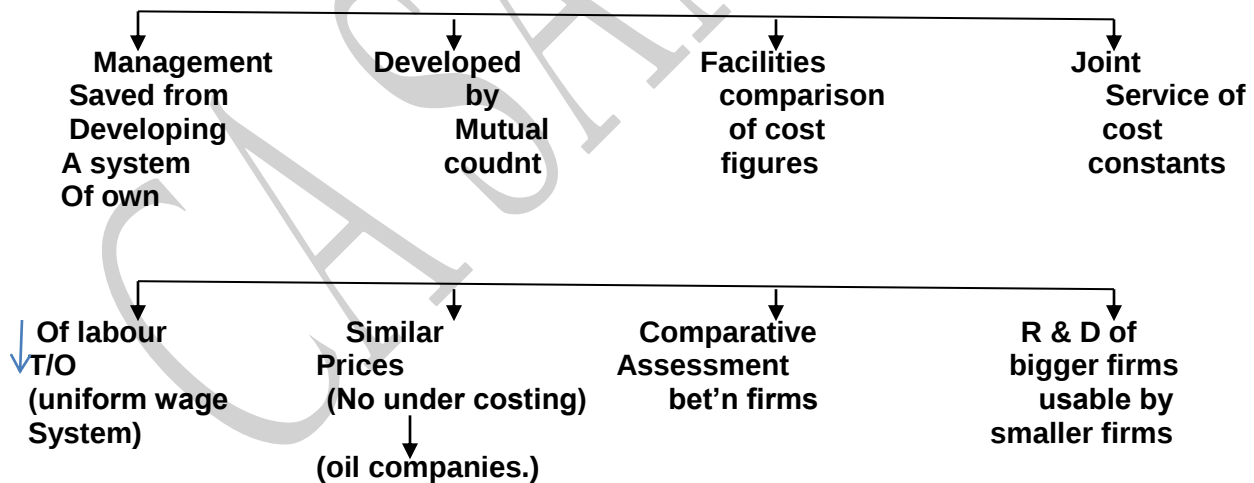


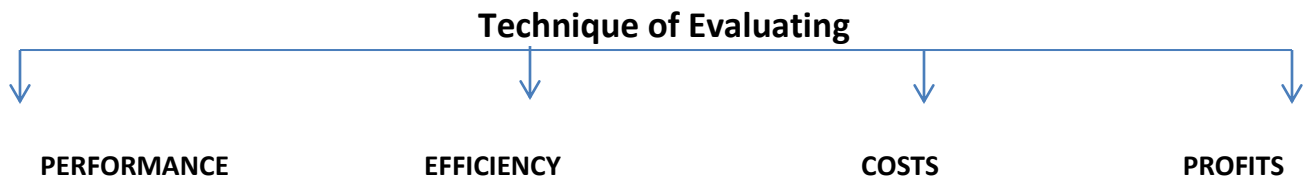
Different concerns in an Industry should adopt a common method of costing.



Helpful in Mutual Cost control and cost Reduction .

CASANKALP

Objectives**Requisites****Advantages**

Inter Firm Comparison

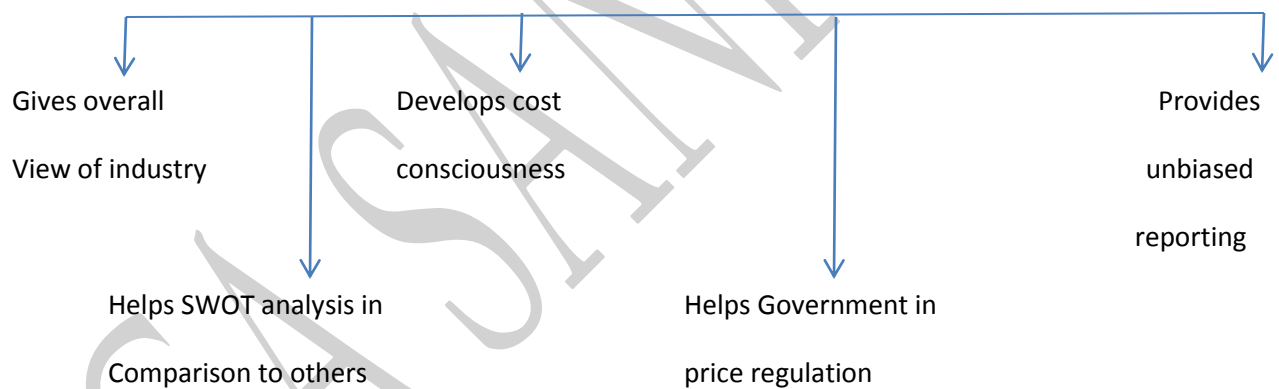
Voluntary exchange of information

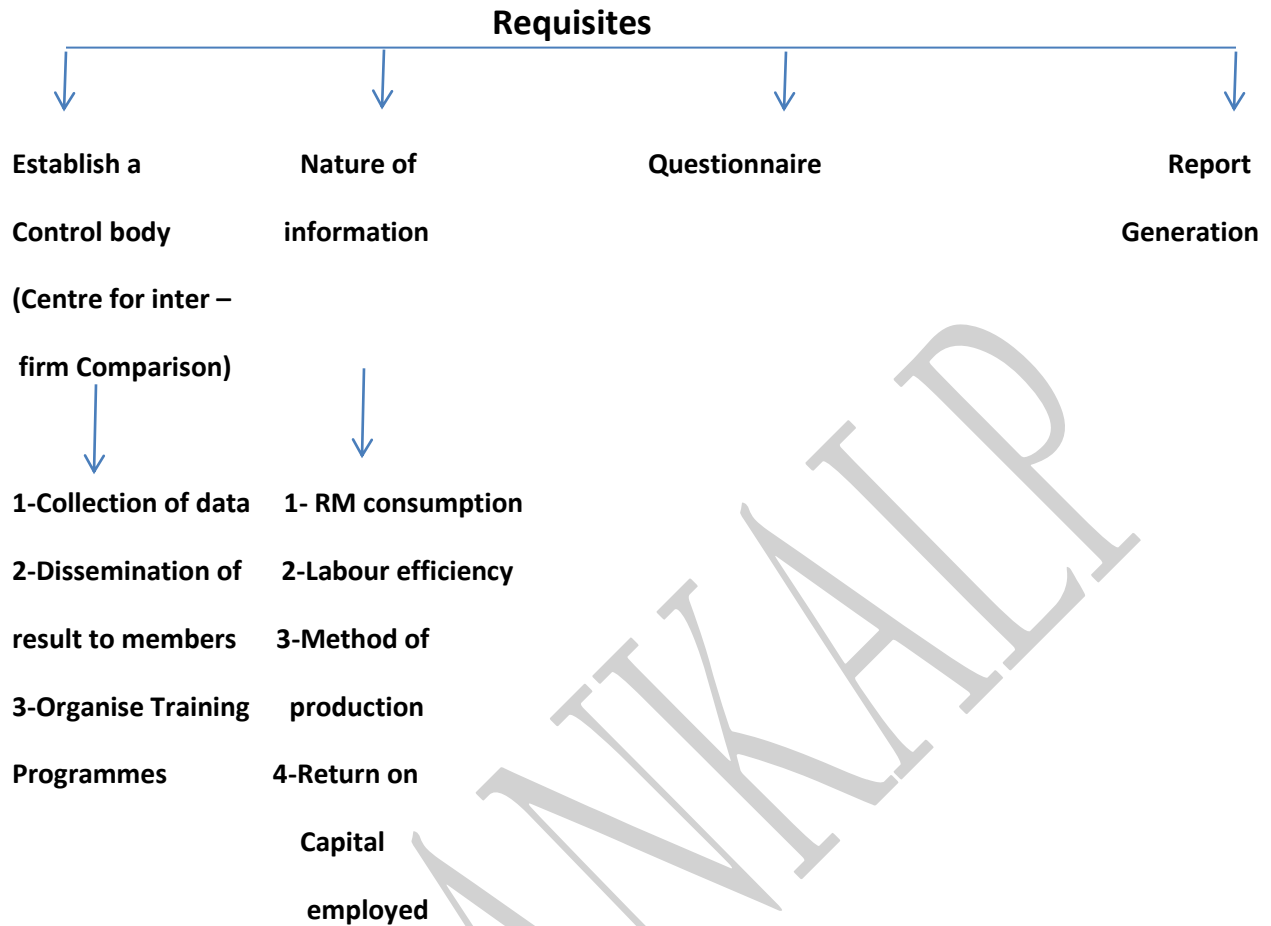


Costs / Prices / Profits / Productivity

Among firms engaged in similar types of operations

Advantages





PROFITABILITY ANALYSIS

Portfolio → Profitable products. → Profitability



Individual & Relative
Profitability of products

D.P.P (Direct Product Profitability)



Measure profitability of individual of Individual pdf



True profitability prdt wise → Decision making



[Against absorption costing → Similar to ABC costing]

IN RETAIL SECTOR

Involves attribution of



Purchase price + Other Indirect Costs
[Distribution, warehouse & retail]

Benefit



Better cost
Analysis

Better
Pricing
Decision

Better Management
of Stores &
Warehouse space

Rationalisation
of product

FORMAT:

SALES	XXX
(-) COGS	(XXX)
GROSS MARGIN	XXX
(-) DIRECT PRODUCT COSTS (W/H, TRANSPORTATION, STORES ETC.)	(XXX)
DIRECT PRODUCT PROFIT	<u>XXX</u>

CUSTOMER PROFITABILITY ANALYSIS

Relatively New Technique



Customers use some activities but not all



**Different group of customers have different
“Activity Profiles”**

**Example: Bank —→ Cash w/d, Overdraft, Bank Statement,
Cr / Dr. Card**

Hotel —→ Garden, Swimming pool, Bar.

BENEFITS OF CPA

- **Helps to have a constructive dialogue between buyer and seller.**
- **Customers Eroding Profit.**
- **Effective Cost Reporting.**

BALANCED SCORE - CARD

“Approach to provision of information to Management to assist in
“Strategic policy formula achievement”

↓
Organisational strategy in performance measure

↓
Implementing strategy

↓
Manage business from 4 perspectives

FINANCIAL PERSPECTIVE

(To succeed financially how should a company
Appear to its stakeholders. Eg. Quarterly sales Growth)

CUSTOMER PERSPECTIVE

(To achieve its vision how
shareholders & how
Should a company
Appear to its customers)
Eg: New product on Time Delivery

VISION STRATEGY

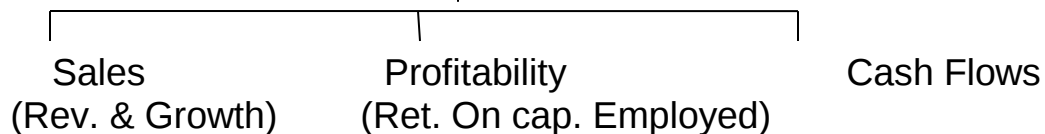
INTERNAL BUSINESS

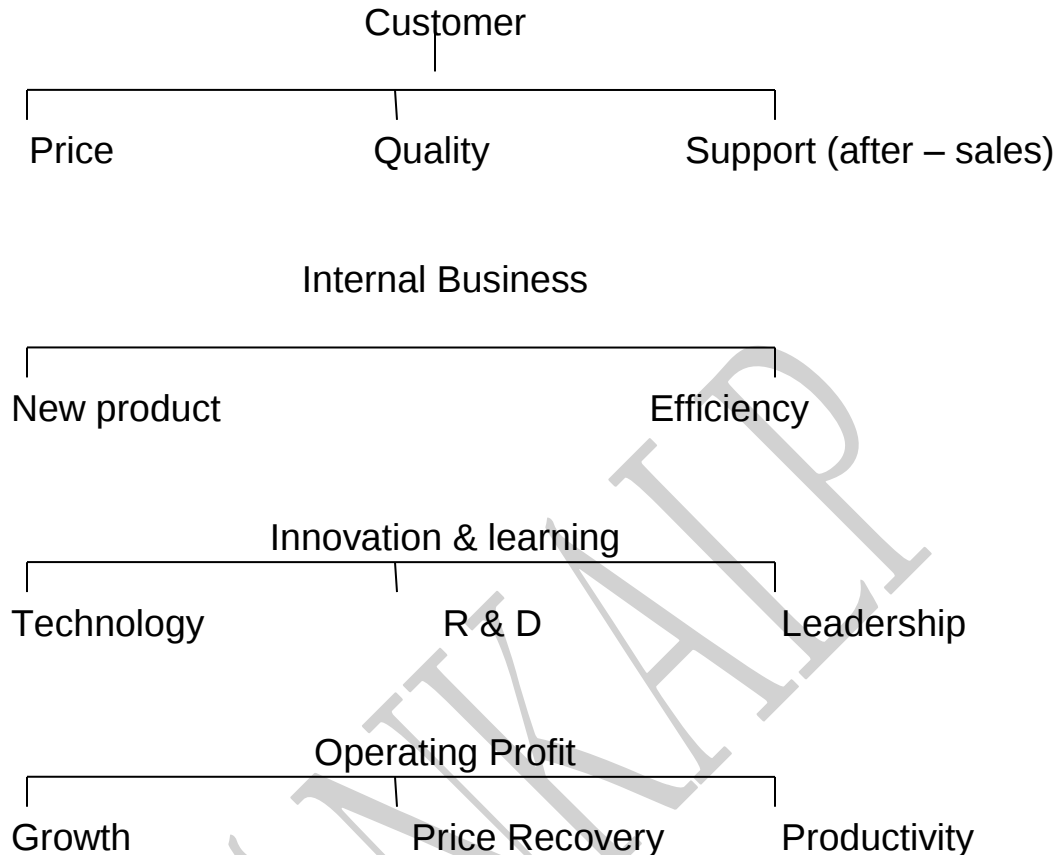
To satisfy its
customers what business
process should co. adept
Eg: Techno capability

INNOVATION & LEARNING

To achieve its vision on how should a company sustain
Technology, leadership

Finance





Revenue effect: $(\text{Act. Sales qty in CY} - \text{Act sales of LY}) \times \text{SP of LY}$

Cost: $(\text{units of input required to produce CY output in L.Y.} - \text{Actual units of input produce L.Y. output})$

$\times \text{Input price L.Y.}$

PRICE RECOVERY

Revenue: $(\text{SP in CY} - \text{SP in LY}) \times \text{Actual sales in CY}$

Cost: $(\text{Input price CY} - \text{Input price in LY}) \times \text{units of input required to produce C.Y. output is LY}$

Productivity

$(\text{Act units of o/p to produce CY output} - \text{units of input required to produce CY output in CY})$