

# TARGET COSTING

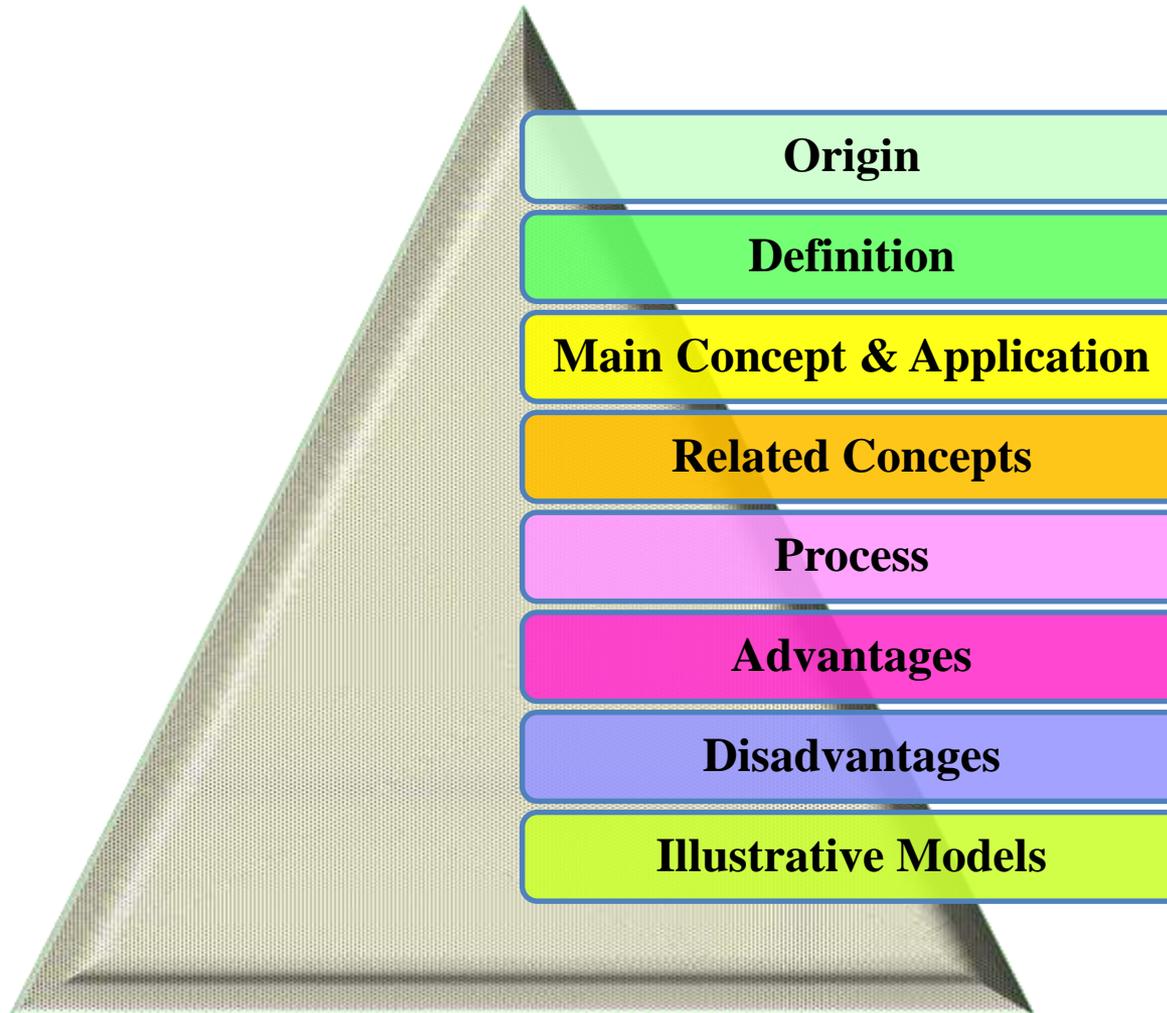
A presentation by

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# OUTLINE

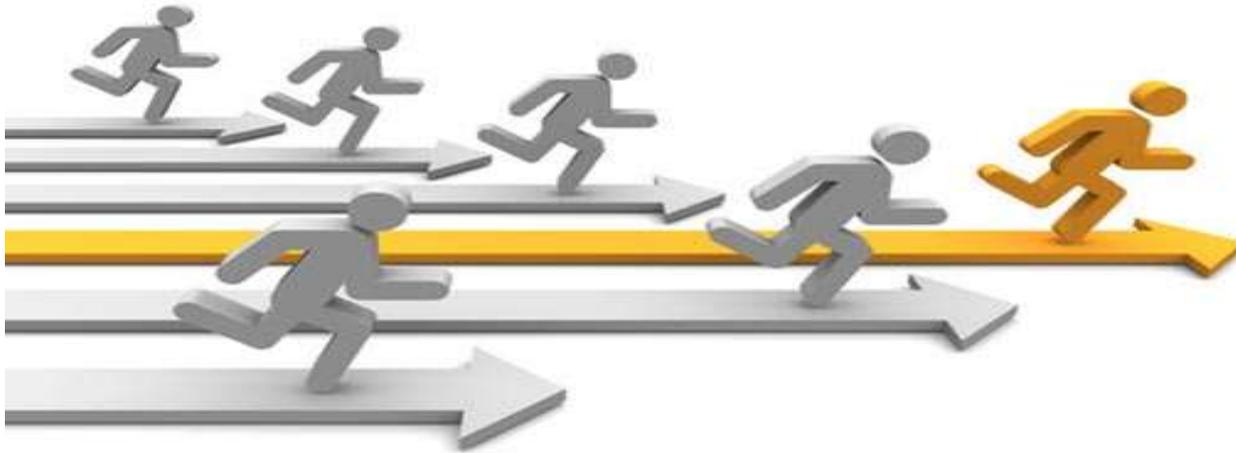


# TARGET COSTING



**Let us explore, how it works?**

# COST COMPETITIVENESS



Achieving a **Target Cost**  
over the entire lifecycle of a product to compete for the  
best price in a market.

# TARGET COSTING



## **A customer-centric**

costing system that bases all cost workings for a product from its market price. The purpose is to reduce cost of a product as low as possible to arrive at a price that would be either **equal to** or **less than** that of competitors' product while delivering the same **functionality**.

# ORIGIN

**Target Costing** originated from **Japan** in **1960s** as a direct consequence of increasing influence of **western products** in **Asian markets**. **Western products** were superior in quality and reasonable in prices. **Japanese companies** struggled hard due to shortage of resources for development of such products that could compete western products in **quality, cost and productivity**. They constituted teams of **cross-functional technicians** to find out products that could compete in cost, quality and productivity. These teams examined production processes minutely. Their aim was to increase the degree of integration between **up-stream** and **down-stream** activities of a company's operations. **Target Costing** originated out of these examinations. **Finally, such designs of products were found that could beat competitors' products in cost, quality and productivity**. They achieved this goal by using several tools from different disciplines, such as engineering, production, marketing, design and management & cost accounting.

The tools used by them included the following: **Value Analysis, Value Engineering, Functional Analysis, Kaizen Costing, Lifecycle Costing, market analysis tools, managerial accounting tools, production methods**, etc., etc.

**Target Costing** enabled **Japanese companies** to have effective and efficient designing and product development departments.

**Now, Target Costing is used across the world today for achieving cost-competitiveness.**

# COSTING SYSTEM

- ❑ Improves the understanding of the costs of products and services, where issues are identified at the design development stage of a product so that a corrective action can be taken for cost-efficiency.
- ❑ Brings a focus on the final users of a service or product.
- ❑ Is multidisciplinary and involves cross-functional team of technicians in the cost management and encourages them to take responsibility for cost-competitive design of a product.
- ❑ Provides a framework which encourages a focus on the wider supply chain, in effect a whole systems approach.
- ❑ Can be used by service organizations to look at the impact which new services have on the existing ones.
- ❑ Develops specific and real targets which ensure satisfactory financial performance.
- ❑ Highlights other problems in areas such as purchasing which affect the cost of the product or service.

# DEFINITION

According to CIMA Official Terminology a target cost is,

**“a product cost estimate derived by subtracting a desired profit margin from a competitive market price.”**

**Target costing** is a formal system that attempts to achieve a target cost. Target costing is just not **costing system** or **cost management technique** but this is a complete business management philosophy that is purely market-oriented.

Target Costing (TC) is a  
**“structured system for achieving a target cost at which a proposed product with its specific functionality must be produced to generate a target profit at its target selling price.”**

# OBJECTIVE



- Reducing cost of a product equal to that of competitors' product at design stage to enable the company to stay competitive in the market in terms of price and product features.
- TC is a market-driven costing system for developing a product that is primarily and effectively used for cost planning and controlling at allowable levels throughout the lifecycle of a product.

# PROCESS

**It is an iterative process which is used by a design development team, the process continues to change design of a given product until the cost of a product is either lowered or becomes equal to target cost while maintaining the required level of functionality.**

Management benchmarks a product from a market and launches its own campaign to create a similar product from its own manufacturing facilities/resources at the same cost and with the same design and features. To achieve this purpose, a team of cross-functional technicians (engineering, production, marketing, design, management accounting departments) is constituted.

The purpose behind achieving target cost is to beat competitive products and to ensure required market share and profitability. If the product under design is delivering same value as that of competitors' products and has lesser or equal cost, then, the product has competitiveness in the market, otherwise, the product may be failed in the market.

# UTILIZATION

**TC is being used invariably across the world today, as a tool for cost management, to secure required market share and to achieve desired profit levels.**

- More than 80% companies in Japan that are in assembly line business, employ **TC** as a tool or technique to manage their cost.
- More than 60% companies in Japan that are in processing industry, use **TC** as a cost management technique.

Here are given the names of few reputed companies that are using **TC** as a mechanism for cost management:

**Boeing, Eastman Kodak, Honda, Daimler, Chrysler, Caterpillar, GE, GM, Toyota, Nissan, Sony, Mitsubishi, Ford, Motorola, etc., etc.**

## **CAVEAT**

It is learned through experience that **TC** is best suited for industries that have non-customized and high volume products.

# APPLICABILITY

**TC is the most effective system for planning, controlling and monitoring of cost for new products at each stage of their life cycle.**

## HOWEVER

**It can also be used for existing stream of products.**

## Why TC is effective for new products?

**It is noted through studies, 70% to 80% cost is planned and committed at design stages. If all focus is placed on cost-cutting at design stages then cost is managed according to the plans efficiently and effectively.**

# COMMITTED COST

**Committed costs** refers to the costs that management agrees to incur for product development through all stages of the life cycle. Studies have suggested, about **70%** to **80%** of manufacturing cost is committed at design stages of a product. **TC** focus all attention at cost components (materials, labor & overheads) at design stages. For example, it is decided at product design stages, what type of materials to be used and from where they can be acquired? What alternatives are available for those materials in the market? How many suppliers for the materials are available in the market?

**Which supplier will provide the required quality materials at required quantities at a given point in time at an allowable cost?**

Suppliers are also involved at design stages to provide cost effective solutions. For instance, suppliers can help in reducing cost by suggesting alternative parts or components at the lowest cost for a desired level of functionality.

Similar decisions are made for labor and overhead costs.

# COST ACCUMULATION

The cost of a product is accumulated at different stages in the lifecycle of a product. A lifecycle of a product starts from **concept stage** and ends with **recycling or decomposing** of a product. Therefore, **TC aims to control cost at each stage in order to achieve overall target cost of a product.**

Following are the costs that are normally incurred at each stage of lifecycle of a product:

- 1. Design** ----- Concept development, design, tooling, prototype
- 2. Manufacture** ----- incurring direct cost of materials, labor and indirect costs (materials, labor and other overheads)
- 3. Operations** ----- Warehousing, Distributing, Selling, Admin, loading and unloading costs, local taxes, advertising, warranty, etc.
- 4. End/retire** ----- Recycling, disposal cost, decomposing cost

# ALLOWABLE COST COMPARED W. TARGET COST

**Allowable Cost** is the maximum cost that can be incurred on the development of a product

## WHEREAS

**Target Cost** is the estimated cost over the entire life cycle that management incurs to develop a product with required level of functionality to achieve target profit at a target price.

## CAVEAT

If the target cost cannot be achieved then the product should not be launched. Further, design team must not be allowed to achieve target cost by eliminating desirable product functions or features. As the product would stand weaker against the competition in the market if desired features are compromised.

# RELATED CONCEPTS

- **Target Pricing**
- **Cost-Plus Pricing**
- **Absorption Costing**
- **ABC Costing**
- **Life Cycle Costing**
- **Kaizen Costing**
- **Value Analysis**
- **Value Engineering**
- **Functional Analysis**

## CAVEAT

TC is just not a cost work-out technique but it is a complete business management philosophy. We, hereby, mention in brief, as to how, each of the above mentioned tools is related to TC.

# COMPARISON

## TARGET PRICING

1. Competitors' prices are considered for setting prices
2. Price determines cost of a product
3. Design is primary focus for reducing cost
4. Cross functional team of technicians participate in cost management
5. Suppliers are involved at design stages
6. Involve value chain in cost planning

### **Important Note**

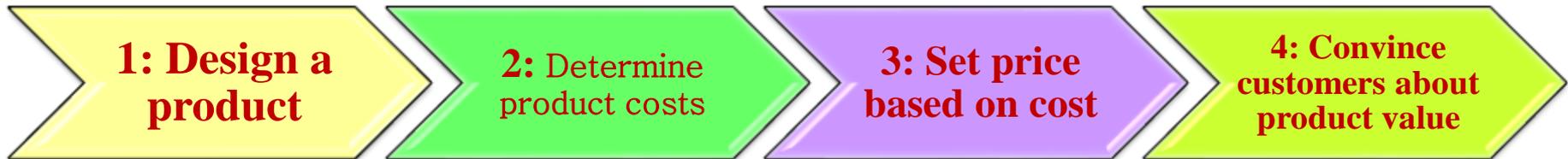
Price setting procedure for a product under Target Pricing is exactly reverse to that of Cost-Plus Pricing.

## COST-PLUS PRICING

1. A certain amount of profit is added to cost to arrive at a price
2. Cost determines price of a product
3. Focus is on meeting budgeted cost, reducing production losses and wastages
4. Cost and Management Accountants work out cost of products and suggest cost reductions
5. Suppliers are involved at production stage
6. There is no consideration for value chain at cost planning stage

# DIFFERENTIATED

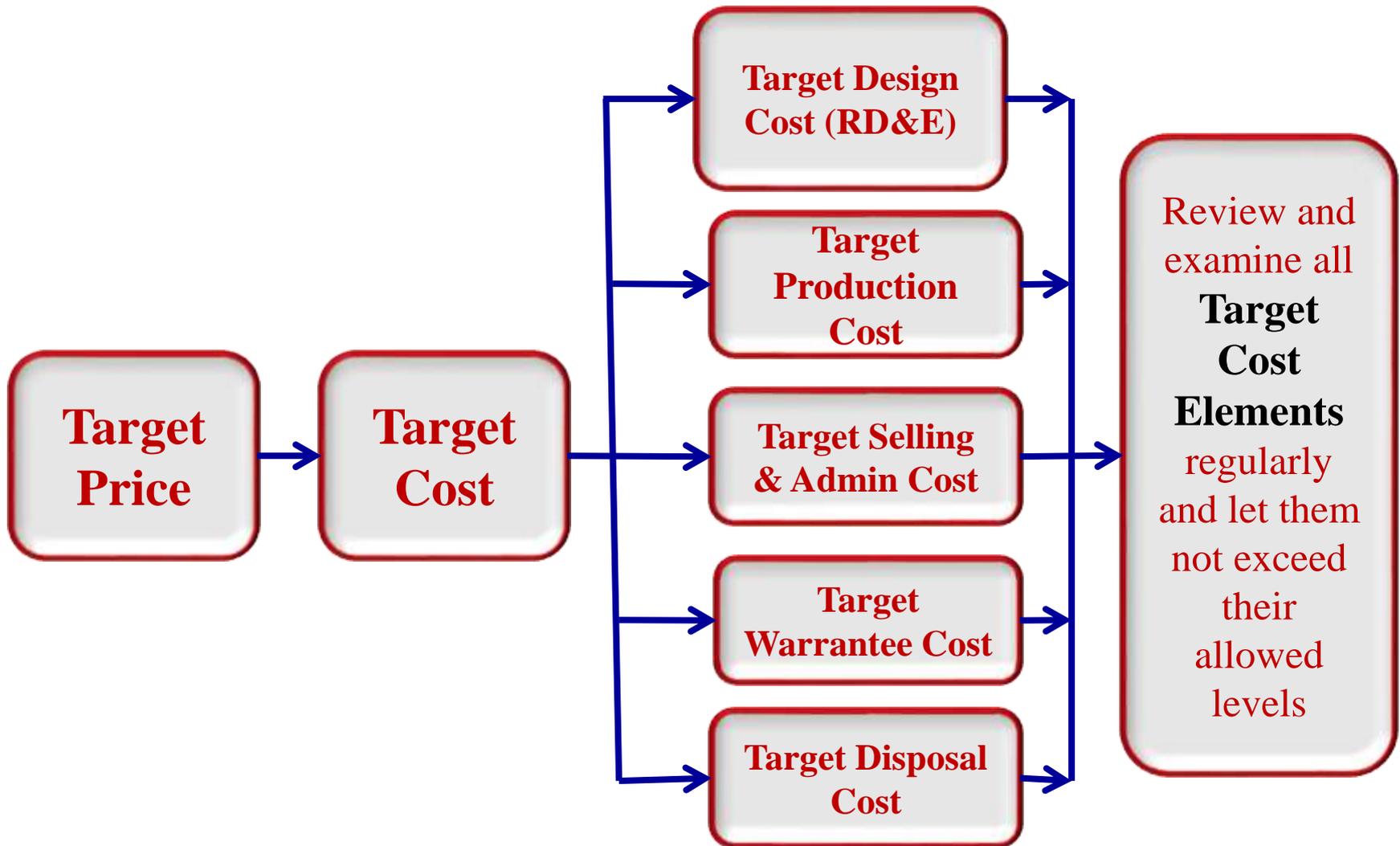
## Cost-based Pricing



## Target Pricing /Value Based Pricing



# PROCESS FLOW CHART



# PRICE-TAKER FIRM

Every firm is a price-taker firm under conditions of a **perfectly competitive market**. There are numerous firms in the market that are producing identical products in a given price range. This is why, a single firm cannot dictate its price in a **perfectly competitive market**. However, in a monopoly or monopolistic competition, a firm can dictate price or a small number of firms can dictate the price, as the products offered by them don't have perfect substitutes in the market.

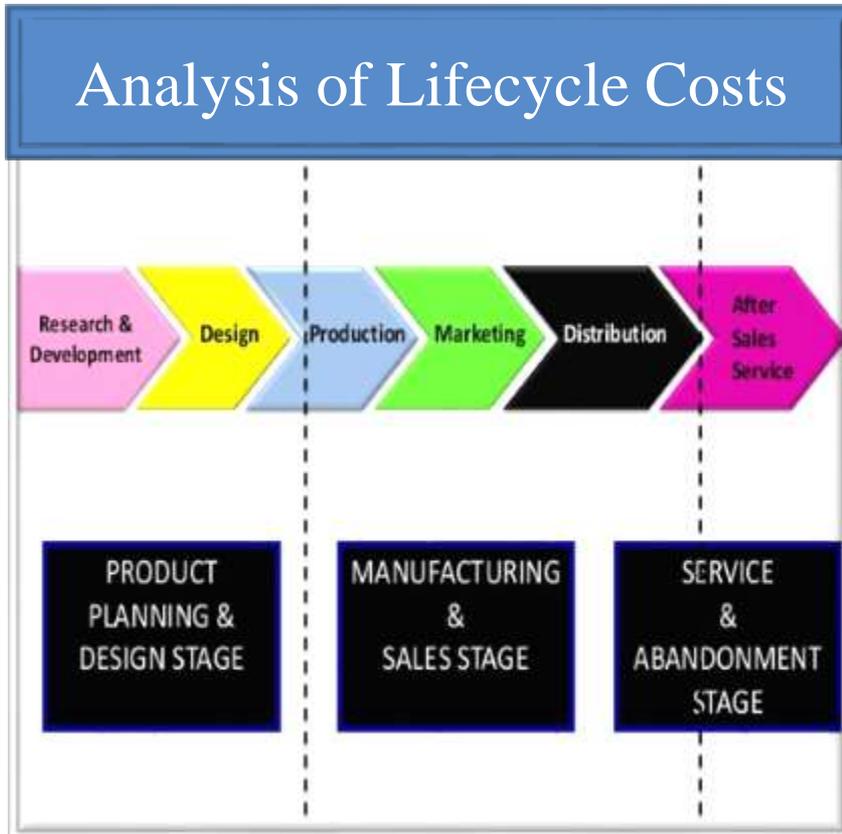
Other conditions that are present in a **perfectly competitive market** are given as under:

- ❑ All companies are selling identical products, therefore, perfect substitutes exist for the products offered by them
- ❑ There are no barriers for entry or exit in the market for companies
- ❑ Every company has relatively small share
- ❑ Buyers and sellers have full information about the market, prices and products offered there

## CAVEAT

Adopting Target Pricing is mandatory for a firm/company that is working under conditions of **perfectly competitive market**. Otherwise, **competitive pressures** will throw the firm out of the market one day.

# LIFECYCLE COSTING



- **Lifecycle Costing (LCC)** refers to a process of identifying and recording all costs that are incurred over the entire lifecycle of a product. **LCC** includes cost incurred before production of the product till cost incurred for disposal of the product.
- **TC** attempts to achieve reduction of **Lifecycle Costs** of a new product by examining all stages for cost-reduction at **R&D**, production and disposal stage a product. **TC** is just not a costing system but a comprehensive profit planning tool for a product over the entire lifecycle.

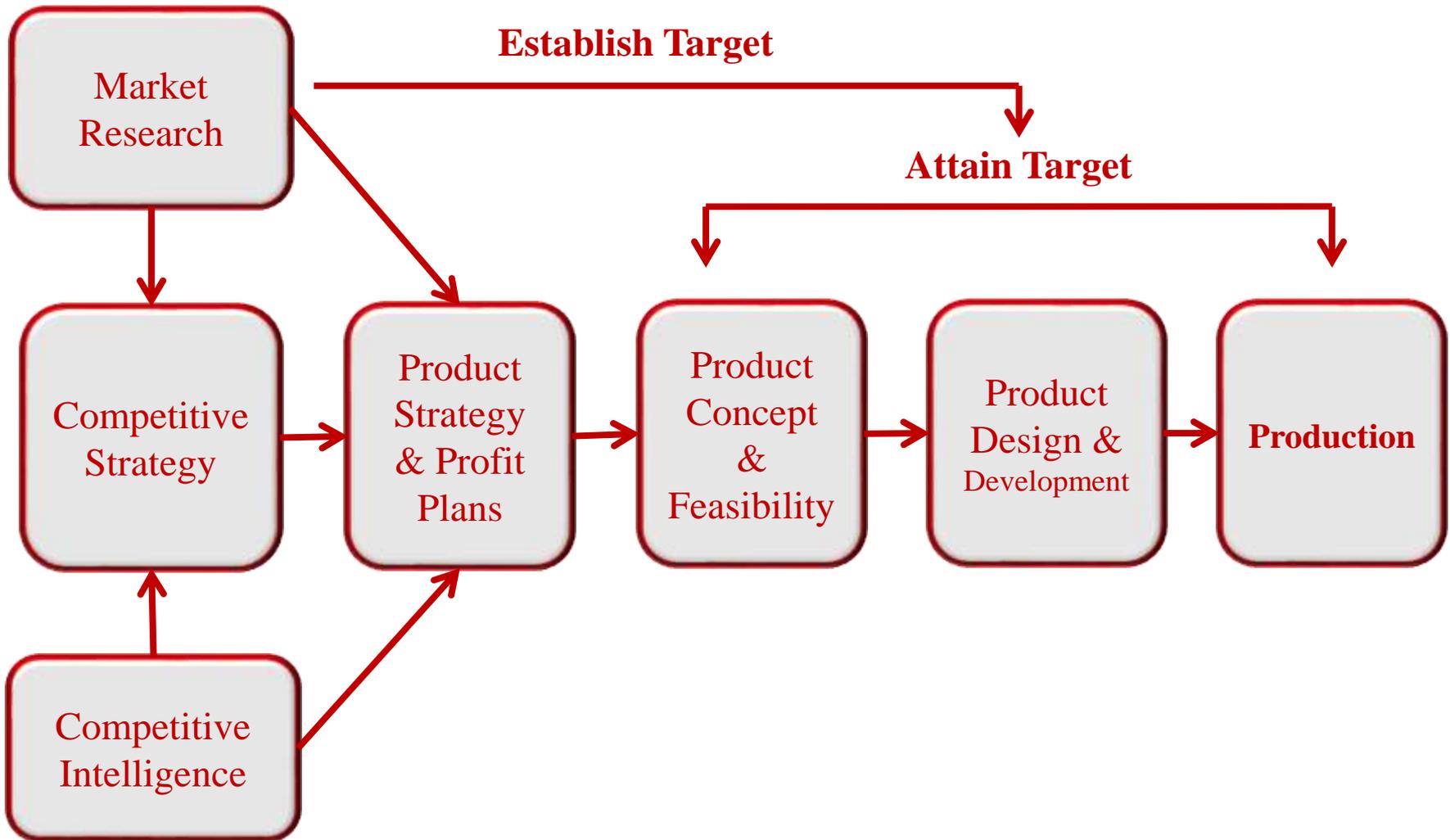
# KAIZEN COSTING

Kaizen Costing (**KC**) refers to a process of cost improvement through small incremental amounts rather than through large innovations. **KC** continues throughout the manufacturing process. In **TC**, the main purpose is achieving target cost over the lifecycle of a product. After the design is finalized, the production starts, **KC** focuses on eliminating costs during production processes. **KC** achieves this purpose by reducing unnecessary cost during manufacturing processes. **KC** achieves cost reductions through increased efficiencies during production processes. Every employee is required to produce cost efficiencies in production processes. **KC** goals for cost reduction are given to each employee on monthly or yearly basis. Actual results are compared with **KC** goals. The actual results achieved are made base for new **KC** goals for each employee. In this way, **KC**, continuously improves cost at production stage. Since, **TC** requires cost efficiencies during the entire lifecycle of a product, therefore, the same objective is followed during production through application of **KC**.

# HOW TC WORKS?

1. **Market Survey and Research** is conducted about the price and features (functions and characteristics) of a product that is to be benchmarked by a management.
2. Preparing feasibility around **Target Price, Target Profit** and **Target Cost**.
3. The primary focus is on the product design that could match target cost. Product design is changed time and again to reduce cost. **This process is repeated till the time target cost is achieved by a design.**  
The following tools are used at this stage: **Value Analysis, Value Engineering, Functional Analysis** etc., etc.
4. Working out cost for each stage of a **product's lifecycle**. This would help in achieving overall target.
5. Implementing **KC** for continuous improvement in cost of a product during remaining stages of the life cycle of a product.

# PRODUCT DEVELOPMENT



# RELATED CONCEPTS

## ➤ **VALUE ANALYSIS**

A systematic analysis that identifies and selects the best value alternatives or designs, materials, processes, and systems.

## ➤ **VALUE ENGINEERING**

Value Analysis (**VA**) is used for existing products whereas Value Engineering (**VE**) is used for new products at the design stages. Both Value Management Techniques (**VMTs**) have same purpose of reducing cost without any compromising on the quality of a product.

**VE** is an organized effort directed at analyzing the functions of the various components for the purpose of achieving these functions at the lowest overall cost without reductions in required performance, reliability, maintainability, quality, safety, recyclability, and usability. The relationship between **VE** and **TC** is: Once a target cost has been set, the organization must determine target costs for each component in a product. **VE** is used to examine the design of each component of a product to determine whether it is possible to reduce costs while maintaining functionality and performance.

## ➤ **FUNCTIONAL ANALYSIS**

Functional Analysis (**FA**) refers to the relationships between product functions, their perceived value to customers and their cost to provision.

# RELATED CONCEPTS

## ➤ **ACTIVITY BASED COSTING**

ABC is a cost attribution to cost units on the basis of benefit received from indirect activities. (Cima Official Terminology)

## ➤ **ABSORPTION COSTING**

It reflects full cost pertaining to a product. It is also referred as Traditional Costing.

➤ **CROSS-FUNCTIONAL TEAMS** guide the target costing process. These teams may include, for example, representatives from the organization's design engineering, manufacturing, management accounting, and marketing areas, as well as representatives from among suppliers, customers, distributors, and waste disposers.

➤ **SUPPLY CHAIN MANAGEMENT**, which involves developing cooperative, mutually beneficial long-term relations between buyers and suppliers, plays a critical role in target costing when suppliers actively participate in resolving cost reduction problems.

### **Important Note**

When cost-plus pricing is used, the total cost of a product may be calculated either by Absorption Costing or by Activity-Based Costing. ABC provides more accurate cost of a product due to more accurate allocation of overheads.

# DECISIONS

Following are a few typical decisions that are made by a **product design and development team** for achieving a **Target Cost**:

- Deciding about features/characteristics/functions of a product to achieve the desired functionality
- The components or parts to be used in the product
- Identifying whether the components are standard or specialized
- The detail about production processes and sub-processes
- What components or parts are to be produced in-house and what parts to be out-sourced?
- How outlook of a given product is impacting customer perception in the market?
- Plan about cost incurrence for each stage of life cycle of a product
- The batch size of a product considered for manufacturing

# COST WORK OUT-- STEP BY STEP

1. Establishing a target price in the context of latest offerings from competitors in a market
2. Establishing target profit based on required profit, like **ROI** or **%age of sales** or another base approved by a management
3. Determining target cost:  
**Target Cost = Target Price – Target Profit**
4. Determining allowable cost
5. Determining cost gap  
**Cost-Gap = Allowable Cost – Target Cost**
6. Finding ways and means to reduce **Cost-Gap** to nil to achieve a **Target Cost**

# REDUCING COST-GAP TO NIL

Reducing **cost-gap** to nil is the biggest challenge for **design development team**. They cannot compromise on the **functionality** of a product that is benchmarked by their management, yet they have to achieve target cost. Every product has its own unique development scheme.

**We here generalize few ways by which cost -gap is reduced to nil.**

- Frequent changes in design until cost comes either equal to or less than the target cost
- Using alternative materials or parts/components
- Using cost-effective labor
- Using standard components that are normally available in the market rather than using specialized parts or components
- Using latest technology
- Removing all activities or processes that add no true value to the final product

# IMPLEMENTATION CHALLENGES

Some of the potential problems in implementing a target costing system from a behavioral point of view are:

- ❑ Conflicts that arise between parties involved in the target costing process, (e.g., the conflict that arises between suppliers and the target costing organization when too much pressure is placed on suppliers to cut their costs),
- ❑ Burnout among employees, and
- ❑ Some employees (such as senior executives) reject the idea and do not understand its value.

# ADVANTAGES

- Managing cost to target levels for staying competitive in the market
- Market-driven production strategies ensure success in the market
- Allowing use of the latest technology at design stage helps for having better design and superior product performance in a market.
- Assures best value for money to customers. Delivers optimal value proposition to end-consumers
- Assures required market share
- Ensures max customer satisfaction
- Reduces development cycle of a product by reducing product-line complexity
- Allows cross functional team of technicians to work together and share their views freely for achieving a cost-effective design of a product
- Provides cost control at all stages of life cycle of a product like design, production/set-up, service/repair, disposal/recycling

# DISADVANTAGES

- It takes more time than usual to achieve a design that meets all market considerations pertaining to cost and allows a price that is acceptable in the market. The iterative process of finding target cost is more time consuming.
- Since team of cross-functional technicians is working together, it may have behavioral issues because of different working background. In traditional methods, only design department supposed to finalize the design.
- Too much cost consciousness may hamper smooth functioning between departments.
- Target costing is relatively difficult to apply in service industries due to paucity of information and high level of specialties.

# ILLUSTRATION # 1

**Mega Electronics** is planning to manufacture product X. The selling price of product X is calculated at 640 dirhams per unit. The company is planning to sell 2000 units/month at this price. Target Profit is estimated at 15% of sales and expected cost per unit is 575 dirhams.

**Calculate Cost-Gap /unit for product X?**

## Solution

Target Profit = 15% x 640 = 96 dirhams per unit

Target Cost = Target Price – Target Profit

Target Cost = 640 – 96 = 544 dirhams per unit

Cost-Gap = Expected Cost – Target Cost

Cost-Gap = 575 – 544 = 31 dirhams per unit

Note: The product design team is required to put more effort to bring this cost-gap to nil.

# ILLUSTRATION # 2

**Alpha Pharmaceuticals** is fixing Sale Price of product Y at 500 dirhams per unit. The company is expecting a sale of 10,000 units per annum at this price. Management has given approval for going ahead with this price. The company's **ROI** is estimated around 18% p.a. The company is making an investment of 1,550,000 dirhams on launching of this product.

**Calculate Target Cost per Unit?**

## Solution

Total Target Profit =  $18\% \times 1,550,000 = 279,000$  dirhams

Target Profit per Unit =  $279,000/10,000 = 27.9$  dirhams

Target Cost = Target Price – Target Profit

Target Cost =  $500 - 27.9 = 472.10$  dirhams/unit

# ILLUSTRATION # 3

**Gamma Chemicals** is planning to launch a product Z. Target Sale Price for this product is calculated at 20 dirhams per unit. The company is expecting to capture the required market share at this price. This is why, management has given green signal for this price at the launching of this product. Target profit margin is 30%.

The estimated production cost per unit of this product is 16 dirhams per unit.

**Calculate Cost-Gap for this product?**

## Solution

$$\text{Target Profit per Unit} = 30\% \times 20 = 6 \text{ dirhams}$$

$$\text{Target Cost per Unit} = 20 - 6 = 14$$

$$\text{Cost-Gap per Unit} = 16 - 14 = 2 \text{ dirhams}$$

Note: Product design team may have little more effort in bringing the cost-gap to nil.

# ILLUSTRATION # 4

**Omaga Company** is planning to extend its product line and is adding a new product **H**. The product has a Target Price of 230 dirhams per unit. The price is an average of all prices of all products that have similar features in the market. Management is perceiving that the product will easily survive at this price in the market. Target Profit of this product is estimated around 60 dirhams per unit.

**Calculate Target Price for this product?**

## Solution

Target Cost = Target Price – Target Profit

Target Price = Target Cost + Target Profit

Therefore,

Target Price = 230 + 60 = 290 dirhams per unit

# ILLUSTRATION # 5

**Zeta Textiles** is using Cost-Plus Pricing for its products. They are launching a new product RTY. The product has a cost of 1,000 dirhams per unit. The markup on cost is 20%.

Calculate price per unit of the product by using cost-plus pricing method?

## Solution

$$\text{Price} = \text{Cost} + (\text{markup \% age} \times \text{Cost})$$

$$\text{Price per unit of RTY} = 1,000 + (20\% \times 1,000)$$

$$\text{Price per Unit of RTY} = 1,000 + 200 = 1,200 \text{ dirhams}$$

# ILLUSTRATION # 6

A product **Beta Complex** is to be manufactured by **Lambda Pharma Laboratories (Pvt.) Ltd** . The product has a lifecycle of 4 years. The costs in each year are given below. Calculate the total lifecycle cost of this product?

Description	Cost detail in each year of lifecycle			
	Year 1	Year 2	Year 3	Year 4
	All amounts are in million of Dirhams			
RD&E	550	-	-	-
Design	-	650	-	-
Production Cost		350	510	615
Marketing & Distribution Cost	-	150	170	190
Disposal Cost	-	-	-	125

# SOLUTION

Description	Cost detail in each year of lifecycle				Total
	Year 1	Year 2	Year 3	Year 4	
	All amounts are in million of Dirhams				
RD&E	550	-	-	-	550
Design	-	650	-	-	650
Production Cost		350	510	565	1,425
Marketing & Distribution Cost	-	150	170	190	510
Disposal Cost	-	-	-	275	275
<b>Total Lifecycle Cost of Beta Complex =</b>					<b>3,410</b>

# ABBREVIATIONS

Abbreviation	Description
ABC	Activity-Based Costing
CIMA	Chartered Institute of Management Accountants - UK
FA	Functional Analysis
GE	General Electric
GM	General Motors
KC	Kaizen Costing
LCC	Lifecycle Costing
R&D	Research and Development
RD&E	Research, Development and Engineering
ROI	Return on Investment
TC	Target Costing
VA	Value Analysis
VE	Value Engineering
VMTs	Value Management Techniques

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**The End of Presentation.**

