

# Management of Target Costing Structure Construct Within the Technique of Value Engineering Philosophy for Product Design Purposes in a Competitive Business Environment: Samsung Case Study

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This article attempt to recognize the utilization of value engineering and target costing of a Samsung cell phone design manufacturing and assembling. Value engineering is a deliberate, imagination and cooperation based strategy to take care of issue, decline cost and improve capacity and nature of tasks, products and procedures. Utilizing a wide scope of information and experts' encounters and concentrating on the elements of venture or procedure, value engineering presents down to earth results for quick improvement. The Cost of Target is a complete cost arranging, cost the executives and cost control thought that used essentially toward the starting occasions of item setup in order to affect item cost structures depending upon the market surmised necessities. The objective The Cost of Target process requires the cost-arranged co-arrangement of all item related legitimate limits. To keep away from huge number of design changes, or deferrals because of manufacturing issues in design it is critical to think about production and assembly as right on time as conceivable in the design cycle. This investigation can likewise be useful to different organizations to give information about Samsung design impacts to manufacturing and how to begin improving the proficiency and all out cost in bundling territory and possibly utilize the cash spared into the genuine finished result itself. The real advantages are relied upon the

current status of organization and how well DFP standards can be executed.

**Key words:** *Value engineering; The Cost of Target, Samsung design, DFM, DFA.*

## Introduction

The central motivation behind the value engineering techniques is centred on the value of a product or an administration (Tamimi & Flayyih, 2017) to get this value, usually to play out a value analysis, which is an examination of each component of a product to guarantee that its cost is no more noteworthy than is important to do its capacities. Value analysis can be connected to another product thought at the structure stage and furthermore to existing products. The objective for this article is to recognize the utilization of value engineering and The Cost of Target of a Samsung cell phone design manufacturing and assembling (Mohammed, Flayyih, Mohammed & Abbood, 2019). The Cost of Target contains six key thoughts, specifically the price for a product depends on the focused market price, which is the free factor. The costs are sets by the subtracting the required overall revenue from the focused market price (Price-driven costing); the Cost of Target is a market driven valuing strategy so as to that the market execution is significant. The client prerequisite about the quality, price and practicality are controlling the cost investigations. It is fundamental to comprehend what the clients expect and what the contenders really doing or may do to address the clients' issues (Customer-driven); the plan of a product and the production procedure is the centre of the cost decrease. The structure organize invests more energy to plan a product, their assembling and the conveyance procedure all the while. The cost decrease process happens while the plan organize, to limits costly highlights and the need to re-engineer changes amid the production procedure (Designing); cross-utilitarian groups have individuals from for example the plan, fabricating engineering, deals, cost bookkeeping and showcasing offices, are capable structure the whole product from the underlying idea as far as possible. This should see how the product functions (Cross functional product team); target costing considers all costs of a product over its entire life cycle, for example, price tag, working costs, upkeep and fixes. The objective is to limit the cost of the proprietorship for the client and the production costs (Life-cycle costing) and all individuals from the production network are associated with the Cost of Target process, for example, provider, vendors, administration and bolster individual. It depends on a functioning and collective relationship, where all individuals from the chain share cost decrease methods (Value Chain).

## **Conceptual Formwork**

### ***Value Engineering***

Value engineering is a deliberate, imagination and cooperation based strategy to take care of issue, decline cost and improve capacity and nature of tasks, products and procedures. Utilizing a wide scope of information and experts' encounters and concentrating on the elements of venture or procedure, value engineering presents down to earth results for quick improvement. As indicated by universal Project Management Institute (PMI), value engineering is an inventive point of view to streamline life cycle costs, spare time, and increment benefit, improve quality, increment piece of the overall industry, take care of issues, and ideally use assets. As indicated by the definition given by Association of Project Management (APM), acquiring alluring value requires making balance between complexity parameters to accomplish a suitable circumstance while value the board is looking with vital issues, streamlining ideas, specialized focuses, official angles, and arranging value (Annacchino, 2003).

### ***The Cost of Target***

The Cost of Target has its source in (Ansari & Bell, 1997) “Japan during the 1960s, the Japan business adjusted the American thought of value engineering and extended it into a dynamic cost decrease framework. It is a client and market-orientated cost the executive’s strategy, which is adroitly not the same as standard costs, wherein the costs are driven from the production and inner elements. The Cost of Target is a complete cost arranging, cost the executives and cost control idea that utilized basically at the beginning times of product configuration so as to impact product cost structures relying upon the market inferred necessities”.

The Cost of Target process requires the cost-situated co-appointment of all product related authoritative capacities. A clarification of the Cost of Target objective focuses on the object of The Cost of Target is to distinguish the production cost of a product so that, when sold, it creates the ideal net revenues (Sahbat, Khashea & Hammood, 2018). The Cost of Target and product advancement forms are partitioned in two fundamental stages. The primary stage is the foundation stage, which contains the product arranging stage, where the specialty of the product will be characterized. Just as the product idea advancement stage and attainability testing stage. The accomplishment stage is the second period of the Cost of Target process. It includes the plan improvement arrange, where the point by point product configuration will be work out of the practical idea; it closes with the production organize (Flayyih, Salih, Rahma & Mohammed, 2020).

An item improvement theory, which contrasts from the conventional item advancement process in the method for the course the design to cost logic depends on the rule that the client has built up an apparent incentive for merchandise and enterprises, and the producer must create, assembling, and market that item at a cost not to surpass that apparent esteem is known as Design to Cost (DTC). In the conventional cost in addition to process, the market cost is only the last advance of the procedure. In the design to cost reasoning, the conceivable market value as indicated by the capacity and highlights of the item is evaluated in the initial step. This assessed market value confines the manufacturing, assembling and dispersion costs by a characterized target overall revenue. The item is then designed to these furthest reaches of material, work and weight. The design to cost isn't client centered like esteem building. Dissimilar to esteem designing, which amplify the client esteem, a DTC approach endeavors to limit the cost by utilizing it as a requirement, yet expanding the creation cost is in the most cases important to accomplish the objective costs of a section or capacity. Design for manufacturing and assembling (DFMA) is an objective costing device to decrease the generation costs by improving the manufacturing and assembling process Design for manufacturing and assembling (DFMA) alludes to building forms design to upgrade the connection between materials, parts, and lessen time to advertise by making it simpler to fabricate or amass parts or to dispense with them. The design for manufacturing and assembling apparatus can lessen the generation costs ahead of schedule amid the design arrange the objective of DFM is to make an item simple to fabricate amid the design period of the advancement procedure (Ansari et al., 1997)

The procedure for proactively designing the items to upgrade all the manufacturing capacities test, gathering, creation, transporting, acquisition, administration and fix is called Design for manufacturability (DFM). In presenting the DFM procedure we should understand this wide scope of mastery required. This implies a ton of assets (individuals) and time to do the real work related. In this venture plainly we are not ready to concentrate on all perspectives nor it was important. To demonstrate the strategy benefits we began from enhancing the parts that had the greatest absence of manufacturability. In bundling creation (when utilizing experienced provider) the delivering of bundling and materials are all around advanced dependent on specialist experience. Therefore it was excluded into rule or streamlining for this examination. Most times shipping is viewed as additionally well. Samsungs are tried against hits and vibration and productivity is considered in bed level. In view of these, center is put essentially into get together, testing (for this situation quality control), acquisition and fix. These things are focal point of rule first discharge (Monden & Hamada, 1991).

The procedure for proactively designing the items to guarantee quality, best cost, administrative consistence, dependability, time-to-market and consumer loyalty, wellbeing, guarantee that absence of manufacturability does not bargain usefulness, styling, new item presentation, item conveyance, improvement programs, or key activities and make it hard to

react to unforeseen floods in item demand or cutoff development is called Design for Manufacturability (Lockamy & Smith, 2000). This sentence is depicting how enormous undertaking it is to do DFM. We need aptitude in different regions, have dissecting capacity for every advantage and at long last, need to settle on design choice that satisfies all design improvement associations targets. Work is making improvement recommendations dependent on information, verification the advantages and then persuade the entire group to help. Or on the other hand at that point trading off in some piece of advantages with better gains in other (Ellram, 2002; Noorullah, Flayyih, Jari, & Hasan, 2020).

By DFM technique organizations can design items that are manufactural the first run through with minimal effort, high caliber and fulfilling client needs. Reason for not accomplishing these objectives is essentially due to avoiding the basic idea stage and center around timetable and cost, doing singular work efforts rather than group work. On the off chance that full DFM strategy is tailed it isn't just the all-out cost impact yet in addition the later work effort decrease by having less change orders and firefighting exercises (Horvath, 1993).

In the interim Design for assembly (DFA) is commonly thought to be same as DFM and for beyond any doubt they can be. Be that as it may, in DFA the view is all the more concentrating on the item assembly cost decrease as DFM is looking all the more generally to likewise part manufacture creation cost. There are a wide range of techniques under the DFA from various sources. Contrasts are inside how they handle manufacturability. In scientist experience Boothroyd technique has been working in cell phone industry and therefore generally tailed they technique. Design for assembly (DFA) is term for designing the item for simplicity of assembly, as Design for manufacturing (DFMA) is blend of DFA and DFM (Design for manufacturing; which means the simplicity of manufacturing of parts and will form item after assembly). Unique technique improvement began in the 1960's on programmed handling and in the mid-1970s it was reached out to general regions of DFM and DFA. Same time first examination around this issue was performed. Concentrate demonstrated the two fundamental standards of design for straightforwardness assembly: Reduce the number of assembly activities by diminishing the quantity of parts and make assembly tasks simpler to perform. In the late 1970's the DFA time standards for little mechanical items was distributed in handbook form and achievement of use of DFA were accounted for. After strategy for breaking down assembly troubles were created, it was discovered that following the guideline of lessening the quantity of parts isn't just diminishing the assembly cost, yet in addition much more noteworthy investment funds in cost of the parts. The capacity to gauge these both (assembly and part manufacturing cost) at the soonest phases of item design is basic of DFMA (Kaplan & Norton, 2006)

To keep away from huge number of design changes, or deferrals because of manufacturing issues in design it is critical to think about production and assembly as right on time as

conceivable in the design cycle. Another purpose behind early thought is truth that over 70% of conclusive item cost are resolved amid design. Design for assembly point is to lessen all out item cost and improve dependability, without trading off items usefulness. Indeed, even that from commonplace item cost breakdown assembly may be just 4% of complete cost, it might be that centering to the simple assembly we can really diminish different costs too. Centering just for other cost components may build the real assembly cost by expanding the part check and therefore the various components cost increments moreover in fix, provider, part cost and so on. Studies have appeared rather than decrease in manufacturing cost the diminished time to advertise an improved quality is seen increasingly significant in the advancement. Another advantages get through the methodology. Results are less difficult and increasingly dependable items. This likewise impact to cost decrease in illustrations, details, merchants, stock as we can lessen the measure of them. Overhead forms the biggest segment of all out cost of item and this way we can effect on it (Flayyih, Ali & Mohammed, 2018).

## **Methodology**

The research sample represented by Samsung, in the areas of communication, faces intense competition for products, which is represented in the face of the development taking place in the products, which may affect the measurement and pricing of the products it produces, due to the high costs of research and development, in order to meet the requirements, desires and tastes of customers, and this reflects its impact on various Decisions, the pricing process adopted by the company is in order to survive and continue to compete and obtain the largest market share and therefore needs to use the target cost entrance as one of the modern pricing systems. The research aims to clarify what the target cost is in terms of origin, definition and goal as well as Pricing according to the target cost portal and applying this portal to Samsung Therefore, the importance of research comes as a result of the increasing intensity of competition in the industry at the global level. Hence the necessity for the company to keep pace with its real position in the global markets and to use the targeted cost entrance as a method that helps Samsung in making decisions related to reducing costs and improving quality and thus lowering the price. The researchers relied on the analytical method in the research, through the available information obtained from the official website of the company, and the financial statements presented in the financial markets.

## **Results**

Procedure Analysis will give understanding of how current Samsungs are supporting the procedure. Each procedure step is depicted and hand time for each activity is estimated. There are numerous approaches to gauge the effectiveness underway like FSP (Floor Space Productivity), manufacturing cost. As Samsung is utilizing UPPH (unit's delivered per administrator every hour) for productivity estimation it was picked additionally to be one key

estimation for this undertaking and not to think about any new estimations. UPPH can be determined by having created sum every hour and separation that with measure of administrator. As DFP ought not just considered design streamlining we additionally can utilize the investigation of current procedure and DFP based design impact to conceivable procedure changes to improve the effectiveness much more. This likewise incorporated the required floor space in present and new design (process). Cost of pressing activity per Samsung can likewise be determined from UPPH, when we know the cost of one administrator for each hour. When doing the estimating of design change impact to UPPH the expectation to learn and adapt must be considered. Expectation to absorb information identifies with tedious undertaking and displays the connection among experience and profitability. Research has demonstrated that procedure time per unit diminishes until 140th units. After this standard time can be created (Kaufman, 2008).

In light of hypotheses specialist made DFP start-up material. Material begun by clarification why Samsungs are significant piece of entire item experience and what are the reason for Samsungs. This gives manufacturing engineers more extensive perspective on bundling that they may have not thought about before. It additionally opens the point of view from where ID sees the Samsung and why in design a few things may not seem essential from manufacturing view. The essential procedure of DFM was presented and how DFP may contrast from other DFX devotees. This gives contribution of where and when to do DFP work amid item program and understanding of what DFP is. DFM and DFA standards and instances of utilization cases in pressing setting are exhibited to give manufacturing engineers thought of what sort of things to centre and what impact they may have on the proficiency. Meaning of various angles that impact to pressing cost effectiveness other than manufacturing, for example, variety, coordination's and complete volumes are displayed, despite the fact that they may not be in the extent of first form of rule. At last analyst brought up issues that would require be cleared up amid current state investigation (PDI, 2010).

## **Conclusion**

In short, this study results demonstrate that DFM/DFFA hypotheses can be connected into deals Samsung design improvement. Hypotheses based rule can be made utilizing the techniques utilized in this exploration and rule can be actualized to items with advantages to expand the assembly effectiveness of pressing procedure. Research focuses for increment proficiency improvement 20% was accomplished. Research demonstrated that definition and genuine substance of DFP rule can shift dependent on current status and organization definitions and it ought to be considered as living report that is refreshed now and again (Kaplan & Norton, 2001). Intriguing discovering amid the execution of DFP rule based design was the challenges actualizing design changes. This test is likewise featured in the speculations and answer for defeat this is to make methodology of DFP usage and the

executives level responsibility. In future the organization should concentrate on making this methodology and duty between associations, continue refreshing the rule dependent on current circumstances and new design improvement thoughts and to expand the extent of DFP to incorporate likewise other major cost components of pressing, similar to the calculated cost and conceivable proficiency improvement to this cost. To help the manufacturing better the business Samsung design division ought to make portfolio and guide that is imparted to other groups, with the goal that they can design new standardized pressing lines dependent on Lean standards and decrease the non-esteem included work. How well those advantages are then caught depends then execution of DFM strategy and assets put into it. For this situation first target is to demonstrate one of the advantages to group that is right now having the most issues with the bundling designs. The street further ahead is then perpetual way of creating and going more profound and more profound into subtleties of every part of complete cost (Zhong & Zhang, 2009). This investigation can likewise be useful to different organizations to give information about Samsung design impacts to manufacturing and how to begin improving the proficiency and all out cost in bundling territory and possibly utilize the cash spared into the genuine finished result itself. The real advantages are relied upon the current status of organization and how well DFP standards can be executed.

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