CYIENT

SHOULD-COST ANALYSIS – ENGINEERING A GLOBAL ADVANTAGE

How we help our clients optimize their products



Should-cost analysis is the process of identifying the cost of a product, based on raw materials used, manufacturing processes, and overhead production costs. A should-cost report can be used in different business situations, including:

- Teardown and benchmark analysis
- Design-to-cost
- · Make-or-buy
- Target costing
- Supplier negotiations

Cyient uses inputs such as bill of materials, 2D drawings, 3D models, estimated annual usage, life volume, geographic location, and other standards to determine the cost of a product. The delivered should-cost report includes material cost, detailed process costs, and a cost summary.

We apply the quick cost method to provide approximate cost of the product in shorter time for certain cases. This helps engineering and procurement teams make smart decisions at a very early stage of the product development.

KEY HIGHLIGHTS

Delivered savings to the order of USD 5+mn through should-cost analysis

Delivered 1400+ cost estimation models in DFMA to an aero engine OEM

Team of 25+ core engineers

16+ years of experience in manufacturing engineering

9+ years of experience in should costing

Expertise in tools such as DFMA, aPriori, SEER, and Costimator

Manufacturing engineering expertise in machining, sheet metal, EDM, gear manufacturing, forging, casting, fabrication, process planning, tooling, inspection, etc.

CYIENT'S SHOULD-COST PROCESS FLOW

Analysing inputs

- · Bill of material
- 2D, 3D models
- Estimated annual usage
- Technical specifications
- Geographic location

Understanding manufacturing process

- Identify various manufacturing processes (casting, sheet metal, machining, plastics, etc.)
- Prepare process plan

Establishing the cost data

- Identify the cost of the material used
- Machines used and their work center rates
- Labour rates

Cost calculation

- Material cost calculation
- Process cost calculation
- Secondary cost calculation
- Finishing cost

Output

Detailed should-cost report with the following

- Detailed process
- Cost summary of the product
- Design and process recommendations
- Nesting analysis

How we can help

Teardown and benchmark analysis

Benchmarking is the process of comparing two products based on their configuration and cost. It involves a teardown analysis of the competitor's product to understand its capabilities in design and manufacturing and what can be done to improve one's product. In the case of new product development, a should-cost analysis helps assess the strengths and weaknesses of the competitor's product and recommends a new design for the client.

What you get: A cost benchmarking report including a comparison of assembly and subassembly. Detailed cost analysis and functional recommendations to improve the product.

Design-to-cost

Design-to-cost assesses the cost of various design choices at different stages of product development. Design-to-cost can identify the cost of product at the concept design stage, which helps select the most suitable design right from the beginning. A quick cost method can be applied to determine the product cost by analyzing the data from the conceptual 3D model of the product.

What you get: A should-cost report of the product or quick cost of the design at the concept stage.

Make-or-buy

The make-or-buy decision refers to the option of whether a product or service should be purchased from outside sources or manufactured internally. With a should-cost analysis, the client can decide upon in-house production or external sourcing based on cost comparison. In case of external sourcing, we can help you identify the country with the lowest cost using should-cost analysis.

What you get: Should-cost and cost comparison reports for in-house production and outsourcing options.

Target costing

Companies have a target cost set for their products, with which the designers must comply. We help the designers identify the cost of a product using should-cost and value analysis. Value analysis calculates the minimum cost of a product, eliminating unnecessary costs without affecting quality, reliability, performance, appearance, etc. In case the actual cost exceeds the target cost, we help tweak the process and material changes to bridge the gap.

What you get: A should-cost report of the product with optimization recommendations for the manufacturing process to restrict costs within the set target.

Supplier negotiations

Calculating the cost of a product is critical for a buyer during the negotiation process with suppliers. A should-cost analysis educates the buyer of the product costs based on raw materials used, manufacturing processes, production costs, and the profit margin of the supplier.

What you get: An extensive report with all cost details and the total approximate cost of the product.



About Cyient

Cyient (Estd: 1991, NSE: CYIENT) provides engineering, manufacturing, geospatial, networks, and operations management services to global industry leaders. We leverage the power of digital technology and advanced analytics capabilities, along with domain knowledge and technical expertise, to solve complex business problems. As a Design, Build, and Maintain partner, we take solution ownership across the value chain to help our clients focus on their core, innovate, and stay ahead of the curve.

Relationships lie at the heart of how we work. With more than 15,000 employees in 22 countries, we partner with clients to operate as part of their extended team, in ways that best suit their organization's culture and requirements. Our industry focus spans aerospace and defense, medical, telecommunications, rail transportation, semiconductor, utilities, industrial, energy and natural resources.

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