

# Enabling Cost Optimization Through Product Cost Management



## Abstract

Tech Mahindra's product cost management solution helps you control profitability by leveraging effective cost management techniques earlier in the product lifecycle saving you time, efforts, and ad-hoc investments.

Our Product Cost management solution effectively delivers across component, sub-system and system level interventions from build to print and build to specifications.

## Introduction

Tech Mahindra's product cost management solution promotes the core of the value engineering approach into your product lifecycle. With multiple centers of excellence covering most domains with global delivery models, we get involved at the early stages of the product development process to enable cost optimization through:

**Should Costing | DMP Ideas | Tear Down and Benchmarking | VAVE and Automation | Data Analysis | Additive Manufacturing | Feature and Functional Analysis | Turnkey Consulting | Digital Twins**

## Our Solution

- ▶ **Design to Cost Analysis**
  - Organizational methodology to integrate cost management for decision making at design stage
  - Comparison between different concepts to understand optimized design and manufacturing process
- ▶ **Concurrent Engineering**
  - It is a method of designing and developing products, in which the different stages run simultaneously
  - Improves Productivity in product development and the time to market
- ▶ **Cost Rationalization**
  - Process of addressing the sources of cost throughout the supply chain and reducing spend on business activities
  - Analysis will streamline the sourcing operations
- ▶ **Identifying the Key Cost Drivers**
  - Raw materials cost
  - Process cost
  - Overhead and profits
  - logistics with respect to regions
- ▶ **Supplier Cost Breakup Structure (SCBS)**
  - Comparative cost model/ template between the supplier cost and should costing value
  - Useful to understand cost parameters and gap between supplier quote and should costing value
- ▶ **Cost Variation with respect to Various Regions**
  - Comparison between different regions to understand cost variance with respect to material rates and labor rates
  - Finalization of best cost country sourcing with respect to commodities

## Our credentials



16+ Years of Experience



30+ Domain SME's



300+ Projects Executed



\$ 11 Bn Worth of Projects Executed



\$ 2 Bn Savings Showcased



150+ Costing Engineers



125+ SAVE Engineers



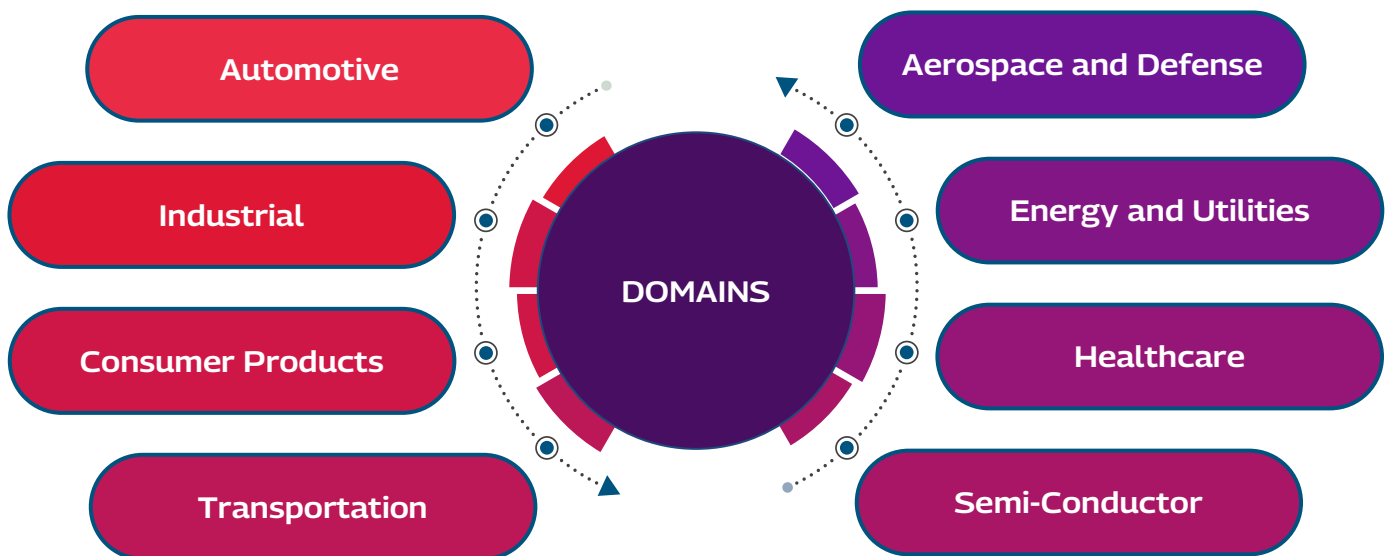
25+ Countries Database



0.004 kg to 65 Ton Range



30+ Mn Volumes Per Annum



## Commodities

Sheet metal

Machining

Casting

Forging

Assembly

Plastics

Wire Harness

Motor

PCBA & Box Build

Heavy Fabrication

Fasteners

Composites

# Raw material sources

We refer all important subscriptions available in the market

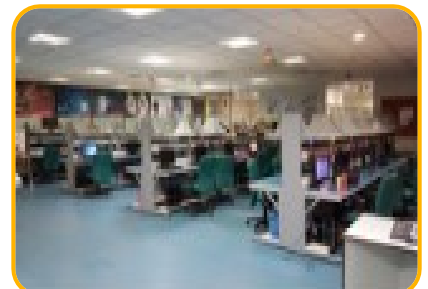
## Lab infrastructure

### Inhouse - Facilities

- ▶ 9500 M<sup>2</sup> Teardown facility
- ▶ Mechanical lab
- ▶ Appliance test lab
- ▶ Embedded systems lab
- ▶ Power electronics lab
- ▶ Automotive lab
- ▶ Factory of future
- ▶ 3D printing

### External Eco-Partners

- ▶ 3D scanning
- ▶ Material testing
- ▶ Performance testing
- ▶ Dynamics and vibration
- ▶ Environmental testing
- ▶ Electromagnetic interference (EMI) and electromagnetic compatibility (EMC)
- ▶ UL \ CE certification



## Benefits

- ▶ Technology adoption
- ▶ Cost rationalization
- ▶ Cost variation
- ▶ Ease of vendor negotiation
- ▶ Make versus buy decision
- ▶ Supporting global sourcing

## The NXT.NOW™ Advantage

- ▶ 10% savings through as - should cost
- ▶ Component, sub-system and system level
- ▶ Build to print and build to spec
- ▶ Finished products - alternate brands and private labeling
- ▶ Inhouse and external eco-partner lab facilities
- ▶ Raw material market analysis
- ▶ Exposure to ferrous and non-ferrous metals, composites, plastics, rubber, and casting material
- ▶ Manufacturing process optimization for various commodities
- ▶ Customized report formats and configurators

## Case Examples

### Turbine Rear Frame (TRF) Assembly

- ▶ Estimated Annual Unit - 152, location- USA and Italy
- ▶ 3 Main assembly, 31 components and 80 standard parts
- ▶ Established 25 contacts and visited over 100 vendors
- ▶ 4 cost saving and 2 design change ideas which showcased 12% savings

### EV - New Product Introduction

- ▶ Teardown for reference vehicle
- ▶ Estimated Annual Unit ranging 20K to 300K for 7 years for 3 regions - India, China, and Italy
- ▶ 15 sub-systems, 2000+ child parts
- ▶ Showcased savings of 17% (€ 50 Mn)

### DC-DC Converter (EV charging station)

- ▶ Cost Analysis of 25KW DCDC converter, to support customer for sourcing strategy
- ▶ Estimated Annual Units - 5K,20K and 25K for 3 regions
- ▶ Components - 136 (mechanical, electrical and electronics)
- ▶ Provided cost comparison between the regions
  - Poland 2% > Mexico
  - Mexico 2% > Malaysia
- ▶ Showcased cost savings \$ 1.2 Mn (10%)

### Renewables Wind Turbine (WT)

- ▶ Entire wind turbine including civil, mechanical and E&E (on /off-shore]
- ▶ Power capacities ranging 1.75 to 12 MW in 15+ countries
- ▶ USD 2.2 Bn worth of SC models across WT domains
- ▶ 50+ DMP ideas, 30% reduction in should costing efforts through automation configuration
- ▶ Notional savings of \$ 1 Bn and actual savings of \$ 500 Mn

# About Tech Mahindra Engineering

Tech Mahindra's Integrated Engineering Solutions (IES) delivers solutions enabling "Digital Engineering Enterprise" across aerospace and defense, automotive, industrial, telecom, healthcare, energy & utilities and ISVs. With 50+ exclusive global engineering centers supporting new program launches and 350+ active global customers, Tech Mahindra IES is an established leader for Engineering Services in the industry.

Tech Mahindra delivers exponential value to engineering enterprises by collaborating with them across three key tenets: **robust products, ubiquitous platforms and cyber factories**. The vision for Tech Mahindra engineering is founded on the new digital economy considering emerging market trends like digital engineering, intelligent workplaces, adoption of tele-everything, end-to-end connected and immersive approach covering smart manufacturing and the need for an overall resilient business framework.

We call this approach of **accelerating** outcomes, **inventing** better products and **transforming** businesses into digital as - Engineer Your NXT.NOW™

## Ready to discuss how Tech Mahindra's Product Cost Solution can help your business?

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# TECH mahindra



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