## Value Added Services



## **Benchmarking & Target Setting**

- Market Research
- Product Research
- Performance Testing
- Functional Testing

- Teardown Study
- Zero Based Costing
- Target Setting



# VAVE/Costing/Sourcing/Localization

- Cost & Weight Reduction
- Zero Based Costing
- · Cost Reduction Feasibility
- Supplier Identification
- APQP/PPAP
- Tooling/Prototyping/Testing



## **Prototyping & Testing**

- Full Vehicle Prototype
- System Level Prototype
- Warranty Analysis & Resolution

#### Physical Testing

- Bench Test (Dyna/4 Poster)
- Field Test (Test Track/Road)
- Material Testing

# **Consulting**

Product Planning / Development for Emerging Markets Feasibility Studies / Business Case Scenarios Design / Process Automation



Hinduja Tech, part of the multi-billion dollar Global Business Conglomerate, Hinduja Group, is a Product Engineering and Digital Technologies service provider for the automotive space. Hinduja Tech, headquartered in Chennai is known for its Frugal engineering approach in delivering award-winning vehicle programs by compressing the barriers of cost, quality and time for emerging markets.





# **Product Engineering Services**

Imagine • Create • Validate • Succeed



Frugal Engi**NEAR**ing Paradigm

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## Full Product Development/Vehicle Integration



- · New Model
- Facelift
- Variant
- Modular Design
- Program Management
- Trucks Highway / Off highway

- Bus/Coach
- Recreational
- Defence
- Special Purpose/Multi-Purpose
- Electric & Autonomous



## Interior & Exterior Trims

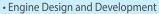
## Service Offerings

- Full Cycle Design & Development
- Module Design & Development
- Platform Development
- Value Engineering
- Localization/Sourcing
- Segments
- Passenger Vehciles
- Commercial Vehicles
- Defence
- Multi-purpose

#### Systems

- · Bumper & Grill
- Cockpit
- Door & Pillar Trims
- Soft Trims
- Seating Systems
- Lighting

# Powertrain Development



- Engine Downsizing
- Engine Upgrade (Performance/Emission)
- Powertrain Integration
- Application Engineering
- · Electric Powertrain Sizing, Selection, Control & Integration

#### Fuel

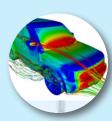
 Diesel, Gasoline, CNG. Biofuel and Electric

#### Application

· Automotive, Industrial, Off highway and Stationary

#### Engagement

Turnkey Solutions/Services



## Virtual Validation

- Structural & Durability
- Safety
- Thermal
- NVH
- Multi-body Dynamics
- Flow

- · Body in White
- Trims
- Powertrain
- Chassis
- Electrical & Electronics
- Full Vehicle

# **Embedded Systems - Electricals & Electronics**



#### Services

- Concept/Architecture
- Wiring Harness
- Hardware Development
- Software Development
- System & Vehicle Integration
- Prototyping & Testing
- Regulatory Compliance
- Electric Vehicle Development

## Segments

- Passenger Vehciles
- Commercial Vehicles
- Defence
- Multi-purpose
- Industrial

# Services · Layout Design

- Process Engineering Lean Manufacturing Support
- Material Flow Simulation
- Virtual Factory Simulation
- Fixture and Gauges
- Material Handling
- Facility Engineering

# Vehicle Manufacturing Services

## Segments

- Automotive Locomotive
- Oil & Gas
- Industrial

# **Body in White & Closures**



## Service Offerings

- Full Cycle Design & Development
- Module Design & Development
- Platform Development

Localization/Sourcing

Value Engineering

## Segments

- Passenger Vehciles
- Commercial Vehicles Defence
- Multi-purpose



# **HVAC/Cooling System**

- System Sizing and Design
- Radiator, Condenser & Evaporator
- Routing
- Packaging & Integration
- Virtual ValidationW

- Proto Development
- Physical Testing
- Technical Publications