

Strategic One-Stop Design Engineering ODC for New Product Realization

The Client

An American Manufacturer of golf carts, utility vehicles, and personal transportation solutions.

The Need

To scale engineering capabilities and accelerate product development timelines for their multiple new LSV's Launch with faster innovation cycle and cost optimization.



- Secured ODC in chennai
- 30+ engineers in CAD/CAE, simulation & validation & costing
- Complete vehicle component COE
- Value added engineering services: proto, tooling & procurement support

ENGINEERING & DESIGN

- Concept-to-detail product engineering
- Advanced CAD, packaging & layout design
- Tolerance stack-up, GD&T
- Manufacturing feasibility & DFM/DFA
- Early process & systems engineering integration

VIRTUAL VALIDATION

- Design & assembly validation
- Mold Flow Analysis
- FEA Modeling
- NVH & Structural Analysis
- Static & Impact Analysis
- CFD Analysis

TOOL DESIGN

- Plastic Injection Mold
- Sheet Metal (Tool Design)
- Pressure Die Cast (PDC)
- Jigs, Gauges & Fixtures Design

PROTOTYPING & VAVE

- Soft Tooling : Injection Mold, Pressure Die Cast (PDC)
- 3D Printing
- Sheet Metal & Structural Prototype
- Weight reduction & material optimization
- Should costing & cost-performance analysis

By 2025, this was no longer a transactional offshore engagement, but a strategic design engineering hub built for resilience, speed, and scale

Value Delivered

- 200+ Components Engineered and Validated
- Robust process validation and Tracking systems from concept to Proto
- Accelerated product development cycles through parallel engineering and early virtual validation, enabling improved design quality and first-time-right outcomes across programs
- Scalable engineering capacity ramp-up aligned to the customer product roadmap, supporting faster deployment of new variants and future program expansion

Business Value

-  Faster Time-to-market
-  25–35% engineering cost reduction through offshore delivery
-  Access to Skilled Engineering Talent across domain functionality
-  Enhanced manufacturability and tooling readiness
-  Reduced overall Total Cost of Ownership (TCO)

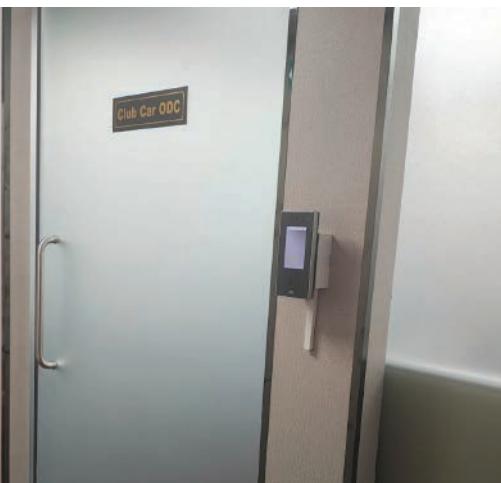
Why MTSL as a Strategic ODC Partner

 End-to-end engineering to Manufacturing Transfer Ownership

 16/7 Engineering Coverage

 Built a powerhouse team of 24 highly skilled engineers with deep expertise

 Custom-built engineering ODC complete with a dedicated testing lab.



-  **People & Compliance**
Employee background verification
NDA signed by all staff
Non-hiring clause enforced
-  **Physical Security**
Secured entry & visitor logs
ID card access control
Segregated ODC area
Dedicated CCTV surveillance
Clear desk & clean screen policy

-  **Legal & Contractual**
MSA & NDA with customer
Customer owns all project data
Project-specific NDAs incl. subcontractors

-  **IT & Data Security**
Club Car-imaged laptops only
Restricted email & internet access
External storage restricted
Mandatory info-sec induction training

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