

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

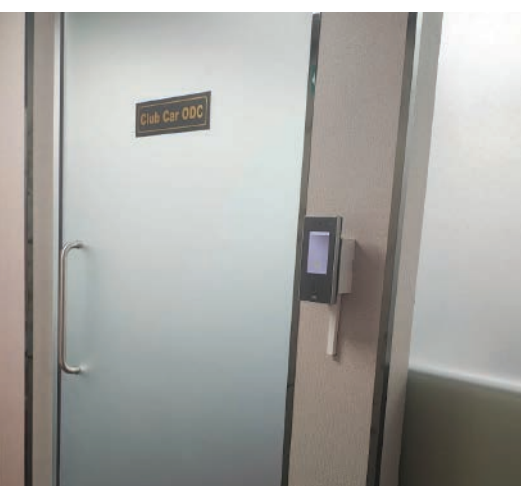
- 200+ Components Engineered and Validated
- Robust process validation and Tracking systems from concept to Proto
- Accelerated product development cycles through parallel engineering and early virtual validation, enabling improved design quality and first-time-right outcomes across programs
- Scalable 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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