

**TATA CONSULTANCY SERVICES**

Experience certainty. IT Services  
Business Solutions  
Outsourcing



# Aerospace

## Engineering and Industrial Services



Innumerable opportunities. Innumerable demands. Your manufacturing unit faces both as the aerospace industry witnesses growth in civil aviation and defense expenditure. From reducing IT overheads, time-to-market and costs to optimize a global supply chain and managing offset obligations, you need to balance scores of factors to offer reliable and innovative solutions to clients. Our services across the entire aerospace development life cycle, help you respond effectively to challenges, increasing your competencies and containing costs.

## Overview

The global aerospace industry is seeing increased investment in both civil and defense areas, which opens up opportunities for OEMs, equipment manufacturers and suppliers like you. However, simultaneously consolidation and restructuring trends are redefining OEM and tier suppliers relationships. The focus now is on building complementary competencies to better cater to customer needs. With globalization and outsourcing, offset obligations also require you to invest in foreign lands, necessitating participation in knowledge transfer or sourcing of components locally. To compete effectively in this demanding environment, you need skilled resources, and a globally-integrated and optimized supply chain. You need to stay customer-oriented, deliver innovative, quality products within time and budget, while reducing product development costs and IT overheads.

Having provided aerospace engineering services to global OEMs, aircraft and engine manufacturers, and their prime and tier one and two suppliers, we understand the needs of this industry. We provide complete 'concept to component solutions' - concept definition, design and analysis, manufacturing, testing, after-marketing services and engineering IT services - leveraging our infrastructure, alliances and MoUs with aerospace companies, strategic partners and academic institutions to give you customized, robust, secure and innovative solutions.

## Why TCS

Our global presence ensures efficient delivery across continents, while our Global Network Delivery Model™ gives you cost, quality and capacity advantages. We have single-window operations to make our engagements smooth and efficient. Backed by Centers of Excellence (CoEs) to augment domain competencies, and flexibility to scale up and down, we work to give you the right solutions. Our strengths include:

### **Domain expertise**

We have a rich pool of experts who have worked in various aerospace segments – aircraft, rotary wing, aero engines, spaces vehicles and unmanned aerial vehicles.

### **Alliances**

We work with HAL, a premier aircraft design and development organization; NAL, a known research institute, and with other academic and research institutes. Along with strategic partners like TAL, TAML, DTL and DARE, we provide you concept to component solutions.

### **Process-driven approach**

An enterprise-wide ISO 9000:2000, CMMI and P-CMM Level 5 certified company, our delivery centers across the globe meet BS 7799 standards. With AS9100 Rev B certification for design and development of airframe structures and accreditation of Center for Military Airworthiness Certification (CEMILAC) from Indian Airworthiness Authorities, our designs and solutions meet quality guidelines.

## What we offer

We ensure engineering excellence while minimizing development cost, production cost and time. Providing better insights into product behavior, we help you optimize resources to enhance product quality. Our skilled experts, with their rich domain experience help you respond pro-actively to market-demands and bring in quick-to-market changes. Our offerings include:

### **Aero structures**

Concept to component solutions in areas like fuselage, wing, empennage, vertical tail plane and stabilizers, secondary structures (door, latches, etc). We undertake conceptual, preliminary and detailed design projects for primary and secondary airframe structures with metal and advanced composites.

### **Aero engines and derivatives**

Concept design to product realization and support for the entire life cycle of aero engines and derivatives including all major subsystems/accessories.

### **Aero systems**

Offerings across the product life cycle for aero systems and various sub-systems, including interiors, hydraulic systems, landing gear, electrical systems, fuel systems, etc.

### **Avionics**

Complete system solutions across the spectrum of civil and military avionics for aerospace prime suppliers/ OEMs, defense majors and railways customers, covering safety and mission-critical software, hardware, firmware and electronics manufacturing.

### **Technical publication services**

Technical writing, illustrations and animations based on aerospace domain knowledge and experience.

### **Radio Frequency Identification (RFID)**

Solutions for effective supply chain management with real-time and accurate information.

## Global aerospace companies we have worked with:

- ADA and DRDO Labs
- ADE
- Airbus
- Avio
- B/E Aerospace
- Bombardier
- Boeing
- Driessen
- Eclipse Aviation
- Finnmechanica
- Gardner
- Goodrich Aerospace
- GTRE
- Hamilton Sundstrand
- Hindustan Aeronautics Ltd.
- Honeywell
- Indian Air Force
- ISRO
- JAMCO
- Labinal
- Martin Baker
- Morson Projects
- P3D GmbH
- Piper
- Pratt and Whitney
- Selex
- SME Aerospace
- Wyman Gordon

## Operational excellence in design and manufacturing for global leader in aviation products and services

A global leader in the design and manufacture of aviation products and services for the aircrafts was seeking a partner who could leverage its global engineering capabilities to enable concurrent engineering for faster time-to-market, apart from lowering costs. In collaboration with an aerospace domain consultant, we did the concept design development, with us as extended design center. Leveraging our alliance partners' knowledge, we are also assisting them with manufacturing and assembly of metallic & composite structures, testing and life-time engineering support. We will be able to help this company lower cycle time by 30 percent, cut manufacturing costs by 35 percent and reduce TCO through low-cost manufacturing and design houses from Asia.

## About Tata Consultancy Services (TCS)

Tata Consultancy Services is an IT services, business solutions and outsourcing organization that delivers real results to global businesses, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled services delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development.

A part of the Tata Group, India's largest industrial conglomerate, TCS has over 160,000 of the world's best trained IT consultants in 42 countries. The Company generated consolidated revenues of over US \$6.3 billion for fiscal year ended 31 March 2010 and is listed on the National Stock Exchange and Bombay Stock Exchange in India. For more information, visit us at [www.tcs.com](http://www.tcs.com)

## Contact

*To know how our solutions can help you deliver better products and services at controlled costs and on time, contact us at [corporate.engineering@tcs.com](mailto:corporate.engineering@tcs.com)*

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