

TATA CONSULTANCY SERVICES



Automotive Solutions

Engineering and Industrial Services



Experience certainty.

IT Services
Business Solutions
Outsourcing

The development of new products in the automotive industry comes with the challenges of time, cost, technology and quality. To counter them, companies such as yours adopt different strategies like sourcing from low cost countries, searching for local talent, especially for regional markets, and moving R&D and engineering centers to different geographies. However, only a mature product design services partner can help meet your diverse engineering requirements. It can help Original Equipment Manufacturers (OEMs) and Tier 1 suppliers meet the cost pressures and respond quickly to market changes. Tata Consultancy Services (TCS) brings you the complete range of solutions in the automotive engineering space with an integrated services approach to cater to your business needs. Backed by our strong track record in different technologies and process expertise across industry verticals, we provide engineering solutions to meet your requirements and support your processes seamlessly.

Overview

While globalization has brought in a host of opportunities for automotive organizations like yours, it has also ushered in many challenges. Considerable among them are the need for a greater understanding of the customer to create products that meet their requirements, shrinking product development cycles, and need for flexible business model. Apart from this, you need to counter probable paucity of skilled people to meet the future demands by strengthening your capacities in emerging markets, and maintain expertise to ensure product quality. Only the right engineering partner with the ability to sustain demand can help you meet these goals.

At TCS, we understand the automotive development process and can design solutions that are rigorously proven through simulation and testing. With our integrated services and complete solutions in the engineering domain, we help you meet the needs of your discerning customers who look for a better automotive experience.

What we offer

With access to a global talent pool, we provide you with reliable, innovative solutions that are cost effective.

- Product and Process Engineering. Body, interior and exterior design, vehicle/ PT CAE/ CFD, aggregates design and CAE, layout studies and other digital validation, product planning, and benchmarking support.
- Embedded Electronics. Body and chassis controls, PT controls, infotainment, safety and security systems, diagnostics systems, HIL/ MIL/ SIL, MCD tools, verification services, advanced engineering and R&D.

- PLM solutions. Program Management, Product Definition and Data Management, Process Management, Engineering Change Management, Global Collaboration and Infrastructure, and Compliances.
- Plant Automation Systems. Manufacturing IT solution encompassing Error Proofing (Poka yoke), Tracking -and Genealogy, WIP Inventory Management, Process Management, Scheduling -and Sequencing, Performance Analysis for Paint, Body, Press, Engine and Final Assembly shops.
- Sourcing and Manufacturing Solutions. Material handling equipment design, NC technologies, digital factory, manufacturing procurement management, quality and supplier management, prototype development support, and spend analytics.
- Enterprise Asset Management. Asset and Works Management, Assets Inventory Management, Spare Parts Optimization, Maintenance Analytics, Assets Vendor Rationalization, Assets Information management, Asset Management Standards,, Health & Safty Management, Asset Performance Analysis.

Ranked No.1 in DQ top 20 Listing

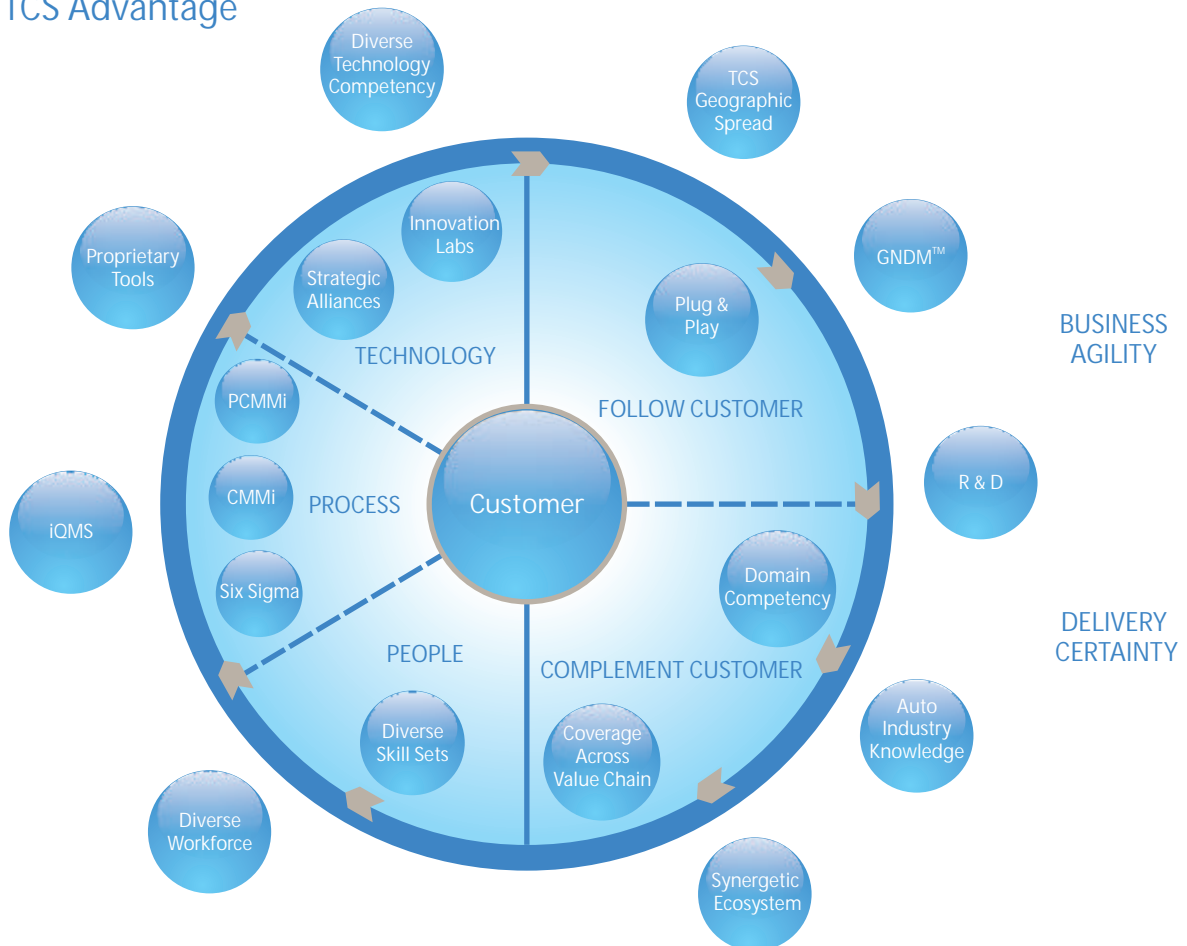
Dataquest, one of the leading IT magazines, acknowledges TCS' leadership position and well balanced portfolio in engineering services space by rating it as the top Engineering Services Provider in DQ Top 20, 2008 listing.

Why TCS

We have the ability to be part of your engineering development processes and programs, and provide you with qualitative automotive solutions. With mature business processes and product development strengths, we add value to an engagement through our:

- **Experience.** Our rich experience from best practices and ability to cross-fertilize technologies across industry verticals help us create offerings that suit your varying business needs.
- **Global delivery foot print.** Our Global Network Delivery Model™, a collaborative, superior framework of people, processes and infrastructure, makes it possible for us to consistently ensure the success of your initiatives anytime, anywhere.
- **Centers of Excellence (CoEs).** Our many CoEs in areas such as product engineering, embedded systems, PLM, EAM and so on, stay in tune with industry trends and facilitate the creation of novel solutions to address your challenges.

The TCS Advantage



TCS 360° Unique Advantage
To be a Strategic Partner to Customer providing Business Value in transformation and beyond

"At Nissan, we were looking for a committed Engineering Services partner who would understand, capture and simulate our engineering processes, meeting our constantly evolving design, quality and security scenarios. Nissan selected TATA Consultancy Services (TCS) as one of the key partners for Engineering Services in mechanical and embedded domain, as they provided us with trustworthy answers, predictably and reliably. We have been working together since '05 and TCS has consistently measured high on our expectations of quality, cost efficiency, flexibility, and process innovation for continuously raising the bar."

Atsushi Shizuta,
Corporate Vice President, Nissan Motors

"TCS has been a strategic partner to Johnson Controls; adding business value globally through participation in critical business initiatives and providing professional and cost effective resources. Our partnership continues to mature and evolve to a higher level for mutual benefit."

Sam S Valanju,
Chief Information Officer,
Johnson Controls Inc.

How we help our customers

Enhanced solutions for different electronics systems

An automotive enterprise with primary presence in Europe and North America wanted to strengthen its Embedded Systems Electronics. It was looking at a multi-geography, multi-domain engagement for several systems – occupants' safety, body electronics, steering and braking systems, etc. TCS not only provided different solutions and services across the development lifecycle, but also offered total technical ownership for specific competency areas. It helped develop a joint roadmap for NPI work, and the customer benefited from large offshore leverage across the product lifecycle. TCS is now engaged actively in the requirement analysis, modeling, code generation, HIL/MIL, firmware development, platform software, MCD tools and V&V for the organization.

Process improvement and cost savings for a global OEM

A large, global OEM wanted to augment its global capabilities and reduce cycle times. It needed assistance with methods development. The challenge was to create a seamless working procedure among various stakeholders, and develop a touch-and-feel for the product at the offshore location. TCS' solutions brought in process improvement and planning strategy, and helped the OEM meet its goals. Additionally, it reduced the development and warranty costs for the organization.

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 148,000 of the world's best trained IT consultants in 47 countries. The company generated consolidated revenues of US \$6 billion for fiscal year ended 31 March 2009 and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at www.tcs.com

To know more about our Automotive Solutions, contact corporate.engineering@tcs.com

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