TCS Develops and Employs Best Practices for Product Engineering Services

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Summary

Today, independent service providers often deliver engineering services for developing products, processes, or services. These third-party services include design elements of the product itself, infrastructure, equipment, and processes involved in manufacturing or maintaining the product.

> Engineering services have become increasingly important for creating differentiated and innovative products. Tata Consultancy Services (TCS) has emerged as a leading player among global service providers (GSPs) in many regions and verticals.

As business processes become more complex and dynamic in the increasingly connected world, engineering service providers are seeing more demand for their services. As revealed in a recent ARC Advisory Group market study, Tata Consultancy Services (TCS) has emerged as a leading player among global service providers (GSPs). This ARC View delves into the reasons why global organizations are increasingly using engineering service providers and captures some of the best practices that TCS employs to make it a leading Indian GSP.

Key takeaways include:

- The connected world presents both challenges and opportunities for manufacturers and GSPs are often well positioned to help.
- TCS has deep engineering proficiency across mechanical, electrical, embedded systems, and software services.
- TCS has domain knowledge and has developed best practices across a variety of industries, including automotive, aerospace, industrial machinery, high tech, telecom, retail, energy, resources, utilities, life sciences, and process manufacturing.

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- While based in India, TCS has offices and delivery centers across the globe to be able to support global customers with product development.
- TCS has strategic alliances and strong collaboration with global leaders in technology, industry groups, and academia.
- TCS has developed a consistent, well-structured consulting methodology and best practices for global customers.

Engineering Services Market Drivers

In addition to the market research study, ARC also conducted a survey on engineering services adoption that suggests that skills augmentation and cost reduction are the key drivers for engaging with a GSP. Other drivers for engagement include the need for product manufacturers to:

- Adopt newer technologies
- Modify products to fit requirements in multiple countries
- Combat pressure from global competition
- Meet increasing quality expectations of end customers

> TCS has made significant investments in technology, industry expertise, product development capabilities, infrastructure, intellectual property, ecosystem linkages, and other areas.

As ARC learned in a recent briefing, TCS has made significant investments in technology, industry expertise, product development capabilities, infrastructure, intellectual property, ecosystem linkages, and other areas. The company believes that these investments have enabled it to emerge as a leading service provider among all service providers based in India. The company contributes to its customers' success by delivering innovative solutions to create smarter products for the connected world, develop specific products for emerging markets, and reducing ongoing engineering costs.

TCS Helps Empower Customers for the Changing World

TCS has developed its expertise in industry applications, best practices, and technology utilization over decades of experience delivering product development, process development, product lifecycle management, asset management, manufacturing engineering systems and product development systems -related services. These enable the company to deliver smart and innovative engineering service solutions to its global customers.

Specific TCS capabilities include:

- <u>In-depth domain expertise with end-to-end ownership</u>: With deep expertise in multiple industries, TCS understands the challenges and proactively invests in technology to ensure timely delivery of solutions that customers need. TCS has deep engineering proficiency across mechanical, electrical, embedded systems, and software services, with investments in laboratories and Centers of Excellence. TCS has developed a wide range of solution accelerators registered under its TCS Intellectual Property Asset Registry (TIPAR). The company designed these accelerators to help customers speed release to market and increase product quality, while streamlining the engagement. By TCS taking the ownership on the deliverables, customers are also noticing their improved ability to respond to the market quickly.

- <u>19 Innovation labs</u>: TCS's state-of-the-art innovation labs are well networked with industry and technology experts and external academia to help support sophisticated research. TCS focuses on the technology and solutions related to Internet of Things, connected cars, connected health, smart home, energy management, power electronics, digital oilfields, high-performance computing (HPC), green technologies, sustainability, IP networking, Bluetooth, and other protocols. These investments help customers to adopt the technologies in their products quicker and launch it ahead of their competitors.

- <u>Partner ecosystem</u>: Strategic alliances and strong collaboration with various stakeholders can help enhance a service provider's value proposition. TCS has built a strong ecosystem that helps customers speed adoption of new technologies. Through its Co-Innovation Network (COIN) that includes engineering technology centers, ISV software partners, industry bodies, centers of excellence, and academic institutions, TCS increases its knowledge base and can bring in best practices from across industries. TCS's innovative business model involving the entire ecosystem helps in solving the customer problems innovatively and efficiently.

- <u>Structured framework for creating business value</u>: TCS has developed a structured framework to improve the efficiency and effectiveness of the engineering functions by benchmarking and aligning people, process, technology and ecosystem. This helps in creating business value for its

customers in areas such as enhanced product value, realizing product strategy from conception to retirement, enhanced market share, reduced total cost of ownership (TCO), and reduced time to market.

- Flexible business models: Unlike outsourcing the non-strategic work to a GSP in earlier days, today's GSPs are considered for more strategic roles like co-innovation and joint development projects, which calls for multiple business models – (fixed price, time & material, outcome based, risk reward etc.). Through this flexibility in approach and agility in operations, TCS has been successful in attaining the trusted partner status with its customers. With leading corporations across the industries as its customers the company can boast a customer repeat record of 98.2 percent.

Conclusion

Competition continues to be increasingly global with accelerating speed of business. Product manufacturers should view engineering service suppliers as strategic partners for both technical and industry expertise. GSPs have moved beyond just skills augmentation to help develop and deliver vertical industry best practices.

ARC Advisory Group's **Engineering Services by Global Service Providers in India: Market Analysis and Forecast** study identifies TCS as the leading India-based GSP. Clearly, TCS offers an array of engineering services and delivery capabilities including supporting infrastructure, technical talent, coherent ecosystem, and vertical industry expertise. TCS has domain area expertise in a broad range of skills and industry best practices that customers can map into their projects.

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