Digiverse™ for the Semiconductor Industry

Technology Business Unit
5G, artificial intelligence (AI), and the internet of things (IoT) have transformed the way people work and live. According to reports by World Semiconductor Trade Statistics (WSTS), the global semiconductor market grew 6.8% in 2020 and is projected to grow during 2021-2026 at a compounded annual growth rate (CAGR) of 10%. This growth wave provides immense opportunity for future-ready semiconductor companies to increase their revenue with growing demand for high-performance and reliable semiconductor chips.

However, semiconductor businesses need to improve customer experience through long and complex design win sales cycles, navigating complex global supply chains for better visibility and improved yield.

The next-generation Digiverse™ platform from Tata Consultancy Services (TCS) accelerates the digital transformation journeys and drives economies of scale for semiconductor companies.

Overview

The fast-evolving and connected technology landscape is further transformed into a modern, digitalized world thanks to the proliferation of smart and AI-powered devices. Customers are increasingly transitioning from legacy, off-the-shelf offerings to more customized, on-demand solutions. Mergers and acquisitions to gain efficiencies of scale are common in the semiconductor industry, warranting the need for simplified and standardized systems and processes. However, the industry is constrained by operational inefficiencies and lacks the agility to effectively respond to changing customer requirements by rapidly developing and deploying innovative chip designs. This is coupled by the need for improved customer experience which further necessitates advanced capabilities like design to win and smart sales for revenue acceleration.

Many firms have considered investing significant capital expenditure to successfully undergo digital transformation that spans the organizational value chain. However, in an industry that is already pressurized for margins, it has become increasingly difficult to undergo capex-heavy transformations, with higher cost of ownership and multi-year delayed benefits.

Digiverse is an IT as-a-service platform with next generation capabilities, specifically designed to better address the dynamics of the semiconductor industry. Built on best-in-class technologies, the platform helps semiconductor customers in their digital transformation journeys by leveraging over 250 pre-configured business processes.

Solution

Digiverse supports cohesive integration across sales and marketing, supply, planning, and manufacturing. It helps in cost optimization and accelerates digital transformation, thereby enabling customers to:

- Unlock synergies across the value chain and accelerate time-to-market through integrated and collaborative sales and operations.
- Achieve highly automated and collaborative customer engagement through design-to-win sales, intelligent, and personalized dashboards.
- Intelligently plan across supply chains and gain real time visibility, including cost operations through supply chain control towers.
- Build supply chain agility and resiliency via tight coupling of planning and manufacturing processes and through advanced functionalities like constraint-based production planning, strategic sourcing, advanced spend analytics, advanced available to promise (aATP), and MRP Live, to name a few.
- Adopt pay-as-you-go pricing, eliminating the need for initial heavy capital expenditure.

Benefits

With Digiverse™, semiconductor companies can reap numerous benefits:

- Return on investment and break-even point within 18 months
- Achieve up to 25% reduction in deal cycle time
- Scale-at-go through on-demand capabilities for faster decision-making and for rapid deployment of proof of concepts
- Reliably deliver finished goods by improving on-time delivery rates by 10-20%
- Upwards of 20% increase in design-to-win rates
- Up to 30% improvement in perfect orders as a result from efficient order orchestration
The TCS Advantage

Digiverse leverages TCS’ deep contextual knowledge of the semiconductor industry and provides the following advantages:

- **Future-ready next-gen digital core**: Delivering exponential value through TCS’ cloud-first approach using applications such as SAP S/4HANA, Microsoft Dynamics, SAP Integrated Business Planning, SAP Ariba, and more.

- **Managing IT to managing business processes**: Leveraging TCS’ semiconductor process framework, which comprises a process library for industry best practices and standards such as the Process Classification Framework (PCF) from the American Productivity and Quality Center and supply chain operations reference (SCOR) from the Association for Supply Chain Management (formerly known as APICS).

- **Improved customer experience via digital transformation**: Enabling semiconductor manufacturers to hyper-personalize and optimize their marketing strategies with TCS’ AI, automation, and cloud capabilities.

- **Capex to opex through a pay-as-you-go pricing model**: Semiconductor companies can adopt an opex operating model through the pay-as-you-go pricing of the Digiverse platform.
Contact

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About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is a purpose-led transformation partner to many of the world’s largest businesses. For more than 50 years, it has been collaborating with clients and communities to build a greater future through innovation and collective knowledge. TCS offers an integrated portfolio of cognitive powered business, technology, and engineering services and solutions. The company’s 469,000 consultants in 46 countries help empower individuals, enterprises, and societies to build on belief.

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