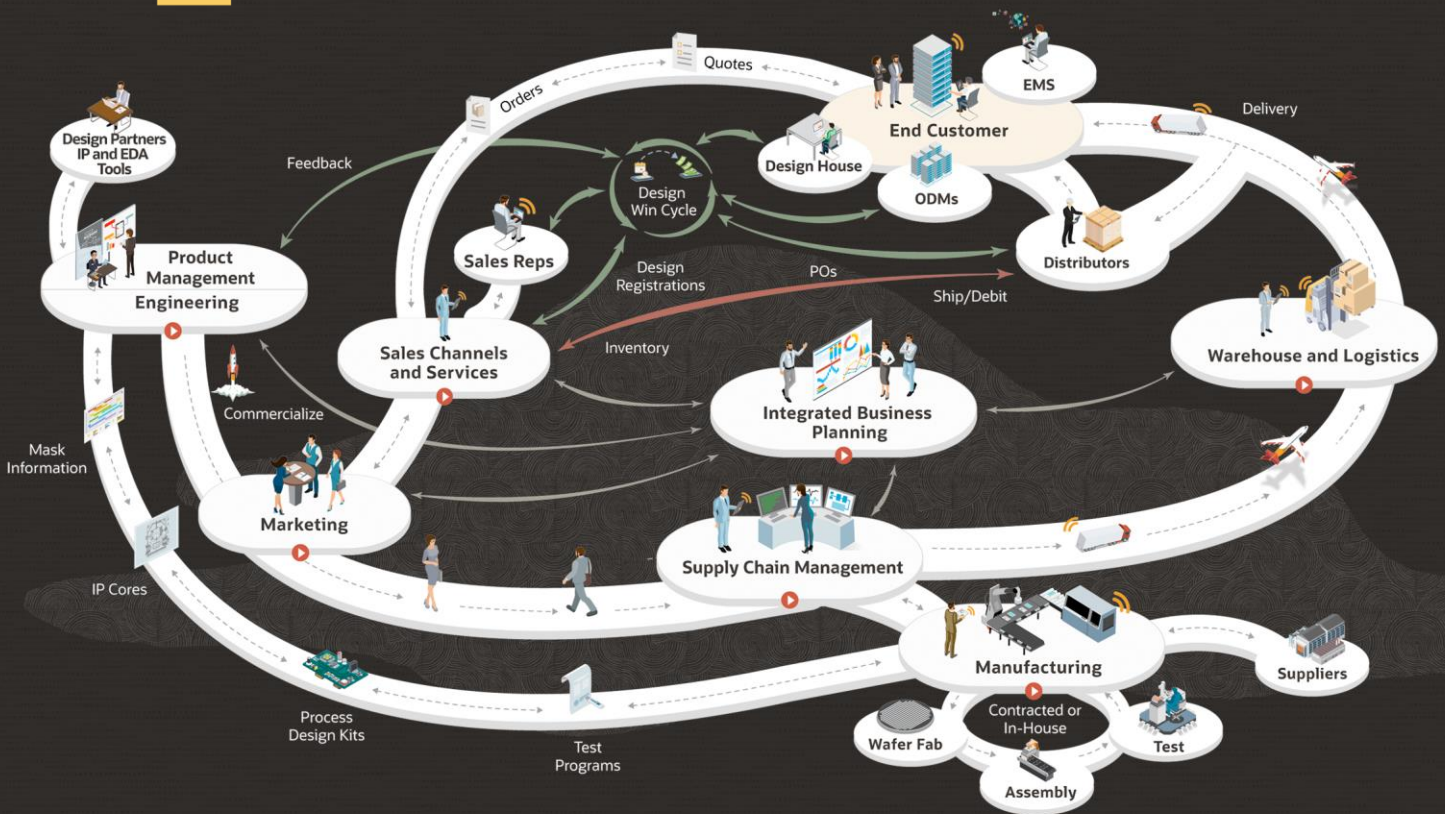


Oracle for the Semiconductor Industry



Due to rising costs, the speed of technology turnover, and a more demanding and diverse customer base, traditional organic growth in the semiconductor industry is lagging. Companies must look at ways to improve operational efficiencies and shorten design cycles as well as innovatively expand their product portfolios.

The semiconductor industries cost structure is ballooning, making profitability a challenge. In 2018, the top 25 fabless companies spent nearly \$50 billion on COGS. That's up 6 percent from 2014 and continues to be a sore spot for investors who are increasingly calling on companies to take action by looking at more hybrid, flexible manufacturing sourcing as a solution.

The rising cost structure of the industry can be seen across design, manufacturing and the supply chain. Design cost is increasing dramatically by technology node — a 10x increase from 28nm to 5nm — while intelligent machines and internet of things (IoT) devices are increasing the demand placed on chips. Customers expect more diverse, sophisticated applications, from smart vehicles to connected homes, forcing semiconductor companies to search for a way to not only stay current but expand R&D to cover broader product portfolios and customized semiconductor chips. Supply chain costs are also increasing as companies try to adapt to disruptions such as trade wars, tariffs, and COVID-19.

Oracle provides a comprehensive set of industry-leading applications to support semiconductor companies with these challenges. Our solutions help drive operational excellence in all areas of business, covering product management and engineering, finance, integrated business planning, supply chain management, warehousing and logistics, marketing, sales and service, and talent management. Oracle solutions utilize a modern cloud platform that combine SaaS applications with advanced technologies including artificial intelligence (AI), IoT, blockchain, and augmented reality to enable accelerated innovation and more agile, streamlined operations.

Digital Transformation with Oracle Cloud

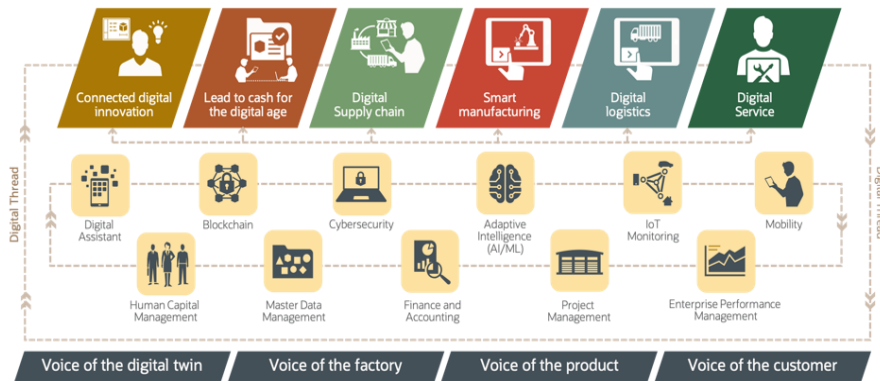
To stay competitive in today's environment, semiconductor companies must transform their business to become a digitally connected enterprise — seamlessly connecting business systems and data flows across the organization to enable improved visibility, increased agility, and better decision making. Oracle, with our comprehensive and unified portfolio of leading business solutions, can make this goal a reality. Leverage technologies including AI, IoT and blockchain to modernize your supply chain, logistics, manufacturing, and other business operations and become a more nimble and innovative enterprise.

Oracle Key Business Benefits

- Streamlined Operations
- Improved Supply Chain Optimization
- Enhanced Customer Engagement
- Integrated Business Operating Models
- Accelerated Innovation
- Greater Business Agility

Enabling the Digitally Connected Enterprise

Leveraging technology to improve enterprise visibility, speed, and agility



“Exadata cloud is the first step to using Oracle public cloud for enterprise solutions in the future. The benefit is to have a wall to wall solution that Oracle is responsible for supporting.”

- Jochen Hinderberger

Director of IT Applications,
Dialog Semiconductor

Product Management And Engineering

As non-traditional competitors change the semiconductor playing field, incumbents are in a race to remain relevant to their customer base. Continuously changing market trends have led to hit-or-miss efforts for new product Introductions (NPI) which has impacted profitability. To compete in this challenging environment, semiconductor companies are using [Oracle’s Product Lifecycle Management \(PLM\) Cloud](#) to accelerate NPIs by reducing integrated circuit and reference board design cycle times. During the design phase, Oracle PLM Cloud enables you to efficiently manage and reuse IP, resulting in reduced cycle times. While during the tape-out phase, it allows you to reduce mask re-spins and costs through efficient management of mask changes and revisions.

Marketing, Sales and Services

As semiconductor chips become more specific in nature for targeted applications, semiconductor companies have to know their customers inside and out predicting and anticipating their needs. You need to ensure you understand all available sockets and design-win opportunities. Then tracking and managing distributors becomes a priority as you focus on product ramp and production. [Oracle’s Customer Experience \(CX\) Cloud](#) family of products enables you to nurture customers, understand their needs, and create customized campaigns to maximize design-wins as well as manage sales executions through your distributors. Set your company apart from your competitors by using Oracle CX Cloud to more effectively build your business around your customers.

“With Oracle Product Lifecycle Management in place, I have a solution that can scale to handle products with complexities, from high volume semiconductor chips to complex devices.”

- Hock-Leng Lee

Director of IT Application,
Broadcom Inc.

Integrated Business Planning and Execution

Semiconductor companies are facing increased competition, commoditization, and globalization. To survive, you need to develop an agile and responsive supply chain to ensure excellence in operational and strategic management, laying a foundation for continuous innovation. Oracle's [Integrated Business Planning and Execution](#) industry solution connects planning and execution with enterprise performance management to help you align finance, sales, and operational metrics to your strategic objectives. Semiconductor companies that operate a well-run, monthly integrated business planning process are more efficient, more effective, and more profitable than those that don't.

Supply Chain Management And Manufacturing

Top-line growth is not the biggest challenge semiconductor companies face. Given the dynamic nature of the industry and pressure from investors for better returns, you need to think more creatively about how to address increasingly unwieldy cost structures to shore up your bottom line. In particular, many companies are adapting their sourcing processes, yield management capabilities, costing methods, and ERP systems to support a more flexible supply chain model and rein in COGS. Achieving the greatest benefits from a supply chain model requires implementing business processes and systems capabilities that can support the needed flexibility required to thrive. [Oracle Supply Chain Management Cloud](#) enables you to manage your supply chains with the scale, security, and agility that modern markets require. Oracle provides industry-leading supply chain solutions addressing the unique business processes relevant to the semiconductor industry like yielded costing, multi-product binning as well as split-lot and wafer handling and traceability.

Talent Management

The semiconductor industry is constantly fighting to attract and retain the best talent for its continued growth. You need a modern, agile HR system to meet the challenges of managing your global workforce. [Oracle Human Capital Management \(HCM\) Cloud](#) is an all-in-one solution that enables you to efficiently hire the best talent and manage and motivate your employees across multiple jurisdictions around the world. Centralize your HCM operations on a flexible, secure, scalable solution that provides managers and employees with self-service access to a range of HR activities including goal setting, recruiting, performance, and talent management, freeing up HR professionals to focus on strategic workforce planning.

“By standardizing the evaluation workflow with Oracle Human Capital Management Cloud, we halved the review cycle time and gained broader employee performance feedback from multiple-rater assessments. This enabled managers to rapidly identify and retain talent and support our growing business.”

- Choi Jong Hyun

CFO, NextChip Co. Ltd.

Innovate with Oracle Cloud

Oracle has the industry's most complete and integrated cloud application portfolio, enabling semiconductor companies of all sizes to optimize operations and drive growth. With advanced technologies, industry best practices and data-driven intelligence built into every application, Oracle's cloud applications are designed to be future-ready for the digital age. Leapfrog your competition and modernize your business with Oracle Cloud solutions for finance, supply chain management, HR, marketing, sales, and other critical areas of your business.

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