

A faster pathway to value for the semiconductor industry

SemiPath delivers digital continuity across
functions and enables better decisions

Enabling digital continuity with SemiPath

Imagine having access to accurate indicators that allow you to make financial and supply chain decisions based on real-time insights into manufacturing. This precise and timely data can be used to price chips and make allocation decisions based on profitability. Envision having the insight to get to market quicker and with tighter integration between product lifecycle management and manufacturability.

These scenarios may seem out of reach for semiconductor value chain companies that struggle with data that's stuck in application siloes or with systemic data-integrity challenges. However, with the right solution, companies can significantly increase the usefulness of their current technology landscape and lay the foundation for future transformations. And they can do so while causing minimal impact to business operations and staying sensitive to industry cyclicality.

Capgemini's SemiPath uses data analytics, decision support, and process improvement to enable a strong data framework between ERP, PLM, and MES systems. It allows semiconductor companies to be more agile and make informed decisions. This, ultimately, drives better customer outcomes, including faster time to market, predictability, improved quality, and a lower price.

How semiconductor companies can build a data advantage

Capgemini's SemiPath solution helps businesses keep pace with the fast-moving and cyclical nature of the industry and overcome functional and system silos through digital continuity. Doing so enables end-to-end visibility across functions and makes it easier to plan and execute effectively.

Semiconductor companies often operate on disparate and outdated systems, for two reasons. First, the sector often experiences acquisitions, mergers, and divestitures, leading to many companies having more than one ERP system, PLM system, MES, or data management system. Second, the industry's cyclical nature has created a reluctance to take on expensive and disruptive technology and process transformations, however necessary. This creates a siloed environment of scattered data and systems, making it nearly impossible to run end-to-end operations smoothly.

Some organizations have addressed design and engineering issues related to M&A, but they have yet to solve issues related to end-to-end planning and execution. And that is often because of challenges in data continuity and integrity.

Systems that are connected and set up for data, insights, and action drive substantial value both within the functions they support and upstream/downstream business functions. Consider the following.

Product lifecycle management

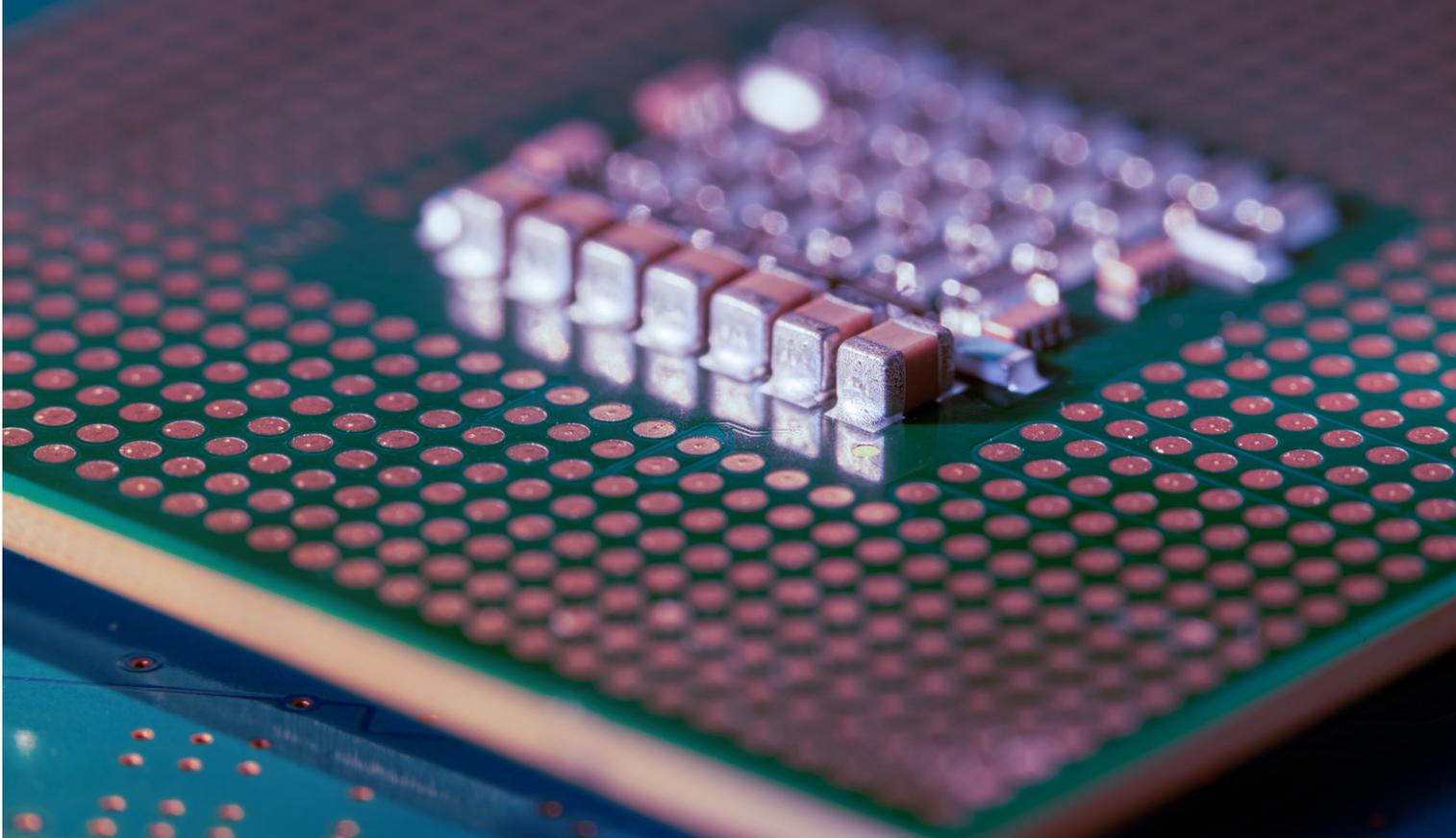
SemiPath-enabled PLM systems use AI-driven insights from product portfolio lifecycles and deliver a faster ramp in yield and manufacturability by up to 20 percent. And in the process, they drive downstream get-to-market progress faster in manufacturing efficiency and sales.

Manufacturing intelligence

Businesses that deploy SemiPath in MES/manufacturing intelligence systems improve efficiency and yield ramp up. In addition, these systems can inform finance so that those teams can price and allocate for better profitability, plan and unlock cashflows, and improve supply chain planning.

ERP

SemiPath-enabled ERPs can offer higher data quality and availability for continuous multi-echelon planning (as against sequential planning) and deliver far superior planning and execution outcomes. In addition, SemiPath improves uptime in factories/fabs, materials planning, financial planning, supply chain planning, and sales outcomes.



Connecting for change across the semiconductor industry value chain

Capgemini has more than 20 years of experience working with the semiconductor industry and understands the challenges of the rapidly changing dynamics. To work with a new set of industry players (OEMs working directly with foundries, fabless facilities addressing new markets through channel partners, etc.), businesses also need to innovate, reengineer, and transform business and technology systems.

Capgemini is uniquely positioned to help customers across all aspects of this value chain. And we know what it means to connect innovation, engineering, operations, and business functions through the thread of digital continuity to allow end-to-end planning and execution.

Capgemini's SemiPath solution framework helps businesses improve decision making, outcomes, and profitability. It can also help organizations substantially reduce inventory and stock outs, improve pricing, profitability, and cashflow, and cut challenges associated with master data across the functional value chain.

SemiPath practitioners understand that transformation must happen without business disruption and that a rip-and-replace approach is not efficient, for either cost effectiveness or change management. Our approach ensures minimal impact on day-to-day business so that our clients can maintain internal/external customer satisfaction while leveraging current investments in technology.

Speak with our experts to learn how we can help set your business on a strong path to value.

Contact:

Sandeep Kamath
sandeep.kamath@capgemini.com

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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