

Taking silicon to the cloud



(Source: Siltronic AG/ 300 mm-Ingot)

Call for change

Siltronic stands alone

The semiconductor industry sits at the center of the global electronics sector and thus operates at the cutting edge of the modern digital economy. It is fast-paced and highly competitive, requiring manufacturers and suppliers to run their businesses with an exceptional level of technological excellence.

As one of the most recognized global leaders in the design and manufacture of hyperpure silicon wafers, Germany-based Siltronic AG occupies a critical position in the global semiconductor supply chain. With the production of every single wafer, a large amount of data is generated throughout Siltronic's value chain processes. A resilient IT infrastructure backbone as well as modern IT security technologies are crucial for Siltronic.

Driven by a necessary carve out from its former parent company (which had provided all its infrastructure, business applications and IT processes) Siltronic faced a massive undertaking in establishing its standalone IT environment, process landscape and operating model at speed. It needed to manage the carve-out along with

major IT transformation activities while maintaining operational efficiency, optimizing IT costs, and cause as little business disruption as possible to its critical manufacturing operations. Additionally, the IT transformation needed to ensure the company was well prepared to support its future business growth with modern IT capabilities, such as hybrid cloud environment. This included the protection of Siltronic's intellectual property—arguably the most valuable part of its business—with state-of-the-art security and data protection.

For this massive undertaking and change program, Siltronic sought a strategic partner with vast experience in driving IT transformation as well as experience running a lean, scalable, high-performing, and future-proven IT environment fit for a modern business. Siltronic also needed a partner that would take end-to-end ownership of all IT delivery services, with a spirit of shared business responsibility, bringing a highly automated and efficient delivery model plus access to a leading technology provider ecosystem.

“Working with Accenture enabled us to successfully manage the carve out, while at the same time conducting a major IT transformation and migrating to the cloud.”

Scott McClure, Program Manager, Siltronic



When tech meets human ingenuity

Complex transformation on Cloud

Siltronic entrusted Accenture with the responsibility for driving and accelerating its entire IT transformation as well as taking over the running of its IT operations. This spanned not only the full breadth of Siltronic’s technology environment, but also establishing new processes, and incident and change management activities.

The journey began with a deep dive into Siltronic’s technology estate to get a clear understanding of both the existing state and the future vision to outline all requirements and create an aligned carve out roadmap. The first step on this journey to Siltronic’s standalone IT landscape, was to transition IT infrastructure and application services from the parent company: Wacker

Chemie AG to Accenture, initially implementing “dual operations” before carefully shifting over to a new standalone 24x7 operating model—this critical step was achieved in just six months.

While the operational handover to Accenture was still underway, the transformation activities were initiated in a series of parallel infrastructure workstreams. The carve-out was a complex transformation program of its own as it incorporated the setup and execution of a range of new technologies for Siltronic—everything from cloud and on-premises infrastructure to networking ecosystems and from application operations to security and service management.

Significant changes in estimation and planning at the start of the project challenged Siltronic and Accenture. These were incomplete quantity scaffolds, but even more demanding production-related, self-developed systems. The variety of workstation systems turned out to be much higher than expected and a high wafer production workload during the project required uninterrupted separation from the Wacker ecosystem. There was also the move to a new data center for SAP and finally the COVID-19 pandemic. These immense challenges could only be solved with the support of top management and intensive commercial negotiations. Nevertheless, our strong partnership enabled us to stay focused on delivering the outcomes.

Image source: Siltronic AG/ Siltronic site Portland, Oregon, USA)

When tech meets human ingenuity

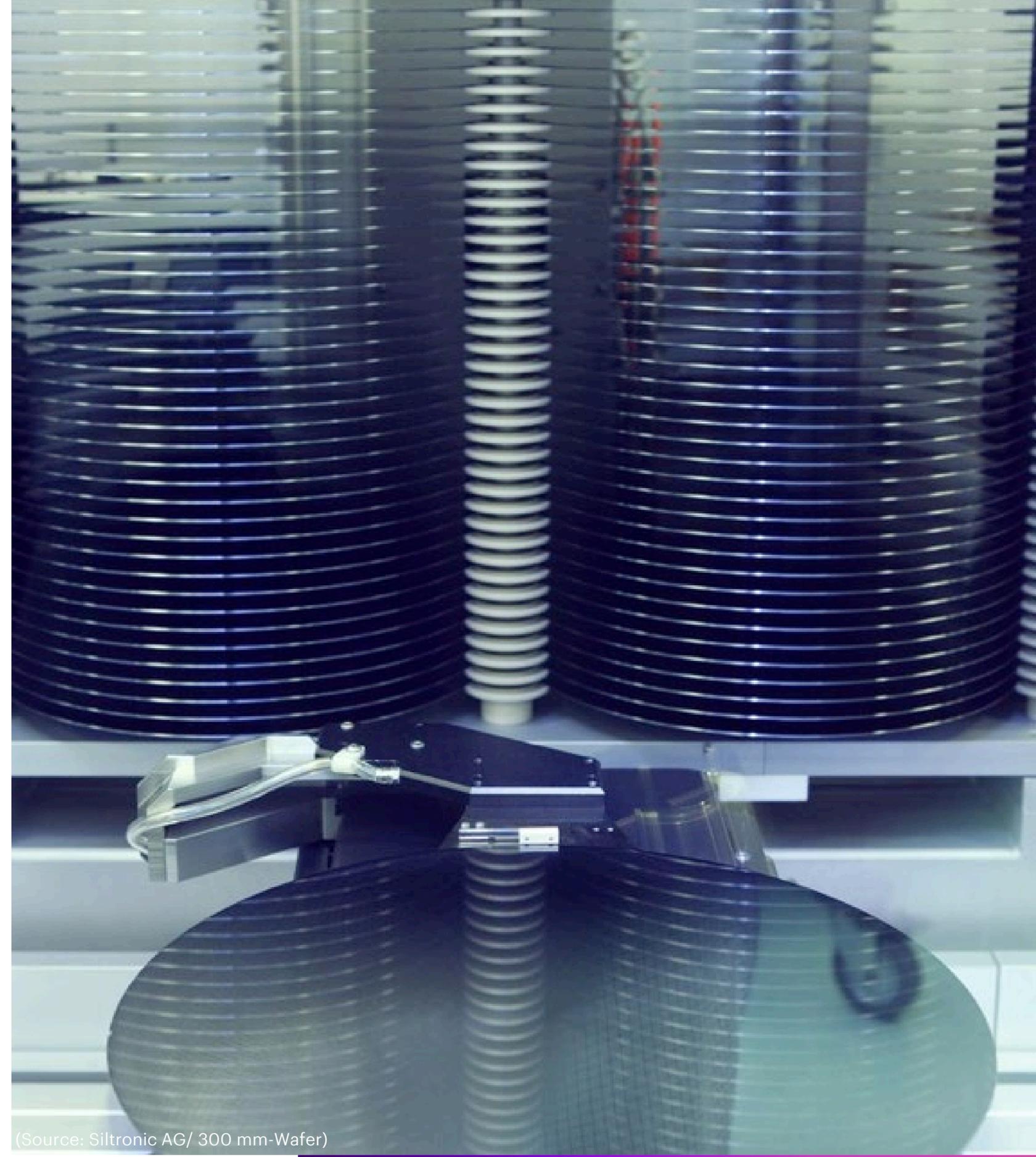
In total, Accenture helped Siltronic migrate over 1,000 servers and more than 4,000 items of production equipment to a hybrid cloud environment using Microsoft Azure, in the process enabling over 700+ users on Azure virtual desktops.

All the infrastructure and application migrations, including multiple planned downtimes and maintenance windows, were executed with minimal impact on production and steered by a dedicated migration factory team.

One key challenge was the tight integration of the SAP environment into Siltronic's business processes and shop floor systems. The team helped move over 90 enterprise business systems (SAP and core applications) to a new data center and onto Azure. All migrations were executed within planned system downtimes, and without any rollbacks.

Accenture also migrated over 20,000 devices for approximately 3,900 members of staff to the new IT environment, and 4,000 workplaces to Windows 10, introducing O365 and OneDrive.

In addition, Accenture designed and introduced a comprehensive set of centralized and cloud-ready service management processes—including incident, problem and change management, configuration, knowledge and service request management — based on out-of-the box ITIL/ITSM process templates which were customized for Siltronic on ServiceNow. These were underpinned by a series of business-critical service-level agreements, such as a commitment to zero wafer loss during production.





A valuable difference

A high-tech solution for a high-tech business

Siltronic now has a modernized IT environment that is faster, scalable, more resilient, and easier to use. It can leverage best practice monitoring, capacity, and availability management, as well as automated ticket processing and performance analytics by using a state-of-the-art tools stack, including ServiceNow, AgentWorkspace, myWizard and SPLUNK. Thanks to the use of leading application, infrastructure and IT security services from Accenture, Siltronic also benefits from measured, outcome based, transparent day-to-day IT management.

With its new state-of-the-art IT infrastructure, Siltronic is now also able to focus on strategic business initiatives with a significantly reduced time to market. Additionally, steps have been successfully

undertaken to establish a globally-aligned IT architecture standard and standardized IT processes across all its locations. That's not only more efficient, it also makes it easier to automate and innovate with IT in the future.

A new flexible service integrator concept combined with market-leading operations ITSM tools and processes and monitoring capabilities, plus modernized landing zones within on-premise data centers and Azure, enables Siltronic to deploy ready-to-use applications, accelerate application migrations to the cloud and reduce operation resolution durations. This flexible service integrator concept also enables Siltronic to extend or to switch vendors within its IT ecosystem.

A valuable difference

The choice of hybrid cloud means Siltronic gets the best of both worlds—access to the speed, scalability, and innovation of the public cloud and the rigorous data security and low levels of latency in a new on-premises environment. Both solutions are needed for a business like Siltronic's. For its high-precision silicon wafer manufacturing operations, running 24 hours a day, 365 days a year, having the processing power of an on-premises data center is essential. At the same time, using Microsoft Azure means the company can unleash cloud potential through new solutions to support more flexible working.

With Accenture's help, Siltronic has taken a huge step forward to an innovative IT environment befitting a high-tech manufacturing business.

“We needed a partner who could take responsibility for moving us to the cloud and rolling out new technology without disrupting our manufacturing production line. We can now concentrate on helping the business create the best products and serve our customers.”

Günter Riedhofer, CIO



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