

Siemens at SPS22: Digital solutions for more sustainability

- **More openness: Digital business platform Siemens Xcelerator accelerates digital transformation**
- **More IT/OT integration: New management system for Siemens Industrial Edge**
- **More sustainability: Application *Analyze MyDrives Edge* creates Transparency of energy consumption of drive systems**

At the Smart Production Solutions (SPS) fair in Nuremberg, Germany, November. 8-10, Siemens will be presenting technical innovations and practical examples for greater sustainability in production. Easier, more open, more flexible and more sustainable production and planning processes – all of this is achieved through end-to-end automation and digitization to become a digital enterprise.

This past June, Siemens launched the new open and digital business platform **Siemens Xcelerator** to make the digital transformation of companies easier, faster and scalable. Siemens Xcelerator consists of three pillars:

- **Portfolio:** A curated, modular portfolio of IOT-enabled hardware and software based on standard application programming interfaces, facilitating the integration of information technology (IT) and operational technology (OT).
- **Ecosystem:** A growing ecosystem of partners.
- **Marketplace:** Interactions and transactions among customers, partners and developers.

In addition to the breadth of the Siemens Xcelerator portfolio, Siemens will also be showcasing its growing [partner ecosystem](#): Together with blue automation GmbH, Digital Industries World e.V., Mytra, Wireless Consulting and Zscaler, the Siemens partner ecosystem illustrates how collaboration across company and sector boundaries generates customer value.

Advancing the integration of IT and OT with Siemens Industrial IoT

Another core topic of the Siemens booth is the convergence of IT and OT, which will showcase the interconnected offerings of Industrial Edge, MindSphere and Mendix, among other solutions. These bring together IoT capabilities from sensor to edge to cloud with embedded low-code capabilities and a wide range of ready-to-use applications, enabling customers and partners alike to embark on their digital transformation regardless of the size or digital maturity of their business.

"With Totally Integrated Automation, we started 25 years ago integrating the OT world and opening it up to IT applications. Siemens Xcelerator further accelerates IT/OT integration, making it the next big vision for industrial transformation. We're bringing IT and OT together more seamlessly than any other company, making industrial processes simple, open, flexible and sustainable," said Rainer Brehm, CEO Factory Automation. "This is exactly what we are demonstrating at SPS with innovations from our entire product portfolio."

[Innovations for the open edge computing platform Siemens Industrial Edge](#)

Siemens is continuously optimizing its Industrial Edge solutions, driving forward the integration of IT and OT with the new Industrial Edge Management System V2.0. This system is available for the open-source system Kubernetes, which is widely used in IT for managing container applications. Siemens is thus addressing the increasing number of IT users in industrial production. It is now easier to integrate Industrial Edge into existing Kubernetes clusters and manage automation on the shop floor more efficiently. Since computing power can be flexibly allocated within one or more Kubernetes clusters, companies save IT resources and thus energy and costs.

Other innovations include license management with the Industrial Edge Hub and a new, completely virtual device (Industrial Edge Virtual Device, IEVD) as well as new Simatic IPC Edge devices.

TIA Portal v18 Highlights

With the latest version of the TIA Portal, users can jointly create, manage, and roll out global libraries throughout the company thanks to extended multi-user engineering functionalities. Another innovation is the IT-oriented approach of SIMATIC AX. Although the TIA Portal is a classic OT-level tool, IT users can now also program engineering functionalities in Visual Studio Code. This provides them with mechanisms such as Git versioning, unit testing, or object orientation. The libraries created in Structured Text can then be seamlessly integrated into the TIA Portal. Since SIMATIC AX is also cloud-based, it can be downloaded and updated quickly and easily anytime, anywhere.

Hardware updates are also increasingly supporting the combination of IT and automation: The medium performance class of PLCs also gets more memory and stronger performance in the field of industrial communication. This allows data to be exchanged and used more efficiently. In addition, version 18 of the TIA Portal enables advanced kinematic engineering (5D/6D), and the reliability of automated production is protected with R1 redundancy.

[Innovations in drive technology for sustainable production](#)

Siemens is presenting a new feature of the Analyze MyDrives Edge application that ensures transparency around the energy consumption of the entire drive system. The AI-based feature of the app calculates all data without the need for additional sensors and special measuring devices. The app shows how efficiently the drive runs, energy consumption and operating costs and the CO₂ footprint. Drive settings can thus be optimized to better meet customer needs.

The second innovation is in the hardware area. Here, Siemens is introducing another Compact DC-DC Converter to the market in time for the SPS trade fair. Available now, Siemens' Sinamics DCP 250kW offers a device with output voltages of up to 1200V. The new device meets the increased requirements in the automotive industry and offers the optimal basis for the realization of test benches for electric

vehicles. DC controllers offer additional advantages for efficient energy use: In the system network, the load absorption from the grid can be smoothed out by using energy storage devices such as batteries. This eliminates peaks loads. In addition, braking energy can be made available in the DC system. With suitable system design, DC converters also require fewer conversion steps.

Milestone for the process industry: new version of the web-based Simatic PCS neo control system available

With version 4.0, Simatic PCS neo is now ready for plant capacities and large-scale projects of up to 64,000 process objects and 56 controllers – making it suitable for industrial plants of all sizes.

With the Simatic S7-4100 automation system, Siemens is also presenting the new generation of controllers for the process industry. The first release will be available exclusively for Simatic PCS neo. Compared to the current model, which will continue to be available in the long term, the new controller is 30 percent smaller and thus saves space in the control cabinet. In addition, Simatic S7-4100 offers extended communication options with up to six Profinet or Profibus interfaces. The use of the latest Siemens chipsets reduces the energy consumption of these controllers by up to 50 percent.

Parallel to Simatic PCS neo V4.0, Siemens is introducing the fully integrated Simatic CN 4100 communication gateway, which enables simple and secure process data exchange with Simatic PCS neo. Supported protocols include Modbus TCP and OPC UA, and more protocols are planned.

New generation of Industrial Ethernet switches

Siemens has also renewed the Industrial Ethernet Switches of its Scalance XC-/XR-300 series and upgraded them with additional functions for next-generation industrial networks. The switches of the new Scalance XC-/XCM-300 and Scalance XR-/XRM-300 series have a high port density, which allows many devices to be connected within large network infrastructures. Thanks to their high-bandwidth ports (up to 10 Gbit/s), the new models also enable various OT network applications for data, voice, video and Profinet. With the Industrial Ethernet switches, OT networks are easily connected to IT and thus enable more flexible production.

Prototype of a local 5G infrastructure

At SPS, Siemens will also show the prototype of a private, local 5G infrastructure which companies can use to build their own 5G network. The private 5G network can then be used to connect edge devices, industrial tablets, or mobile robots (AGVs) in factories and use augmented reality solutions without interference. The launch of the product is expected in the coming year.



Caption: Siemens at SPS22: Digital solutions for more sustainability.

This press release can be found at <https://sie.ag/3UvZZDR>

Further information about Siemens at the SPS can be found at:

www.siemens.com/press/sps22

Further information on Siemens Xcelerator: <https://new.siemens.com/uk/en.html>

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Siemens Digital Industries (DI) is a leading innovator in automation and digitalization. In close cooperation with its partners and customers, DI is the driving force for the digital transformation in the process and manufacturing industries. With its Digital Enterprise portfolio, Siemens provides companies of all sizes with all the necessary products, along with consistent solutions and services for the integration and digitalization of the entire value chain. Optimized for the specific requirements of individual industries, this unique portfolio enables customers to enhance their productivity and flexibility. DI continuously extends its portfolio to include innovations and the integration of future-oriented technologies. Siemens Digital Industries, with its headquarters in Nuremberg, has a workforce of around 72,000 employees worldwide.

Siemens AG (Berlin and Munich) is a technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power. In fiscal 2021, which ended on September 30, 2021, the Siemens Group generated revenue of €62.3 billion and net income of €6.7 billion. As of September 30, 2021, the company had around 303,000 employees worldwide. Further information is available on the Internet at www.siemens.com.