SIEMENS

Hannover Messe 2019, Hall 9, Booth D35

Siemens showcases smart solutions for industry-specific implementation of Industrie 4.0

- **This year's trade fair slogan: "Digital Enterprise – Thinking industry further!"**
- **Setting course for the factory and process automation of the future**
- **Integrated energy solutions for digital enterprises**

Siemens will be placing smart solutions for the industry-specific implementation of Industrie 4.0 at the heart of its Hannover Messe 2019 presentation under the banner "Digital Enterprise – Thinking industry further!". Over an exhibition space of around 4,000 square meters in Hall 9, Siemens will be showcasing these solutions with an array of new additions to its Digital Enterprise offering designed to enable the digital transformation of the discrete and process industries. By integrating future technologies into its portfolio, Siemens is offering users new and far more extensive scope for leveraging the exponential growth in industrial data. Its offering ranges from the use of artificial intelligence and edge computing through to the factory and process automation of the future. Siemens will also be showcasing integrated energy solutions for network operators and digital enterprises. This comprehensive portfolio allows industrial enterprises of all sizes and sectors to achieve the improved flexibility and productivity they need to address the growing challenges posed by mass customization.

Siemens will be illustrating its vision for industry-specific implementation of the Digital Enterprise and the use of future technologies with a range of exhibits, including two highlight showcases. One of these is the chemical industry showcase featuring the totally virtual representation of a greenfield plant complete with laboratory, automation and control technology enabling the sustainable and

environmentally responsible production of polyamide made from biomass.

The automotive industry showcase demonstrates the use of digital twins, additive manufacturing, innovative robotics and automatic guided vehicles to enable flexible, efficient e-car and battery production.

"By enhancing our Digital Enterprise portfolio with the addition of product innovations and future technologies, we're helping our customers gain an even sharper competitive edge in their respective industries," explains Jan Mrosik, CEO of Digital Factory Division. "This also includes modern methods of data analysis enabled by edge or cloud computing. With the acquisition of Mendix, we now have a market leader in the development of low-code apps on board: Using the Mendix platform and the associated tools and services, users can now generate their apps at up to ten times the speed." Users will also benefit from the continuously expanding ecosystem surrounding the open cloud-based IoT operating system MindSphere. Independent MindSphere World user organizations in Europe (Germany, Italy) and Southeast Asia (Singapore) now count some 90 users among their members.

Product innovations showcased in Hanover include the latest version of the NX software, which has been enhanced with machine learning (ML) and artificial intelligence (AI) capabilities. These new features can predict next steps and update the user interface to help users more efficiently use software to increase productivity. Siemens will also be presenting its own E-CAD functionality for mechatronic machine and production line engineering in the form of its new "Electrical Design" module.

New standards in process control technology

"We're rethinking process control technology, and we'll be presenting our innovative new process control system at Hannover Messe," says Process Automation Business Unit CEO Eckard Eberle. "The completely web-based new system and the multi-user concept for engineering and operation will open up totally new and efficient ways of working for our customers." The new concept allows expert knowledge to be deployed anywhere, any time, and the innovated Simatic PCS 7 hardware means that customers are already ideally prepared to work with the new system today.

Customers will also benefit from PlantSight, a system which draws data from several different data sources to enable rapid access to previously unattainable information.

Synchronizing the physical plant with the relevant engineering data enables the creation of a digital twin of the manufacturing process. This allows plant operators to count on a high level of trustworthiness and information quality, enabling continuous operational readiness and greater reliability.

Another Siemens innovation at the fair will be the new CloudConnect products designed to enable data transmission from the field level to a variety of different cloud platforms.

Smart automation concepts forming the basis for digitalization

"With our TIA portfolio, we are providing smart automation concepts which create the basis for digitalization. At the same time, we are also integrating new technologies such as edge computing and artificial intelligence into the TIA ecosystem as the basis for the future of automation. Combining these with our current software environments opens up totally new ways to use production data and at the same time enables a significant increase in productivity," says Factory Automation Business Unit CEO Ralf-Michael Franke. Siemens will be featuring a use case in Hannover which is already in practice at the company's Amberg factory. The integration of edge computing, artificial intelligence and MindSphere has already proven invaluable for quality inspection of PCBs by X-ray equipment during the manufacture of Simatic products, allowing the number of final inspection processes to be drastically reduced. Product innovations also include a new generation of high-end industrial PCs incorporating 8th generation Intel processors. Also featured at the fair will be an innovative drive and control concept developed by Siemens and Festo involving integration of the multi-carrier system into the Bosch Rexroth transfer system. This allows production processes in fields such as battery manufacture to be designed for greater flexibility and efficiency.

Innovative solutions for digitalization in machine building

"Digitalization is the number one productivity driver for our machine building customers across the different industries. This applies both to classical machine tool and production machinery builders and users and to machine buyers in the field of additive manufacturing. The range of possibilities offered by Siemens within the scope of its Digital Enterprise portfolio is enormous. It ranges from real time-based edge computing applications for data analysis and enhanced performance for complex machine tools through to comprehensive digitalization of complete

production lines and factories," says Wolfgang Heuring, CEO of the Motion Control Business Unit. Siemens will be showcasing a number of new software solutions at the fair for cloud and edge computing designed to enable data analysis and machine learning, and to boost the performance of machine tools. Also featured at the fair will be the integrated use of software and control technology for additive manufacturing in combination with machine tools and modern robotics. Digitalization also has a central role to play in the field of drive technology. With its IoT digitalization offering Sidrive IQ, Siemens will be presenting apps and services designed to optimize drives by linking to MindSphere. Additional highlights will include the G120X product family aimed at the water/wastewater, pump and fan industry, and the new servo drive system Simatic Micro-Drive for the safety extra-low voltage range.

Integrated energy solutions for network operators and digital enterprises
Industrial enterprises need solutions which enable the economical use of self-generated energy, increased energy efficiency and the optimum support of automated digital production processes. "The digital transformation of industrial enterprises will only be possible with an adequately designed electrical infrastructure. This will not only enable a reliable power supply to buildings, plants and machines, it also delivers elementary data for the Industrial Internet of Things," says Ralf Christian, CEO of the Energy Management Division. At Hanover, Siemens will be showcasing innovations for power grids alongside solutions for a smart and sustainable power supply to industrial and infrastructure facilities. Visitors to the booth will be able to experience the seamless integration of power distribution into digital automation environments using new, smart systems and tools – some of them with a direct link to MindSphere.
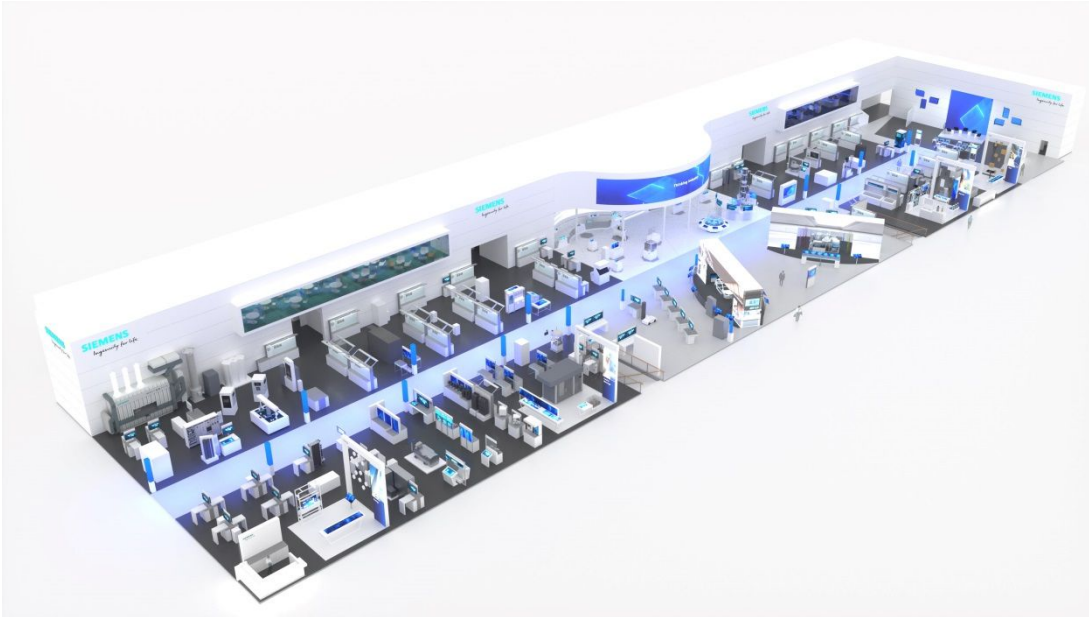
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This press release and a press picture are available at
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More information on Siemens at the Hannover Messe 2019 is available at
www.siemens.com/press/hm19 and www.siemens.com/hannovermesse

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. The company is active around the globe, focusing on the areas of electrification, automation and digitalization. One of the largest producers of energy-efficient, resource-saving technologies, Siemens is a leading supplier of efficient power generation and power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. With its publicly listed subsidiary Siemens Healthineers AG, the company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2018, which ended on September 30, 2018, Siemens generated revenue of €83.0 billion and net income of €6.1 billion. At the end of September 2018, the company had around 379,000 employees worldwide. Further information is available on the Internet at www.siemens.com.