Siemens extends offering for the “Digital Enterprise”

- Innovations in energy distribution, automation and drive technology as well as industrial software
- Booth slogan for 2016 “Ingenuity for life – Driving the Digital Enterprise”
- Four cornerstones enable producing companies to achieve more flexible, faster value adding processes
- More economical, efficient and reliable operation through smart energy management

Siemens continues to extend its range of products for what has come to be known as the “Digital Enterprise” – or the achievement of end-to-end digitalization. At the Hannover Messe 2016, Siemens will be showcasing an array of innovations in the fields of power distribution, automation and drive technology as well as industrial software. Under the banner "Ingenuity for life – Driving the Digital Enterprise", the Siemens booth in Hall 9 at the Hannover Messe 2016 will be offering an overview of the company’s extensive portfolio over an area of 3,500 square meters.

The four cornerstones needed to achieve a digital transformation are integrated software tools and systems, industry-capable communication and security solutions as well as data-based services. These will enable manufacturing companies to achieve faster, more flexible value adding processes and so cater more specifically to individual customer needs, allow them to respond far more rapidly to new market demands, and make it easier for them to develop complete new business models. Although industrial enterprises are facing different demands depending on their field, the central challenges are the same for all companies: Reducing the time-to-market and increasing flexibility and efficiency while achieving an ever higher standard of quality.
Implementing Industrie 4.0 solutions already today

Siemens took an important step towards extending its offering for the “Digital Enterprise” with its recently announced plan to acquire the US company CD-adapco. Speaking at the press conference ahead of the fair, the Digital Factory Division CEO Anton S. Huber said: “By supplementing our portfolio of industrial simulation tools to include the market’s leading software tool for computational fluid dynamics (CFD) and integrating world leading experts in this field, we are significantly expanding our expertise in the extremely important field of model-based product development”.

Over the past 15 years, Siemens has continuously expanded its portfolio of software tools offered as part of its “Digital Enterprise Software Suite”. The Digital Enterprise Software Suite offers a comprehensive portfolio of integral software-based tools focusing on Teamcenter as a collaboration platform. In future, this will increasingly bring about the seamless integration of PLM (Product Lifecycle Management), MES/MOM (Manufacturing Execution System/Manufacturing Operations Management) and TIA (Totally Integrated Automation). In common with industrial communication networks, security solutions and the rapid, smart evaluation of large volumes of data based on MindSphere – the Siemens Cloud for Industry – Siemens is helping its customers achieve transformation towards the Digital Enterprise. MindSphere offers industrial enterprises an open infrastructure based on SAP HANA, and enables innovative digital services.

“Using the software tools, communication solutions, security concepts and solutions, and an open platform for data-based services offered by Siemens, manufacturing companies are already in a position to invest in future-proof automation solutions for the step-by-step implementation of Industrie 4.0 solutions today”, said Huber. “Digitalization gives them the capability to significantly speed up their value adding processes and so engineer, produce and market their products far more quickly and efficiently.”

Increased flexibility, reduced time to market

With the “Digital Enterprise”, Siemens is offering solutions designed to address the specific requirements not only of drive technology but all sectors of the process industry. These solutions combine the world of planning and operation to create an integral plant management concept covering the entire lifecycle of an industrial plant. Its basis: integral software products and solutions which enable the entry,
exchange and documentation of all relevant data and therefore digitalization of the entire plant (integrated engineering). All the necessary data are available centrally in real time. This allows use of the virtual, identical digital twin of a plant created during the engineering phase to simulate and optimize its commissioning, operation and maintenance. "The transition from 'integrated engineering' to 'integrated operations' is a key step for our customers in the process industry on their way towards Industrie 4.0, and enables considerable improvements in terms of speed, flexibility and efficiency to be leveraged. We offer integrated solutions across the entire life cycle of a plant and are the first supplier ever to make available an integrated data model. This is how we are supporting the development of the Digital Enterprise", explained Dr. Jürgen Brandes, CEO of the Process Industries and Drives Division.

As digitalization and the trend towards sustainable business continue to progress, many industries are undergoing a rapid pace of transformation. The paper industry is a prime example: Digital media are increasingly replacing "classical" paper products and fibers are replacing oil-based products. A consistently high quality of the end product, low use of energy and resources, alongside the greatest possible variability in production are key factors. These varied and complex requirements call for meticulously considered and integral approaches such as Integrated Drive Systems (IDS). Here too, digitalization provides a central lever for improved efficiency potential and for the implementation of aspirational customer requirements: With a standardized data model and seamless flow of information, Siemens is able to help customers achieve cohesive engineering solutions and virtual plant simulation, enabling them to test, further develop and if required also replicate an existing plant configuration. "Entry into the world of digitalization doesn't only pay off for new facilities. Given the radical changes taking place in the market, standardization, flexibility and efficient plant and maintenance management are particularly vital for existing installations if they are to remain competitive and fully future-proof", added Brandes.

**Power supply as part of the “Digital Enterprise”**

To address growing demands for more climate protection and to master the increasing integration of renewable energy sources, energy systems have to be made more flexible and also smarter. This applies in particular to energy-intensive industrial enterprises. Digitalization can offer a solution here: what are known as "microgrids" are used to network energy loads and generators in industrial
properties, producing an array of data which has to be measured, controlled, monitored and regulated. This process of digitalization offers companies new scope and new business models such as participation in the energy market or smart load peak management to ensure an economical power supply. Another key issue is the need to ensure security of supply, using modern protection concepts to safeguard plants and systems against overloading or short circuits. The increasingly distributed generation of energy within a plant itself is also changing the way in which industrial enterprises and energy providers interact. This changing landscape calls for new planning and energy management concepts for networks and systems which are able to guarantee a robust, cost-optimized supply of power. Siemens has concentrated its power distribution portfolio in Totally Integrated Power (TIP), and offers integral solutions allowing the economical planning, control, protection and optimization of energy systems specifically to industrial enterprises.

“Power supply is a part of the Digital Enterprise”, says CEO of the Energy Management Division Ralf Christian, speaking at the Press Conference ahead of the Hannover Messe. “By using smart energy management, industrial enterprises can operate their plants and processes economically, efficiently and safely. Advancing digitalization is a decisive lever for this”. A digital twin of the power distribution system is possible right from the planning and engineering phases: Available CaX data permits low-cost, fault-free control cabinet engineering, for instance, and selected power switches and measuring devices can now also be accessed alongside the latest planning and project engineering tools in the TIA Portal. On the factory floor, plants and machines can be integrated into energy management systems.

Siemens at the Hannover Messe 2016
Under the banner “Ingenuity for life – Driving the Digital Enterprise”, the Siemens booth at the Hannover Messe from April 25 to 29 in Hall 9 will be offering an overview of the company’s extensive portfolio over an area of 3,500 square meters. The booth will feature solutions and products for electrification, automation and digitalization, offering visitors to Hanover the chance to experience an array of innovations in the fields of power distribution, automation and drive technology as well as industrial software. Exhibits will include the new performance features of the TIA Portal V14 and the innovative service concept based on MindSphere – Siemens Cloud for Industry. In the field of motion control applications, Siemens is launching a
coordinated package comprising the Simatic Advanced Controller and Sinamics servo drive system. Also new at the fair will be the latest release 8.2 of Simatic PCS 7 featuring additional convenience functions, the Simotics reluctance drive system with an extended output range and Simotics AMB active magnetic bearing technology. In the field of energy management, Siemens will be presenting two new series of its molded case circuit breaker 3VA from the Sentron portfolio in compliance with American standards with UL approval, and the modular multi-channel current measuring system type 7KT PAC1200.

Using a range of concrete examples taken from practice, Siemens will be demonstrating ways in which companies can benefit by from the merger of the real and virtual worlds. The central exhibits at this year’s booth will be a series of “Highlight Cubes” on the topics of Energy for Industry, Additive Manufacturing, Automotive and Fiber Industry, which will provide visitors with a graphic illustration of selected topics for a direct hands-on experience. In the Sports Zone, Siemens will be showcasing its long-standing proximity to the USA, the partner country to the fair. Using the example of products by American manufacturers from the sport and leisure industry, this area of the booth demonstrates the influence of automation and digitalization on the production of sports articles and equipment.

Under the banner of “Ingenuity for life – Driving the Digital Enterprise”, Siemens will be providing an overview of its comprehensive portfolio for industrial customers over an area of 3,500 square meters at the Hannover Messe from 25 to 29 April.
Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world’s largest producers of energy-efficient, resource-saving technologies, Siemens is No. 1 in offshore wind turbine construction, a leading supplier of gas and steam turbines for power generation, a major provider of power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. 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 2015, which ended on September 30, 2015, Siemens generated revenue of €75.6 billion and net income of €7.4 billion. At the end of September 2015, the company had around 348,000 employees worldwide. Further information is available on the Internet at www.siemens.com.