

Software Systems and Processes

Company Core Technology

Background

Software is the overwhelmingly important innovation factor for digitalization. Without digitalization software, there can be no digital solutions – neither the Internet of Things, nor predictive maintenance, artificial intelligence, autonomous systems or system platforms with third-party software will be possible. But because user demands in this area are so high – expecting innovations that bring more immediate and tangible added value than elsewhere – new types of solution concepts are needed for the development of digitalization software. This situation will lead to massive pressure on development speed and increasingly complex software solutions. Conventional approaches to the development of software systems will soon prove inadequate.

Importance for Siemens

In the industrial software field, Siemens has been an important driving force for innovation for more than 20 years now, and intends to perform the same role when it comes to the digitalization of industry. Siemens aims to be a leader in shaping digitalization software for facility management, automation systems, power plants or signaling centers. Company Core Technology Software Systems and Processes is therefore of decisive importance for future business at Siemens, supporting and accelerating the digital transformation of the company and its solution portfolio through innovative software technologies. This team of selected software experts is tasked with exploring and building the tools and methods that will enable business units to develop their crucial digitalization software.



SIEMENS

Ingenuity for life

Success stories and research focus

Given the fact that Siemens is one of the world's major software developers, employing more than 24,500 software engineers working on hundreds of projects, Company Core Technology Software Systems and Processes will, in particular, focus on developing reference solutions for industrial digitalization software, gather them and make them available to all company units through a solution repository, so fueling synergies and avoiding duplication of effort.

The reference solutions address the key challenges of developing innovative digitalization software. Digital solutions require close collaboration with customers and systematic selection of development partners, which is only possible through new approaches to the definition and selection processes.

The more complex solutions become, the more important it is to safeguard their development using artificial intelligence – the only way to further accelerate speed of development. Early market feedback will open up the possibility of even shorter innovation cycles. The prerequisite for this is extremely rapid deployment of new solutions. All digital solutions, especially those that need to adapt autonomously to dynamic changes, require special architectural components, which have to be selected and made available. Smart, self-learning solutions require special validation before they can be used in an industrial context. At Corporate Technology and within the various Siemens business units, engineers are already working flat out on reference solutions for these challenges, and the solution repository is gradually filling up.

Further information

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