Digitalization of Production: Merck and Siemens Collaborate
Merck invests € 10 million in modular technical infrastructure

27.11.2020 - Merck announced a collaborative partnership with Siemens for the digitalization of production. This partnership is to result in the development of a process control system for the modular production of innovative materials and products for the electronics, pharmaceutical and life science industries. A first state-of-the-art, modular plant in this production environment is to be built at the Darmstadt site of Merck by 2022. In the first phase, Merck will invest € 10 million in the realization of this plant. The project is part of a € 1 billion investment program announced last year for global headquarters in Darmstadt up until 2025. It will also be funded by the German Federal Ministry of Economic Affairs and Energy because, thanks to the modular, flexible and efficient technology, the carbon footprint of production can be reduced.

“In the smart factory of tomorrow, everything will revolve around flexibility, networking and efficiency,” said Kai Beckmann, CEO Performance Materials and Executive Board member of Merck responsible for the Darmstadt site. “The time needed from the product idea to market readiness is a critical success factor. The resulting technology platform for standardized, modular production will also be usable in product development in the future. This allows data-based decisions to be made as early as the product development phase and applied seamlessly to the production process. Therefore, in the future, we will be able to respond quicker and even more flexibly to high customer requirements.”

“We know that new production plants have to be more flexible and more efficient in order to support faster product changes. We are therefore delighted to be partnering with Merck. This will create new opportunities for us to drive forward modular production and to meet growing requirements for chemical and pharmaceutical processes in our joint development work,” said Eckard Eberle, CEO of Siemens Process Automation.

The objective of this collaboration between Merck and Siemens is the joint development of an overall system for automating the modular production of tomorrow.

Special software components (Module Type Packages, MTP) form the basis for managing modular production equipment. Using a supervisory control
system, known as the process orchestration layer (POL), various production modules can be interlinked to an overall process. In the future, this should occur without additional programming effort – similar to the USB standard for electronic devices. Merck is taking on the establishment of the production infrastructure; Siemens is responsible for the development of POL technology.

Merck already has experience with modular production systems. The collaboration is meant to advance the concept of flexible and simple interlinking of individual modules globally in the process development and production network of all business sectors at Merck.