

# **Bosch Rexroth defines automation trends for 2021**

Manuela Kessler | 23/02/2021 | Lohr am Main | PI 005/21

#### Automation is a growth market – further impetus expected

- Openness, simplicity and flexibility of automation solutions in demand
- Microservice/app-based system architectures instead of software monoliths
- Need for demand-driven solutions for high added value is growing



"Automation is a growth market. Fast, flexible solutions are needed – as the coronavirus pandemic has demonstrated once again," explains Philipp Guth, Head of the Business Unit Automation & Electrification Solutions, Bosch Rexroth AG. (Image source: Bosch Rexroth AG)

Bosch Rexroth expects a further boost in automation for the manufacturing industry and other segments in 2021 – driven also by the coronavirus pandemic. This is because manufacturing companies in particular are forced to further digitalize processes in order to keep production processes efficient and delivery capabilities up and running during the crisis. However, the demand for open, easy-to-use and flexible automation solutions will also increase independently of this.

"Automation is a growth market. Fast, flexible solutions are needed – as the coronavirus pandemic has demonstrated once again. Rigid, complex, proprietary systems are outdated," explains Philipp Guth, Head of the Business Unit Automation & Electrification Solutions at Bosch Rexroth. He adds: "Another driver for this development is the fact that mechanical engineering and other industries are increasingly defining themselves by software development and want to bring their own know-how into the control and software. This calls for adequate solutions."

Thus, commonly used software development tools and programming languages are increasingly finding their way into automation. And engineering processes will be completely digital in the future.

#### Automation via open ecosystem and demand-driven solutions in demand



Therefore, measured by the requirements of Bosch Rexroth customers, the demand for simplicity, openness and flexibility of an automation system that functions like an ecosystem will increase particularly in 2021. Bosch Rexroth is setting a good example with ctrlX AUTOMATION. The automation platform removes the limitations of previous solutions with its open, flexible architecture – based on the high-performance and communication-enabled industrial control unit ctrlX CORE. Bosch Rexroth relies on the Linux real-time operating system, open standards throughout, app technology, web-based engineering and comprehensive IoT connections.

"Today's automation systems should be based on the needs of the users, not the other way around. Customers only want to use and pay for what they really need and have the freedom to expand as required at any time. The trend is therefore moving towards microservice or app-based system architectures instead of large software monoliths. This way, users can put together their solution according to their requirements and thus achieve high added value," explains Steffen Winkler, Vice President Sales, Business Unit Automation & Electrification Solutions at Bosch Rexroth.

#### Cooperation of all participants in the sense of co-creation grows

The higher-level user goal is therefore to obtain a solution that meets their needs as well and as tailor-made as possible. "The total domain know-how required in automation today is so broad that one company alone cannot cover it. Therefore, the willingness to cooperate increases in all directions. Suppliers, partners and customers work together to find the best solution. Each of us concentrates on our own strengths and contributes partial solutions that interlock perfectly via standardized interfaces," explains Philipp Guth.

For this reason, Bosch Rexroth has created a partner world around ctrlX AUTOMATION. The principle: Users can use apps from Bosch Rexroth, applications from third parties or apps they have produced themselves. ctrlX AUTOMATION users can access a broad portfolio of applications and download them easily via the App Store. Third-party vendors can offer their own apps via ctrlX World.

For example, apps can be downloaded for the digitization trends in mechanical engineering: applications for the implementation of AI, digital twin or simulation solutions for process optimization in production and much more. "The use of technologies such as digital twins and simulations for development and commissioning, as well as for optimization and efficiency improvement will continue to grow. Our customers will find both the appropriate apps and the corresponding hardware and software for all these requirements on our platform," says Steffen Winkler.





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#### **Basic Information Bosch Rexroth**

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components, customized system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, more than 29,600 associates generated sales revenue of around 5.2 billion euros in 2020.

#### **Basic Information Bosch**

The Bosch Group is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020). The company generated sales of 71.5 billion euros in 2020. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first guarter of 2020. The basis for the company's future growth is its innovative strength. At 129 locations across the globe, Bosch employs some 73,000 associates in research and development, of which nearly 34,000 are software engineers.

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