Press release

Start of the 2021/2022 training year: Bosch education campaign for Industry 4.0

Global apprenticeship and professional development curricula for Industry 4.0 with new courses and role profiles

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- Bosch is developing new Industry 4.0 certificate courses for nationwide and international education programs.
- The company is opening up new academy locations to train and develop Industry 4.0 experts.
- Bosch is introducing new Industry 4.0 role profiles for associates at its roughly 240 plants.

Stuttgart, Germany – Bosch is continuing its Industry 4.0 education campaign. “Because Industry 4.0 strengthens the competitiveness of manufacturing sites, it helps safeguard jobs,” says Rolf Najork, the member of the Bosch board of management responsible for industrial technology. At the start of the 2021/2022 training year, Bosch will be inaugurating a new Industry 4.0 training center in Stuttgart-Feuerbach and one at the Bosch Rexroth Customer and Innovation Center in Ulm. New certificate courses initiated by Bosch, such as Industrial Manager of Digital Transformation, will also start in September. After the pilot phase, curricula that Bosch helped develop will be exported internationally to train people as Industry 4.0 specialists and more. In total, Bosch offers more than 100 external training courses for Industry 4.0, which are open to associates and interested parties from other companies. “Our some 240 plants worldwide keep us at the cutting edge. We draw on our experience and develop concepts to make workers fit for Industry 4.0,” says Filiz Albrecht, Bosch board of management member and director of industrial relations at Robert Bosch GmbH. Over the past five years, Bosch has invested more than one billion euros in qualifying and further training its associates. The company is now introducing newly designed Industry 4.0 roles across its plants.

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Skilled workers are the key to Industry 4.0

Connected industry is becoming a reality. Almost two-thirds of all German companies have now integrated Industry 4.0 applications into their manufacturing operations – three years ago, it was just half (source: Bitkom, 2021). Yet obstacles remain: according to the industry association Bitkom, 55 percent of companies lack Industry 4.0 specialists, and 52 percent feel overwhelmed by the complexity of the subject. Bosch is working to counteract this.

"Bosch is a pioneer in Industry 4.0. By sharing our knowledge and experience, we help companies successfully implement this modern form of production," Najork says. Through academies from Bosch Rexroth and Bosch Connected Industry, the company offers an extensive apprenticeship and professional development program for Industry 4.0. Parts of this program are also offered by Bosch partners. For example, the course leading to qualification as an Industry 4.0 specialist, which Bosch helped design, can be completed at chambers of industry and commerce throughout Germany.

And thanks to German chambers of commerce outside Germany, this "homegrown" Industry 4.0 curriculum is now becoming the international standard as well: from Slovenia and the Czech Republic to Malaysia, from Singapore to Colombia and Peru, companies are training their workers according to the German model. "Skilled workers are the key to Industry 4.0, and vital for competitiveness. Any company wishing to become and stay successful has to train its people," Najork says. In addition to training formats, Bosch is developing full-scale training equipment that covers robot programming, augmented reality, app technology, RFID, and manufacturing execution systems. These "Industry 4.0 mini-factories" will be used at vocational schools and universities as well as in company training centers. In addition, Bosch is opening its own factory gates and offering Industry 4.0 tours at several locations.

Bosch is developing new role profiles for Industry 4.0

Bosch started digitalizing its own plants in 2012. Some 85 percent of all parts production and assembly lines in Bosch plants worldwide feature connectivity, so they can automatically capture digital machine-based performance data such as cycle times, malfunctions, or reject parts. "Nearly every one of our plants has connected applications in use, and we continue to systematically train our associates for Industry 4.0," Albrecht says. Bosch offers around 360 different courses on digitalization and on Industry 4.0 in particular – from apps, videos, and online seminars to traditional on-site training. Role profiles specially developed for Industry 4.0 are currently being introduced in plants worldwide. In the future, each Bosch plant will have a permanent Industry 4.0 team consisting of a coordinator plus IT specialists for infrastructure, hardware, and processes. The teams will be rounded off by data analysts and data scientists who process

production results to make them understandable and also identify problems early on with the help of machine learning. “We offer the appropriate courses for each new role. After all, you have to understand the connected world before you can shape it,” Albrecht says.

Additional information:

Fact sheet: Bosch readies workers for Industry 4.0

Press release: Ten years of Industry 4.0: Bosch sales reach 4 billion euros

Press photos: #9f6049ab, #352492, #1848400, #f7728fe5, #1361004, #3ebf3bb9

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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 quarter 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.

The company was set up in Stuttgart in 1886 by Robert Bosch (1861–1942) as “Workshop for Precision Mechanics and Electrical Engineering.” The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-four percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The remaining shares are held by Robert Bosch GmbH and by a corporation owned by the Bosch family. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust.

Additional information is available online at www.bosch.com, www.iot.bosch.com, www.bosch-press.com, https://twitter.com/BoschPress