



## The Bosch plant in Feuerbach – where tradition meets high-tech

October 2020

Feuerbach, in Germany, is home to Bosch's biggest, as well as oldest, location worldwide. It was established by Robert Bosch himself in 1909, and is home to a Bosch plant that has been in existence for more than a century. In other words, it has a rich history. At the same time, it also has a very bright future – not least because the plant has kept pace with progress and is now profiting from the benefits of Industry 4.0 in the areas of manufacturing, maintenance, transport, and monitoring. For example, with a network of over 550 items of connected machinery throughout the plant, the condition of individual production systems can be monitored via a graphic display showing their current operating status. Equipped with this knowledge, plant engineers can intervene at a first sign of a problem, thereby reducing machinery downtime and increasing output.

At the same time, the plant also benefits in the field of logistics, where seamless connectivity has substantially enhanced processes and brought greater transparency. For example, a smart supermarket system with put-to-light technology automates the management of inventory and simplifies sorting in a materials store that is located close to the production line. All parts removed are recorded by the inventory management system, and replacement orders automatically dispatched. The resulting transportation is undertaken by digitalized milk runs or fully autonomous ActiveShuttles.

Alongside the extensive deployment of software-based solutions, the Feuerbach plant is also driving forward the development of human-machine interaction. This includes the use of APAS, an automatic production assistant that works hand in hand with human operatives without the need for a protective fence. In other words, Industry 4.0 is changing the face of manufacturing and, with it, the nature of manufacturing jobs. Feuerbach has been quick to respond to this trend. In spring 2018, skilled workers from the plant commenced training for the new, nationwide qualification for Industry 4.0 specialists established by the Chamber of Commerce and Industry (IHK).

In addition, in its role at Industry 4.0 lead plant, Feuerbach is doing pioneering work on 5G for the entire Bosch manufacturing network with its approximately 250 plants. For this purpose, Bosch has applied for and received a 5G license to build a private campus network. The set up of the network is planned in 2020.

## General information

- ▶ **Plant name** Feuerbach Plant
- ▶ **Established** 1909
- ▶ **Surface area** approx. 109,100 m<sup>2</sup>
- ▶ **Workforce** approx. 3,000
- ▶ **Products** High-pressure pumps and components for exhaust-gas treatment
- ▶ **Core competencies** Lead plant functions, digitalization/Industry 4.0, carbon coating, contact measurement, Bainitic hardening
- ▶ **Division** Powertrain Solutions

## Facts and figures: Industry 4.0 in Feuerbach

- ▶ Over 550 items of connected machinery
- ▶ 10 percent reduction in cycle times
- ▶ Over 50 percent reduction in administrative overheads for production management due to introduction of the Active Cockpit interactive communication platform
- ▶ Over 50 percent reduction in energy requirements (as per January 2019 compared to 2007), also as a result of smart connectivity for diverse data sources