

Interstandox

The car factory of the future



How will cars be built in the future? One thing is clear: The car factory of the future will make extensive use of digital technologies. The use of virtual reality will enable employees - many hundreds of kilometres apart - to work together. The digital tracking and analysis of individual work steps will allow accurate production planning.

Volkswagen's production relies on close networking between the Group's individual brands, which include Audi, Seat and Porsche. Through the use of digital technologies and virtual reality (VR), "man, brand and machine" will be intelligently networked in the future, according to Holger Heyn, Head of Future Technologies Production at VW.

Virtual reality facilitates collaboration

At Volkswagen's conference centre in Braunschweig, the possibilities of virtual reality are already being tested. Employees exchange ideas with their colleagues, visit remote locations virtually and learn from each other. Each movement of their virtual journey can be followed on a monitor displaying a factory floor. This will soon open the doors to international cooperation between the individual factories - VW has 120 locations worldwide.



Production will be digitalized in the future and connected to other production facilities in the global production network (Photo: Volkswagen AG)



Digital laying of the foundation stone of "Factory 56" at the Mercedes-Benz Sindelfingen plant: Markus Schäfer, Member of the Mercedes-Benz Cars Divisional Board, Production and Supply Chain (Photo: Daimler AG)

The increasing digitalization of production facilities, Heyn promises, will also provide advantages in terms of competitiveness and future viability. New installations can already be planned on a computer so that individual work facilities such as the paint shop, final assembly and the use of robots are optimally matched to one another.

Daimler relies on digital production

Daimler, too, will use modern technologies of the future in its "Factory 56", which owes its 56 number to that on the site plan. The 220,000 square metre site in Sindelfingen is expected to produce cars, high-specification and luxury class electric cars, robo-taxis and the new-generation S-Class from the start of 2020. At the same time, "Factory 56" is digitalized in line with Industry 4.0 and is connected to other production facilities in the global production network. Driverless transport systems (also known as Automated Guided Vehicles (AGVs)) are used during assembly. In the future, the finished vehicles will drive automatically from the conveyor belt to the loading station. Individual components can be tracked digitally and linked to the corresponding vehicle.

Energy efficiency and sustainability

The topic of "energy" plays an important role in planning, both at VW and Daimler: VW uses robots to save energy. The intelligent placement of 30,000 robots across the Group has given the manufacturer annual energy savings of 30 percent. Daimler is focusing on the use of renewable energy in Factory 56. A photovoltaic system on the roof will supply the factory with green electricity, saving 5,000 MWh of electricity per year. Water consumption, waste production and CO2 emissions will also be significantly reduced.



The "Factory 56" construction site in Sindelfingen (Photo: Daimler AG)

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