

CASE STUDY

INDUSTRY 4.0 FOR THE BATHROOM AND KITCHEN



Problem – Challenge

Taps have been manufactured in Unterkulm for over a century. Today, Franke Water Systems KWC exports products to over fifty countries and regularly takes home design awards for its high-quality products. However, the company is also faced with the challenge that customer demands are constantly increasing, with customers now wanting more than just a simple tap. “Today’s kitchens are not only a place to cook but also a living space, which means the tap has become an accessory that has its own special role to play,” comments Andreas Adam from KWC. With this in mind, the company wants to bring new taps onto the market faster. To do this, more flexibility is required in production. With funding by the Commission for Technology and Innovation (KTI), KWC and FHNW started a research project.

Solution

By fully automating the production process, it should be possible to reduce the size of the series run to a single tap. “With a smaller series run, we can react faster and the goods are back in circulation quicker,” says engineer Andreas Adam, who is responsible for launching new products at KWC. As part of a research project, the grinding and polishing process was modelled, simulated and validated. The grinding and polishing of the taps is a key step in the manufacturing process. Originally carried out by hand by experienced specialists, this step is now completed by industrial robots. The crux of the problem is that the robots have to be reprogrammed for each tap, during which time the system is at a standstill and cannot produce any more items. Based on the research work carried out at the FHNW, it was possible for this set-up time to be reduced by around 30 per cent. “This is an enormous improvement,” stresses Andreas Adam.

