

THE FUTURE IS NOW

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SCHAEFFLER

A SITE TO SEE

How Oliver Jung, Chief Operating Officer of the Schaeffler Group, is building the factory of the future.

by MAREN EITEL and CHRISTOPH BAUER

Herzogenaurach is a town in northern Bavaria that would hardly figure prominently in books for its geography alone. Yet it boasts the headquarters of Schaeffler AG, as well as those of the world-famous sporting goods companies Adidas and Puma. Schaeffler has a worldwide reputation too, albeit in a different discipline—the top league of automotive and industrial suppliers. Rolling and plain bearings are among its most successful products, along with engine components and clutch systems.

Oliver Jung (55) is a mechanical engineer and the member of the Schaeffler Executive Board responsible for production, logistics, and purchasing. Every time he enters his office, the first thing he sees is quite a large graphic on

the wall. Measuring two by four meters, it is entitled *The Factory for Tomorrow*. One might add that it displays a fair amount of artistic license. Is this what the next Schaeffler factory will look like? “Well, it’s not exactly a construction plan,” says Jung. But that’s not what he’s using it for. Day after day, this artful depiction of a production site gives him new inspiration for innovation—for the work at Schaeffler factories in the future.

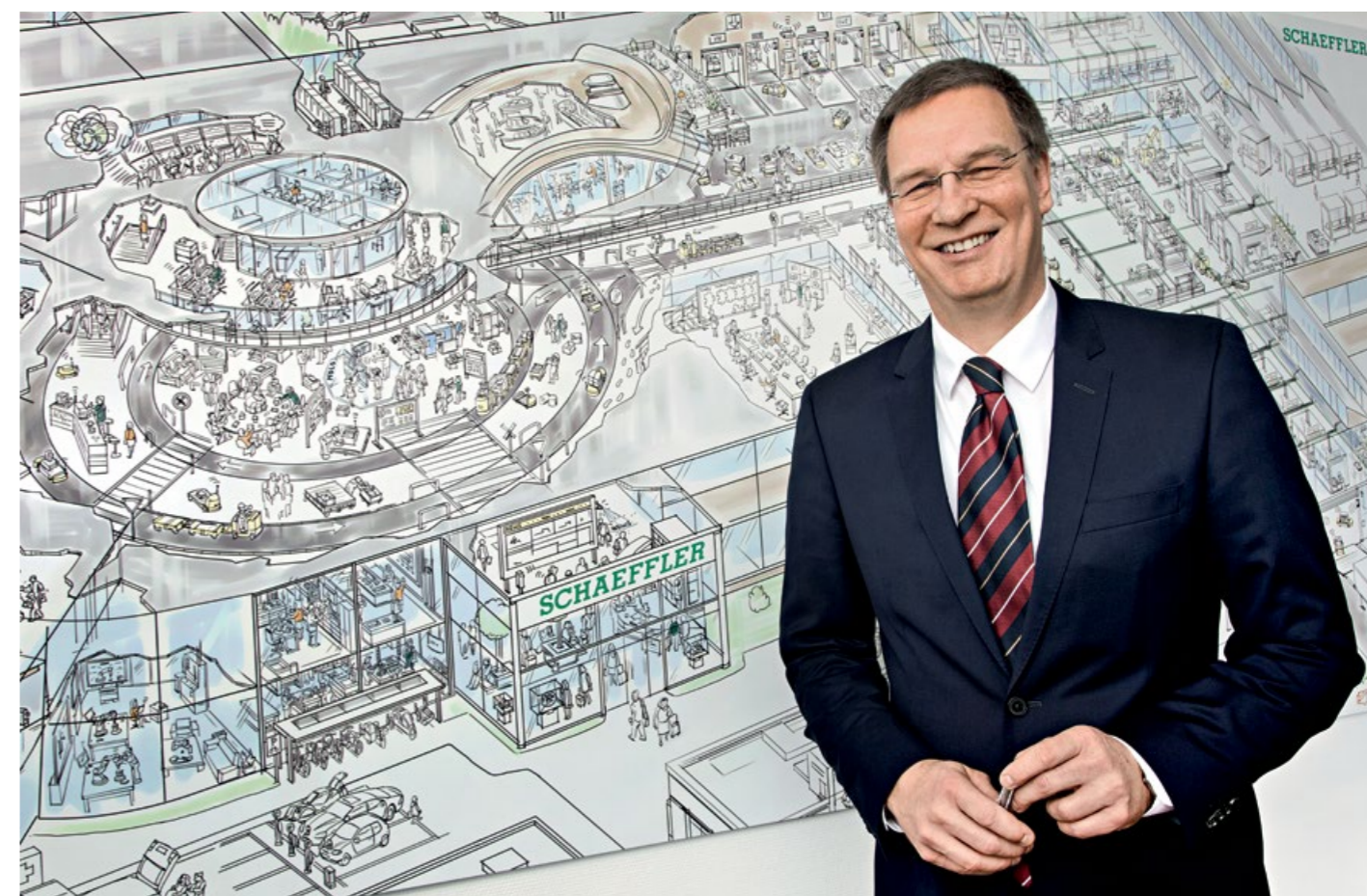
The Schaeffler Group opens one or two new production sites somewhere in the world every year. It currently has a total of 73. “It’s routine for us, we’re experts at it,” says Jung. Each factory is based on a clear vision, and concrete plans are drawn up five years in advance. “But it’s not always clear what a factory should look like five years before we build it,”

he adds. To develop this vision, Jung commissioned the Porsche consultants and gave them an unusual set of instructions—not to think too much about immediate profitability. “We’ve already done a lot with Porsche Consulting to strengthen our production and improve our quality, costs, and scheduling. But for this project, the first thing we have to do is widen our scope.” Jung therefore set a deliberately overambitious goal: a factory that produces more energy than it consumes, and cleans the air in the process. “The formulation is a little over the top, that’s true. But it describes the direction we want to take.”

There are many reasons behind Schaeffler’s desire to change its factories. The company wants to do more than help preserve the environment by means of energy efficiency and air purification. Megatrends like digitization and electrification are changing the products it will be offering in the future. Demographic shifts and increasing urbanization are changing employees’ ideas about what makes an attractive place of work. And innovations don’t exactly fall from the sky. They only arise under the right conditions. All of these factors have very naturally led to Schaeffler developing a vision for its production facilities of the future. “Our factories are the places where we generate value,” says Jung. “They are the backbone of our production system, and that’s why we’re doing our utmost to have strong production sites.”

Nobody knows exactly what requirements a factory of the future might have to meet. This means that flexibility is more important than ever. “We have to build factories that can adapt to differing lengths of the value chain,” explains Jung. When making its rolling bearings, Schaeffler produces everything itself from the steel strip to the finished item. But for its electrified products, purchased parts are playing a greater role. That increases the demands placed on logistics. However, the Schaeffler Group has a lot of experience in shifting production among different sites. The company carries out more than a hundred shift projects a year.

To become even more flexible in the future, the plan is to make the factories highly standardized. Is this a contradiction in terms? Not



A modular structure for flexible production facilities, sufficient space for all employees to communicate and exchange ideas, and attractive work stations: Schaeffler employees and Porsche consultants have worked together to develop more than 300 individual ideas for their “Factory for Tomorrow”—and incorporate them into an overall concept.

at all. The key is to take a modular approach. “Plug and produce” is the name of the game. Machines should be able to fit into different environments on a “Tetris principle,” and be immediately able to work. Their dimensions and technical parameters therefore have to meet certain standards.

A current example: Schaeffler is developing a universal production line for all types of rolling bearings. But that’s not all. If a rolling bearing factory needs to make a completely different product one day, nothing should hinder the conversion process. So the plans for utility systems, such as the energy supply, also have to allow for their possible removal.

And then there’s another matter, namely, the “pleasant working environment”—which, as

production specialist Jung readily admits, is not a topic that comes easily to him. But he is very interested in making factories more appealing in general. “We don’t just need to make our shop floors more attractive than they are right now, we also need to improve our communications,” he says. “Production has to take place in physical proximity to all the indirect departments, and be closely linked with them.” This transforms a factory into a place where knowledge is exchanged and innovations are developed. Schaeffler has known for decades that systematic simultaneous engineering is what brings forth the best innovations. Jung is also convinced that the most efficient approach is to have close ties between product development and production. “We’ve all been socialized in our careers to make a strict division between blue- and

white-collar workers. But I doubt that’s the right way to proceed in the future.”

That division has already been erased in the artful depiction of a production site on Jung’s wall. It and other innovations in the graphic are being implemented one by one. “In fact, most of them will be put into place the next time we build a factory,” notes Jung. A new company campus under construction in China comes very close to this ideal depiction. A recently opened factory in the Czech Republic already contains many of its elements. And individual solutions can be retrofitted at other plants. Site by site, Schaeffler is working on the factory of the future—because sometimes the future arrives faster than expected. ←