

Mr. Höller, Biohort is Europe's leading producer of garden tool sheds – a very sound line of business. Why do you need to engage with Industry 4.0?

Nowadays, every manufacturing company needs to get involved in Industry 4.0, or more generally speaking, digitalization. We are currently building a new factory covering 4 hectares in Herzogsdorf in Upper Austria. While it's only 15 kilometers from our old location in Neufelden, it represents a whole new world. Of course, we also need the factory after enjoying years of steady growth and now having to ensure that we have sufficient capacity for the long term. It's a logical development. But we wish to – or rather, we need to – tread new paths with this new factory. We need to structure our production in such a way that we can meet complex market conditions – and it is very easy to underestimate the dynamics of our market. The new factory is also intended to enable our business to face the challenges of the future, and not just to scale up capacities.

What are the specific challenges and corresponding solutions?

First, the large fluctuations in sales. Sales can vary by a factor of five between weak and strong months. The fact that the new plant will be able to keep pace with these fluctuations is a huge benefit and, at least for us, a blueprint of how we need to think about production in future. And it's of course only possible with a digital approach. To begin with, we need data, which, incidentally, we've been collecting for years anyway. We also need software capable of analyzing the complex relationships and interdependencies between the data. We've had this for about a year and a half. What we're doing here, ultimately, is setting up a digital twin: a real-life modulation of our production and the relevant framework conditions. This allows us to implement a completely new quality of management and planning compared with traditional approaches.

How complex does data management need to be in order to enable a digital twin?

Essentially, a cyber-physical production system (CPPS) lives from and through data – and in a dimension that is really huge. We therefore realized right from the start that setting up the processing of existing and constantly newly generated data was crucial. Our simulation software now has access to historic and current data from our ERP, CAD and MES systems, and integrates them into analytical models, enabling various scenarios to be simulated. On this basis, the digital twin **can validate decisions for initial investments or even propose them.**

You will always need human experience and intuition as a corrective

A longer version of the interview can be found at www.roi-international.com

THAT'S STRATEGIC INTELLIGENCE

TOOL SHED MANUFACTURER BIOHORT IS WORKING WITH A DIGITAL TWIN TO BRING ABOUT THE FUTURE

When will the digital twin be so far advanced that it no longer needs human input?

I don't think that's a realistic scenario. At the end of the day, software that operates in a purely rational manner doesn't have enough intuition for the living system that production is. You will always need human experience and intuition as a corrective. Digital twins help us to prevent disruptions in production and massively boost our analytical capacities. This represents huge progress. Instead of speculating about when systems are likely to act independently, we prefer to tackle the question of how we can ensure that employees can grow with technological progress, as otherwise you won't achieve sustainability of change.

- 1 Garden tool sheds 4.0
- 2 Real-life modulation of the production
- 3 Limits for digital twins



Biohort is the market leader in Europe for storage solutions made from metal for garden and leisure. With 250 employees and sales of EUR 47.5 million (2016), the company, which is located in Neufelden, Austria, produces garden sheds, boxes and equipment lockers.

www.biohort.com