**SHORT INTERVIEW**

**Big Data Opens Up New Business Models**

**Three questions to Thomas Bauernhansl, Fraunhofer IPA**

*Three questions to Professor Thomas Bauernhansl, Director of the Fraunhofer Institute for Manufacturing Engineering and Automation (IPA) in Stuttgart and of the University of Stuttgart’s Institute of Industrial Manufacturing and Management (IFF)*

Q: Professor Bauernhansl, what data-based business models can help stand against international competition?

A: Manufacturers of production technology in Germany have recourse above all to business models offering *everything as a service,* or XaaS for short. These are subscription-based promises to deliver added-value custom solutions combining industrial services with physical and digital elements. The greater the data transparency, the more readily customers accept this. Tailored solutions can be provided over the whole value chain, and customer loyalty deepened by means of new payment models (e.g. *Pay Per Part* or *Pay Per Productivity*) and the associated shifts in the transfer of responsibilities. This type of business model may be expected to grow on saturated markets as well, thanks to cross- and upselling, and the new offers for added value promote differentiation in the global arena.

Q: How can data-based business models contribute towards making industrial production more transparent and strengthening supply chains?

A: Data-based business models create transparency in supply chains, facilitating the early detection and elimination of malfunctions, for instance by means of remote services. Smart algorithms reduce waste by maximizing the utilization of production resources. When targeting e.g. a reduced CO2 footprint, smart algorithms can be applied, for instance, to adjust production planning to the availability of renewable energies.

Q: Does Germany’s industry have a cutting edge in industrial production, according to data-based business models in international comparisons, specifically with respect to the USA and providers in the Far East?

A: Where service-oriented business models are concerned, we in Germany still maintain an edge over the Far East and the USA thanks to our deep understanding of our customers, our exceptionally high engineering expertise, our creativity, and our skills in developing solutions. The best proof is furnished by the many hidden champions in Germany and their rapidly growing service portfolios of innovative promises for the creation of value. Initiatives like Gaia-X, Catena-X, or, more recently, Manufacturing-X are flanking measures towards maintaining the competitive edge. At the moment, we can still enjoy this edge, but we can feel the international competition breathing down our necks – what counts here are rates of implementation and courage to try out new things!

The interview was conducted by Daniel Schauber, technical journalist in Mannheim.

**Three questions** **to Maximilian Rolle, Trumpf**

*Three questions to Maximilian Rolle, Product Manager Pay Per Part at Trumpf SE + Co. KG*

Q: Mr. Rolle, your business model *Pay Per Part* lets customers pay not only for the machine, but for the parts they actually complete on it. How does that work specifically?

A: Trumpf’s *Pay Per Part* allows customers to pay solely for their use of the fully automated laser systems from our TruLaser Center 7030 series. Although the installation itself is sited in the customer’s production plant, it is remote-monitored and controlled from the Trumpf Remote Control Center in Neukirch. Trumpf experts also offer their support in programming and configuring the machine. In the end the customer pays for the completed parts a price guaranteed in advance. This business model benefits customers in that they can leave the machine running in three-shift mode without having to recruit or deploy additional personnel. In the event of a malfunction or downtime, Trumpf takes immediate action. This maximizes the machine’s utilized capacity and raises productivity. In addition, Trumpf experts are capable of extracting the maximum from the fully automated laser systems. And the efficiency of production climbs even more.

Q: What other digital business models are currently enjoying particularly strong demand from production technology customers?

A: When faced with digital business models, many customers initially prove reserved. However, a good market response has been observed to services helping our customers raise efficiency and productivity. *Pay Per Part* too is meeting with growing interest. We may assume that the number of users will continue to grow.

Q: Digital business models for the production sector would benefit from a cloud platform offering the best possible data protection. What’s the state of things in *Manufacturing-X*?

A: The subject of data security is of huge importance to Trumpf. As is generally known, today’s cloud solutions offer the best possible data protection. The Trumpf data usage agreement ensures that the user shares only the relevant data agreed on. This provides additional protection. This helps us create the conditions necessary for our customers to decide for themselves on the data they provide to Trumpf when they use our digital models. Manufacturing-X may possibly prove an initiative for safeguarding data ownership and may lead over the medium term to a new industrial standard.

The interview was conducted by Daniel Schauber, technical journalist in Mannheim.