

Expert Lists the Best Tips for the Smart Factory

Why Stand-Alone Solutions Are Not Enough for Successful Digitalization Efforts

Companies only gain revenues and profits if they rigorously think through their digital transformation. Jürgen Pfeifer, expert in automation technology at WAGO, explains what actually matters in an interview about strategies and the use of technology.

You have previously stated that, “Digitalization has always been part of technology.” What do you mean by that?

Jürgen Pfeifer: Let’s look back at the 70s. Computer-aided technologies were already supporting skilled laborers back then. In the metal processing industry, machines were added 50 years ago that used computers to replace manual labor in automatically controlling machine tools. Jump forward to the 80s, when digital operating panels facilitated everyday work for technicians and the skilled trades. Orders were processed using punch cards, and digitally evaluated using magnetic cards. Over time, industry and the internet grew closer together. It has become standard for every individual machine to be able to communicate with the cloud, and bidirectional communication capabilities are increasing. Industrial production dovetails with modern information and communication technology. Over the course of the transformation, we are now arriving at the “Industrial Internet of Things” (IIoT).

What does “IIoT” mean precisely?

Pfeifer: IIoT is the acronym for the “Industrial Internet of Things”. IIoT concentrates on the use of the internet among things in the production and industrial environments. It includes the digital transformation of industrial manufacturing processes; thus, it concerns industrial processes and sequences, and the increasing networking of devices, machines, people, and sensors.

How can companies profit from IIoT?

When we look into the concept of IIoT, we consider questions that relate to protection and other successful corporate developments in a digital and global world. These include: How can we reduce costs in production? How can operational efficiency be increased? How can companies accelerate processes in manufacturing and production? and how can new, forward-looking business models be incorporated in practice?

Today, every single machine has different levels, technologies, and systems. When in use, they collect a lot of important data across the entire manufacturing process. These are digitally transmitted to the cloud and can be aggregated and evaluated there. The data and the knowledge that we obtain from every individual machine forms a consolidated base for analysis and a solid foundation for production planning. This represents enormous gains and opportunities for the company.

There is no opportunity without risk, right?

Pfeifer: One of the decisive factors for success is the interaction of actual processes with the digital world. In this context, cloud-based integration solutions promote greater flexibility in manufacturing processes, particularly in industrial use. They allow efficient use of production-related data and simplify cross-site networking of global communication structures.

What is the current state of things in industry?

Pfeifer: The “Internet of Things” (IoT) is currently a very popular topic. In the industrial context, we are currently seeing different approaches and ideas, which mostly rest on a purely technical approach and start from a technical point of view. An essential part is often missing, and this is the relationship with the business aspect. As in, “How does this investment benefit me?”

What should companies pay particular attention to?

Pfeifer: The digital transformation includes all essential core fields: sales, logistics, personnel, finance, production and CRM. There are already some good IoT solutions on the market for some aspects. However, these are often implemented as silos, or stand alone solutions, which means that they usually lack a connection to the higher-level business process. In addition, media discontinuities are still a problem, so that the information has to be transferred manually from one system into another. This substantially limits the effectiveness and the integration of business processes, and also increases possibilities for human fallibility.

In addition to the acquisition of valuable raw data in sufficient quantities, it is also important for companies to process the data to make it useful. That is to say, it is vital to gain information from the machine-generated data that is relevant to the business, and which can then be used for production planning and corporate decisions.

How can a company overcome silo solutions?

There are solutions on the market for technically overcoming silos. Current business software and different IT systems in a company can be linked to one another with the aid of integration platforms. This is true regardless of whether the business software is located in the cloud or whether it's on-premises software. WAGO Kontakttechnik and our cooperation partner, Magic Software, are happy to demonstrate to interested parties, without obligation, how integration platforms and smart IoT solutions can contribute to overcoming silos, and increasing efficiency and quality – in particular while taking the required system availabilities into account.

What piece of advice would you like to give our readers?

Pfeifer: There is no mistake, we are all taking the path to digitalization. Companies can gain added value and utility from it; in addition, they should not be afraid that IoT projects will develop into endless monstrosities. Digitalization is not accomplished with a single project; instead, it represents a continuous process of development, which can take place over

numerous, individual steps. It is important to simply get started, beginning with something small.

Mr. Pfeifer, thank you for the conversation.

Interview: Claudia Pulfer, Magic Software Enterprises (Germany) GmbH



Jürgen Pfeifer has worked for WAGO Kontakttechnik GmbH & Co. KG since 2001 as a specialist in automation products, and is an expert in the field of the “Industrial Internet of Things” (IIoT).

Jürgen Pfeifer, Automation Expert at WAGO