OPEN INDUSTRY 4.0
ALLIANCE

Digitization during COVID-19: Open Industry 4.0 Alliance intensively pushes the digitization of intralogistics

The Asset Administration Shell in the Industry 4.0 platform as a reference framework is specifically supplemented by the intralogistics group with automatable device features

- **The alliance strives for manufacturer-neutral automation that is highly agile for the user without much IT effort**
- **The "open source" principle with ready-made software code allows cost-effective digitisation even for medium-sized companies**

Reinach, Switzerland, June 17, 2020 – In view of the coronavirus (COVID-19) pandemic, companies in the Working Group Intralogistics in the [Open Industry 4.0 Alliance](#) expect significant simplifications in the automation of warehouses and supply chains. The group is working intensively on the connection of sensors and the standardization of data flow within the [Asset Administration Shell](#). The group's work progress is in contrast to the picture of the state of digitisation in Germany drawn up by the Gartner/Cisco "Digital Readiness" index. The Open Industry 4.0 Alliance has grown from 13 companies to 55 within a single year. The Alliance's Working Group Intralogistics brings together globally active companies such as CAPTRON Electronic, Dunkermotoren, Fujitsu, Gebhardt Fördertechnik, the KUKA Group, Pepperl + Fuchs, SALT Solutions and SAP.

The report on the Wirtschaftswoche [blog](#) about the Digital Readiness Index 2020 states that although Germany has improved in 3 out of 7 categories in an international comparison, it has fallen from 6th to 14th place in relation to the index for 2019. It is estimated other industrial nations are set to make much faster progress.

"It may well be that German companies are progressing somewhat more slowly on average. But there are also systemic reasons for this, as the focus has so far been on individual cases or so-called lighthouse projects. Today, it's all about real scaling through the automatic implementation of all possible applications in the factories and warehouses of industry," explains Nils Herzberg, spokesman for the Executive Board of the Open Industry 4.0 Alliance and Global Head Strategic Partnerships for Digital Supply Chain and Industry 4.0 at SAP. "We will develop some use cases by November 2020 and hopefully demonstrate them in practice at the SPS".

"We expect that as a result of the coronavirus pandemic, localization in supply chains will become increasingly important. This is in line with the general trend towards more regional, but also more rationalized warehouses. Our goal is to virtualize warehouses and thus create transparency. Being able to deliver locally and at the same time having a global overview of availabilities and flows of goods will make all the difference," says Dr. Christian Liedtke, member of the Working Group Intralogistics of the Open Industry 4.0 Alliance Head of Strategic Alliances at KUKA.

The intralogistics market is seen as the key to the digitalization of the industry. It will show how the economy can readjust despite the pandemic. The analysts from [Logistics IQ](#) expect the global warehouse automation market to more than double from 13 billion US dollars to 27 billion US dollars by 2025, with an annual growth rate of 11.7 percent. A reduction of 65 percent in operating costs and 85 percent in floor space is expected.

The Working Group Intralogistics also focuses on the customer perspective of automated systems operators. As an "implementation alliance", for example, the Working Group is busy actively implementing existing standards on two levels within the Asset Administration Shell , a reference model for Industry 4.0 components. This is the automatic translation of machine attributes and the provision of software services (cloud services) in the Asset Administration Shell . An automatic translation of device attributes could be the message about the battery condition of a storage device to the warehouse management system. Today, the attributes are stored as digital twins in the cloud or (partially) on the robot itself. What a machine can do like a robot is programmed as a service. The Open Industry 4.0 Alliance ensures that all warehouse robots understand each other and different warehouse management systems and that their services are automatically available within minutes of commissioning.

Vendor neutrality and strong agility are advantages, especially for medium-sized companies. One example is the commissioning of used robots from different manufacturers. Another example is the scalability during Black Friday events, where a rented storage robot should be available to the entire system within minutes.

What individual members of the Working Group Intralogistics say:

"Today, department stores and warehouses have to be built and rebuilt faster. New devices and sensors register themselves automatically and can be configured and maintained very easily or automatically. The result is not only higher quality and efficiency, but also lower costs due to faster time to market and more flexible logistics processes", explains Philip Bellm, Managing Director of CAPTRON.

"The aim is to show integrated concepts for the intralogistics sector. By this we mean a coherent architecture and networking from the individual engine to business process control. We want to create an intelligent ecosystem in which all components simply interact with each other. It is particularly important to us here that this is not only worked out on a theoretical level, but that we, together with our partners, can show by means of practical examples how our drives can be embedded in such an ecosystem," says Uwe Lorenz, Managing Director at Dunkermotoren.

"Fujitsu is contributing expertise in various areas. These include the digitalization of material flow processes, but also the solution of complex optimization problems in intralogistics, which we master, for example, with Digital Annealing, a transitional solution to quantum computing," explains Jörn Nitschmann, Head of Manufacturing & Automotive Central Europe at Fujitsu. "In the Open Industry 4.0 Alliance, cooperation within the framework of an ecosystem that covers all important levels of intralogistics is of particular importance to us, and in which the participants jointly design reference solutions and create prototypes".

 "We are entering new dimensions in automation. For example, some members are already working on the development of predictive maintenance models and the interpretation of data using artificial intelligence and machine learning. The exchange within the working group on such topics has an enormous added value and significantly accelerates the associated developments and processes", says Marco Gebhardt, Managing Director of the GEBHARDT Intralogistics Group.

"It was not only the COVID-19 pandemic that taught us that an agile and flexible response to changing market conditions is one of the key challenges in modern intralogistics. Economic operation of a logistics center that meets these requirements is only possible with end-to-end digitalization and a high degree of automation. For this reason, it is important for us to be able to fall back on an intelligent combination of optimally suitable elements for our installations. Harmonisation in the digital world is of decisive importance here in order to enable smooth operation. This requires ecosystems in which individual solutions can be coordinated and implemented in advance using open interfaces and consistent, semantic protocols", says Dr. Christian Liedtke, Head of Strategic Alliances at KUKA.

"Industry 4.0 promises completely transparent data streams in real time from the shop floor into the new, data-driven business models. To achieve this, the data from the shop floor's digital sensors, actuators and machines must be able to flow beyond the usual boundaries of the corporate firewall, without having to agree on or even program safety concepts and solutions each time," says Dr. Gunther Kegel, CEO of Pepperl + Fuchs.

"We are contributing our skills as process and architecture consultants, software developers and implementation partners. Interesting for the user are our expertise and our successful implementations in partnership with Autostore, Knapp, Gebhardt or Swisslog. All members of the working group are joining forces to further use and develop existing standards so that simple harmonization between all these parties is possible," says Maximilian Brandl, CEO of SALT Solutions AG.

"The working group offers SAP the opportunity to show how the transformation to an Intelligent Enterprise can be achieved by using real-world use cases," says Franz Hero, Head of Digital Supply Chain & Industry 4.0 at SAP. "We expect this group to add value for users and providers. Users of intralogistics solutions will have more choice and it will be easier for suppliers of intralogistics products to integrate with other products as well as with cloud applications such as SAP extended Warehouse Management".

The approach of the Open Industry 4.0 Alliance

The Open Industry 4.0 Alliance sees itself as an implementation community that wants to use existing standards, such as the industrial communication standard OPC UA, and combine them in practice. Automation silos are to be broken down and the focus is on the digitalisation and transformation of brownfield plants, i.e. existing plants with components that also partly date back to before IIoT.

The members of the alliance list more than 155 products and services which they intend to redesign in the coming years in accordance with the interoperability guidelines of the Open Industry 4.0 Alliance. The first compatible products and services will be presented in November, probably at SPS 2020.

Alphabetical list of members of the Working Group Intralogistics:

CAPTRON Electronic, Dunkermotoren, Fujitsu, GEBHARDT, KUKA Swisslog, Pepperl + Fuchs, SALT Solutions und SAP.

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About the Open Industry 4.0 Alliance
The Open Industry 4.0 Alliance acts as a partnership of leading European industrial companies that pragmatically participate in the implementation of cross-vendor industry 4.0 solutions and services for manufacturing facilities and automated warehouses. The alliance was launched in April 2019. The association is headquartered in Reinach, Switzerland.

Further information can be found at https://www.openindustry4.com/