Strategic partnership: Industrial Digital Twin Association and Open Industry 4.0 Alliance agree on close cooperation

First cooperation projects show positive effects of synergy for the digitization of industry

Frankfurt am Main, Germany / Reinach, Switzerland, January 12, 2022 – *The Industrial Digital Twin Association e.V. (IDTA) and the Open Industry 4.0 Alliance (OI4) have signed a memorandum of understanding for close cooperation. The goal of the cooperation is to further advance digitization in the industry based on the Asset Administration Shell (AAS). Initial cooperation projects show how the two organizations complement each other.*

Both IDTA and OI4 pursue the vision that different industrial systems, such as manufacturing machines and factory software solutions, interact seamlessly in a digital environment – in other words, that they are interoperable. While IDTA, with its focus on definitions, provides the basic technology for this in the form of specifications and standardized sub-models, OI4 builds on these definitions. As an implementation alliance with its 92 members, OI4 carries out implementation projects within the open ecosystem in order to contribute to end-to-end networking from the machine to the cloud.

The ifm group of companies (ifm) is a member of both organizations and uses the complementary competences for a specific application in the food and beverage sector: "The cooperation of IDTA and OI4 is an important step to fully exploit the potentials for the fourth industrial revolution. We are already benefiting from the regular exchange between the standardization and implementation levels of IDTA and OI4 in one of our projects, which focuses on the topic of condition monitoring," says Bastian Schmick, connectivity expert at ifm.

Further joint development of the digital twin

The Asset Administration Shell (AAS) – also known as the management shell – forms the basis for the digital twin and thus connects the physical world of machines on the store floor with the world of their digital images. As part of the cooperation, IDTA and OI4 are working to further develop the Digital Twin so that it can be applied as an open and interoperable solution.

The AAS infrastructure enables this open exchange on both a technical and semantic level. The established standards create an open ecosystem suitable for industrial greenfield and brownfield facilities. "At ifm, we strongly believe in the huge potential of openness and collaboration and are therefore happy to participate in the Open Industry 4.0 Alliance and IDTA," explains Kai Bürger, Product Manager at ifm.

The effects of synergy: no interoperable concepts without standardized specifications

With its members from the electrical industry, mechanical engineering and the software industry, the IDTA is resolutely driving forward the AAS development process with the aim of making it available to every company internationally. The technological basis of the Open Industry 4.0 Alliance is an open architecture based on RAMI 4.0, which is built on the four building blocks of Device Connectivity, Edge, Operator Cloud and Cloud Central – as well as a corresponding service offering.

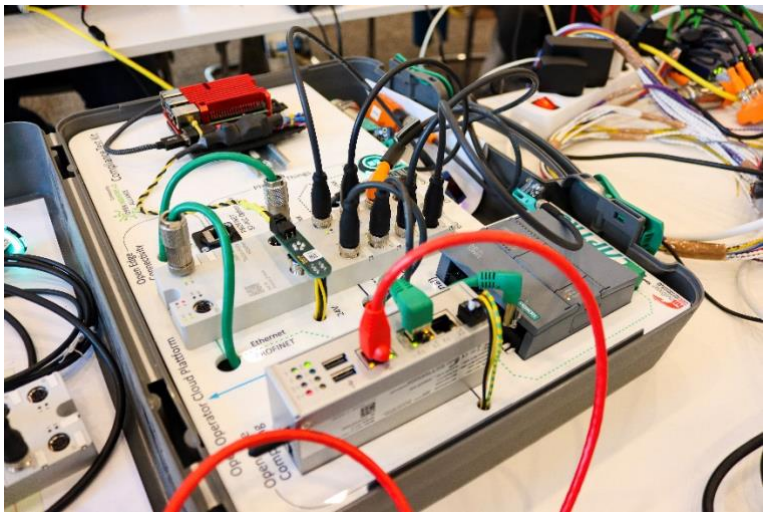
One of the most important features of the architecture is Automatic Asset Onboarding through all four architecture layers using open standard interfaces based on AAS. "With this, we are relying on an Industry 4.0 key technology in OI4," says Michael Riester, Senior Enterprise Architect at Endress + Hauser Process Solutions GmbH, which is also a member of both organizations. "Complementing this,

IDTA provides the necessary specifications. It harmonizes sub-models and defines processes, criteria and tools for the digital twin as a basis for ensuring interoperability in multi-vendor scenarios. Thus, the IDTA is of central importance for the success of the interoperable concepts being developed by OI4." The resulting synergy will benefit the networks of both cooperation partners.

Presentation of first cooperation projects at virtual in-house exhibition of OI4

Similar to the project at ifm, there are already 17 other pilot projects from the ranks of the member companies of both organizations, such as the connection of sensors from different manufacturers to the cloud platform of Endress+Hauser, which enables fully automated onboarding of plants thanks to manufacturer-independent AAS. They will show how the concepts of IDTA and OI4 complement each other in practice and can be implemented with technical ease. On January 26 and 27, they will be presented to a broad audience from industry at a virtual in-house exhibition of the Open Industry 4.0 Alliance under the motto of "Connect to Open Implementation".

Picture:



IDTA and OI4 cooperate to drive industrial connectivity even faster. © Open Industry 4.0 Alliance

About IDTA:

The Industrial Digital Twin Association e.V. (IDTA) is an alliance for the active shaping of the Digital Twin. As a coordinator around the topic of digital twins, IDTA offers users from all industrial sectors a platform to advance technology development based on the Asset Administration Shell (AAS). The goal is to establish the digital twin as an open source technology for the interoperability of components and to further develop it together with industry. For further information visit https://industrialdigitaltwin.org/

About Open Industry 4.0 Alliance:

The Open Industry 4.0 Alliance acts as a partnership association of leading industrial companies that pragmatically participate in the implementation of cross-vendor Industry 4.0 solutions and services for manufacturing plants and automated warehouses. In industry and technology working groups, industry experts develop use cases and implement them technically based on the OI4 reference

architecture. These solutions, along with implementation guides, are shared in the community and made available outside the Alliance. The Alliance was launched in April 2019. The seat of the association is Reinach, Switzerland. For further information visit https://openindustry4.com/

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