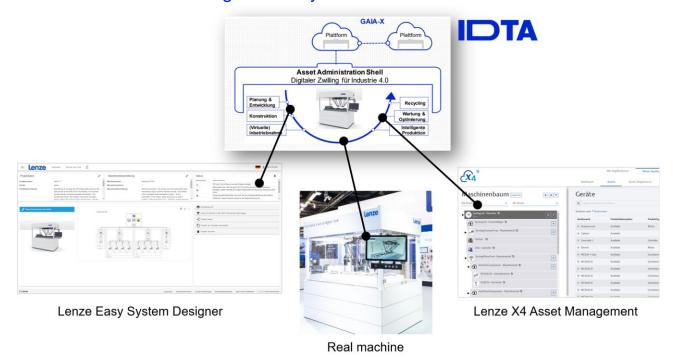
Factsheet Asset Management System



FROM SYSTEM DESIGN TO ASSET MANAGEMENT

- Automatic mapping of the machine components with various contents and the assembly structure
- All content on components and assemblies can be integrated into the asset management solution regardless of manufacturer
- State variables and process data of the machine solution included in the AAS image
- Modeling, testing and visualization of a machine solution from the first moment digitally
- Extensibility of the concept integration of components from other manufacturers, use for different target systems

The application enables an automatic, updateable integration of all contents of the machine components and assemblies into an asset management solution. It is shown that all content can be made available via the AAS without additional effort in the development phase of a machine if suitable tools are used from the beginning.

AAS for the generation of a standardized description and import into a target system

With the AAS, a manufacturer-independent digital twin can be created, which allows components from different manufacturers to be integrated and, on the other hand, the content to be made available for different asset management solutions. Currently, there are implementations with a solution from Lenze and one from Hegla new Technology. The concept allows the integration of further tools for the development and operation of machines via the AAS.

The digital twin as the central hub of a machine

The existence of a company- and technology-neutral information management for machine solutions based on standardized models with the AAS, enables an automatic integration of diverse components and solutions or assemblies into an overall model. It enables a standardized connection of tools or even services, for engineering and enables the automatic generation of content in target systems, such as an asset management solution for machines or production equipment.

An AAS-based digital twin is generated from the system modeling tool, Lenze Easy System Designer. The AAS of the components were modeled with the AAS Package Explorer. Partial content was generated using a Lenze Product Information Service.

Nameplate data, technical data, operating data, documentation and engineering models, e.g. CAD files, were integrated.

The digital twin was realized as a server in a research project with the help of the BaSyX opensource project. It can be accessed via a Rest API interface and returns a json file containing all information about the requested object. With the help of this interface, the asset management solution fetches the necessary descriptions and can translate them into its own format.

