

Contact us Andreas Faath  
Telephone +49 69 66 03 1495  
e-mail andreas.faath@vdma.org  
Date March 25, 2025

## Data spaces become reality - first implementation for small and medium-sized enterprises

- **VDMA and T-Systems bring standardized machine data into the Manufacturing-X data ecosystem**
- **CO<sub>2</sub> footprint of products from the supply chain measurable live from four continents**
- **Demonstrator at Hannover Messe**

**Frankfurt, March 25, 2025** - VDMA and T-Systems, together with the umati (universal machine technology interface) initiative, are presenting the first global Manufacturing-X solution with open standards for machine data at this year's Hannover Messe. The demonstrator shows the CO<sub>2</sub> footprint of various products in a data space. Plants in Asia, Brazil, Germany, Spain and the USA share live data from their production processes and Manufacturing-X ready equipment. The solution calculates the product carbon footprint live and documents it in a digital product passport. The participants always retain sovereignty over their machinery and production process data.

For the first time, small and medium-sized enterprises, in particular, can experience an implementation of the "X for Machinery" architecture developed by the VDMA and use it as a blueprint for their own simple access to data spaces. The "X for Machinery" architecture describes how a selection of internationally established standards and technologies can be used and combined to realize access to data spaces. The architecture is based on the rules of the International Data Space Association (IDSA) and uses OPC UA and Companion Specifications like OPC UA for Machinery (OPC 40001) for communication. This ensures data sovereignty and creates a trustworthy ecosystem in which standardized production information can be shared and used.

The demonstrator realizes the FX-Port concept and brings standardized machine data from four continents into the data space using the umati.app platform and a data space connector. The data space infrastructure, the authentication of new participants for the data space and the connector, which is tailored to the special requirements of machine data, are provided and operated by T-Systems.

"Data spaces are the digital foundation for Europe's future," explains Christine Knackfuß-Nikolic, Chief Technology Officer at T-Systems. "They are not only the key to a secure and sovereign data economy, but also the catalyst for groundbreaking innovations. By providing high-quality, interoperable data, we are creating the foundation for an AI-driven economy that strengthens Europe's global competitiveness and secures our digital independence. Data spaces are our opportunity to unleash the untapped power of 80 percent of data and generate an additional €270 billion in GDP by 2028. They are nothing less than the fuel for Europe's digital renaissance."

"Digitalization, interoperability and networking are crucial for our industry and the key to this is the data space. Small and medium-sized enterprises have the opportunity to develop new, data-based business models with additional service offerings and implement efficient AI applications," emphasizes Hartmut Rauen, Deputy Managing Director of the VDMA.

The solution involves international partners such as the Federation of Industries of Minas Gerais (FIEMG), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), CESMII, TRIMEK S.A. part of Innovalia Metrology, the Institute for Production Management, Technology and Machine Tools (PTW) at the Technical University of Darmstadt and interop4X.

**Experience the data space live at the Hannover Messe at umati in Hall 9, Stand F25.**

#### **Further information:**

umati is an initiative of mechanical engineering companies and their customers who want to promote and use open, standardized interfaces based on the OPC UA (Open Platform Communications Unified Architecture) communication architecture.

#### **Deutsche Telekom**

Corporate Communications  
Albert Hold

Phone: +49 228 181 - 49494

E-Mail: [media@telekom.de](mailto:media@telekom.de)

Do you have any questions? Andreas Faath, Head of the Machine Information Interoperability (MII) department at VDMA, phone +49 69 6603-1495, e-mail [andreas.faath@vdma.org](mailto:andreas.faath@vdma.org) , will be happy to answer them.

The VDMA represents 3600 German and European mechanical and plant engineering companies. The industry stands for innovation, export orientation and medium-sized businesses. The companies employ a total of around 3 million people in the EU-27, more than 1.2 million of them in Germany alone. This makes mechanical and plant engineering the largest employer among the capital goods industries, both in the EU-27 and in Germany. It accounts for an estimated turnover of around 910 billion euros in the European Union. Around 80 percent of the machines sold in the EU come from a production facility in the internal market.