



UdZ

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The Data-driven Enterprise

FIR international

FIR Global Benchmark

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**Aachener Digital-Architecture-Management
With the Right Approach into the Digital Future**

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**Concept for an International Co-creation Platform
in the Furniture Sector**

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The next generation of wireless connectivity, 5G, is becoming a hot topic in industry. However, there are still many myths and misconceptions surrounding the new wireless technology. By enabling machine-based communications, 5G's capabilities go far beyond mobile broadband.

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BaSys4Dash

The aim of the 'BaSys4Dash' research project is to develop a partially automated, dashboard-based decision support system for two user companies. The BaSys 4.0 software system provides the basis for the partially automated evaluation of processes and the visualization of information on dashboards that is tailored to the situation and application at hand.

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MarryIT

The aim of the research project is to support SMEs by providing a methodically guided as-is analysis and evaluation of the current IT-OT integration status.

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EDI-Multiply

The aim of this sub-project is to achieve a multiplier effect in terms of potential business connections.

// SPECTRUM – THINK TANK

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EDI-Multiply:

Connect Thousands of Business Partners Across Disparate B2B Platforms

'EDI-Multiply' is a joint project between *FIR at RWTH Aachen University* and the *Center Integrated Business Applications* in the *Smart Logistics Cluster*, located on *RWTH Aachen Campus*. It contributes to the EU's 'MARKET4.0' project, which is based on the open source SCSN communication standard. The aim of this sub-project is to achieve a multiplier effect in terms of potential business connections. Instead of connecting individual companies directly to the MARKET4.0 platform, this approach addresses the integration of entire platforms and ERP systems. By connecting the consortium partner *myOpenFactory Software GmbH* alone, for example, more than 1,300 companies in the manufacturing industry will be able to exchange data electronically with a large number of potential business partners. MARKET4.0 provides an e-commerce platform for the sale and provision of complex industrial plants and equipment. >



Connecting a company, especially a small or medium-sized manufacturing company, to a platform such as MARKET4.0 increases its visibility among a large number of potential business partners. Compared to other platforms, MARKET4.0, which was developed in a European research project, does not only make the company itself or parts of its product portfolio visible, but also its production capacities and capabilities. The challenge in connecting a company to such a platform is that this involves high risks and expenses that not every company is prepared to invest. However, an indirect connection via already existing platform connections or via a company's ERP system is much easier to realize, provided that the providers of platforms and ERP systems are willing and technically able to offer such a connection. In order to promote such a solution, the onboarding process must be designed to be simple and attractive. This is achieved in the 'EDI-Multiply' project by providing concepts and suitable templates via an open source solution. In addition, as a specific use case, *myOpenFactory Software GmbH*, including its customer *BT Brammer B.V. / RUBIX*, will be connected to MARKET4.0.

The Goal of MARKET4.0: "Plug & Produce"

MARKET4.0 is a platform ecosystem that connects suppliers of production plants and equipment, manufacturing companies, and software service providers. The project's

guiding principle "Plug & Produce" captures in particular the idea of manufacturing on demand or production equipment as a service. Today, there are three specialized marketplaces for different production equipment: metal processing, processing of plastics and composites, and processing of high-tech components, such as electronics. In addition to typical e-commerce functionalities, such as invoice dispatch, payment processing, delivery bills, etc., the platform provides the opportunity to perform additional services (e.g. simulation processes) via software service providers. The platform is based on the open communication standard Smart Connected Supplier Network (SCSN). This standard models essential B2B processes via dedicated UBL messages, with the data transfer itself taking place in the International Data Space (IDS). In turn, the peer-to-peer communication defined by the IDS eliminates the need to send raw data via third parties.

EDI-Multiply Expands Platform

To support the widespread use and growth of MARKET4.0, the EDI-Multiply project creates the conditions to indirectly connect companies to the platform via their ERP systems and existing platform connections. Instead of confronting

¹ Mehr über das übergeordnete EU-Projekt; s. market40.eu
(Link zuletzt geprüft: 04.05.2021)

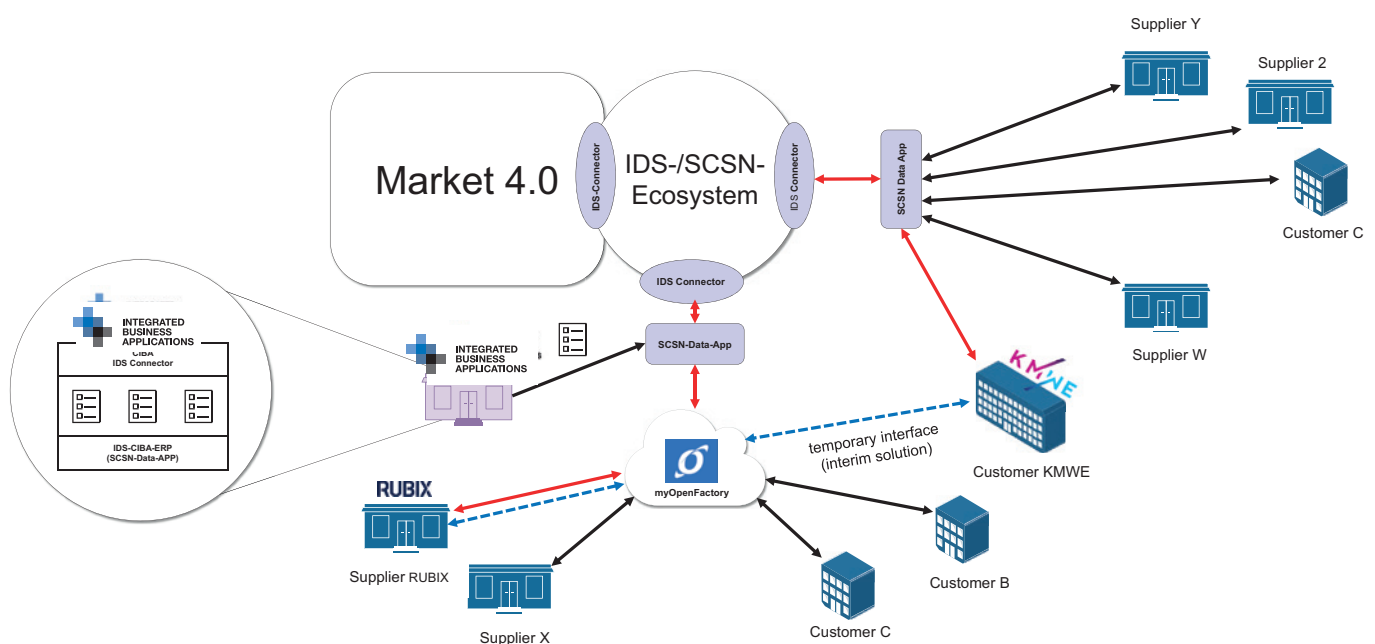


Figure 1: Architecture of the connection of BT Brammer B.V. to its business partner via *myOpenFactory Software GmbH* and the SCSN ecosystem (own illustration)



businesses with the decision of whether to join a new platform, the solutions provided by the EDI-Multiply project allow them to make use of existing systems and platforms. In order to make it more attractive for the providers of ERP systems or other platforms to offer connection to the MARKET4.0 platform and to speed up this process, the project also sets out to develop concepts and standardized templates that will be implemented in a specific use case.

In a first step, ERP systems, communication standards, and B2B processes were selected on the basis of various factors such as representativeness and currency and analyzed with regard to their compatibility with B2B processes in SCSN, from which a generic concept including templates for the connectors is being developed. *FIR at RWTH Aachen University*, the *Center Integrated Business Applications*, and *myOpenFactory Software GmbH* are working hand in hand on this project. The subsequent connection of the two platforms myOpenFactory and MARKET4.0 does not only result in the expected immediate increase in potential business

connections, but has already been defined to be the future communication channel between the consortium partner *BT Brammer B.V. / RUBIX* and one of its long-term business partners (see Figure 1, red arrows). This business partner is already part of the SCSN ecosystem today, so that the current solution will be replaced (see Figure 1, blue arrows) and a significant reduction in operational efforts achieved. To ensure that this transition works seamlessly, an extensive requirements analysis for this connection was carried out during the conception phase of EDI-Multiply.

In summary, the project goals of promoting the widespread use and expansion of the MARKET4.0 platform are passively enabled by the faster connection achieved through the use of open source integration concepts and their templates. Furthermore, by actively connecting the myOpenFactory platform, the MARKET4.0 platform is indirectly expanded by more than 1,300 additional participants. Immediate benefits include the connection of consortium partner *BT Brammer B.V.*, whose operational efforts will be reduced as a result.

Project title: EDI-Multiply

Funding/Promoters: Europäische Union (EU); Europäische Kommission

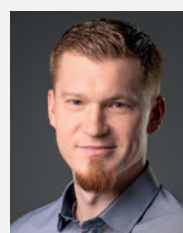
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