Innovative Service Products for Availability-Oriented Business Models

The BMBF Research Project InnoServPro (FKZ: 01FJ15009)

Today, availability-oriented business models for capital goods can only be implemented poorly despite increasing demand, as they involve a high degree of uncertainty and high risk. Excessive costs due to a lack of transparency about the condition of a machine are not economically viable for the supplier and the customer. The reason for this is missing information about the product during operation. By means of Internet-based use and intelligent analysis of field and operating data of communicating products, however, these uncertainties can be eliminated and the risk can be better estimated. Industrie 4.0 and IT technologies available today offer new opportunities to realize innovations in the service sector and thus to be able to offer availability-oriented business models and exploit their potential.

The BMBF research project *InnoServPro* addresses this topic. The overall goal is the development of innovative service products for the entire extended value-added network for the realization of individualized, availability-oriented business models for capital goods through product service systems (PSS). The basis for this are intelligent, communication-capable components that provide real-time data on the operation of capital goods, the intelligent analysis and integration of this operational data with master data and data from the service provision to a consistent database as well as the management and the exchange of all data via an innovative information management system and a suitable communication platform. In particular, the self-initiated and organized maintenance of machines opens up the need for research into models, methods and IT technologies in product development.

The Institute for Virtual Product Engineering (VPE) presents first project results, including modern development methods and IT technologies (such as Model-Based Systems Engineering, System Lifecycle Management, Service Lifecycle Engineering, Digital Twin) as components of an innovative information management system for the realization of PSS. The innovative IT solutions developed in the project are explained using virtual demonstrators.

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