An ecosystem for intelligent production

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IFW | Using Artificial Intelligence in production faster and easier: That is the vision of IIP-Ecosphere. Per Schreiber, research associate at the Institute of Production Engineering and Machine Tools (IFW), is responsible for coordinating this multifaceted project.

An ecosystem in industrial production? What may sound strange at first glance has the potential to revolutionize industrial production fundamentally. For some time now, artificial intelligence (AI) has been considered a key technology in this respect. Thanks to AI, the production of the future is supposed to be flexible, efficient and self-optimizing. Just like a natural ecosystem. However, despite the progress made in AI methods, industry faces a huge implementation problem. Often, not only the technical prerequisites and know-how are lacking, but also the appropriate business models and the legal framework.

Interdisciplinary cooperation

The team of the joint project IIP-Ecosphere tackles these challenges with an AI ecosystem. The AI Ecosystem enables companies to jointly develop AI solutions and exchange knowledge and data. "We are not only working on new AI solutions, but are also directly involved in thinking about simple usability and transfer into practice," says Per Schreiber. He is a staff member at IFW and coordinates the IIP-Ecosphere project. At IFW he previously headed the department "Process Monitoring and Control", from which he brings a lot of experience into the project.

Also, innovation is not a new topic to Per Schreiber. During his studies of mechanical engineering at the Technical University of Munich and the KTH in

Stockholm he already dealt with innovative business models and open innovation, i.e. the strategic opening of innovation processes. "What inspires me about IIP-Ecosphere is that all these topics have to work together," says Schreiber. "In this project we are successful if we generate something new from the approaches of the different disciplines."

Project budget: 12 million euros

IIP-Ecosphere is one of the winners of the innovation competition "Artificial Intelligence as a driver for economically relevant ecosystems". In the innovation competition, the Federal Ministry for Economic Affairs and Energy (BMWi) promotes outstanding approaches for new forms of AI-based platform economy.

The L3S Research Centre and the IFW of Leibniz University Hannover (LUH) have developed a convincing concept for the expansion of intelligent production – together with 18 partners from science and industry, including the University of Hildesheim, the Friedrich-Alexander University Erlangen-Nuremberg, Volkswagen, Siemens, DMG Mori and Sennheiser. In total, more than 40 scientists, engineers and data scientists work together in the IIP-Ecosphere team. The total budget of the project is around 12 million euros.

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