

Solutions for Production Directly From Research: Machine Connectivity, Digital Twin, Detailed Planning

- FORCAM ENISCO emphasizes its pioneering role with further innovations
- New app AC4DC: Robust data streams through machine connection with micro-PCs
- New app DS4EX: Efficient production through detailed planning for the highest demands

Böblingen/Ravensburg, December 2024 - Smart factory specialist FORCAM ENISCO has once again underpinned its position as an innovative provider of smart manufacturing in 2024.

The experts from the Baden-Württemberg-based group of companies have developed two new applications for digital production directly from research projects: the [AC4DC](#) app, a completely new technological solution for the digital networking of heterogeneous machines, and the [DS4EX](#) solution for flexible production planning in factories, known as detailed planning. Further new products such as a digital twin for shop floor analytics in heterogeneous machine parks are planned.

Oliver Hoffmann, Managing Director of FORCAM ENISCO and responsible for sales and marketing: “The new products show that we are developing findings from publicly funded research projects directly for practical application in factories in a tried-and-tested manner.”

[AC4DC - robust data streams through new digital machine data collection \(MDC\)](#)

[AC4DC](#) is a result of the partnership within the Emuldan research project funded by the German Federal Ministry for Economic Affairs and Climate Protection (BMWK). The acronym [AC4DC](#) stands for ‘Asset Connectivity for Data Collection’. Dr Ullrich Ochs, Managing Director of FORCAM ENISCO and responsible for technology: “Machine data collection from heterogeneous systems remains a supreme discipline. [AC4DC](#) enables connectivity 4.0: the new generation of software also runs on industrial mini-PCs, i.e. decentralized and close to the machine. Users can use the software centrally worldwide via the cloud.” [Find out more](#)

With [AC4DC](#), companies can network their machines faster and operate them in a more fail-safe manner than before. The technology enables robust data streams from a wide variety of signals. Werner Gruber, Managing Director of FORCAM ENISCO and responsible for finance, emphasizes the monetary benefits of [AC4DC](#): “Short implementation and scaling phases of machine data acquisition enable a quick return on investment. This is particularly important for companies with international factory networks and plants that often cost hundreds of millions of euros.”

FORCAM ENISCO was recognized as the winner of the ‘Allianz Industrie 4.0 Award Baden-Württemberg’ competition in October for the [AC4DC](#) solution. [Learn more](#)

New DS4EX app enables flexible detailed planning for last-minute changes

FORCAM ENISCO is also launching a new solution for digital detailed planning in 2025. The application is called **DS4EX**. The abbreviation stands for 'Detailed Scheduling for Execution'. **DS4EX** is a result of the partnership in the InTeleMat research project, which is funded by the German Federal Ministry of Education and Research (BMBF).

Background: Factories today must be able to react extremely flexibly and quickly to a wide range of market influences. "**DS4EX** offers this flexibility to ensure that orders run smoothly even when changes are made at short notice," explains Dr Alexander Schließmann, Lead Value Engineer at FORCAM ENISCO. "**DS4EX** provides production planners with a powerful tool that allows them to react flexibly and efficiently to all requirements - be it unforeseen market changes, bottlenecks or short-term staff shortages." [Learn more](#)

FORCAM ENISCO - a regular partner in publicly funded research projects

FORCAM ENISCO is a regular partner in publicly funded research and development projects in order to research the production of tomorrow and incorporate trends into innovative products at an early stage. An overview:

- [DiCES - Circular economy with data-based value creation](#)

DiCES stands for 'Digital Transformation of Circular Economy for Industrial Sustainability'. The aim of the research project is to develop an innovative, data-based value creation system that seamlessly integrates the circular economy into the operational business of companies.

In addition to FORCAM ENISCO, the partners in the BMWK-funded research project are: FIR e.V. at RWTH Aachen University (consortium leader), WZL Laboratory for Machine Tools and Production Engineering at RWTH Aachen University, Miele & Cie KG, All-for-One Group SE, IconPro GmbH and Klima.Metrix GmbH.

- [TwinMap - Digital twins for heterogeneous machine parks](#)

The TwinMap research project aims to optimize the interaction of heterogeneous machines and a wide variety of manufacturing processes using the example of bus production and to make the effects of new technologies predictable.

Partners in the BMWK-funded research project are beside FORCAM ENISCO: DAIMLER TRUCK Buses, German Research Centre for Artificial Intelligence (DFKI), Emden/Leer University of Applied Sciences, Institute for Automation and Communication (ifak), IPI Institute for Production and Information Technology (TTZ Sonthofen), ISG Industrielle Steuerungstechnik GmbH, RAUMTÄNZER GmbH - be expert, SimPlan Group, TRUMPF, TWT GmbH Science & Innovation, VELIT Consulting GmbH & Co. KG.

- **[InTeLeMat - Supporting SMEs in the digital transformation](#)**

How can small and medium-sized enterprises (SMEs) manage the digital transformation? The digital reorganization of production is considered a suitable way. The InTeLeMat project is developing solutions for this in the three dimensions of people, technology and organization.

In addition to FORCAM ENISCO, the partners in the BMBF-funded research project are: Fraunhofer IWU Institute for Machine Tools and Forming Technology; ATB gGmbH; Sarissa GmbH; CPT Präzisionstechnik GmbH; MOGATEC Moderne Gartentechnik GmbH.

- **[LCAMP - Europe-wide vocational training for advanced manufacturing](#)**

The European initiative LCAMP (Learner Centric Advanced Manufacturing Platform) focuses on the manufacturing of the future. The aim is to offer vocational training centers, companies and associations an international platform for knowledge development and exchange. The project is funded by the EU.

The consortium consists of 20 full partners from 10 countries. 60 associated partners from industry and education support the initiative.

- **[EMulDan - Greater energy efficiency in production](#)**

How can energy efficiency be increased in the production of precision parts made from steel materials? The EMulDan project aims to provide an answer to this question. The aim is to analyze multivalent data. The necessary technologies, sensors and software and hardware components are being developed for this purpose.

The project sponsor is Forschungszentrum Jülich GmbH. Funding is provided by the BMWK. In addition to FORCAM ENISCO, other partners are ICM - Institut Chemnitzer Maschinen- und Anlagenbau e.V. GT-Industrie-Service, ROUNDTEC GmbH, HSP Schwahlen GmbH, Wenaroll GmbH Werkzeuge und Systeme, AutoForm Engineering Deutschland GmbH, AutotechEngineering Deutschland GmbH (Gestamp), Fraunhofer-Institut für Werkzeug- und Umformtechnik, VELOMAT Messelektronik GmbH.

About FORCAM ENISCO

The FORCAM ENISCO GmbH group of companies supports medium-sized companies and corporations in sustainably securing their competitiveness through data-driven production. FORCAM ENISCO's modular MES (Manufacturing Execution System) solutions and consulting and services cover all stages of digital transformation in discrete manufacturing - from entry into the smart factory to automated control of complete production and logistics processes as well as rollouts across plant and national borders. Customers include Audi, Bizerba, Borgwarner, BWF Group, Daimler Truck Buses, IKEA, Jungheinrich, Liebherr, NMH, Siemens Energy, Swarovski Optik and Voestalpine. FORCAM and ENISCO employ around 200 people worldwide and are represented in the DACH region at the Böblingen, Heidelberg and Ravensburg sites. International branches are located in France, the USA, China and India.

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