BEIA GmbH

Company profile

www.beia.at

Experience

- BEIA GmbH is a research and development-focused SME specializing in time-critical Artificial Internet of Things (AIoT) solutions. Located in Vienna, Austria, the company boasts a team experienced in various domains, including:

- **R&D Service Innovation**: Expertise in artificial intelligence, blockchain, cloud computing, big data, and quantum security.
- **Hardware Development**: Proficiency with sensors, actuators, and IoT devices.
- **Information Technologies**: Skills in data analytics, backend systems, user interfaces, and frontend development.
- **Integration**: Seamless software and hardware integration capabilities.
- **Communication Technologies**: Knowledge in speech processing, automatic speech recognition (ASR), text-to-speech (TTS), natural language processing (NLP), natural language understanding (NLU), sentiment analysis, and emotional computing.
- **Project Management**: Experience in communication, dissemination, marketing, and overall project coordination.

Solutions

- BEIA GmbH has developed a telemetry platform comprising three modules:

1. **IoT Sensors**: Integrating sensor technologies for applications such as environmental monitoring, smart cities, energy management, and agriculture.
2. **Time-Critical Cloud Platform**: Featuring a modular architecture that enables low-cost and timely deployment.
3. **Visualization and Notification**: Customizable interfaces tailored to specific applications and customer groups.

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BEIA GmbH's mission is expressed in its slogan: **"We make Artificial Intelligence of Things (AIoT) a natural thing"**, reflecting its commitment to integrating advanced technologies into everyday applications.

Ongoing Projects

- **EDEN**: Efficient decentralized sustainable food production (FFG, April 2023 – October 2025)
- **STAR**: Sustainability Transformation: Research and Innovation Network for Quality Information, Better Sustainability Reporting Practices and Business Resilience (HORIZON MSCA, 1 January 2025- December 2028)
- **ENTA**: Encrypted Network Traffic Analysis for Cyber Security (ITEA labelled running, October 2021 - March 2025)
- **AgAPP-e**: Agriculture's digital Analyser of Production, for Phosphorus efficiency (Eureka Clusters Sustainability Call 2022 running)
- **WinDTwin** - Wind Digital Twin for cost-effective wind farm design, optimal operation and predictive maintenance (EUROGIA running)
- **USWA**: Ultra Scalable Wireless Access (Celtic labelled running)
- **SmartDelta**: Automated Quality Assurance and Optimization in Incremental Industrial Software Systems Development (ITEA labelled running)
- **CISSAN**: Collective intelligence supported by security aware nodes (Celtic labelled running)
- **i2D-MSW**: intelligence to Drive | Move-Save-Win (Celtic labelled)
- **ADVISOR** - Cooperative Missions of Autonomous Vehicle Swarms for Surveillance Tasks (ITEA Call 2023 labelled running)
- **GreenCode** - AI/ML Driven Software Optimisation to Reduce Cost and Climate Impact (ITEA Call 2023 labelled running)
- **MedGPT** - Medical GPT Revolutionizing Healthcare with Ethical AI (ITEA Call 2023 labelled)

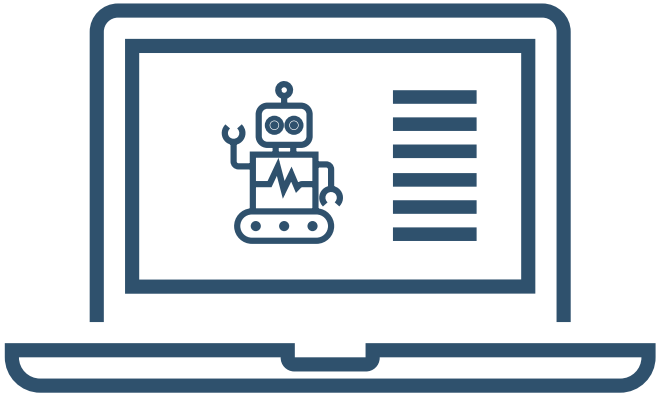
Past Projects

- **ADMA TranS4MErs**: Advanced Manufacturing assistance and training for SME Transformation (H2020 INNOSUP CSA, October 2021 - December 2024)
- **4DHydrogen:** Green Ammonia Production with 4D (Decentralization, Decarbonization, Derivation and Digitalization (EUROGIA labelled)
- **IMMINENCE**: Intelligent Management of next generation MobIle NEtworks aNd serviCEs (Celtic labelled)
- **SmartDelta**: Automated Quality Assurance and Optimization in Incremental Industrial Software Systems Development (ITEA labelled)
- **Mad@Work**: Mental Wellbeing Management and Productivity Boosting in the Workplace (ITEA labelled)
- **OMD**: Optimal Management of Demand (ITEA labelled)

ADMA: Advanced Manufacturing assistance and training for SME Transformation

- Supporting ambitious and innovative Manufacturing SMEs to become Factories of the Future embracing present ecological, digital and societal challenges
- As one of the biggest European transformation programmes, ADMA TranS4MErs offers a comprehensive and dynamic approach to digital transformation, helping companies across the continent achieve their full potential.
- ADMA TranS4MErs is re-energising the European Advanced Manufacturing (ADMA) Support Centre project's efforts to help SMEs' transformation towards next-generation factories.
- With the help of a selected cohort of SME advisors, the TranS4MErs, we will transform 1000 SMEs, our Champions, into Factories of the Future.

TranS4MErs



www.TranS4MErsxChange.eu

EDEN: Efficient decentralized sustainable food production

- project on IoT technologies which can be used to help inexperienced aquaponics operators relevant for the circular economy
- investigating the process optimization of individual plants beyond IoT, through the (digital) integration of multiple participants and the influence of such a distributed approach on established parameters of the circular economy.
- among others, we are investigating the impact of community building on the degree of circularity of aquaponic plants.
- resource cycles are closed further through new recycling possibilities for residual materials (e.g., fish waste and sedimentary deposits).

4D Hydrogen: Green Ammonia Production with 4D (Decentralization, Decarbonization, Derivation and Digitalization) Hydrogen

- Green hydrogen will be a critical enabler for the global transition to sustainable energy and net zero emissions. Also, as a hydrogen carrier, ammonia will play a significant role in the new hydrogen ecosystem.
- We have formulated our strategy in order to develop green hydrogen, which is produced by electrolysis using green electricity produced from sun.
- In this project; a pilot scale green ammonia production site will be established and also a simulation of this site will be generated.