

EU Danube Region Strategy

PA 8 LIGHTHOUSE

DIGITALIZATION, ARTIFICIAL INTELLIGENCE, METAVERSE & VIRTUAL WORLDS



EuProGigant

TU Vienna, Austria



**Steinbeis
Europa Zentrum**
Enabling Innovators to Grow



Interreg Programme
Danube Region



Co-funded by
the European Union



REPUBLIC of CROATIA
Ministry of
Economy



Baden-Württemberg
Ministry of Economic Affairs,
Labour and Tourism

Basics

Acronym: EuProGigant

Name: European Production Giganet for calamity-avoiding self-orchestration of value chain and learning ecosystems

Country: Austria, Baden-Württemberg

Scoring: 41/50

Contact Person:



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[EuProGigant - TU Vienna](#)

Key Project Data:



2022-2025



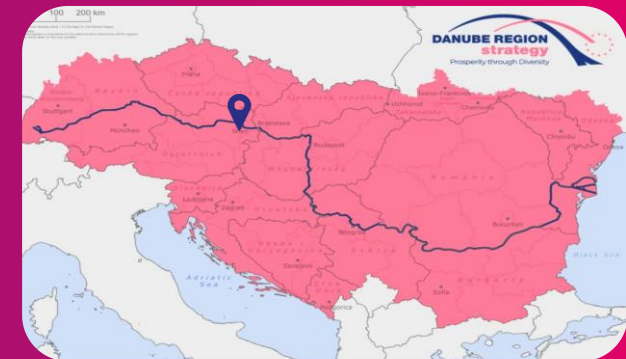
approx. 5 Mio. €

Funded by the Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and the German Federal Ministry for Economic Affairs and Climate Action (BMWK)

Project Coordinator:

Pilot Factory Industry 4.0 TU Wien

PTW TU Darmstadt



Partners

Austrian project partners

- A1 Digital International GmbH
- Concircle Österreich GmbH
- craftworks GmbH
- EIT Manufacturing East GmbH
- Pilotfabrik Industrie 4.0 TU Wien
- Plasser & Theurer GmbH
- STARK Spannsysteme GmbH
- WFL Millturn Technologies GmbH & Co. KG
- Haidlmair GmbH
- Posedio GmbH
- voestalpine High Performance Metals GmbH

German project partners

- ARBURG GmbH + Co KG
- Brinkhaus GmbH
- IGH Infotec AG
- EIT Manufacturing Central gGmbH
- PTW TU Darmstadt
- MTU Aero Engines AG
- Gebr. Heller Maschinenfabrik GmbH
- Software AG
- deltaDAO AG
- DigiCert Inc.
- SIMCON kunststofftechnische Software GmbH

About the project

The **EuProGigant** project is a research project which aims to build a **multi-location, digitally connected manufacturing ecosystem**.

- First financially supported industrial project with practical **GAIA-X** (European data infrastructure) implementation
- Will demonstrate how a highly connected manufacturing set-up can be equipped with self-orchestrating and stabilising characteristics
- Sustainable + resilient manufacturing is realized
 - with sovereign data
 - with exchange within shared data ecosystem

EuProGigant



Focus:

- Optimising the speed and flexibility of value creation
- High-frequency data collection
- Process-oriented aggregation of the collected data
- Faster value creation through self-configurable connectivity between the infrastructure ecosystem and the data ecosystem

Vision:

Create a new type of interaction in value creation and learning ecosystems



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Project scope and vision

EuProGigant is concentrated on **three research questions** and on the goal to address **four key goals** on the topic of **smart and sovereign use of data in manufacturing**.

<u>Key questions</u>	<u>Key goals</u>
How can value chains be made resilient to market changes and capable of a large number of variants?	The identification, extraction and organisation of production-relevant data
How can interdependencies between stages in the value creation process be recognised and used to increase economic efficiency?	Increasing flexibility and efficiency in production through the processing of production data (e.g. energy demand and consumption)
How can we design platforms for production systems that are both responsive and universal ?	Ensuring reliability and availability of production data
	The mapping of cross-border value chains

The companies are combining existing technologies + building a GAIA-X demonstrator in manufacturing with concrete use cases

→ **EuProGigant develops business models according to GAIA-X as best practice example for Europe**

Methodology and key activities

**Designing and implementing
data-sharing patterns that
respect GAIA-X principles of
transparency,
interoperability, and trust**

**Establishing
governance and
compliance
frameworks**

**Generating replicable
frameworks**

**Developing cross-
site demonstrators**

**Creating learning ecosystems
that enable industrial
partners to experiment**

Impact/Added value

- Technologically, EuProGigant provides a **validated reference architecture** for implementing GAIA-X in industrial contexts.
- Economically, EuProGigant **empowers European SMEs and large enterprises alike** to participate in digital value networks without ceding control of their proprietary data.
- Strategically, EuProGigant **strengthens Europe's industrial sovereignty**, reducing dependency on non-European cloud providers and advancing standards-based collaboration models.

Outcome/Conclusion

- **Validated GAIA-X Implementation:** EuProGigant successfully operationalizes GAIA-X principles in a real-world industrial setting, creating a reference architecture for federated data infrastructure in manufacturing.
- **Self-Orchestrating Ecosystem:** Demonstrators show how production networks can autonomously respond to disruptions (e.g., machine failures or supply shortages) by reallocating tasks across sites.
- **Trusted Data Spaces:** The project established secure, interoperable data-sharing frameworks that allow companies to retain control over proprietary data while collaborating across borders.
- **Economic Empowerment:** Both SMEs and large enterprises gain access to digital value networks without vendor lock-in, enhancing competitiveness and strategic autonomy.
- **Environmental dimension:** Real-time data-driven decisions lead to reductions in waste, logistics inefficiencies, and unplanned downtime, supporting sustainable production.