



This project is co-financed by the European Union
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PRESENTER FULL NAME: Öykü AKBULUT

ORGANIZATION: Ermetal Automotive

WORKSHOP NAME: Workshop#2-Twin Green and Digital Transformation Industry

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Description of the Organisation

Ermetal was founded in 1972 as Erkalıp, our die and tooling company by Fahrettin Güleener. Ermetal was founded in 1978 to use the tooling produced by Erkalıp, specializing in sheet metal forming ever since as a Tier 1 Supplier.

We opened the doors of our R&D Center in 2011. With a team of 58 in our R&D Center, we are active in international projects since 2018.

Our expertise spans from die and fixture production, welding and stamping. We aim to become a leading force in innovation, sustainability and efficiency in our relevant field.

Your Teams' Expertise

Our work is focused around forming of sheet metal automotive components including welding.



High-quality forming and manufacturing solutions for automotive industry.



Dies for shaping, including transfer and tandem dies. Fixtures for precision welding and checking. Stamping of sheet metals parts including new generation steel, RSW and arc welding.

Your Research Fields

Usage of Digital Twins and AI in production optimization, green transition and sustainable work practices.



Demonstration of next-gen stamping solutions, aiming better quality, lower downtimes, and higher formability.



Demonstration of novel welding methods, such as FSW and laser Welding.



Collaboration with all aspects of the auto industry and help leverage the full effect of electrification of automotive.



Your On-going Projects

- InnoSale (EUREKA ITEA3 Cluster)
- SynAM (HORIZON MSCA-2022)

InnoSale and Ermetal

InnoSale leverages AI to enhance sales processes for complex industrial equipment. It uses case-based reasoning for feasibility, AI-driven quotations, and deep learning with AR and 3D modeling to improve the quotation process and support sales engineers.

INNO SALE Fact Sheet

Project Title

Innovating Sales and Planning of Complex Industrial Products
Exploiting Artificial Intelligence

Starting Date

Original German consortium established in 2021 with international kick-off in 2022.

Framework

EUREKA Clusters. ITEA3 Cluster



Your On-going Projects

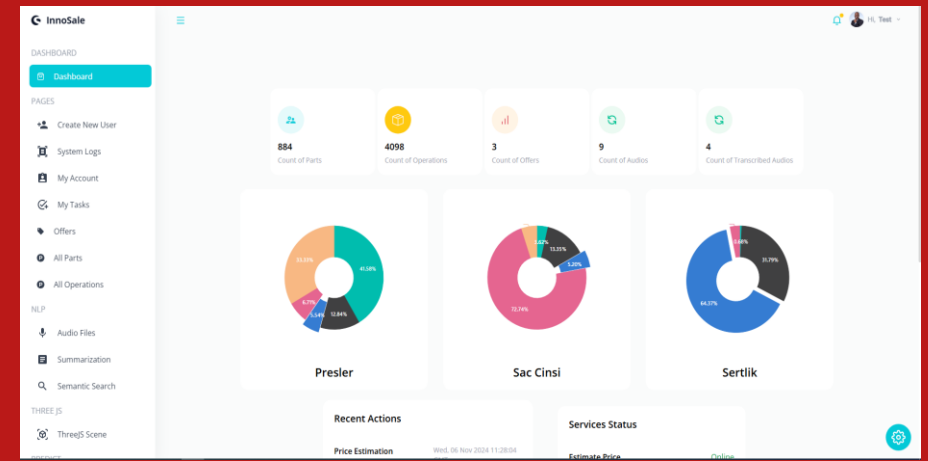
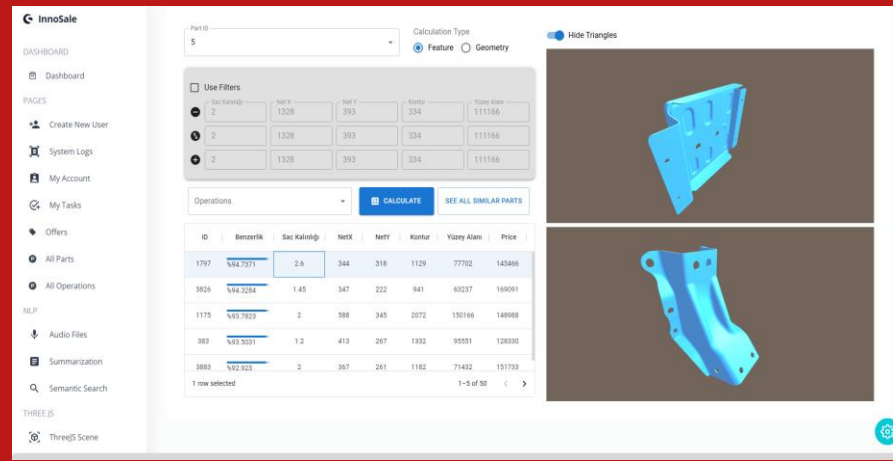
-InnoSale (EUREKA ITEA3 Cluster)

-SynAM (HORIZON MSCA-2022)

Ermetal actively participated in the InnoSale project, focusing on demonstrating of quotation components of InnoSale platform. As Ermetal is a supplier of automotive components and sheet metal dies. With our commitment to using cutting-edge technology solution and expertise in international projects, we supported the development of the AI-based InnoSale project in various ways.

•**Use Case Definition:** Ermetal identified specific scenarios where quotation of a complex industrial component is prevelant. Ermetal specified what's important during the quotation process and curated the use cases for the project.

•**Real-World Demonstration:** After the implementation, quotation experts from Ermetal demonstrated the usability of components. 3D model viewers for quotation, using AI to take shapes and sizes of parts into account helps recall previous quotations, transcription of meetings, and highlighting important takes and an ML-based pricing module was demonstrated, supporting sales engineer.



Your On-going Projects

- InnoSale (EUREKA ITEA3 Cluster)
- SynAM (HORIZON MSCA-2022)

SynAM and Ermetal

This project integrates data systems, imaging, machine learning, and modeling to optimize additive manufacturing. It advances materials like duplex steel and Mg alloys, improving surface integrity and properties. Collaborative R&I fosters Industry 4.0/5.0 adoption and accelerates researcher development.

SynAM Fact Sheet

Project Title

Integration of Advanced Experiments, Imaging and Computation for Synergistic Structure-Performance Design of Powders and Materials in Additive Manufacturing

Starting Date

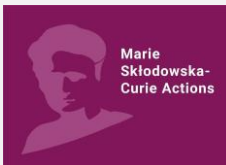
Signature by EC was completed in 2023 and the project was kicked off in 2024.

Framework

HORIZON, MSCA-2022



Funded by the Horizon 2020
Framework Programme of the
European Union



Project Partners



Project Idea

Call Topic: HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-01: Integrated approaches for remanufacturing.

Deadline Dates: 23 of September, 2025

- ☐ **Objectives:** Demonstrations in remanufacturing of automotive sheet metal parts, feasibility studies on reusing sheet metal parts to form cuttings and new parts.
- ☐ **Expected Results:** Minimizing steel usage, and reutilizing steel for certain, larger waste pieces. Therefore reducing total energy usage per part and secondary processes.

Project Idea

Call Topic: HORIZON-CL4-INDUSTRY-2025-01-TWIN-TRANSITION-05: Advanced manufacturing technologies for leadership of EU manufacturers in products for the netzero industry.

Deadline Dates: 23 of September, 2025

- ☐ **Objectives:** Studies and demonstrations in using AM in automotive in metal parts and their manufacturing with integration of such systems.
- ☐ **Expected Results:** Improving capabilities to form more complex parts, dies, and other tooling, minimizing waste by reducing subtractive manufacturing methods.

Project Idea

Call Topic: HORIZON-CL4-INDUSTRY-2025-01-MATERIALS-43: Innovative Advanced Materials (IAMs) for robust, fast curing sealants and coatings for manufacturing and final assembly.

Deadline Dates: 23 of September, 2025

- ☐ **Objectives:** Development and demonstrating of feasibility of working with newer, innovative sealants or coatings. Assessing degradation of the tooling and effects of the coating for the final products in automotive.
- ☐ **Expected Results:** Ability to form metal parts as-is, reducing the needs for operational complexity, assessments in doing so on the tooling.

Consortium – required partners

| No | Expertise | Type | Country | Role in the project |
|----|----------------------|-------|------------------------------|--|
| 01 | Automaker | OEM | Any EU or Associated Country | Design and use case requirements for remanufactured, coated or additively manufactured pieces. |
| 02 | Academic Institution | Misc. | Any EU or Associated Country | For all projects, required for AM, remufacturing or coating expertise on lower TRL levels and dissemination. |
| 04 | SW Provider | Misc. | Any EU or Associated Country | SW for remanufacturing, AM and coatings workable software for machines. |



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