Resource Efficient Materials for Additive Manufacturing



REPAM is a HORIZON EUROPE project designed to support Europe's green and digital transition.

The project aims to make additive manufacturing (AM) more resource-efficient and sustainable by improving the way raw materials are designed, produced, and recycled.

Today, the production of metal powders achieves only 30–50% efficiency, with the remaining material either used for low-value applications or remelted at a high energy cost.

REPAM addresses this challenge with a holistic approach, covering the entire value chain – from material design to production, and from use to recycling.

Key Impacts

With these innovations, REPAM targets a ***50% reduction in material losses***, a ***40% increase in production efficiency***, and ***over 50% reduction*** in greenhouse gas emissions for demonstrator components. This will strengthen Europe's competitiveness and independence in additive manufacturing.

The project focuses on three main areas ;

Material Reuse

- Powders reborn, value preserved
- Smarter reuse, stronger materials

Efficient Production

- Real-time control, higher yield
- Less energy, more output

Scrap Recycling

- From scrap to feedstock
- Waste transformed into value

Consortium Countries:



Consortium Partners:

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