



## **Aerospace and automotive waste can be turned into high-quality components for new products thanks to digital technology developed by the COMPASS project**

Steyr, January 29, 2024

The COMPASS project, a collaborative effort among 13 leading European partners, was officially launched with a kick-off meeting held in Steyr, Austria, on January 23-24, 2024.

Funded under the European Union's HORIZON EUROPE programme, COMPASS aims to revolutionize the remanufacturing of sheet metal and thermoplastic composites, significantly reusing material waste for high-quality components production, and promoting a circular economy approach in the aerospace and automotive industries.

The PROFACTOR research team, coordinator of the project, stated that: "The digital tools developed in COMPASS will make disassembly processes efficient for extracting sheet metal or panels from a decommissioned aircrafts or cars, where relevant component information will be collected and stored in the digital passport during the part's life-cycle. In addition, remanufacturing process planning software will also optimize the matching of incoming and outgoing parts for the creation of new products".

Below we present the key concepts of the project:

### **Driving Circularity through Advanced Remanufacturing**

The COMPASS project addresses the growing challenge of efficiently recycling and remanufacturing components at the end of their lifespan. By employing advanced remanufacturing techniques, COMPASS will extend the life of these components, minimizing the need for raw material extraction and reducing environmental impact of new component production.



**Co-funded by  
the European Union**

COMPASS Project is co-funded by the European Commission within the Horizon Europe Programme Views, grant number 101136940, and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.



### **A Data-Driven Approach for Enhanced Remanufacturing**

COMPASS introduces a novel data-driven approach to remanufacturing, leveraging digital tools and a comprehensive digital component passport. This passport will capture real-time information about component performance and history, enabling intelligent remanufacturing strategies.

### **Optimizing Remanufacturing Processes and Quality**

Digital tools will streamline dismantling processes, ensuring efficient extraction of sheet metal and composite panels. The passport will also facilitate the collection of relevant component data, facilitating improved quality control and optimization of remanufacturing operations.

### **Partnership for Innovation and Impact**

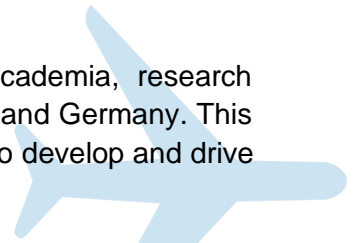
COMPASS brings together a diverse consortium of experts from academia, research institutions, and industry, representing Austria, Netherlands, Spain, Italy, and Germany. This collaboration will bring together cutting-edge technologies and expertise to develop and drive innovation in remanufacturing processes.

### **Achieving Sustainable Manufacturing for the aerospace and automotive sectors**

The COMPASS project aims to achieve a significant impact by enabling the remanufacturing of approximately 30% of sheet metal parts and thermoplastic composite panels.

The remanufacturing process will utilize end-of-life components, or production scrap, from aircraft or cars, retaining a high value in sheet metal and composite panels, rather than reprocessing them as secondary raw materials and/or sending them to landfill.

The total commercial value will be in the order of EUR 60 million per year (30,000t/year of end-of-life scrap and 14,000t/year of production scrap) for metal alloys and EUR 500 million per year for composites (10,000t/year) by 2035. This will lead to substantial resource savings and contribute to a more sustainable future for the aerospace and automotive sectors. This will lead to substantial resource savings and contribute to a more sustainable future for the aerospace and automotive sectors.



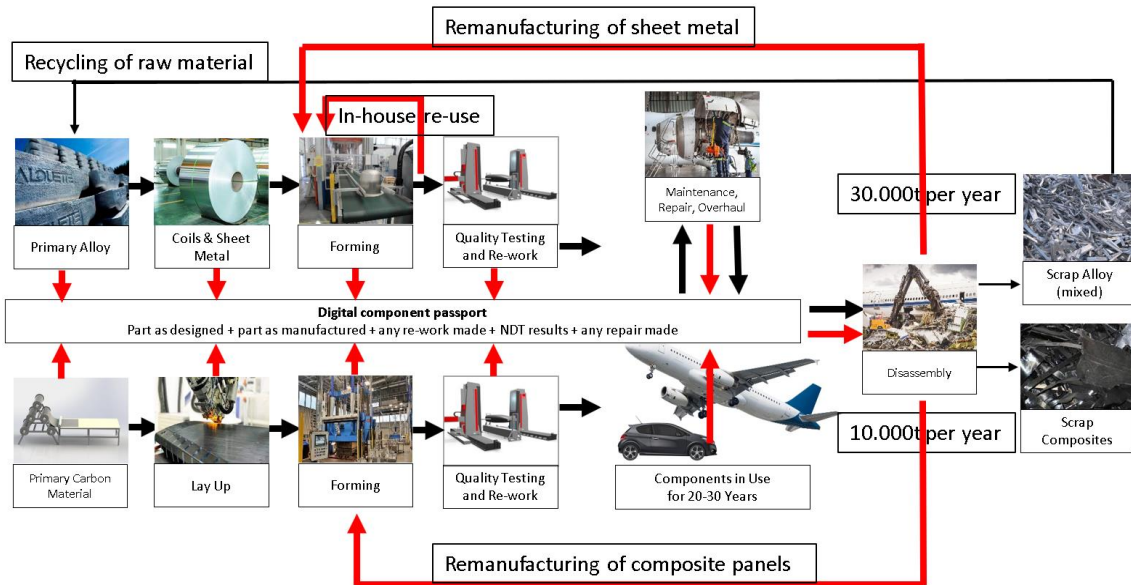


Figure COMPASS aims to create a smart remanufacturing process that uses end-of-life components, or production scraps, from aircraft or automobiles, maintaining high value in sheet metal and composite panels, rather than converting them to secondary raw materials and/or landfill.

## Project Summary

Project Title: A Data-driven remanufacturing process for sheet metal and thermoplastic composites

Project Acronym: COMPASS

Project Number: 101136940

Funding Programme Call – type of action: HORIZON-CL4-2023-TWIN-TRANSITION-01 - Innovation Actions

Project Starting Date: January 1, 2024

Project End Date: December 31, 2026

Project Duration: 36 months

Web fact sheet: <https://cordis.europa.eu/project/id/101136940>

## Partners:

PROFACTOR GMBH (Austria) – Project Coordinator

CIRCULARISE BV (Netherlands)

FACC OPERATIONS GMBH (Austria)

AIRCRAFT END-OF-LIFE SOLUTIONS BV (Netherlands)

KONINKLIJK NEDERLANDS LUCHT- EN RUIJTEVAARTCENTRUM - NLR (Netherlands)

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (Austria)

NEROSUBIANCO SRL – NSB (Italy)

MARK METALLWARENFABRIK GMBH (Austria)

FUNDACION AITIIP (Spain)

EDAG ENGINEERING GMBH (Germany)

SCHILD & PARTNER GMBH (Austria)

VOESTALPINE METAL FORMING GMBH (Austria)

LKR LEICHTMETALLKOMPETENZENTRUM RANSHOFEN GMBH (Austria)



For more information, please contact:

Denis Krajnc

Project Coordinator

Mobile: +43 (0) 664-60885-953

Email: [denis.krajnc@profactor.at](mailto:denis.krajnc@profactor.at)

Website: [www.compass-horizon.eu](http://www.compass-horizon.eu)



**Co-funded by  
the European Union**

COMPASS Project is co-funded by the European Commission within the Horizon Europe Programme Views, grant number 101136940, and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.