

CONSORTIUM



FACTS and FIGURES

Full name: Zero Emission Electric Vehicles enabled by Harmonised Circularity

Acronym: ZEvRA

Starting date: 1st January 2024

Duration: 36 months

Partners: 28 partners from 11 countries

CONTACT

Project Coordinator: Fraunhofer IWU – Daniel Nebel
zevra@iwu.fraunhofer.de

Website: www.zevraproject.eu



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ZERO EMISSION ELECTRIC VEHICLES ENABLED BY HARMONISED CIRCULARITY



ABOUT

ZEvRA's main objective is to improve the circularity of light-duty EVs throughout their entire value chain, from materials supply and manufacturing to end-of-life (EoL) processes, which aligns with the European Union's goal of achieving zero CO2e emissions by 2035, particularly in the EV value chain.

To do so, ZEvRA will develop a Design for Circularity (DfC) methodology and a circularity assessment to improve the of electric vehicles (EVs) based on the 9Rs. This methodology will be validated by developing zero emission solutions for the most important automotive materials:

- Steel
- three versions of aluminium (wrought, casting, and foam)
- thermoplastics composites (long and continuous fibre-reinforced)
- unfilled/short fibre plastics
- glass
- tyres
- Rare Earth Elements (REE).

These solutions will be supported by a set of digital tools to support the manufacturing of the use cases, the assessment of circularity, traceability, and the virtual integration of components into a full replicable vehicle. To maximise the outreach of our methodology and zero emission solutions, ZEvRA will develop a dedicated training & upskilling programme for the automotive workforce and academia, together with activities aimed at increasing awareness & acceptability of the proposed zero emission solutions.

CONCEPT

Circular economy methodology



Digital tools



Circular car prototype



Use case prototypes



Educational platform

OBJECTIVES

- Design for Circularity (DfC) methodology and a holistic circularity assessment
- Digital tools as a key enabler for circularity
- Circular car concept
- Validation in the most important automotive materials
- Creation of an educational platform for training and upskilling of industrial workforce

