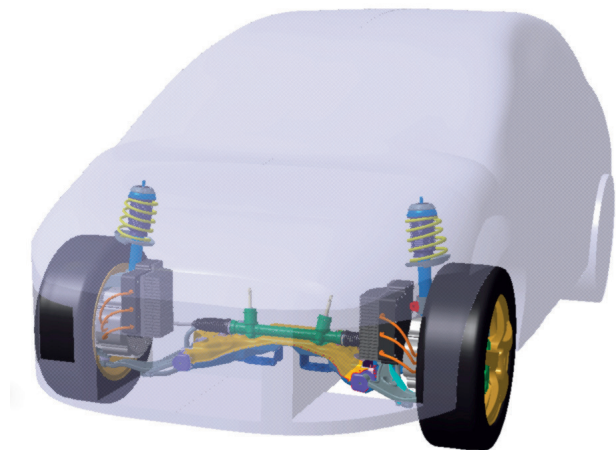




Eco-design and Validation of In-Wheel Concept for Electric Vehicles

introduction

Promotion of Electric Vehicles is strategic for the European Community, but today battery performance is still poor and all forecasts for near future transport electrification suggest that A-B class EV cars with limited range are the first step to develop. Even in the current economic crisis, global demand for A-B class cars is expected to grow, with a positive sale scenario in the next years. In-wheel electric motor architecture holds major advantages for these A-B class cars, allowing high modularisation of the vehicle architecture, increased interior space and improved driveability. However, current existing solutions for in-wheel motor are still in prototype phases, resulting in no commercialized A-B class EV equipped with in-wheel motor, even though the predicted market for this technology is 100K vehicles for 2015.



www.eunice-project.eu



Financed by the European Union

objective

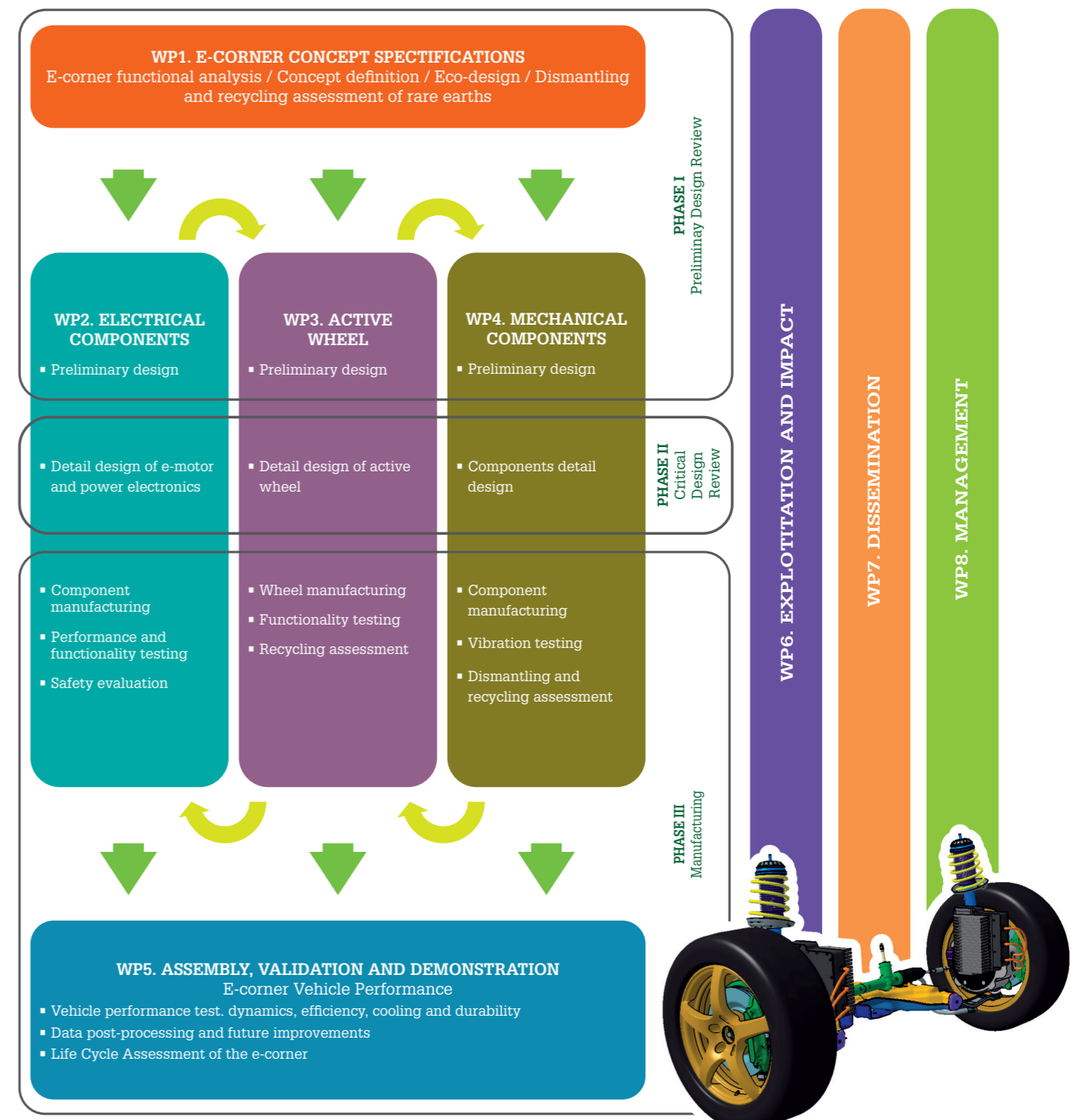
The main objective of EUNICE is the design, development and validation of a complete in wheel motor assembly prototype (electric motor, power electronics, reduction gear, structural parts and wheel), based on a McPherson corner suspension topology, to meet the defined car top level specifications.

about the project

EUNICE is a research and development collaborative project promoted by the 7th Framework programme of the EU, Nanosciences, nanotechnologies, materials and new production technologies. It started in September 1st 2012 and will be three years in the making until August 2015 with a total budget of 2,9 million EUR. Thirteen partners are involved including industrial enterprises as well as Research Centres.

The research leading to these results has received funding from the European Community's Seventh Framework Programme under the grant agreement No. 285688.

project structure



project partners

- > Fundación Tecnalia Research and Innovation (Spain)
- > Pininfarina S.p.A (Italy)
- > Magneti Marelli Suspension Systems (Italy)
- > Fundación CIE I+D+I (Spain)
- > Industrias Puigjaner S.A. (Spain)
- > IVL Swedish Environmental Research Institute (Sweden)
- > Infineon Technologies AG (Germany)
- > Fundación AIC-Automotive Intelligence Center Fundazioa (Spain)
- > AIT Austrian Institute of Technology GmbH (Austria)
- > Hayes Lemmerz Srl (Italy)
- > GKN EVO eDrive Systems Ltd (United Kingdom)
- > European Association of Automotive Suppliers – CLEPA (Belgium)
- > GKN Driveline Zumaia S.A. (Spain)



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For more information, please visit the project website:

<http://www.eunice-project.eu>