

SWARM

Demonstration for small fuel-cell passenger vehicle applications

Hydrogen as the fuel for the future

Hydrogen powered vehicles are an important factor for a sustainable future of road transport in Europe, but they are not widely available for customers in the market today. The European FCH JU funded project SWARM ("Demonstration of Small 4-Wheel fuel cell passenger vehicle Applications in Regional and Municipal transport") will establish a large demonstration fleet of small passenger vehicles that builds on and expands existing hydrogen refueling infrastructure. Three regions will be participating in this effort: the British Midlands, the Brussels area and Wallonia, and the Weser-Ems region in Northwest Germany. Each of these regions will deploy a new hydrogen refueling site to close the gaps in a continuous "hydrogen highway" that leads from Scotland via the Midlands to London, connecting to Brussels and on to Cologne and Hamburg/Scandinavia/Berlin via Bremen.

Small manufacturers as trailblazers

The vehicles employed are low-cost, high fuel-efficient, hybridized, light-weight passenger cars specifically designed for city and regional transport. These vehicles provide a complementary pathway to commercialization to the large Original Equipment Manufacturer (OEM) of hydrogen fuel cell options, by allowing near-term rollout on a commercial basis to a wide range of users – in parallel with the planned rollouts for large OEM vehicles from 2015. Their deployment regions will gain the infrastructure, public exposure and technological understanding to act as seed locations for future large scale OEM vehicle rollouts.

Data acquisition by DFKI

The Robotics Innovation Center will be responsible for the conceptualization and design of a data storage facility for the empirical data gathered by the partners during the planned fleet trials. This includes the collection of data from vehicles in actual driving operations via data logger devices and GSM

connection, and the server and data storage, so that the OEM project partners and accompanying research partners have access to the raw and pre-processed data for an evaluation of the vehicle performance in the field.

Duration: 10/2012 – 12/2017

Partners:

PLANET GbR (Coordination)
Air Liquide Advanced Technologies SA
Birmingham City Council
Coventry University Enterprises Limited
Element Energy Limited
EWE-Forschungszentrum für Energietechnologie e.V. (Next.Energy)
GESPA GmbH
H2O E-mobile GmbH
Jade Hochschule Wilhelmshaven/Oldenburg/Elsfleth
Riversimple LLP
Service Public de Wallonie
The University of Birmingham
TÜV Süd Product Service GmbH
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Contact:

DFKI GmbH & University of Bremen
Robotics Innovation Center

Director: Prof. Dr. Frank Kirchner
Phone: +49 421 - 17845 - 4100
E-mail: robotics@dfki.de
Website: www.dfki.de/robotics