Revolutionary electric delivery vehicle tech prototyped

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A technology demonstrator for a new type of electric delivery vehicle that could make the courier industry greener and more efficient has been developed by WMG at the University of Warwick and Warwickshire-based design company Astheimer Ltd.

Based on the platform of a Renault Twizy, the DELIVER-E is a quiet, compact, lightweight electric vehicle, ideal for navigating urban environments, addressing issues like congestion, noise, pollution - and responding to the demands of an ever-growing shift to online shopping. This prototype allows cutting-edge WMG research outputs to be shown in a real, driveable vehicle.

A number of teams in WMG have worked on the project, including their SME Group who developed the original design, and with the help of one of their partners Astheimer, progressed the design from concept to prototype.

Astheimer developed the WMG concept to create a unique vehicle exterior - by enlarging its rear storage area, giving it space for three online delivery baskets. They also added new body panels to the DELIVER-E, and fitted it with programmable LED pixel strips, which can change colour for brake and indicator lights.

Carsten Astheimer, founder and creative director, Astheimer Ltd comments: "The DELIVER-E is the result of an intensive ten week collaborative project between Astheimer and WMG to design and build

an electric delivery vehicle prototype. This unique collaboration showcases the design and prototyping capabilities of Astheimer.

"We are working on several projects at the forefront of electric transportation and autonomous technology, anticipating the future of mobility which will be dominated by electric vehicles as emission controls tighten and on-line acquisitions increase."

WMG have designed a powerful, state-of-the-art battery system for the DELIVER-E, which makes the vehicle lightweight - allowing it to deliver goods quickly - whilst not polluting the atmosphere, and reducing fuel consumption on the roads.

Advanced battery experts, at WMG, fitted the vehicle with a powerful 48V 6.5kWh battery system - increasing its peak power from 12 kilowatt to 36 kilowatt – helping it to cope with an increased weight of goods, and to conserve energy despite the start-stop nature of deliveries.

This battery system is the first module produced by WMG's new automated battery production line for electric vehicles, developed as part of the Automated Module-to-Pack Pilot Line for Industrial Innovation (AMPLiFII) project – launched by WMG to create a UK supply chain for fully qualified battery packs to suit hybrid and electric vehicles across a broad range of markets.

The DELIVER-E also has an open-platform vehicle control system – enabling the development of bespoke control systems – and a touchscreen Human-Machine Interface.

Professor Dave Greenwood, WMG, said "It's great to be able to showcase some of the technologies which we're working on in a real driveable vehicle – this really helps us bring home the benefits of the technologies we develop at WMG, and helps industry see how they may

adopt them."

DELIVER-E will be showcased as a demonstrator, at a number of events through the year. WMG and collaborative partners will also use it when undertaking research around electric vehicles.

Provided by University of Warwick