

Affordable electric car realized by German Industrie 4.0 strategy e.GO Mobile moving the market with its electric car

Aachen, 24th June 2016 – e.GO Mobile is developing a particularly cost-efficient electric car on RWTH Aachen Campus. Production researcher and e.GO Mobile CEO Professor Günther Schuh and his team show that German Industrie 4.0 (Industry 4.0) make highly iterative development processes and particularly cost-efficient production of prototypes as well as small series possible. Their work has shown outstanding results.

The new EC directive L7e, defining small vehicles of a top speed of 90 km/h and a maximum width of 1.50 m, has been beneficial to development. The standard e.GO Life is expected to cost 12,500 euro. If supplied with two additional batteries and 2 + 2 seating, the car will achieve a maximum range of 120 km and will cost 13,900 euro. In 2017 a first batch of 100 rapid prototypes will be manufactured, and 75 will be sold to beta testers.

The e.GO Life is the second electric car developed on RWTH Aachen Campus. In 2010, StreetScooter was launched, which now produces an all-electric light commercial vehicle for last mile delivery in series. StreetScooter currently manufactures six cars per day in Aachen. These vehicles are used in daily operations by Deutsche Post DHL Group across Germany. In 2014, Deutsche Post DHL Group acquired StreetScooter. "Our objective is to show that already today, total costs of operations of all-electric cars are comparable to those of traditional cars with combustion engines," says Professor Günther Schuh, e.GO Mobile's CEO and former StreetScooter co-founder.

This e.GO Life is an attractive, compact city car, especially useful as a second or third car for larger families or as a fleet vehicle. Driving the car is simply fun, because it makes perfect use of the electric drives – above average torque and great utilization of space. "Once the e.GO Life has established itself on the market, we aim for a series production of up to 10,000 cars per year, produced at the Aachen industrial estate," says Professor Günther Schuh.

RWTH Aachen Campus brings together science and business, which allowed for the development of this near-to-production car below 30 million euro. The 50 dedicated team members with an average age of 29 years have been applying scrum processes. These processes have been originally tried and tested within software development and were now adapted to vehicle development in cooperation with RWTH researchers. 30% of the initial prototype was made of 3D printed components.



PLM software permits both real and virtual construction as well as parallel development of different functional prototypes by teams at different locations.

Regular, speedy design checks using aixCAVE, a virtual reality installation at RWTH Aachen's IT Center, considerably accelerate the development process. Early simulations produced a chassis that can be particularly sturdy with electric cars by using the strength of the robust and stiff battery compartment, which enhances the passive safety qualities of the entire vehicle.

Structural plastic exteriors reduce overall production costs particularly if produced in small quantities, compared to customary integral bodies. Powered by a mass-production 48 volt electric engine as well as the consistent modular design further decrease the already very low production costs. "We had hoped to make our frugal engineering approach work and produce an extremely affordable electric car. However, we ourselves are very much surprised how fun it is to drive the e.GO Life", says Professor Günther Schuh.

Key technical specifications

Powertrain:	BOSCH 48V drive system
Performance:	15 kW continuous output
	(2x10 kW peak performance)
Battery capacity:	9.6 kWh
Acceleration 0 -50 kph:	3.9 sec
Range:	80 km (standard model)
	120 km (extended version)
Dimensions (length/width/height):	3150 / 1500 / 1460 mm
Curb weight:	450 kg (without battery)
Chassis:	2 + 2 seating

e.GO Mobile AG

e.GO Mobile AG develops and produces electric vehicles and is headquartered on RWTH Aachen Campus. e.GO was founded in early 2015 by Professor Günther Schuh, who previously initiated StreetScooter GmbH. 50 team members benefit from this experience in their daily work, developing and constructing affordable electric vehicles for short-distance travel. As of spring 2017, e.GO will sell an initial batch of 75 e.GO Life cars to beta testers. Serial production is scheduled to start in early 2018.

RWTH Aachen Campus

RWTH Aachen Campus contributes significantly towards highlighting the research competence available at RWTH. The project creates a unique symbiosis of science and economics. Here, experts research specifically defined, relevant topics. Long-term areas of research are represented in clusters. These clusters are subdivided into centers, in which interdisciplinary teams and industry forums work jointly on specific issues of the future and develop visionary solution approaches.

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PRESS INFORMATION



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