PRESS INFORMATION

EU-LIVE
EFFICIENT URBAN
LIGHT VEHICLES

EU-LIVE launches: Elite European researchers and manufacturers developing smart urban light vehicles

A European consortium of leading vehicle manufacturers, suppliers and research institutions is developing a comprehensive solution for the next generation of electrified, cost- and energy-efficient light vehicles. The unrivalled modular development approach of the collaborative EU-LIVE (Efficient Urban LIght VEhicles) project will provide a complete range of different electrified powertrains and vehicle bodies with different designs that are cost-efficient and easy to produce.

Graz, 22 June 2015 – Across the globe, the urban population continues to grow. While around 750 million people lived in cities in 1950, this number reached almost 4 billion in 2014. As this rapid increase continues, 73% of Europe's total population currently resides in urban areas, which leads to increased traffic congestion, as well as higher noise and air pollution.

The demand for individual mobility remains high in cities as well. Motor vehicles in the L-category (motorized light vehicles with 2, 3 or 4 wheels) on a modular basis offer a complementary, individualized mobility alternative to public transport and "soft" modes of mobility, such as walking and cycling. New concepts such as car sharing and carpooling will take on an even more important role in urban mobility in the future. For this purpose, novel vehicle types are needed that are designed for these systems and can be integrated into the infrastructure in an optimal way.

The problem: The development and production of L-category vehicles is relatively complex and expensive because, compared to traditional passenger cars models, only quantities lower by a factor of 10 to 100 can be produced in the market. As a result, it has not yet been possible to devise a cost and resource-efficient development and series production process.

The EU-LIVE research and development partnership is working on a comprehensive European solution for the next generation of electrified, cost- and energy-efficient urban light vehicles. To this end, for the first time for light vehicles, the focus is on continuous modularity in full and partial electrification of powertrains (including in-wheel motors), but also of car bodies for different purposes and users. The modular design and production enables a significant cost reduction, which will make these vehicles far more attractive to end users.

Unique: The "EU-LIVE modular platform"

The overall goal of the project is the development and application of a comprehensive, user-centric, European approach for the efficient design, development and production of a whole range of L-category vehicles: the "EU-LIVE Modular Platform". This modular platform comprises a wide variety of powertrains, car bodies and components within this vehicle category, as well as the integrated co-simulation of the full system including the usage of standardized interfaces from the automotive area. The open design simplifies reusability and flexibility, as well as the mutual exchange of different vehicle components and systems of all L-category vehicles with a special emphasis on the electrified powertrain. This open design can also be applied to a wide range of vehicle types. Whether they are designs similar to the current market or radically new vehicle designs, the modular EU-LIVE platform provides the solid foundation for quiet, clean, energy-efficient and safe individual mobility in urban areas.

Project overview

The EU-LIVE project has a total budget of 6.7 million EUR. It is coordinated by the VIRTUAL VEHICLE Research Center in Graz and combines the know-how of 12 partners from six countries, including two large European vehicle manufacturers (PSA Peugeot Citroën, Peugeot Scooters) and numerous renowned suppliers and prestigious research institutions.
At the end of the 3-year research project, prototypical demonstrators for a full-fledged plug-in hybrid tricycle, a purely electric motorcycle as well as a concept of a four-wheel vehicle (selected from an "Open Innovation Competition") will be presented.

Project leader: VIRTUAL VEHICLE Research Center (AT)
12 Partners: Peugeot Citroen Automobiles S.A. (FR), Peugeot Scooters (FR), Continental Automotive GmbH (DE), SAMSUNG SDI Battery Systems GmbH (AT), Fraunhofer-

Gesellschaft zur Förderung der Angewandten Forschung E.V. (DE), Mondragon Goi Eskola Politeknikoa J.M.A. (ES), fka Forschungsgesellschaft Kraftfahrwesen mbH Aachen (DE), Spirit Design - Innovation and Brand GmbH (AT), IFP Energies nouvelles (FR), Brembo Spa (IT), Elaphe Pogonske Tehnologije Doo - Elaphe Propulsion Technologies LTD (SI), VIRTUAL VEHICLE Research Center (AT)
6 countries: Austria, France, Germany, Italy, Slovenia, Spain
Website: www.eu-live.eu

Key project partners:

Peugeot-Scooters (PSCO) is key player in urban mobility in Europe for 113 years and holds the title as the oldest two-wheels motor vehicle manufacturer in the world. With over 20 models from 50 to 500cc commercialized, Peugeot Scooters currently offers one of the most comprehensive scooter and moped ranges on the market.
Bruno Jamet, Head of R&D / PSCO: “EU-LIVE will create for PSCO unique opportunities to transfer know-how and high volumes (reduced costs, high quality) from automotive industry to L-Category. It will also bring unique technological bricks to improve powertrains efficiency, that may represent a modular base for future powertrains (Euro5 and beyond). The L5 concept (PHEV tricycle) will be a premium product, breaking current state-of art (fuel efficiency, fun-to-drive, cost effective…), that will contribute to PSCO growth.”

Continental develops intelligent technologies for transporting people and their goods. As a reliable partner, the international automotive supplier, tire manufacturer, and industrial partner provides sustainable, safe, comfortable, individual, and affordable solutions. In 2014, the corporation generated sales of approximately €34.5 billion with its five divisions, Chassis & Safety, Interior, Powertrain, Tire, and ContiTech. Continental currently employs more than 200,000 people in 53 countries.
Andreas Schießl, Senior Project Manager: “In EU-LIVE, Continental is responsible for hybrid and electric powertrain design and development, defining the complete E/E architecture, validation and optimization of the real powertrain, using its competence and experience in control system development and production of mass-product electronics.”

SAMSUNG SDI is committed to the vision of an eco-friendly and clean energy solution business, and is eager to share our future direction for low carbon vehicles. Samsung SDI is the world’s leading advanced energy solutions provider, with proven expertise in mass production of high quality lithium-ion batteries.

Klaus Grieshofer, Project Manager R&D: “Using our technical prowess as a base, we are dedicated to developing more efficient, high capacity energy solutions for leading automakers. The advanced automotive batteries with high energy/power density will enable vehicles to outperform significantly the current fuel economy performance. In EU-LIVE we bundle competences of our industrial and research partners for the electrified urban mobility of the future.”

About VIRTUAL VEHICLE

VIRTUAL VEHICLE is an internationally operating research center in Graz, Austria, that develops affordable, safe and environmentally friendly vehicle concepts for road and rail. With over 200 employees, VIRTUAL VEHICLE collaborates with more than 150 domestic and international partners from science and industry. The key aspects of the expertise include connecting numeric simulation and experimental verification, as well as developing a comprehensive, full-vehicle system simulation.

About 200 experts from an international network of industrial and research partners devise innovative solutions and develop new methods and technologies for the vehicles of tomorrow. VIRTUAL VEHICLE is currently working in close collaboration with over 100 industrial partners and, in addition to our principle scientific partner, Graz University of Technology, 45 global university research institutes. The COMET K2 program provides the basis for funded research activities until at least the end of 2017. An extensive involvement in EU projects and a broad portfolio of commissioned research and services round out the activities.

Contact and Information:
Dr. Werner Rom
VIRTUAL VEHICLE / Head of Area "Cross Domain"
Project Coordinator EU-LIVE
werner.rom@v2c2.at
Tel: +43 316 873 9847

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