# Press Release

## FEV presents development highlights at virtual Aachen Colloquium

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**Aachen, October 2020 - For the 29th time, the "Aachen Colloquium Sustainable Mobility" (ACK) will be the meeting place for experts from the automotive industry, where new vehicle and powertrain solutions will be presented. This year, FEV, a leading independent international service provider of vehicle and powertrain development for hardware and software, will present cutting-edge sustainable mobility solutions in the symposium and at its own booth. Due to the current Covid-19 situation, the ACK, which will take place from October 5-7, will this year for the first time be held completely digitally, featuring virtual booths of the participating companies.**

FEV's virtual showroom will feature numerous highlights from the Aachen-based company's five areas of expertise:

- Vehicle Development
- Powertrain Development and Electrification
- Intelligent Mobility and Software
- Consulting
- Software and Testing Solutions

In the area of Complete Vehicle Development, FEV presents the E-Roch, a modular chassis for e-vehicles whose ground clearance, wheelbase, track width and drive (front-, rear- or all-wheel-drive) can be flexibly adapted. This enables the chassis to significantly reduce development time and costs. E-Roch also offers an ultra-flat and modular battery concept, is compatible with ADAS stages 3 and 4 and includes an integrated EE architecture.

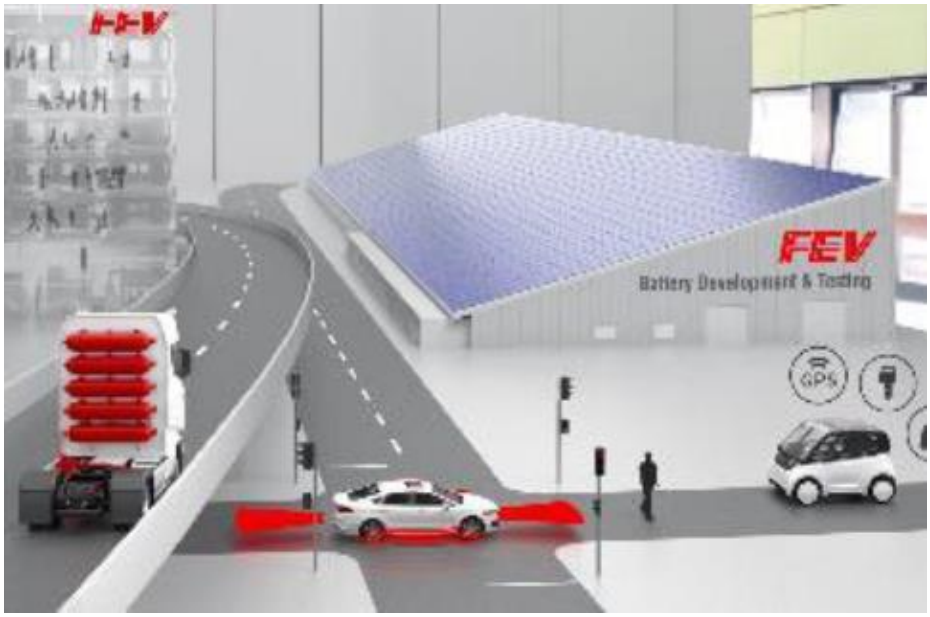
On the subject of electrification, FEV will present an oil-cooled e-motor. Conventional e-motors can only briefly call up their maximum power during operation, as this results in high thermal stress. FEV presents a special cooling solution that counteracts this limitation. While water as a coolant cannot be used for cooling directly at the copper windings in the e-motor due to its conductivity, FEV uses a special non-conductive oil, which is also used as a lubricant in the electric motor. Within the system, the oil is guided by centrifugal force via the shaft to the heat-conducting copper windings during motor operation in order to cool them efficiently. This allows the power density of the motor to be significantly improved and the increased torque to be called up for a longer duration. Alternatively, cooling allows the engine to be downsized while maintaining the same power density, resulting in installation space advantages in the vehicle.

FEV will also provide digital information to the colloquium participants about solutions in the context of autonomous driving. In addition to ADAS testing, these include connectivity solutions, model-based system engineering and software development. A central challenge in the ADAS context, for example, is to provide systems for safeguarding automated driving functions that recognize and evaluate the various scenarios in road traffic during test drives and prepare them for the engineers. FEV has developed its own data management and evaluation system for this purpose.

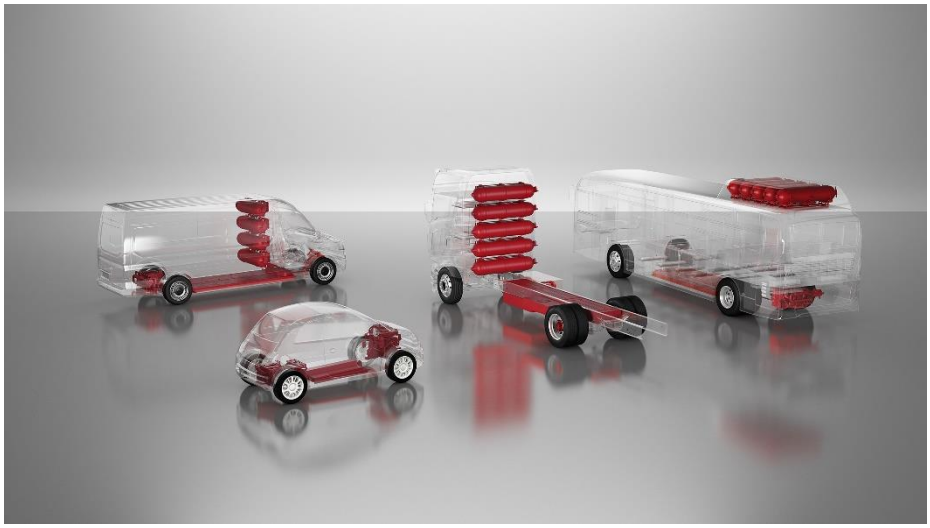
In the field of battery development, FEV recently officially inaugurated eDLP, the world's largest development and testing center for high-voltage batteries for passenger cars and commercial vehicles. Currently, 69 facilities under one roof and from one source in a building area of more than 15,000 m² cover all international standards that batteries in an e-vehicle must meet. ACK participants can view the technical features of the eDLP with

its systems and exact specifications via a link from the digital FEV booth.

A dedicated chat tool allows for the ACK visitors to directly get in touch with FEV's experts online, ask questions and schedule follow-up meetings




FEV will attend this year's Aachen Colloquium with a virtual booth. Source: FEV Group



At ACK, FEV will present approaches to tomorrow's sustainable mobility – these include fuel-cell solutions. Source: FEV Group

**About FEV**

FEV is a leading independent international service provider of vehicle and powertrain development for hardware and software. The range of

competencies includes the development and testing of innovative solutions up to series production and all related consulting services. The range of services for vehicle development includes the design of body and chassis, including the fine tuning of overall vehicle attributes such as driving behavior and NVH. FEV also develops innovative lighting systems and solutions for autonomous driving and connectivity. The electrification activities of powertrains cover powerful battery systems, e-machines and inverters. Additionally, FEV develops highly efficient gasoline and diesel engines, transmissions, EDUs as well as fuel cell systems and facilitates their integration into vehicles suitable for homologation. Alternative fuels are a further area of development.

The service portfolio is completed by tailor-made test benches and measurement technology, as well as software solutions that allow efficient transfer of the essential development steps of the above-mentioned developments, from the road to the test bench or simulation.

The FEV Group is growing continuously and currently employs 6700 highly qualified specialists in customer-oriented development centers at more than 40 locations on five continents.