

## Press Release

Vienna, 10 July 2020

### INNOVATIVE E-MOBILITY CONCEPT ON TWO WHEELS

To comply with future emission restrictions, strategies need to be developed for cities to reduce traffic and pollution. Clean and energy-efficient electrically powered two-wheelers that coexist on the road with cars, bicycles and public transport will be an essential part of the solution.

The Center for Low-Emission Transport at the AIT Austrian Institute of Technology is leading the three-year EMotion project, which is funded by the Climate and Energy Fund with three million euros as part of the second "Zero Emission Mobility" call. Eleven partners from industry and science are jointly developing category L electric two-wheelers especially for the young (16-18 years) and older (50+) generation. These low-cost, energy-efficient and comfortable electric two-wheelers will provide drivers of conventional vehicles with a viable and environmentally friendly alternative with a reduced footprint for their daily commute.

Due to their low weight, they offer an excellent driving performance and an efficient and optimised use of resources in relation to currently available and comparable vehicles. Users benefit from an innovative, user-centred human-machine interface, an integrated information system and a completely new mobility experience.

#### **Modular architecture and improved usability**

To achieve this, EMotion addresses the weaknesses of current electric two-wheelers. A modular, scalable and highly efficient architecture for electric powertrains and batteries is designed to significantly reduce manufacturing and maintenance costs. In addition, numerous technologies are used to maximise the energy efficiency of electric two-wheelers. Furthermore, the driving experience of the electric two-wheeler will be enhanced by improved stability and handling of the vehicle, and a human-machine interface will facilitate user-friendliness in eco-driving.

The concept pursued in EMotion is based on a comprehensive portfolio of technological solutions in the areas of innovative lightweight construction and component arrangement, highly efficient electric drive and charging components, and user-oriented human-machine interface together with a novel on-board information system. In order to demonstrate the synergetic potential of these solutions, an 8-month pilot phase with two demonstrators in both urban and rural areas in the Salzburg region will be carried out, which will serve as the basis for an evaluation of the realised demonstrators and their innovative driver-vehicle interaction concept.

#### **Project data**

Project management:

AIT Austrian Institute of Technology GmbH, Center for Low-Emission Transport, Competence Unit Electric Drive Technologies – <https://www.ait.ac.at>

Project partners:

- KTM Technologies GmbH, <https://www.ktm-technologies.com>
- KISKA GmbH, <https://kiska.com>
- KTM AG, <https://www.ktmgroup.com>
- WIVW Würzburger Institut für Verkehrswissenschaften GmbH <https://wivw.de>
- Salzburg Research Forschungsgesellschaft m.b.H., <https://www.salzburgresearch.at>
- FH OÖ Research and Development GmbH, <https://www.fh-ooe.at>
- NUMERICA GmbH & Co KG, <https://www.numerica.at>
- Graz University of Technology, Institute for Structural Durability and Rail Vehicle Technology, <https://www.tugraz.at>
- Daxner & Merl GmbH, <https://www.daxner-merl.com>
- Kobleder GmbH, <https://kobleder.at>

Project duration: 36 months  
Project start: 01.03.2020  
Project end: 28.02.2023  
Project volume: 6.3 million Euros  
Funding: 3.0 million Euros  
Funded by: Climate and Energy Fund (KLIEN)  
Call for proposals: Zero Emission Mobility, 2nd call for proposals

Further information on the project: <https://www.ait.ac.at/themen/propulsion-technologies/projects/emotion/>

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