

## Press release

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### **AIT MOBILITY OBSERVATION BOX WINS DEKRA AWARD 2021**

Measure and improve road safety objectively: The tool developed at the Center for Low-Emission Transport convinced in the category "Safety in Traffic".

Vienna/Stuttgart (AIT): Great success for the AIT traffic safety team around Peter Saleh and Klemens Schwieger: The Mobility Observation Box, an AI-based tool for recording and objectively assessing traffic infrastructure and conflict situations, wins the DEKRA Award 2021 in the category "Safety in Traffic". The globally active expert organisation DEKRA has been organising the DEKRA Award together with WirtschaftsWoche, Germany's leading business magazine, for many years and awards pioneering excellence in the service of safety.

#### **Increased safety for vulnerable road users**

In order to promote sustainable mobility, it is particularly important to increase the road safety of vulnerable and non-motorised road users. If pedestrians, cyclists and e-scooter riders do not feel safe on their daily routes, they will rarely choose sustainable forms of mobility. For this reason, it is necessary to make the infrastructure appealing and above all safe for these groups.

Accident statistics clearly show that there is an urgent need to increase the safety of vulnerable road users: while the number of car drivers injured or killed in traffic has fallen continuously over the last ten years, there has been a simultaneous increase of almost 40 percent in the number of accidents involving cyclists and pedestrians. What is needed here is a proactive approach that starts with traffic conflicts or so-called near-accidents. Conflicts occur much more frequently than accidents and thus provide a much larger data basis for research. Conflict analysis is thus a proven means of increasing road safety.

#### **Mobility Observation Box: Traffic evaluation and targeted improvement measures**

Against this background, the experts at AIT have developed the Mobility Observation Box: A compact box films the traffic situation with a camera, after which the data is analysed using AI. This makes it possible for the first time to measure the safety of traffic infrastructures according to objective criteria and thus make them comparable.

The collected data is the basis for the development of a risk-based assessment procedure based on machine learning and artificial intelligence. This enables the highly precise monitoring of all movements of the different groups of road users (pedestrians, cyclists, cars, trucks, e-scooters, etc.) in a specific traffic section. The measurements are repeatable and do not disturb the traffic flow. Each road user is detected, classified and their trajectory recorded.

The data obtained in this way is used to derive key figures for traffic conflicts, such as conflict severity or relative speeds, as well as to determine general traffic information such as traffic volumes, speeds, etc.

Data protection and data security have the highest priority: the Mobility Observation Box is officially approved and fulfils the strictest legal requirements. The automated anonymisation of all road users ensures the highest level of data protection, and no conclusions can be drawn about individual persons.

The better understanding of possible causes of accidents helps to improve safety measures without referring only to historical accident data. The aim of the survey with the Mobility Observation Box is to provide objective and comparable evaluations of the effects of various infrastructural and traffic measures on the risk of accidents and injuries.

### **Solutions for the digital future in the service of security**

In addition to AIT, Ottobock (exoskeletons for industrial workplaces) received a DEKRA Award in the category "Safety at Work" and BAG (virtual giant kitchen/child safety) in the category "Safety at Home".

"The winners have impressed with ideas that are groundbreaking in their disciplines," says Stefan Kölbl, Chairman of the Board of DEKRA e.V. and DEKRA SE. "This year's DEKRA Award shows: Digitalisation, artificial intelligence and machine learning make it possible to leverage new potential for greater safety. The high number of participants and the good quality of the concepts submitted prove the extraordinary relevance of the DEKRA Award as a platform for solutions for the digital future."

Klemens Schwieger, Research Engineer at the AIT Center for Low-Emission Transport and significantly involved in the development of the Mobility Observation Box, adds: "We are convinced that with the Mobility Observation Box we can make an essential contribution to increasing the road safety of the so-called 'weak' road users. Every serious road accident that is prevented in this way justifies all the work we have put into the development of the box in recent years. I am all the more pleased that we have now been awarded such an important prize by DEKRA in Germany. I would like to thank the jury very much for this!"

### **About DEKRA**

Since its foundation in 1925, the DEKRA promise has been: We ensure the safety of people in their interaction with technology and the environment. In the meantime, the Deutscher Kraftfahrzeug-Überwachungs-Verein e.V. has become one of the world's leading expert organisations. In 2019, DEKRA achieved a turnover of more than 3.4 billion euros. 44,000 employees are at work in around 60 countries on all five continents. The portfolio ranges from vehicle inspections and appraisals to claims settlement, industrial and construction inspection, safety consulting and the testing and certification of products and systems, as well as training services and temporary employment.

### **About AIT Austrian Institute of Technology / Center for Low-Emission Transport**

The AIT Austrian Institute of Technology is Austria's largest non-universitarian research institution. With its seven centers, the AIT sees itself as a highly specialised research and development partner for industry. At the Center for Low-Emission Transport, around 150 employees are researching solutions for sustainable, safe, intelligent and thus future-proof mobility. The focus of the research and development work is on material-based lightweight design, on the electrification of the drive train and the storage of electrical energy, as well as on a resilient and safe transport infrastructure.

### **Further Links**

[AIT Center for Low Emission Transport](#)

[Mobility Observation Box](#)

[DEKRA](#)

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