

## Transport logistics

At the 2018 TRA conference, the AIT Austrian Institute of Technology will be presenting solutions for vehicle and route planning and fleet management whose practical efficiency is based on advanced mathematics.

### **One step ahead with PLAN**

As a result of globalisation and a thriving online retail industry, there is a growing demand for transport. This in turn means increased CO<sub>2</sub> emissions. With PLAN, the AIT is using cutting-edge mathematical expertise to address these challenges and environmentally damaging trends. Through methods such as the FLEET system, which use predicted traffic information and real-time traffic data, optimally efficient solutions can be calculated for vehicle and route planning. For instance, PLAN increases the efficiency of both transport and fleet management, as well as route planning, reduces costs and moreover contributes to climate change mitigation. Target groups such as transportation and logistics service providers, haulage companies and courier services particularly stand to benefit from the work of the AIT. In terms of practical implementation, PLAN enables operational route and vehicle planning and supports operational and strategic fleet management, as well as optimising staff planning and resource management. In doing so, energy-saving and environmentally friendly aspects are taken into account. Furthermore, PLAN enables intermodal real-time planning and evaluations with a view to redesigning supply chains.

In addition, PLAN takes account of unplanned incidents and events such as traffic jams and vehicle failures, and provides the most suitable mathematical methods and tools.

### **EMILIA – clean and mobile**

EMILIA stands for "Electric Mobility for Innovation Freight Logistics in Austria" and is a lighthouse project for CO<sub>2</sub>-free urban logistics, which won the 2017 VCÖ (Austrian Mobility Club) Mobility Award in the "Mobile in a climate-friendly way" category. Through EMILIA, the AIT aims to provide logistics concepts and electric vehicle components to achieve greener and more efficient freight logistics in cities. With its electric cargo tricycle, for instance, the AIT's project enables express food deliveries within 60 minutes. Moreover, EMILIA is also improving parcel deliveries through a local parcel shop and electric vehicles in the district of Aspern Seestadt. With a novel engine and drive inverter, the vehicle range is increased by



15%. Through the use of electric vehicles, the AIT has set itself the goal of making urban freight logistics more environmentally friendly, flexible and efficient

