## Name of Case

**EMILIA - Electric Mobility for Innovative Freight Logistics in Austria**

### KeyWords:
- Freight consolidation and transhipment; Implementation of low emission technologies; IT-technologies and solutions; Innovative vehicles, vessels and equipment; ICT (e.g. routing, guidance), transport optimisation; Business to business (B2B) solutions, cooperation; Business to customer (B2C) solutions (e.g. e-commerce, last mile delivery); Innovative operational solutions; Transport management, fleet management

### Description:
This demonstration project focuses on innovative freight logistics for urban areas especially tailored towards a significant use of electric mobility ranging from e-cargo bikes to alternatively-fuelled road trains:
- Open Innovation for actively involving external stakeholders
- Develop novel logistics concepts, algorithms and applications
- Optimize small cargo vehicles: increasing range and reducing cost and weight
- Demonstrate that using electric vehicles in urban logistics is technically feasible and economically viable

### Benefits:
- Electric vehicles are more energy efficient, quieter, and they produce significantly lower levels of CO2 and air pollutants compared to standard vehicles
- It is assumed, that in future scenarios electric vehicles can be permitted in times or areas which are restricted to transport activities conducted by other goods vehicles.

### Starting Point/Objectives/Motivation:

The growing significance of city freight transport and logistics is related to an increased and still increasing population in urban areas. The result is a rising demand for freight transport. Furthermore, as urban freight transport deals primarily with the distribution of goods at the user end of the supply chain, many deliveries tend to be made in small loads and in frequent trips, thus resulting in many vehicle kilometers.

These developments seriously affect the environment of cities in terms of pollution, noise and CO₂ emissions. Politicians have had to react to these changes and started defining goals and taking measures to reduce emissions in urban centres.

**Solution**

The project EMILIA focuses on the following three major goals:
- The raising of awareness of the topic of e-mobility in urban logistics,
- The improvement of technologies to carry out transport in urban areas using ecologically friendly vehicles and
- The optimization of transport chains with novel logistics concepts, planning algorithms and applications

The project will demonstrate that a well planned usage of different electric vehicles in urban logistics is economically viable while also having a positive impact on the environment.

The demonstrators will run in the following areas: parcel delivery, pharmaceutical logistics, food delivery, and last mile transportation in inner cities.

### Supported Strategic Targets:
- Limited climate change; Reduced emissions; Conservation of resources; Competitive logistics and transport system;
- Acceptance and influence; Balanced provision of goods and services; Increased amenity value; Highest safety and security;
- Increased efficiency / productivity of logistics processes;
- Increased company profitability; Minimisation of financial risks;
- Increased competitiveness; Increased quality
Case Description (Cont.):

**Novel logistics concepts of electric mobility focusing on:**
- medium size vans as mobile depots
- dynamic rendezvous logistics
- last-mile delivery with light vehicles
- sustainable and suitable technical solutions

**Planning support for implementing the concepts:**
- real-time planning and synchronization of vehicle operations
- novel a priori and dynamic optimization algorithms
- based on vehicle models and real-time data collection
- usable as desktop and mobile applications

**More information:**

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**Transport mode or supply chain elements:**

**Alternative transport vehicles:**
- electric delivery van
- electric tricycle
- electro-multifunction-transportation vehicle
- hybrid electric truck

**Main actors involved:**
- integrators
- technical researchers
- logistics researchers
- practical partners / testers / auditors

**Pictures:**

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