



# SAFE - Urban logistics

New possibilities in Logistics with EV's

















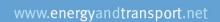






### **Purpose**

- Study potential of integrating electric vehicles in urban goods distribution
- Create next practice solutions
- Offer promising opportunities for urban logistics operations
- Develop potential business models
- Identify potential technological concepts for the future
- Evaluate the environmental effect of the concepts























# **Analysis of Urban logistics** in Scandinavia

A glimpse on Scandinavia













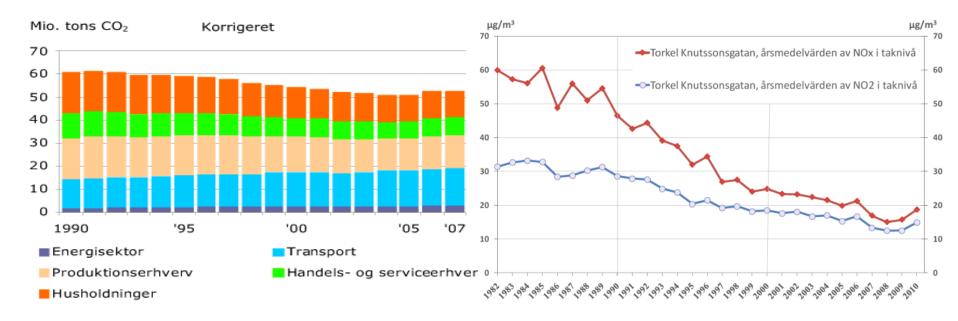








#### **Polution levels**



More than 40 % of inhabitants in urban areas are exposed to noise levels that are higher than the WHO recommended guideline of 55 dB.

500-600 lives are lost a year due to deceases that can be directly related to exposure to constant traffic noise in Stockholm and Copenhagen.



















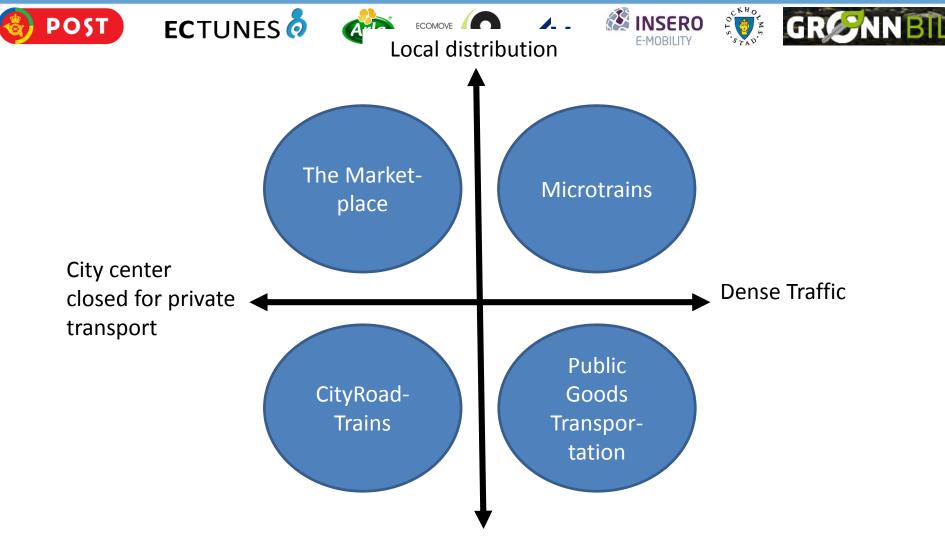


## 4 Scenarios

4 potential pictures of the future







Global distribution























## **Hub and Spoke Warehouse Distribution**

#### Description

- Plan deliveries through the usage of a hub warehouse
- Optimize routes so that EVs become the means of transportation
- Use common delivery to balance flexibility and cost-efficency

#### Economic aspects

- Increase the utilization of the last-mile delivery vehicles
- Broader and cheaper portfolio of vehicle types to be used
- Reducing distances and costs of distribution
- The concept can be distributed on several levels creating a flexible business setup

Example: CityLogistikService project in Copenhagen





















## **Night Distribution**

#### Description

- Using EVs for night distribution due to their low noise levels
- Decrease the time of delivery by using a time of the day when traffic congestion is at its lowest
- Reduce traffic congestion by moving deliveries off rush hours

#### **Economic aspects**

- Increased efficiency of distribution due to less waiting time will lead to lower costs
- Cut costs through less energy consumption
- Lower maintenance costs due to using EVs

Example: The off hour deliveries NYC project







## **EC**TUNES 6















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