Michael Stie Laugesen

e-mobility NSR

E-Mobility NSR Conference
“Policy, Practice and Profitability”

The Interreg IVB North Sea Region Programme
Investing in the future by working together for a sustainable and competitive region

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CUFLOS

Clean Urban Freight LOgistics Solutions

E-Mobility NSR Conference in Haarlem

October 10th 2013

Mr. Michael Stie Laugesen

Project Coordinator

FDT – Association of Danish Transport and Logistics Centres

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FDT – Association of Danish Transport and Logistics Centres

- Is a non-profit public similar organisation approved by the Danish Ministry of Transport.
- Encompass seven Transport and Logistics Centres located in Denmark.
- Works with added value logistics services.
- Performs research and test on freight Electric Vehicles.
- Has its headquarter in Aalborg in the North of Jutland.

Background

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When developing solutions for electric vehicles, a **combined focus on both electrified car solutions and electrified urban freight solutions** is an obvious opportunity, which will be utilised in the E-Mobility NSR project by FDT and associated partners around the North Sea Region.

Electrified urban freight solutions can be offered in many ways e.g. by **consolidating goods in Logistics Centres** and transport hubs outside the core area of the city, where **transhipment onto electric vehicles** can be performed. Hereby **more silent, clean and efficient distribution methods are introduced**, for the benefit of both the inhabitants of the cities and the transport companies performing the service.

Why this focus?

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- **EU White Paper for Transport - *Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system***
- **Goals for a competitive and resource efficient transport system; benchmarks for achieving the 60% GHG emission reduction target**
  - *"Halve the use of 'conventionally-fuelled' cars in urban transport by 2030*
  - *Phase them out in cities by 2050;*
  - *Achieve essentially CO2-free city logistics in major urban centres by 2030."*

COM (2011) 144 Final

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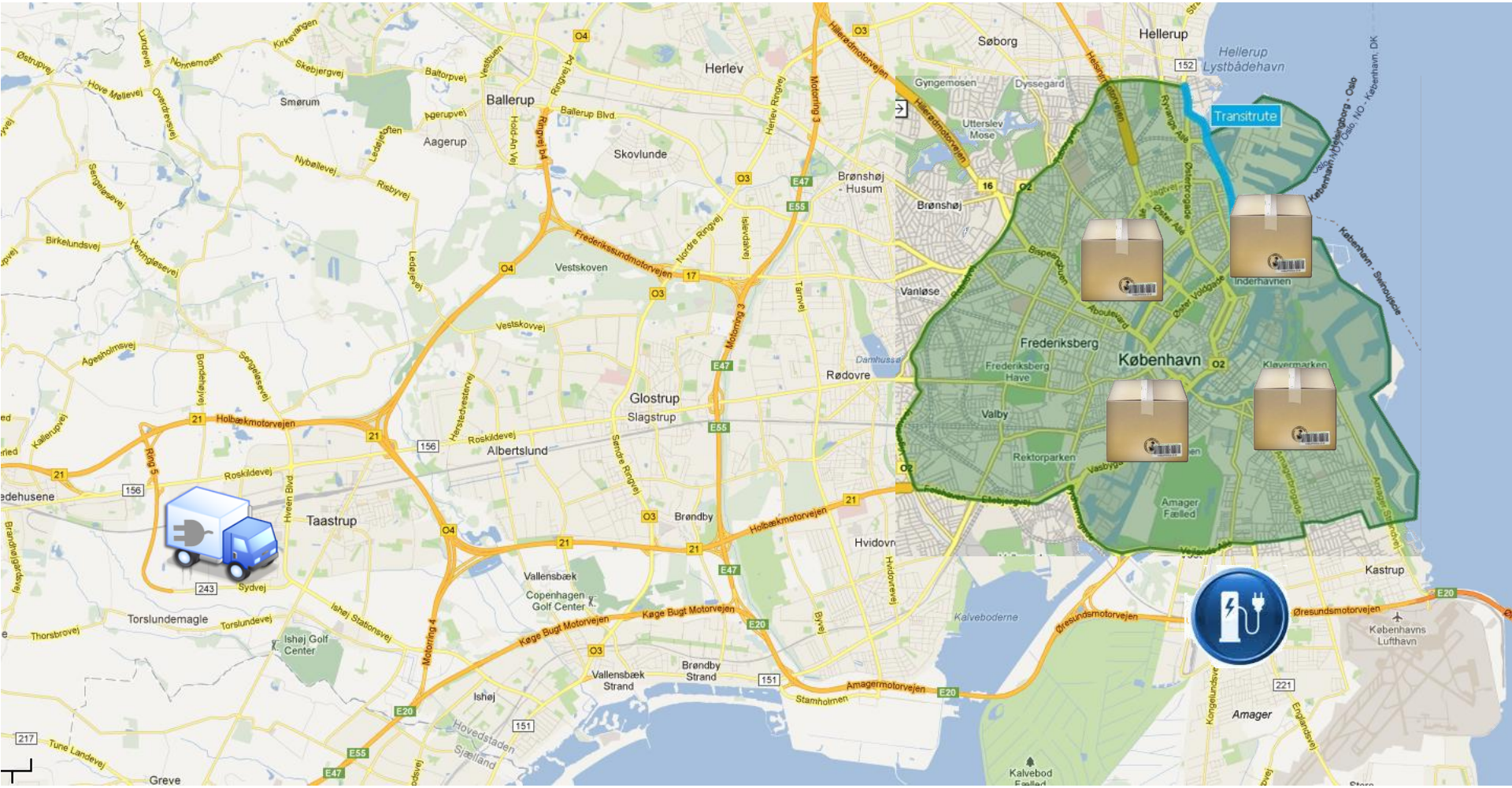
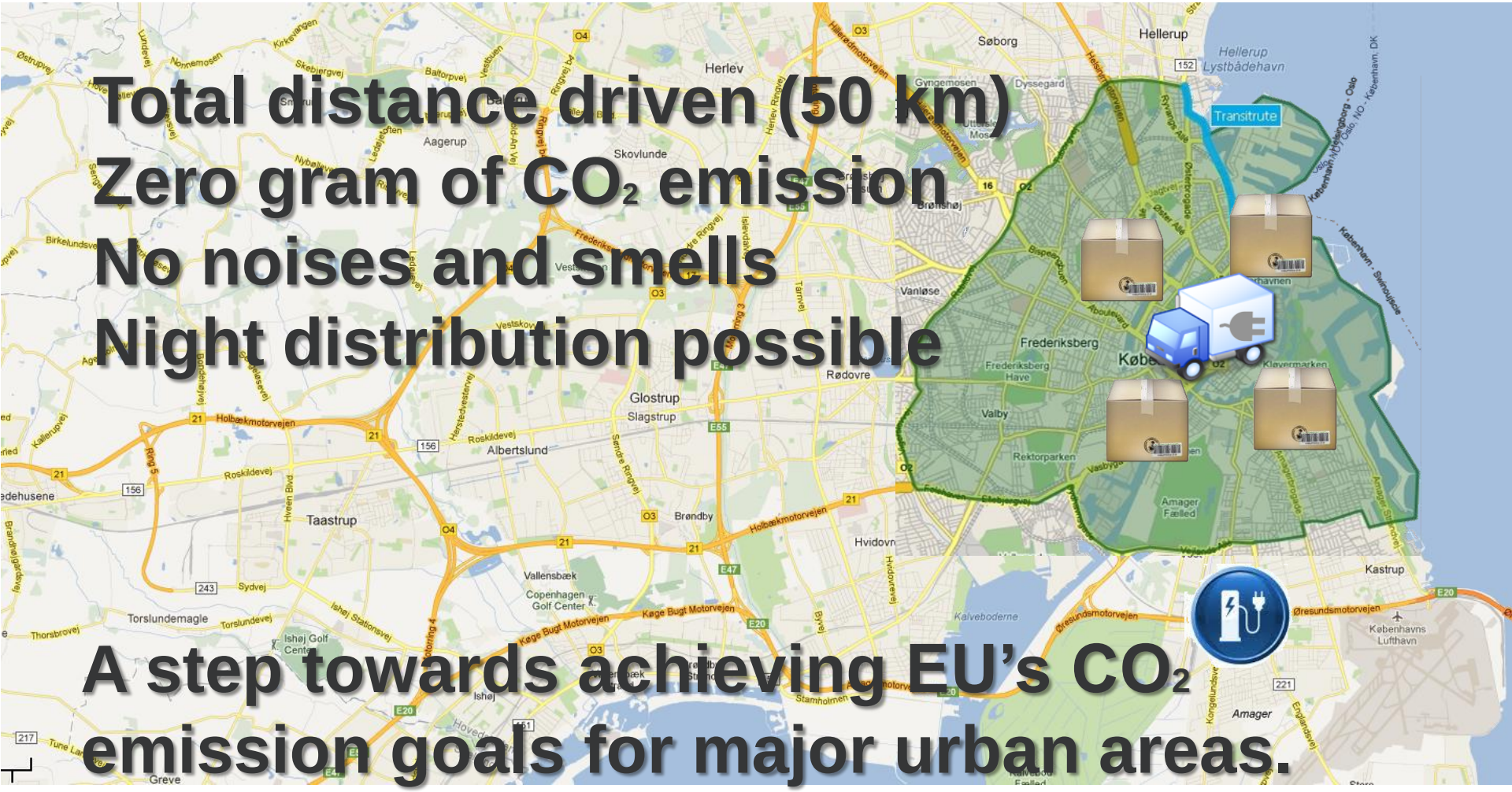
Concept of distribution with EV's

- Vehicles are loaded at transport centres/ terminals outside the city centres. (Goods coming in via road, rail and sea)
- Vehicles can easily enter city centres (with certain precautions) also during night hours.
- Charging spots are placed at strategic locations, next to the biggest loading and unloading sites (stores and consumption areas).
- No CO_2 and noise emission.
- At present the largest electric trucks produced by OEM's can have a payload up to 8-12 tonnes.
- With a range of minimum 80-100 km, distribution in most European cities can be performed on one charging before returning to the Transport Centre.

Distribution with EV's



Distribution with EV's



Total distance driven (50 km)

Zero gram of CO_2 emission

No noises and smells

Night distribution possible

A step towards achieving EU's CO_2 emission goals for major urban areas.

Challenges

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- The weight of the batteries should be reduced to limit the loss of payload
- Low maximum speed and heating issues during winter
- Lack of repair shops.
- Up until now, total cost of ownership (TCO) for electric freight vans is more expensive than for fossil fuel equivalents.
- Significant market uptake seems to still require public subsidies and regulatory support.
- Regulations and legislation to support EV uptake for distribution purposes is only available in some countries.
- New product/market anxiety
- Companies are waiting for tested solutions

Crowdsourcing Platform

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E Mobility NSR Forum

Introducing Crowdsourcing

The original idea behind crowdsourcing consists of gathering ideas/solutions from large groups of people usually through online media. Usually a party owning a challenge/issue/problem posts it on an online platform and "solvers" answer the challenge with their solution(s). Typically there is an incentive (price/reward) provided by the interested party for the solvers to get involved and provide innovative solutions. In the E-mobility NSR Forum, crowdsouricng has been adapted to the specific needs of the project. After the challenges have been posted, the solvers/users can choose which challenge to solve. The award criteria from each challenge gives guidelines in regards to what the solution should contain.

Introducing Crowdsourcing
By Michael Laugesen (Aug 23rd 2013, 3:12pm)
1 Thread
1 Post

Challenge 1: EV competing with ICE vehicles

Maintaining the current technological status of EVs, what should be done to enable them to compete with ICE vehicles on the general market AND/OR what should be done if EV's compete with the ICEs on particular markets?

Prerequisites for this challenge (1)

The current developing/technological trend of EVs on the market is describing a race between ICE vehicles and EVs. While the ICE industry has reached a dominant design (a standardized model) and a constant growth, the EV industry hasn't. This progress is typical for new industries. The emergence of the dominant design can arise from a great consumer adoption of a specific model or from becoming a dominant design in a particular market followed by a general market adoption. Other reported emergences in new industries depict the intervention of the public authorities through public procurement of innovation. Regardless of the pathway, it is of interest that the process of dominant design emergence to increase its velocity so that the market uptake becomes standardized. In this challenge, a possible solution shall be provided considering the continuation of ICE and EV competition on the general market or to limit the market extension for the EV so that the competition is more focused and specialized.

Award Criteria
By Michael Laugesen (Sep 18th 2013, 3:07pm)
1 Thread
1 Post

Challenge 2: Needs for legislative support

Which type of legislation actions can help electric freight vehicles to compete with conventional vehicles, given the condition that the legislative action is objective - it doesn't violate competition on the

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CUFLOS Objectives

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- Stimulate dialogue, discussions and exchange of knowledge on the subject of clean urban freight logistics solutions.
- Promote cleaner and more efficient city logistics solutions.
- Create synergy between different findings from relevant fields to generate better transnational solutions.
- Transnational orientation of results, enabling harmonisation of efforts cross the North Sea Region borders.

CUFLOS CHALLENGE YOU…

1. *Maintaining the current technological status of EVs, what should be done to enable them to compete with ICE vehicles on the general market AND/OR what should be done if EV's compete with the ICEs on particular markets?*

- Give your answer at http://forum.e-mobility-nsr.eu/

2. *Which type of legislative actions can help electric freight vehicles to compete with conventional vehicles, given the condition that the legislative action is objective - it doesn't violate competition on the market?*

- Give your answer at http://forum.e-mobility-nsr.eu/

Where to go!

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North Sea Region Electric Mobility Network - E-Mobility NSR

At present, several cities and regions in Europe and the North Sea Region are developing strategies and action plans to bring forth electro mobility.

To achieve this objective, a range of different incentives are currently being developed throughout Europe to seize the potential of electro mobility, especially in terms of local and regional traffic.

However, to date many of these activities are neither well synchronized nor aligned with one another, so that realization is actually confined to only a few cities or regions.

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