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CHARGING HOT SPOTS

FACILITATING CITY LOGISTICS TO GO ELECTRIC

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E-MOBILITY & CITY LOGISTICS

Research group supporting businesses and governments in the greater city region of Amsterdam

involved in **all sectors of e-mobility** (apart from personal individual mobility)

- Taxi and public transport
- City logistics (all types of EFV: HGV, LEV, cargobike, etc.)
- Transportation by water
- Etc.

in all areas of e-mobility

- Vehicle and charging infrastructure development, including modelling of demand
- Logistical concept development, including testing
- Evaluations of policy measures and projects
- Business Cases for the use of EV’s and charging infrastructure

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EXAMPLES

Development of PT alternatives based on small EV's including fuel cell drivetrain development

Part of project team at municipal PT provider (GVB) implementing electric busses in A'dam

Evaluation of use of EV's by SME's and taxi companies including follow-up study on public charging infrastructure

eNV200 evaluation: some findings

Range of vehicle, purchasing price and charging times are issues for most sectors involved

Publicly available fast charging infra lacking; expensive infrastructure for single company

Municipal support measures (e.g. priviliges) are effective and efficient measures

But: different sectors have different demands and features that influence the uptake of EV's in general

- Business Case
- # of kilometres travelled
- Predictability of routes
- Etc.

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RECOMMENDATIONS TO MUNICIPALITY

- Facilitate the introduction of public fast charging infrastructure
- Use public procurement as an incentive for EV's
- …

Charging infra specifically applicable for **taxi's** and **paratransit services**

- EV's already in use → TCO (almost) comparable to ICE or vehicle subsidies
- (To a certain extend) plannable mobility → hotspots for charging
- High # of kilometres → possible BC for EV's and infrastructure

OTHER SECTORS?

Different features per sectors in terms of possible use of EV's → qualitative approach to aggregate

- **Emissions**: local (e.g. PM, NOx, sound) and environmental
- **Energy features of operations**: predictability in terms of time, distance and route and length of stops
- **Availability of vehicles**: off the shelve technologies available? Related to…
- **Business case and cost effectiveness**: the use of electric vehicles themselves, but also mobility as part of the business and societal costs and benefits
- **Willingness of the sector:** e.g. contribution of green image, sustainable from a larger prespective

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FEATURES PER SECTOR

	Emissions	Energy features	Availability vehicles	BC & cost effectiveness	Willingness of sector
Sectors involved in transportation of people					
Sectors involved in transportation of goods					
Other sectors					

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CURRENT STATUS

- Interviews, literature and multiple project outcomes allow for scoring the sectors in a qualitative manner

- Conclusions on for instance effectiveness of (fast) charging hot spots

→ Preliminary result: **taxi**, **paratransit** and **food & perishables** (requiring cooling) have need for publicly available (fast) charging infrastructure in order for the market to further increase the use of EV’s

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NEXT STEPS

Complete the matrix by means of interviews and different project outcomes

Seek possibilities to implement charging infra at hotspot locations

Continue supporting business and municipalities in the uptake of EV’s, especially those where there are one or multiple barriers as shown by the matrix

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Feel free to contact me with questions or proposals;
I’m (almost) always willing to cooperate!

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