CASE STUDY

Stockholm

Charging Infrastructure for heavy vehicles

CIVITAS FastTrack 2030

Sustainable and Clean Urban Logistics

Context and rationale

Stockholm is the capital of Sweden, with nearly one million inhabitants in the capital itself and about 2.4 million inhabitants in the metropolitan area. Stockholm is located in the east of Sweden, at the meeting point between Lake Mälaren and the Baltic Sea.

The city has elaborated and adopted an Integrated Urban Development Concept, Climate Plan, Green City Action Plan, Sustainable Energy Action Plan, Sustainable Urban Mobility Plan (SUMP), and Sustainable Urban Logistics Plan (SULP). In addition, the SUMP is being actively updated, with the current update in the preparation and analysis phase. Mobility planning takes place at both the municipal and regional level.

Initial challenges and needs

Within FastTrack, the team from Stockholm focused on urban logistics solutions. In particular, the team wanted to explore smarter solutions for the charging of heavy vehicles. The motivations for these activities were a mix of common issues, including congestion, climate change (CO_2-reduction and electrification targets), air pollution, noise, social exclusion, and an improved use of urban infrastructure. The solutions to be deployed, which are seen as innovative at the local level, are mainly related to an urban area, but will also include the large peri-urban area around Stockholm, which is roughly 6,500 square-kilometres.

A major challenge is that the City's planning capacity is limited by a lack of reliable data concerning traffic movements of heavy vehicles. The City's environmental zone and congestion charge systems mean there is an overall awareness about the number of vehicles entering and leaving the urban area, but there is less data on the patterns of vehicle movements and how this relates to e.g. logistics "hot spots" or availability of loading bays, and how such issues relate to charging needs, both with regard to terminal-based charging and for on- or off-street "top-up" charging. These issues also need to be considered in relation to a wider set of related challenges, such as how to develop attractive public spaces, increase traffic safety, and reduce air pollution. As a result, a wide range of stakeholders are likely to have opinions – and be affected – by work on this topic. There are thus significant opportunities to use multiple sources of information to address specific data gaps,

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improve planning and better inform decision-making in the both the public and private sectors. By doing so, risks such as technological lock-ins or poorly informed investment decisions may be avoided, and opportunities to capture hidden/unseen values may be identified.

Innovation developed

Stockholm's innovation in a defined plan/approach that enables accelerated introduction of public charging infrastructure for heavy vehicles in Stockholm and its surrounding region. This plan/approach will be linked to specific locations and interventions enabling action. Electric heavy vehicles are expensive but increasingly being adopted. For heavy vehicles using public charging stations there are multiple challenges – e.g. identifying appropriate locations, engaging service providers, ensuring grid access and electricity supply. The City aims to accelerate introduction by facilitating dialogue and coordinated planning, to ensure that e.g. new charging stations for heavy vehicles are located in ideal locations and enable synergies with or fulfilment of other city objectives (addressing e.g. reduced noise pollution, congestion, traffic safety, etc.)

In Stockholm, an "Electrification Pact" has been formed and involves relevant stakeholders. Within this, a working group is trying to identify the needs and possible solutions to accelerate introduction of public charging for heavy vehicles.

- The City has a structured approach concerning planning and permitting to enable introduction of on-street public charging and parking in publicly-owned parking facilities;
- The City has a structured approach concerning awareness-raising to enable introduction of off-street charging in private properties;
- Terminal-based charging of e.g. buses, vans and heavy vehicles remains the responsibility of other stakeholders.

Image: Pixabay / Pexels

Lessons learnt along the FastTracking way

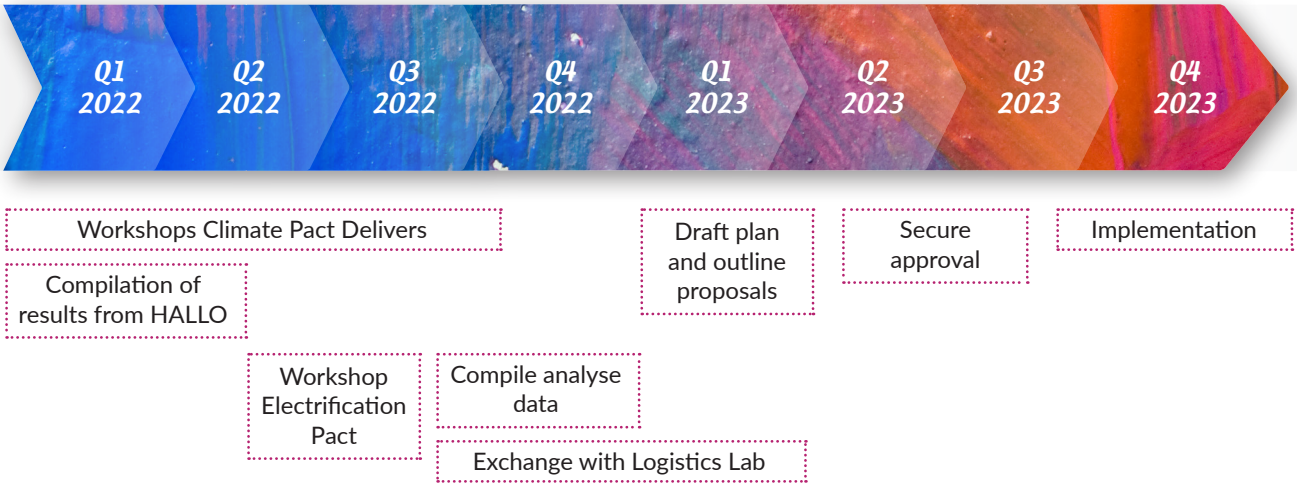
> *"As Ambassador City, the main benefit has been the exchange with other cities concerning ambitions, measures, methods and approaches which have partly influenced our thoughts about the deployment process and more generally influenced our discussions concerning implementation."*
>
> **Paul Fenton**, City of Stockholm

Acceleration factors

- Local political support
- Aligned local and national electromobility strategy
- Several European projects aligned to support data gathering and stakeholder cooperation

Timeline - The deployment road ahead

Milestones achieved so far include multiple rounds of dialogue and completion of studies. The next milestone will be completion of data analysis followed by the development of general conclusions and a proposed working method for coming years. In this stage, more specific milestones related to implementation will be defined and may include e.g. quantitative milestones concerning charging points or similar, or qualitative milestones concerning process development (e.g. update of city freight plan).



Read more

- Deployment Plan
- Awaken Sleeping Assets Project
- ECCENTRIC
- HALLO project
- SULP (in Swedish)

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This publication is produced as part of the CIVITAS FastTrack Coordination and Support Action funded by the European Union Horizon 2020 research and innovation programme under grant agreement No 101006853. The sole responsibility for the content of this publication lies with the FastTrack project and in no way reflects the views of the European Union.