

## **CNCA Mobility Hubs – findings and lessons from Stockholm**

### **Summary**

Stockholm is a member of the Carbon Neutral City Alliance (CNCA), which is a network of world cities working to drastically and urgently reduce carbon dioxide emissions. The network facilitates many activities including exchange and cooperation on the topics of energy and transport. From January 2020 – June 2021, the Mobility Hub project has supported two CNCA member cities – Minneapolis, USA, and Stockholm, Sweden – in developing plans to deploy mobility hubs. The project received a grant from the McKnight Foundation.

Stockholm aimed to facilitate changes in the use and ownership of private cars by designing and implementing a mobility hub pilot project in a location with an existing city-owned garage and limited available parking. This report is the final Mobility Hub report from Stockholm in the CNCA Mobility Hubs project. The report describes the work done during the project, outcomes and lessons learnt by the project participants, and may be useful for practitioners in other cities working on the topic of mobility hubs.

### **Planned actions and organisation**

The project included the following activities in Stockholm:

- Analysis of parking availability in a district and market analysis informing establishment of a mobility station
- Launch of a mobility station and related information campaign to raise awareness
- Data collection and analysis
- Host study visit from Minneapolis.

To implement these actions, a local project team was established, including representatives from the Environment & Health Administration (project manager), the Traffic Office and the municipally owned company Stockholm Parking. The City Executive Office and the Departments of Development and Urban Planning participated in a reference group.

The Environment and Health Administration is the authority for citizens' health and all environment issues in the City of Stockholm. The Administration is also responsible for the climate action planning of the City. The climate action group coordinates the work and monitors the implementation and the result of all climate actions undertaken in the city.

The Traffic Office oversees the city's traffic system and ensures accessibility and a high level of road safety. Its mission is to make Stockholm a clean, attractive and safe city for residents, visitors and organisations. The Traffic Office is responsible for maintaining and investing in the street and road environment and city parks, strategic traffic planning and traffic safety.

Stockholm Parking is a city-owned company that owns or manages around 63,000 parking spaces situated on plots at locations across Stockholm, including over 230 parking garages. The company has a directive from the City to reduce pressure for on-street parking and to enable uptake of sustainable forms of mobility.

The Development Department has the overall responsibility for the management and development of the city owned land. The Department owns about 70% of the city's land and is responsible for maintaining, buying and selling land, land decontamination and land leasing, as well as development and project management of new city districts.

The Urban Planning Department is responsible for the development of the physical environment. The department is responsible for the long term and detailed planning, building permits, registration of property and housing redevelopment. The Department works with strategic planning for social sustainability, water, climate adaptation as well as noise and risk issues.

### **Scope, mandate and local objectives**

In addition to the aforementioned actions, the scope and mandate of the project was influenced by various other factors.

#### Council decisions

Formally, the mandate to work on mobility hubs was granted by the City Council in the annual budget for 2020. Although previous budgets had enabled the City organisation to address a wide range of mobility topics quite broadly, there had not been explicit references to mobility hubs/mobility stations (the terms are used interchangeably). This was important, as the City budgets form the basis for departmental workplans and often provide a clear signal as to which part(s) of the city organisation should engage in planning or delivery of an action.

In 2020, a budget task was included that corresponded to the CNCA Mobility Hubs project, giving a mandate for the Environment Department, Traffic Office and Stockholm Parking to develop a pilot project. This provided some clarity as to which actors should engage in the project, but the task did not define the content or scope of the proposed action; this was left to the project participants, with the clear implication that – in line with the grant agreement – a mobility hub should be tested at a facility owned or operated by Stockholm Parking.

#### Project decisions

To prepare the project, the local project group and reference group were formed. Following discussions with these groups, it was decided that the project would aim to establish a mobility hub in a densely populated area close to a major metro station. Stockholm Parking would develop a business plan to enable conversion of existing parking spaces or non-commercial spaces can be leased to private mobility service providers or delivery service providers, and that this would be a first step towards development of mobility stations in Stockholm which may in future develop in other formats.

More specifically, the reference group identified a series of general ambitions. These included:

- To stimulate a general discussion around mobility hubs in the City organisation;
- To inform City departments and companies on what can be achieved with mobility hubs, which organisational structures or processes are required, and how this should be linked to the urban development process;

- Identify particular challenges concerning establishment of mobility hubs that are open to all persons with access to parking garages or existing buildings, or in the basements/ground floors of new premises/dedicated parking facilities;
- Contribute to development of alternatives to private vehicles and enable choice of suitable modes depending on relevant need/function/location;
- Establish contact with interested stakeholders and understand their needs, interests, etc;
- The Traffic Office needs (in their role as responsible for roads)
  - o More knowledge about how mobility hubs can contribute to fill gaps in the current network, which transfer alternatives are appreciated, and where these should be located;
  - o Insights concerning integration into the public space and how to minimise conflicts with other users of street space

The reference group identified a series of expected impacts or results, including:

- Providing input to development of a strategic approach for further development of mobility hubs in Stockholm;
- A checklist for continued work in the City or outlining steps/actions to consider when implementing hubs;
- Information about user preferences regarding services and an evaluation of impacts;
- For Stockholm Parking to learn about which methods and data are required to determine siting of mobility hubs and to develop knowledge about how to organise and price hubs;
- For the Traffic Office, Development Department and Urban Planning Department to learn about mobility hubs and methods that can e.g. enable more efficient use of parking spaces.

Following a series of discussions between project group and reference group members, it was agreed that the project would concentrate on establishing a new mobility hub at Stockholm Parking's facility at Medborgarplatsen. A range of other alternatives were discussed, including new buildings, peripheral areas and park-and-ride facilities. Medborgarplatsen was selected due to its location and a range of contextual factors that appeared to favour the site. These included, for example, the site's location in central Södermalm, a densely-populated area with low car ownership and high parking occupancy rates; Medborgarplatsen's multiple functions, with many residences, businesses and visitor attractions (e.g. restaurants, theatres, swimming pools, cinema, religious institutions, etc); the site's existing public transport connections and other mobility services in the area; the parking facility's location, underground and with direct access to a highway exiting the city (i.e. attractive for car-sharing for leisure trips). The project group discussed (a) improving marketing of the current services; and (b) introducing new services to the parking facility or above ground as part of a hub.

Risks with the choice of this site included a sense that – if focusing only on the parking facility – there was limited potential for intermodal journeys (at least for services located in the parking facility, as intermodality at ground-level is common) and a need to focus on multimodality (that is, on providing parking facility customers with a wider range of alternatives to private cars). A challenge would thus be to introduce services to the parking facility that increased the range of services, were commercially viable *and* not better suited to an overground or more accessible site. The fact that the mobility hub would be located underground in the parking facility, without direct access to the area's public transport terminal, was considered a risk;

customers would have to be informed and encouraged to change modes, but whether they would choose to do so was unclear. Moreover, it was unclear if information could be integrated into other apps or similar.

In sum, the project group and reference group agreed to proceed with a hand-on test, with objectives and actions aligned with the CNCA project plan. Each action was allocated to a different department to lead, and work began during January-February 2020.

## **Project implementation**

In the early stages of the project, the reorganisation of the Stockholm Parking company meant that the project group focused on implementing the other tasks in the project plan. With the site of the pilot chosen, the Environment Department and Stockholm Parking, together with a consultant, designed a survey to determine user needs and assess travel patterns and preferences in the district. The survey was to be distributed on site and digitally during April 2020, but the emergence of covid-19 meant it was only possible to disseminate digitally via organisations in the local area, e.g., housing associations, property owners, community organisations, etc. In parallel, the Traffic Office carried out an analysis of existing parking availability and car ownership. Translated versions of these studies were shared with CNCA in July and November 2020.

The studies confirmed that Medborgarplatsen is an interesting site for mobility hubs, with limited parking, low levels of car ownership among residents, and access to a wide range of mobility services. However, throughout 2020, the onset of the pandemic effectively stalled development of several mobility services in the area and resulted in actors such as the MaaS service UbiGo and various kickbike companies leaving the market. Similarly, new rules for micromobility – a large geofenced area was introduced to reduce disputes e.g., concerning parking of kickbikes – meant that possibilities to introduce new services at street-level, in direct proximity to entrances to the parking facility, were limited. Despite this, a wide range of discussions were held with mobility service providers and delivery companies about the possibility of establishing Medborgarplatsen parking facility. In most cases, these discussions were difficult and complicated by specific requests concerning facility access or price. The project group offered to fund limited renovation of a part of the facility to enable cargo bike access or delivery boxes, but even this did not result in agreement with the company in question.

During spring 2020, the project leader carried out of “state of the art” study regarding mobility stations in other European cities. This study indicated a number of commonalities and general trends among cities, with typical emphasis on establishing mobility stations above-land/on-street, at existing public transport nodes, and with a clear hierarchy of mobility stations from larger hubs to smaller “points”. An unintended impact was to indicate that the approach chosen in Stockholm is unusual, as few other cities have introduced a network of mobility hubs without direct engagement from their public transport authority, or off-street and underground. A lesson

from this project is that the approach is both motivated by, and a consequence of, a fragmented mobility governance landscape.

This in turn illustrates another lesson, namely the importance of thoroughly mapping governance challenges in Stockholm (or other cities) when developing mobility hubs. In Stockholm, the kind of mobility hub “solution” emerging from a process depends very much on the questions being asked. For example, the first question could focus on whether a mobility hub be located on or off-street? Or in new or existing buildings? Or on public land or planned/private land? Depending on the question and its answer, there are likely to be different outcomes in terms of e.g. actors involved, rules and regulations, etc. Encouraging different kinds of approaches to develop mobility hubs may be desirable, but there is a risk of scattergun development in the absence of a general strategy in which the different opportunities, needs, and trade-offs are discussed. Partly as a consequence of this finding, the Environment Department and Development Department have since 2021 been developing such a strategic approach to assist future planning.

During fall 2020, the project group discussed how to communicate the existence of the Medborgarplatsen mobility hub, even though no additional services had been introduced to the parking facility (in addition to two car-sharing services and electric vehicle charging points). The hub was defined as an informal cluster within the proximity of the garage, i.e. a neighbourhood hub, and one objective was to raise awareness about the services located in the garage. The range of other mobility services in the area were inventoried and mapped to show how many services were located within a 500 metre radius of the parking facility. This map was then presented, alongside a news article, on the City’s “Without Your Own Car” website, to raise awareness about the hub and other hubs in the city (<https://utanegenbil.stockholm.se/valj-bland-manga-satt-att-resa/>). In addition, a short memo was written to outline the steps taken when preparing the map and to provide recommendations about potential improvements that could be made to city websites so as to better indicate the availability of multimodal alternatives.

Subsequently, the CNCA project agreed that the planned study visit by Minneapolis to Stockholm would become a virtual exchange, and in spring 2021 an additional action – the production of a short film about mobility hubs in Stockholm – was introduced. This film was produced during spring 2021 and will be used for additional awareness-raising actions as well as during presentations at a planned CNCA webinar in fall 2021.

Designing and implementing a pilot Hub was the main responsibility of Stockholm Parking and, in the City budget for 2021, the company was also given main responsibility for further development of mobility hubs in parking facilities. During winter 2020-spring 2021, Stockholm Parking have relaunched their website with improved functionality, enabling users to more easily search for multiple mobility services and to see the full range of mobility services on offer at each facility. Some of these improvements were suggested by the CNCA project group, but at present it is unclear if funding is required. Significantly, in its relaunch, Stockholm Parking strongly emphasised its role as a mobility service provider and home to mobility hubs. Stockholm Parking state that, despite the difficulties of improving the service offering at

Medborgarplatsen, their view is that participation in the CNCA project has helped them learn and refine their business model and approach to mobility hubs; the work to improve the range of services offered, and number of sites offering hubs, is ongoing.

Throughout the project, the project team has liaised with other initiatives in the city interested in developing mobility hubs – for example, urban planners working on new developments, and private property owners aiming to establish a hub – in order to ensure that more mobility hubs are established and synergies between different initiatives are maximised. One example is the Kista Business District in the northwest of the city, which during spring 2021 has conducted a pre-study and aims to establish mobility hubs from late 2021 onwards. These discussions feed into the wider development of a strategic approach to development of mobility hubs in Stockholm, which began in January 2021 and is ongoing.

### **Outcomes and lessons**

The project completed in line with expectations, resulting in production of knowledge concerning the Medborgarplatsen site, parking, user expectations and implementation of mobility hubs in other cities. The pilot Hub was implemented with mixed results. It was launched, but more as a cluster of services in a neighbourhood, rather than as a multimodal station with all services at one place. It was not possible to introduce new services at the desired location, nor was it possible to acquire data on use. Nevertheless, the wider impact of the work is visible in the upscaling of Stockholm Parking's work on mobility hubs and the increased awareness and knowledge among city planners. There are also signs that, despite the pandemic, the mobility landscape will continue to diversify and new forms of hub will emerge. The ongoing strategy development process will result in more comprehensive guidance on how to plan, including checklists, for multiple forms of mobility hubs, and recommendations on where these should be located.