



Method / procedure for selection /
implementation of eHUBS – City of Nijmegen
DELIVERABLE 2.1

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Summary sheet

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1. Implementation approach

The joint methodology (deliverable 2.2) describes different strategies for planning eHUBs in the partner cities. Three stages can be identified in this planning process: location selection, planning the eHUB and getting started (figure 1). Generally, there is a division between a top-down approach and a bottom-up approach (see figure 2).

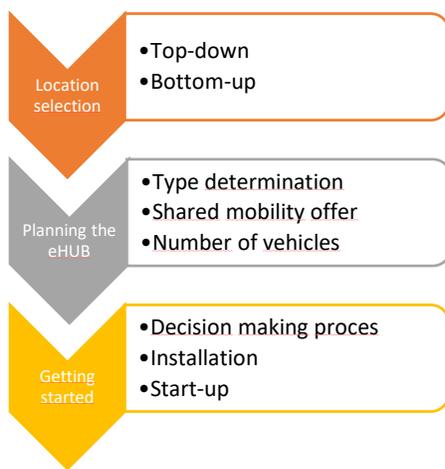


Figure 1: Implementation methodology

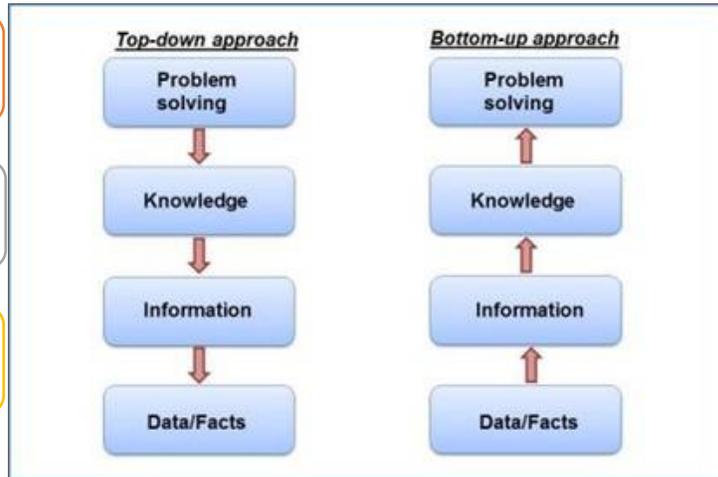


Figure 2: Top-down versus bottom-up

For Nijmegen and Arnhem, the implementation methodology will consist of a mixed approach, combining both top-down and bottom-up strategies. In the following sections, these strategies are further explained for the various aspects of the eHUB planning process.

2. Location selection

To determine the location of e-HUBs, a first assessment has been made by the municipality, determining potential locations based on factors such as expected demand, existing awareness and support for a sustainable lifestyle, existing infrastructure, potential (social) impact and geographic dispersion. These potential locations are discussed with shared mobility providers to determine suitability and to further pinpoint the exact starting locations. This top-down approach is then combined with a bottom-up approach, in which the input from local inhabitants is taken into account. Inhabitants of one environmental-friendly oriented neighbourhood in the North of Nijmegen have contacted the municipality to request an eHUB, so we want to make use of that energy. Although starting locations will in some cases be determined based on a top-down approach, input from inhabitants will be used to tailor the locations to the demands of the neighbourhoods and search for optimal embedding within the local environment. Within Nijmegen and Arnhem, the location selection is also seen as an iterative learning process, in which initial locations can be changed based on early experiences.

Initially we had also planned to combine some eHUBs with new developing areas, but this has proven impossible due to planning timelines. These locations will be locations of interest for upscaling of the eHUBs concept after the Interreg-project is concluded.

3. Planning at the location

a. Type determination

The main factor determining the type of eHUB implemented at each location is the available opportunities at this location. This is based on the space available, the proximity to other modes of transport (e.g. public transport hubs), the type of neighbourhood (residential, business, mixed) and other limiting or enabling conditions (e.g. availability of charging infrastructure). These factors are largely based on a top-down approach. Similar to the location selection, the determination of the type of eHUB is an iterative process, in which a bottom-up approach is implemented to further determine the best match between location and eHUB type. Based on an assessment of local support and demand for eHUBs, as well as an assessment of early user experiences and feedback, the type of eHUB can be modified to best suit the specific requirements for each location. For this Interreg project, we will mainly implement type 3 eHUBs. Depending on the location and experiences, it is possible that these type 3 eHUBs will be expanded into type 2 or type 3 eHUBs.

b. Shared mobility offer for an eHUB

Shared mobility offered at eHUBs is related to the type determination. Smaller type eHUBs (type 3) will most likely have a smaller variety of vehicles available than larger type eHUBs. Given the local context in Nijmegen and Arnhem (and the Netherlands in general) a focus on bicycle mobility is warranted. Electric bikes and electric cargo bikes will therefore always be a core aspect of eHUB facilities. Further determination of the shared mobility services offered at eHUB locations will be done based on proximity to public transport hubs, local demand within the neighbourhood and existing infrastructure and space available. Electric cars are very likely to be included in the eHUBs, as well as e-mopeds. E-scooters are currently not allowed on public roads in the Netherlands, but could be added in a later stage in the case of changed legislation and the existence of a specific demand.

c. Number of vehicles

Similar to the shared mobility types offered at eHUB locations, the number of vehicles is dependent upon available space and existing infrastructure as well as local demand. Proximity to other facilities such as public transport hubs can also affect the choice of the number of vehicles. In the early stages of the eHUBs deployment, we will have an average of eight e-bikes and two or three e-cargobikes present at each e-HUB. We aim to add at least two e-cars at each eHUB in a later stage, and potentially a number of e-mopeds. However, the distribution of vehicles among the various hubs may change based on experiences.

d. Infrastructure

A central aspect of required infrastructure for each eHUB is the availability of charging infrastructure. Both institutional and physical barriers can limit the availability of charging infrastructure at eHUB locations, especially in the early stages of eHUB installation. Basic infrastructure will include bike parking and charging facilities for both shared electric bikes and shared electric cargo bikes. Additionally, signage and branding will be required to signify the presence of the eHUB. Depending on the type of vehicles present at an eHUB, parking spaces for (electric) cars will also be necessary. We may also consider charging infrastructure for electric cars not being a shared car.

3. Getting started

a. Making decisions and installation of infrastructure

Installation of eHUBs is the responsibility of the municipality. This responsibility may be executed through the contracting of private partners. The municipalities of Nijmegen and Arnhem are each responsible for arranging the necessary permits and permissions for installation of the eHUBs.

b. Start-up of the eHUB

Apart from the physical set-up of eHUB locations, communication about the facilities to potential users is an essential component of an eHUB start-up. For this purpose, a communication consultancy will be contracted to set up and implement an extensive communication and outreach plan. In this project, we want to start with a very basic hub with e-bikes and e-cargobikes to get people familiar with the concept of sharing. With the experiences from this first pilot, we want to create a more definite eHUB with more branding and a larger variety of vehicles.

The eHUBS Consortium

The consortium of eHUBS consists of 15 partners with multidisciplinary and complementary competencies. This includes European cities, leading universities, networks and electric and shared mobility providers.



For further information please visit <http://www.nweurope.eu/ehubs>



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