STUDENT PROJECTS SHAREDIMOBIHUB

Interreg North Sea

Co-funded by the European Union

HOGESCHOOL UTRECHT

ShareDiMobiHub

Shared mobility in the Municipality of Utrechtse Heuvelrug (Deelmobiliteit Gemeente Utrechtse Heuvelrug)

Introduction

This report, commissioned by the Municipality of Utrechtse Heuvelrug and Utrecht University of Applied Sciences, explores the promotion of sustainable transport through shared mobility. It focuses on distances of 7.5 to 15 kilometers. The central question of the report is: How can the Municipality of Utrechtse Heuvelrug, starting from 2024, utilize or reorganize its current shared mobility options to align with user profiles and increase the usage of mobility hubs?

Methodology

To address this question, a literature review was conducted. Additionally, a survey was carried out within the Municipality of Utrechtse Heuvelrug. Data was also obtained from the shared bicycle company Donkey Republic. The primary requirement for the clients is to gain insight into how effective the (shared) mobility hubs are. The goal is to draw conclusions about the relationship between the target group and the placement.

Results

The current usage of shared mobility hubs is low, with less than 10% awareness among residents. Challenges include a preference for personal transport, lack of facilities, and suboptimal transfer times. The report proposes three primary solutions: enhancing awareness through campaigns, increasing visibility of hubs both online and physically, and relocating underperforming hubs, such as in Amerongen. While improving accessibility ranked high in impact, it was deemed less feasible and financially viable. Collaboration between the Municipality and Donkey Republic is advised for implementing these solutions, with an expected timeline of 9 weeks for execution.

Read the complete report

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Shared mobility, Carpool and P+R (Deelmobiliteit, Carpool- en P+R)

Introduction

The Province of Utrecht aims to expand shared mobility hubs due to spatial constraints and an anticipated population growth of 15% by 2050. A combination of carpool, P+R and shared mobility locations could alleviate these problems.

Methodology

This research employs a problem-solving cycle to address the transition from carpool and P+R areas to shared mobility hubs, focusing on the initial phases: problem definition, analysis and diagnosis, and solution design. The SERVQUAL model is used to evaluate service quality and identify gaps between user expectations and experiences. Data was gathered through qualitative surveys at carpool and P+R sites in Houten, Veenendaal, Papendorp, and Woerden, directly engaging with users to understand their needs and experiences. Insights from these surveys, combined with literature reviews and expert consultations, informed a structured action plan to improve shared mobility accessibility, reliability, and user satisfaction. The methodology highlights a systematic approach to proposing feasible solutions that align with user expectations and regional sustainability goals.

Results

Enhancing user awareness and engagement is crucial, requiring proactive collection of user feedback for continuous improvement. Recommended facility additions at locations include coffee and snack machines, seating areas, charging stations, cameras, and toilets, to further support the expanded shared mobility network.

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Visibility of Shared Mobility Hubs (Zichtbaarheid van Deelmobiliteitshubs)

Introduction

This report explores the online and physical visibility of shared mobility hubs in the city of Utrecht. The research aims to assess the current status of the visibility of these hubs and provide strategic recommendations based on collected data.

Methodology

The methodology includes evaluating the physical and online visibility levels of existing hubs through standard signage and digital platforms like Google Maps. This evaluation is combined with a comparative analysis with other cities. Additionally, interviews and survey results are incorporated into the research.

Results

Key recommendations for optimizing physical visibility include comprehensive signage and innovative digital directions. For online visibility, improvements suggest adjustments on municipal platforms and interactive mapping. Implementing these recommendations is expected to enhance visibility and user experience, fostering increased acceptance and use of shared mobility options in Utrecht. This work contributes to the development of more sustainable urban mobility solutions and the efficient use of city spaces.

Read the complete report

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Shared Mobility and Neighborhood Hubs in the 15-minute City (Deelmobiliteit en Buurthubs in de 15-minutenstad)

Introduction

Cities are increasingly adopting the "15-minute city" concept, aiming to provide all essential services within a 15-minute walk or bike ride. This concept enhances urban life by reducing travel time. Utrecht is advancing this idea with a plan to become a "10-minute city," prioritizing walking, cycling, and public transport over car use. Shared mobility hubs, offering options like shared bikes and cars, could play a crucial role in addressing space constraints and reducing emissions in cities.

Methodology

The study investigates the potential of shared mobility hubs in realizing the 15-minute city concept, using Utrecht as a case study. It employs a combination of literature review, expert interviews, and geographical data analysis.

Results

The study finds that shared mobility hubs, particularly those with e-bikes and cargo bikes, can significantly improve access to different areas, especially on city outskirts. For these hubs to succeed, collaboration between public and private sectors is essential, along with supportive policies. Ultimately, these shared hubs can advance the 15-minute city concept without necessitating major changes to urban infrastructure.

Read the complete report

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Multifunctional Shared Hubs in Regional Areas (Multifunctionele Deelhubs in het Buitengebied)

Introduction

This report explores setting up multifunctional hubs in the rural areas of Utrecht province. The goal is to identify the best locations for these hubs and determine what they need to function effectively. The research examines what a multifunctional hub is, what it requires, where it can be located, and how it might look.

Methodology

A multifunctional hub connects different types of transport, like buses and shared cars, with services such as shops and medical clinics. The research involved thorough analyses, including surveys in Graaf and Maarsbergen, although limited responses made it difficult to fully understand community needs. By evaluating bus stops on regional routes, the study identifies ideal locations based on factors such as space, closeness to services, and bus frequency.

Results

Lopik Kruispunt Graaf, Maarsbergen Kerk, and Loenersloot Amsterdam Rijnkanaal emerge as top locations. Designs have been created for these spots to meet project requirements, enhancing accessibility and quality of life in these rural areas. The report provides a practical plan, supported by thorough analysis, to guide the development of these multifunctional hubs.

Read the complete report

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Modular Framework for Shared Mobility Hubs

Introduction

This research aims to develop a modular framework for shared mobility hubs tailored to the needs of the Municipality of Utrechtse Heuvelrug. The objective is to design scalable and adaptable hubs that support sustainable transport over medium distances (7.5 to 15 kilometres), respond to user profiles, and increase the use of shared mobility options. The focus is on reducing car dependency, enhancing multimodal integration, and supporting local accessibility goals.

Methodology

The study employed a combination of desk research, field observations, and surveys conducted at three locations within the municipality. A Multi-Criteria Analysis (MCA) was applied to evaluate the feasibility of these locations, using criteria such as population density, proximity to key destinations, and mobility needs of different user groups. The framework design was informed by these local insights and supported by reference to national and international case studies.

Results

The study demonstrates that a modular approach enables shared mobility hubs to respond effectively to local conditions and user needs. The five identified modules offer a clear structure for tailoring services across diverse locations. The Multi-Criteria Analysis confirmed that site-specific adaptations are essential to maximise usage and impact. This framework lays the groundwork for practical implementation, while remaining flexible enough to scale across the municipality and beyond.

Read the complete report