ShareDiMobiHub

Mobility hubs and shared mobility in Leuven: Towards further digitalization

DELIVERABLE WP2 A.8

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Summary sheet

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Organisation	Abbreviation	Country
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Capital Region of Denmark	CRD	Denmark
Vestfold and Telemark county	VTFK	Norway
Subpartner: Statens vegvesen	SVV	Norway
Subpartner: Tønsberg kommune	TK	Norway
Subpartner: Porsgrunn municipality	PK	Norway
Subpartner: Skien municipality	SK	Norway
Promotion of Operation Links with Integrated Services	POLIS	Belgium
City of Amsterdam	AMS	Netherlands
City of Leuven	LEU	Belgium
University of Antwerp	UAntw	Belgium
Transport Authority for the Amsterdam Region	VRA	Netherlands
Mpact	Mpact	Belgium
Autodelen.net	Auto	Belgium
City of Rotterdam	ROT	Netherlands
Hamburg University of Applied Sciences	HAW	Germany
University of Applied Sciences Utrecht	HU	Netherlands

Document history

Version	Date	Organisation	Main area of changes	Comments
0.1	July 2024			Review by Mpact
0.2	December 2024			
0.3	January 2025			Inputs from consortium considered (MPact)

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1   Introduction

The city of Leuven wants more Leuven residents, commuters and visitors to use Hoppin hubs and the available shared mobility services. There is still a lot of growth potential for information and data flows between the city of Leuven, end users and providers.

We see areas for improvement in end-user communication and information; digital information channels could be wider and better developed.

Shared mobility services are provided by external providers. The exchange of data and information between the city and the providers is crucial to provide the most appropriate services and best service. To organise that data exchange as efficiently as possible, we would like to take steps to achieve automatic exchange for a minimum number of parameters. We certainly see the benefits of data standards, but do not want to push that in the short term. We think it has to be a win-win for both stakeholders, so also in terms of rollout well-tuned to the rhythm of both.

We are pursuing more effective data management within the city of Leuven, with good coordination between relevant stakeholders. We would like to take the first steps towards making shared mobility data more insightful and visually appealing using a closed dashboard. We aim to take more policy decisions based on data, and think that such a dashboard can help.

For the scale of Leuven, investing in a city-wide MaaS app does not seem to make sense. We think a MaaS app on a Flemish scale could be useful. However, it is coffee-gazing what the next legislature aspires to in this regard. During the past legislature, the foundations were laid, but unfortunately the results achieved do not come close to those expected.

2   Context

The city of Leuven aspires to scale up use of Hoppin hubs and the available shared mobility services. After all, Hoppin hubs and shared mobility are crucial for the realisation of a climate-neutral and easily accessible city where it is pleasant to live, work and move around. Further digitalisation with regard to Hoppin hubs and shared mobility is an important pillar to realise this ambition.

What follows is an overview of Leuven's current data situation: what data we collect, how they are exchanged between the provider and the city of Leuven, how we organise the data flow and how we use this data for policy-making. We prepare this overview by vehicle type and provider.

2.1   Collecting data

2.1.1   Shared cars

2.1.1.1   Cambio

Since 2023, Cambio has developed a dashboard. From the city of Leuven, we have exclusive access to fleet data in Leuven. Every 10 th of month n+1, the dataset of month n is added.

The crucial indicators are:

1. Occupancy: average use of a car based on 24h/day. 30% = 7.2 hours per day (target 33%)

2. Reservation coverage: percentage of wishes/applications ending in effective reservation (target 90%)

3. Kms driven/car/year: extrapolation of miles driven to miles per year per car.

The key figures are:

1. Number of trips in period

2. Number of trips per day/car

3. Total kms of all cars in period

4. Average distance over all trips of all cars in period

5. Average duration over all trips of all cars in period

6. Number of unique active users of all cars in period

For each of the above parameters, as well as for the "number of cars" parameter, it is possible to filter by car type (fuel vs EV), as well as by period (down to monthly level).

For the shared cars for which financial intervention is provided, the following parameters can be given via the dashboard up to the level of "supported cars":

- Forecast number of kms per car/year

- Number of active users

- Number of journeys

- Occupancy rate

- Reservation coverage

At an individual car level, there is visibility of distance.

Upon specific request, we get the data of the above indicators and key figures for each carsharing station, supplemented by the geographical distribution of users. This info is provided to us using a screenshot from the "administrator dashboard".

2.1.1.2 Cozywheels
Cozywheels is a pee-to-peer mobility sharing platform.

Annually, we request the following dates from them:

- Number of members (domiciled in Leuven)

- Number of shared cars in Leuven (and how many of them EVs)

In addition, we have data on

- Number of car-sharing/Cozywheels parking permits

- Number and location of parking spots intended for Cozywheels car sharing

- Average number of users per car (derived)

2.1.1.3 Dégage

Dégage is a peer-to-peer mobility sharing platform.

During the pilot project (09/23 till 02/2025) we will receive the following dates 2x/year:

- Number of Dégage members by postcode

- Number of active users by postcode

- Number of active cars per postcode (and how many of them EVs)

- Number of kilometres driven per car

  o Total

  o Number of kms by users

- Derived: share percentage per car and average share percentage for Leuven Dégage cars

Additionally, we have data on number of car-sharing/Dégage parking tickets.

2.1.2 Shared bikes

2.1.2.1 Cargoroo cargo bikes[1]

Every month, we get the following data by dashboard (pdf):

1. Number of bicycles

2. Availability of bicycles (%)

3. What % of the total fleet is used on a daily basis?

4. Number of users using Cargoroo for the first time

5. Total number of registrants (people with an account)

6. Number of active users

7. Number of rides

8. Average trip duration

9. Average number of trips per user (derived)

10. Average number of trips per day per bicycle (derived)

11. Distribution (%) of trips by trip duration

12. Average duration of trips for each of the 7 days→ on which day do people drive the longest/shortest on average?

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[1] Unfortunately, Cargoroo was declared bankrupt (24/12/2024) at the time of finalizing this plan.

13. Average number of trips (whole fleet) for each of the 7 days→ on which day are the most/least trips driven?

14. Average number of trips per day per bicycle for each of the 7 days (derived)

15. By bicycle or location

   o Number of rides

   o Miles driven

   o Number of hours driven (only for 30 must-have locations)

   o Number of unique users

   o Availability

On a quarterly basis, we get by dashboard in addition to summations of the monthly data, we also get

1. Percentage of active users versus number of trips driven -> what proportion of users drive very regularly/sporadically?

2. Origin of users by a heatmap of Leuven.

Since early 2024, Cargoroo has additionally been using an API to provide information about vehicles and their status. The MDS (Mobility Data Specification) 2.0 standard is followed for this purpose. In this way, the city can monitor the availability of each vehicle in real time and retrieve information about the trips driven per vehicle (time, duration and distance), and integrate this data into its own data warehouse and dashboard (see 6.3).

2.1.2.2   Blue-bikes
Annually, we receive by dashboard following data on the shared bikes (regular shared bikes and, since December 2023, supplemented by shared e-bikes); the data for the shared e-bikes can be delivered separately:

- Number of bicycles

- Total number of trips for the entire fleet

- Number of trips per month for the entire fleet

- Distribution (%) of trips by trip duration

- Number of unique users

- For period of last 3 years - where do users of Leuven Blue-bikes come from?

- For period of last 3 years - where do Leuven residents borrow a Blue-bike?

- By location (3)

   o Number of trips per year

   o Number of trips per month

- o   Distribution (%) of trips by trip duration

- o   Number of unique users

2.2   Organizing data

The collected data are generally stored in 2 separate summary tables, one for shared cars and one for shared bikes. At the beginning of each calendar year n, they are updated for year n-1.

Per car-sharing provider (commercial and P2P), the following parameters have been tracked in excel (table and graph) since 2005:

- -   Number of users
- -   Total number of vehicles
- -   Number of EVs
- -   Number of pitches
- -   Derivation: average number of users per shared car

Per bike-sharing provider (commercial only for now), the following parameters have been tracked in excel (table and graph) since 2013:

- -   Number of members, subscribers, people with account
- -   Number of active users (min 1 ride/year) (from Blue-bike only)
- -   Total number of bikes (for regular Blue-bikes also per pitch)
- -   Number of e-bikes
- -   Number of pitches
- -   Number of rides (for the regular Blue-bikes also per station)
- -   Derivation: average number of users per shared bike
- -   Derivation: average number of trips per bike per day
- -   Derivation: average number of trips per user

2.3   Policy-making based on data

Within the multiannual plan 2020-2025, efforts will be made to scale up shared mobility solutions and cluster them within mobility hubs or Hoppin hubs.

To monitor growth in supply and use, the above data was used by administration and policymakers. There were no concrete targets of growth. These tables were sufficient to answer questions from municipal councillors. If more location-specific information was desired, we could also contact providers ad hoc to request that data.

To plan annual expansions, these tables were also used to make high-level decisions on fleet expansion (number of cars and bikes). In consultation with the providers, who have insight into the location-specific usage figures, and based on the local context supplemented by e.g. parking pressure measurements, area-specific choices were made for new stands and expansions.

To communicate about the status quo of shared bikes, shared cargo bikes or shared cars in their own channels or in the press, these tables were also used.

3 Objectives

3.1 General objectives

Further digitalisation should lead to better usage figures of Hoppin hubs and shared mobility services:

- Increased use of Hoppin hubs
- Increased use of shared mobility services

We aim for annual growth in supply and demand for the period 2023 to 2030, in terms of number of users, number of vehicles and number of trips. The monitoring plan elaborates on this with concrete targets within the scope of the ShareDiMobiHub project.

3.2 Digital targets

Specific digital objectives are also kept in mind, which in turn contribute to the overall goals:

- Towards a more data-driven policy
- Higher service level on digital info

4 Stakeholders

From the mobility department, we want to plan and implement high-performance data management. We want to build our planning, monitoring and evaluation (PME) from data. We want to develop a longer-term vision and also monitor and evaluate policy decisions. We need to determine which data are crucial and which are nice-to-have for this purpose. We want to work towards the most efficient and effective way of data management.

From the mobility department, we therefore want to cooperate with both internal and external stakeholders.

4.1 Internal

Stakeholder	Powers	Elements to address
Digi-team	Coordination of citywide data management	- Data management - Dashboard
Sustainability department + Leuven 2030	Coordination of breakthrough projects within the Leuven climate contract	- Policy follow-up of breakthrough project "shared mobility for all" - Communication to Leuven residents and wider
Communications department	Clearly communicating mobility policies, actions, projects to citizens	- Working towards even better communication to citizens in order of more use
Board of Mayor and Aldermen	Setting out a vision and coherent policy	- Drive and monitor a pro-shared mobility policy

4.2   External

Stakeholder	Powers	Elements to address
Cambio	Provider of shared cars	Towards better, preferably automatic, data exchange with city of Leuven
BattMobility	Provider of shared e-cars	Towards better, preferably automatic, data exchange with city of Leuven
Cargoroo	Provider of shared cargo bikes	Exchange via MDS 2.0
Blue Mobility	Provider of shared bikes	Towards better, preferably automatic, data exchange with city of Leuven
Dégage	Platform of private vehicles sharing	Towards proper data exchange in line with recognition framework car sharing Leuven
Cozywheels	Platform of private vehicles sharing	Towards proper data exchange in line with recognition framework car sharing Leuven
Transport region Leuven	Regional mobility plan: decision power about mobility hubs	Determination of location of local, regional and interregional Hoppin hubs. Tendering of shared mobility providers.
MOW and Hoppin	Flemish Government initiative to promote sustainable travel. Focusing on Hoppin hubs and Hoppin travel planner. And in the future also "MaaS app"?	Good insight into plans and implementation of Hoppin app, especially regarding integration of shared mobility services (from Leuven)

5   Roadmap towards implementation

No	Description	Deadline	Ready
1	Drafting digi-plan draft1	06/2024	07/2024
2	Revision by Mpact		14/8/2024
3	Adjust to final digi-plan within scope of SDMH	01/2025	01/2025
4	Implement planned actions in coordination with concerned stakeholders	08/2025	

6 Planned actions within SDMH

These are actions within the city as well as actions in coordination with external actors.

6.1 Towards better digital information for end users on the Leuven website

We choose not to pull real-time info from the SMPs onto our website, as the added value is too small, since only consultation is possible and no further processing such as ticketing.

We will, however, introduce visitors to the alternative offer of shared mobility and Hoppin points through more entrances.

We examine which pages, on which mobility information is relevant, are currently frequently visited:

- https://www.leuven.be/zonaarleuven
- https://www.visitleuven.be/hoebereikjeleuven
- https://leuven.be/parkeren
- https://www.leuven.be/autodelen
- https://www.leuven.be/hoppinpunten

  Mpact hereby advises to check what plans there are from the Flemish Government to keep the Flemish database of Hoppin hubs up-to-date, and to see whether it would not be better to refer to that info from the Leuven website. Now it is a bit of double work to keep information up-to-date. This tip will be discussed further with webmaster (Leuven) and the Flemish Government (Hoppin). It will only be considered if they can guarantee that updates happen quickly, because Leuven doesn't want to take a step back in terms of quality.

- https://leuven.be/fiets-huren ...

This can be looked at with Upper's project coordinator, where there is a similar objective for OV.

We take inspiration from other Flemish cities.

We list the areas for improvement, and try to implement them.

6.2 Towards better data sharing between city and shared mobility providers (WP2/act8)

We wish to work towards an automatic data exchange, a transparency of data so that the most important parameters are visible at any time. We aim for a set of must-have data, with an eye on feasibility for providers and with an eye on feasibility of data processing by the city of Leuven.

6.2.1 A considered selection of data

In Leuven, we have a decent offer of shared mobility services, but this is of course very relative to big cities. In Flanders, there are some larger commercial shared mobility providers with a wide geographical spread, which are also active in Leuven, namely Blue-mobility and Cambio. In addition, there is Cargoroo, which also operates in Antwerp and Mechelen.

The proposal is to make the basic set of data as similar as possible for the different shared mobility providers.

For shared cars, the recognition regulation (work in progress) will be decisive. This will define the basic set of parameters, as well as the regularity and mode of exchange.

We also have the cargo bike sharing concession rules, which include agreements on data and data sharing.

A basic data set looks as follows:

#	Parameter	At level of	Car	Cargo bike	E-bike	Bike
1	Number of members/accounts (with address in Leuven)	Provider/platform	yes	yes	yes	yes
2	Number of active users (with address in Leuven)	Provider/platform	yes	yes	yes	yes
3a	Number of unique active users per vehicle	Vehicle	yes	yes		
3b	Number of unique active users per location	Location			yes	yes
4	Start time and end time of each trip	Vehicle	yes	yes	yes	yes
5	Mileage at start and end of every trip	Vehicle	yes	yes		
6	Name and address of site/location	Vehicle	yes	yes	yes	yes
7	Licence plate (number) (name)	Vehicle	yes	yes		
8	Type car (city, family, cargo, ...)	Vehicle	yes			
9	Population density (< or > 4,000 inh/km^2)	Vehicle	yes			
10	Drive of engine	Vehicle	yes	yes	yes	yes
11	Availibility	Vehicle	yes	ja	ja	

Using this basic set, follow-up can be done at different levels (vehicle, pitch, provider and/or city of Leuven) on:

1. Number of share vehicles
2. Number of e-sharing vehicles
3. Number of reserved sites
4. Number of rides
5. Number of kilometres driven
6. Number of hours driven
7. Average duration of trips
8. Median duration of journeys
9. Average distance of trips
10. Median distance of trips
11. Number of kilometres driven by the largest user (with most km)
12. Number of hours driven by the largest user (with most hours)
13. Average number of trips/day/shared vehicle
14. Average number of active users/shared vehicle
15. Occupancy rate
16. Origin of active users

6.2.2   How to exchange data?

City of Leuven would like to evolve towards real-time automatic exchange of raw data between shared mobility provider and government. Data exchange via reports or ad hoc deliveries of raw data, requires substantial efforts both on the provider's side and on the government's side: the provider, often with

limited (staff) capacity for data analysis, has to process and report its data, the local government has to bring together and reprocess these disparate reports from different providers. Although setting up the automatic exchange of unprocessed data at the vehicle level requires an initial effort on both sides and is thus only desirable when the provider's operations in the city are stable and reach a certain level of scale, the long-term efficiency gains are significant.

Moreover, this effort can be limited by making maximum use of standardization and harmonization: local authorities harmonize their data requirements, shared mobility providers follow as many data exchange standards as possible (preferably MDS2.0 or a standard derived from it, agreed at regional level). As the number of active providers in Leuven is as yet limited, data standardization is not a priority for the city of Leuven.

6.3   Towards higher-performance data process management

6.3.1   How to organise and link databases?

The city of Leuven has a lot of different data sources, but these sources are often hidden in data files in a variety of formats, which are not centrally stored and not properly described anywhere. Reports from shared mobility providers, for example, are in PDF files, stored in a network location that is only visible to a limited number of city employees. Standings of shared vehicles, for example, are kept in a locally stored spreadsheet without regard to possible reuse of the data.

Data warehousing is a process of collecting, storing and managing data from different sources in a central storage structure, often called a data warehouse. A data warehouse provides a central, reliable source for data analysis and reporting, which is essential for strategic decision-making. By centralising data from various sources, organisations and thus certainly local governments can gain a coherent picture of their community and make better-informed decisions. The process consists of the following components:

1. **Data collection**: Data is collected from various sources such as databases, applications, and external datasets. This can be both structured and unstructured data.

2. **Data integration**: Collected data is integrated and consolidated. This involves cleaning, transforming and merging data to ensure consistency and quality.

3. **Storage**: The integrated data is stored in the data warehouse. This is a specialised database optimised for performing complex queries and analyses.

4. **Access and Analysis**: Users can access the data in the data warehouse through Business Intelligence (BI) tools and analytical applications. This enables them to generate reports, analyse trends and gain insights that support decision-making.

5. **Management and Maintenance**: The data warehouse is continuously managed and maintained to ensure that data remains up-to-date and accurate. This includes updating data, managing security and optimising performance.

Thus, by housing data related to shared mobility (both data produced by the shared mobility providers and data collected or produced by the city itself) in a data warehouse, we facilitate the making of data-driven decisions around shared mobility itself, but also the (re)use of this data in other policy contexts where it is relevant.

6.3.2   How to handle data from mobility providers?

Integrating data sources into the data warehouse takes time. Integrating existing datasets citywide is a long-term work. The use of data standards can facilitate this part of the process. Nevertheless, given the limited capacity to onboard datasets, it is important to prioritise data flows for which we are reasonably sure that they will remain stable in the future, i.e. that the structure will not be changed overnight and that the data will continue to flow. Experience shows that this is not always the case with (new) shared mobility providers. So the onboarding of new datasets should always be carefully considered.

It is important to draw up a data processor agreement between the provider and City of Leuven. (a DLA: Data Licence Agreement). In it, agreements are agreed on how data will be processed and stored, when the data will be destroyed, with whom the data may be further shared. After all, sharing raw data is commercially sensitive; aggregated data sharing can be easier. Often, providers allow data to be shared with other governments, police or court institutions and research institutes.

We already expect several challenges regarding this exchange of data. Technical issues will undoubtedly arise. There will probably be data missing from the delivered data sets. Data will not always be delivered "on time". The challenge is how to deal with "formal notice", i.e. how will a provider be forced to deliver the data according to the agreements made, and how will the provider be punished if it does not conform to the requirements? Will they first receive a warning and only then will sanctions follow? And what exactly do these sanctions entail? How much time will operators already operating on the Leuven territory be given to adapt to the new guidelines? Here, too, consultation with the providers is indispensable. Within the draft recognition regulations for car-sharing providers, an attempt is made to clarify these processes, at least in theory.

6.4   Towards a convenient and visually appealing dashboard (WP2/act8)

Two separate tools are distinguished, however, the distinction between the two is much less sharp than might appear from this. Within the geographical tool, there is of course quantitative information attached to locations.

6.4.1   For area-specific policy goals and decisions

With regard to Hoppin hubs and shared mobility, there are a fair number of policies to set out and monitor that are "place-related" . Therefore, an interesting product of good data management is an application that can visualise and combine geographical information. The city of Leuven uses ArcGIS for this purpose.

Within the time frame of SDMH, we are rather working towards a closed GIS tool for internal use; we wish to monitor, visualise and provide insight into the use of shared vehicles (and Hoppin hubs) at the spatial level (ranging from a Hoppin hub location or stand of shared vehicle(s) to borough) in the short term. This tool will certainly help ensure that policy goals and decisions are set, monitored and adjusted based on data.

Four main categories are defined, namely Hoppin hubs, shared cars, shared cargo bikes and shared bikes. Within this GIS tool, relevant map layers are brought together and information is linked in fields to geographical points, clusters or surfaces so that the clearest and most insightful answers can be found to policy questions.

6.4.1.1 Hoppin hubs

The following is a list of concrete use cases regarding Hoppin hubs that we want to look at and investigate further using this tool:

1) we want geographically optimal coverage - if we assume we want to reach all Leuven residents on max 5' walk, in which areas of Leuven are we not yet achieving that?
2) we certainly want a supply of Hoppin hubs in heavily populated sectors: where is the offer sufficient and where not?
3) we want to install new neighbourhood Hoppin hubs where there are well-run shared mobility services (minimum 2), with highest priority for places with 3 different services, then with 2 services and finally with 1 service.
4) we want to install new Hoppin hubs with public transport supply where shared mobility services are running well (minimum 1), with highest priority for places with 3 different services, then with 2 services and finally with 1 service.
5) we want charging infrastructure for cars at Hoppin hubs, with highest priority for shared cars, then also for private cars
6) we also want to facilitate bicycle parking at Hoppin hubs (both for stayers and interchanges)
7) we also want to provide parking at the Hoppin hubs (both for stayers and interchanges)
8) we want the additional services such as parcel lockers to be integrated as much as possible within the Hoppin hubs
9) we want additional services such as seating to be integrated to the maximum within the Hoppin hubs
10) we want additional services such as bicycle repair to be integrated to the maximum extent within the Hoppin hubs
11) we also want to consider parking pressure when locating Hoppin hubs

6.4.1.2 Shared cars

The following is a list of concrete use cases regarding shared cars that we want to look at and investigate further using this tool:

1) we want geographically optimal coverage - if we assume we want to reach all Leuven residents on max 5' walk, in which areas of Leuven are we not yet achieving that?
2) we certainly want Cambio's offer in the heavily populated sectors (inner city and Kessel-lo) within a radius of 150 m from every home, where are the needs? (Climate city contract -commitment statement)
3) as far as Cambio is concerned, we want to grow by an average of 25% annually in terms of the number of vehicles (see CCC commitment statement, 2023-2025)
4) in terms of Cambio's shared car fleet, we want at least 20% to be electric by 2025 (see commitment statement CCC)
5) we want the total fleet of shared cars (zone and reserved pitch) to increase by 15% annually until 2030
6) we want to maximally link the shared cars with the Hoppin hubs

7) we want to evolve towards the widest possible range of electric shared cars (from our authorised providers, we require at least statbel[2]% + 10))
8) we also take parking pressure into account in the expansions
9) we also take into account a diverse range of car types in the distribution
10) we would also like to take into account the distribution of private car ownership when determining stand locations (e.g. registered vehicles per sector)
11) we also like to take into account the distribution of issued residents' permits/parking permits when determining stand locations

6.4.1.3   Shared cargo bikes

The following is a list of concrete use cases regarding shared cargo bikes that we want to look at and investigate further using this tool:

1) we want geographically optimal coverage - if we assume we want to reach all Leuven residents on max 5' walk, in which areas of Leuven are we not yet achieving that?
2) we certainly want to offer a share bin bike within 150m of every home in the heavily populated sectors, where are the needs?
3) we want to maximise the linkage of the shared bicycles with the Hoppin hubs
4) we also consider parking pressure when determining new pitches

6.4.1.4   Shared bikes

The following is a list of concrete use cases regarding shared bicycles that we want to look at and investigate further using this tool:

1) we want to give more sustainable travel options for first and last mile for visitors and commuters. Good to provide shared bikes at key train stations, bus stations + bus stops and peripheral car parks . Examine to what extent we already answer this transport demand, where are there still options? Best to check on a trial basis whether people use bicycles in combination with train, bus and car.
2) we want to provide more sustainable travel options for first and last mile for visitors and commuters. Therefore, it is good to know the main destinations (of visitors and commuters), so that we provide a hub for pick-up and drop-off not only at the origin but also at the destinations of journeys (within a B2M system). Which are the main destinations? Have we already covered them? Where are there still needs?
3) we note that the Blue-bikes at Leuven stations (certainly Leuven station) are also reasonably used by Leuven residents themselves. We want to investigate whether an offer of shared e-bikes is also picked up by Leuven residents - especially at the 3 locations: Leuven station, Rector de Somer square and Parking Vaartkom? If we want to offer more opportunities for them, where do we best expand? (best in densely populated parts of the city, where people also find it difficult to park their bikes safely inside)
4) we want to maximise the linking of the hubs for shared bikes with the Hoppin hubs

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[2] Statbel, the Belgian statistics office, collects, produces and disseminates reliable and pertinent figures about the Belgian economy, society and territory.

It would also be interesting to link and visualise high-level usage information for each of the 4 themes to the items, at the level of Hoppin hubs or vehicle: number of kilometres driven/month; number of hours driven/month; number of unique users/month).

6.4.2 For quantitative policy goals and decisions

A product of good data management can be a dashboard or, in other words, a strong visualisation of quantitative data related to the whole territory of Leuven. Microsoft Power BI does offer possibilities for this.

Within the timeframe of SDMH, we are rather working towards a closed dashboard, and aim with this dashboard mainly as a tool for internal use; in the short term, we mainly wish to monitor, visualise and provide insight into the supply and use of shared mobility services (and Hoppin hubs). This tool will certainly contribute to setting, monitoring and adjusting policy goals and decisions based on data.

In the further future, the mobility department wishes to have a global dashboard, which also integrates the other mobility data, and which can also be used as a tool for external use (communication and nudging). It seems best to us to open up such a dashboard when it is more or less complete, i.e. integrates more than shared mobility, hence the focus now is on internal use. From that first experience, it can then be built on.

Mpact makes the following interesting remark here: the long-term goal of making the dashboard publicly accessible carries certain risks. After all, making the number of members or active users of certain subsystems public may be sensitive for certain operators, who consider this data to be sensitive, strategic information and therefore prefer not to share it. Therefore it is necessary to think carefully about which data we make public. Good agreements with the providers are indispensable here.

With this dashboard, we think we can more easily draw up, monitor and adjust quantitative policy goals and decisions concerning the entire territory of Leuven. Specifically, we aim to track the following items:

1. Annual evolution of **supply** of different shared vehicles (at 3 levels: 1) bike/car; 2) bike/cargo bike/car) and 3) by provider)
2. Annual evolution of **use** of different shared vehicles (at 3 levels: 1) bicycle/car; 2) bicycle/cargo bike/car) and 3) per provider)
3. Annual evolution of **impact on private ownership of vehicles** (car and cargo bikes)
4. Biennial evolution of **impact on modal split**
5. the **origin of the users.**

Based on the above expectations, certain data will be included in the dashboard.

6.5 Towards a HOPPIN app integrating shared mobility services in Leuven (WP2/act9)

In a first phase (from December 2023), all facilities - including the shared systems - at a Hoppin hub will be visible in the app. For the sharing systems, the offer will be shown + a link to the shared mobility provider's website so that travelers can find the appropriate information there (availability, fare, etc.).

In principle, all shared providers are shown (bike/ car/scooter) at the level of the active Hoppin hubs. This data is still delivered manually to the Hoppin centre via the Hoppin database. In addition, the Hoppin database is not up-to-date.

Within route planning, shared mobility services are not yet included.

As far as ticketing is concerned, there will be further followed-up on what can be done with the app: which tickets can be bought and fully processed?

The expectations of the Hoppin app within the SDMH project progression should definitely be adjusted. At present, we can only hope that the renewed Flemish administration will sharpen the objectives within the next legislature.

7 The ShareDiMobiHub Consortium

The consortium of ShareDiMobiHub consists of 13 partners and 4 subpartners with multidisciplinary and complementary competencies. This includes European cities and regions, universities, network partners and transport operators.

For further information please visit https://www.interregnorthsea.eu/sharedimobihub