



Vlaamse
overheid

OSLO Passenger Transport Hubs: Business workshop

Welcome!

Tuesday 26th of April 2022
Virtual workshop – Microsoft Teams

We start at 09:05am



Before we start...

Mute yourself during the meeting



Raise your **hand** before speaking. We encourage interaction!



Questions and suggestions can always be communicated via the **chat**.



yes/no questions can be answered via the chat:



Yes = +1
No = -1
Neutral = 0

Objective

An introduction of the OSLO
Passenger Transport Hub track



Brainstorming about **use cases**
and **requirements** for this data
standard

Topics

09:00 - 09:10 AM	Welcome and introduction	Arne Scheldeman (DV)
09:10 - 09:20 AM	Project introduction	Clara Pezuela & Tom Callens (GreenMov)
09:20 - 09:35 AM	Introduction to OSLO	Arne Scheldeman (DV)
09:35 - 10:15 AM	Flemish model OSLO Hoppinpunten	Joris Cornu (DMOW) Arne Scheldeman (DV)
10:15 - 10:30 AM	<i>Break</i>	
10:30 - 10:50 AM	Model explained by real-life example	Arne Scheldeman (DV)
10:50 - 11:20 AM	Brainstorm: use cases and expectations	Arne Scheldeman (DV)
11:20 - 11:40 AM	Mapping models	Arne Scheldeman (DV)
11:40 - 12:00 AM	Q&A en next steps	Arne Scheldeman (DV)

Introduction



Who is who?

M U R A L

Project introduction

Green mobility data models for smart ecosystems

Clara Pezuela
Project Coordinator - GreenMov
26 April 2022



GreenMov in a nutshell

Project mission

- Harmonization of data and development of services for a more sustainable mobility in urban areas

Expected impact

- reducing the pollution due to mobility
- promote alternative and cleaner mobility modes

Technical challenges

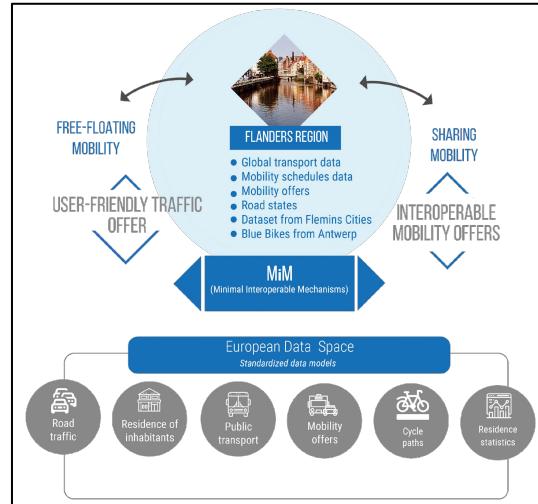
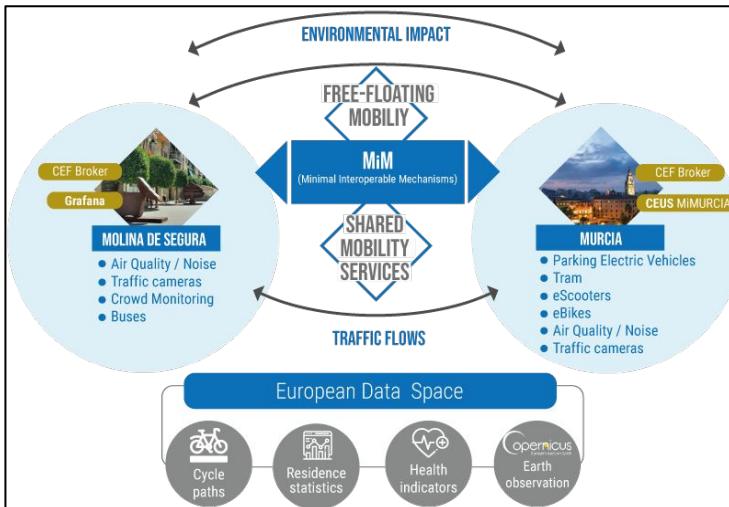
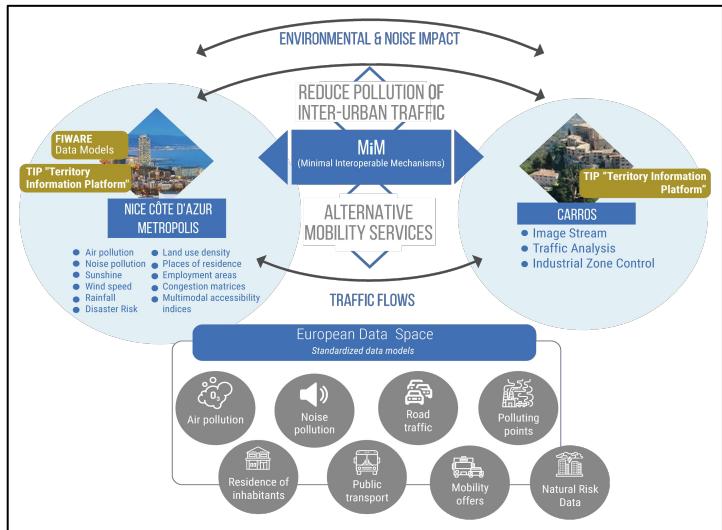
- Common vocabulary (OSLO) and data models (Smart Data Models)
- Scalable and federated architectures for context management
- Customizable digital services

Outcomes for the community

- Extended Smart Data Models
- New building block for Context Broker selection in federated architectures (Source Selection)
- Advance green mobility services for cities/regions
- Reference architecture for scalable Context Broker and set of guidelines for deployment
- A white paper with lessons learned for other cities

GreenMov pilots

Nice, Flanders, Murcia&Molina De Segura



GreenMov outcomes so far

Extended Smart Data Models

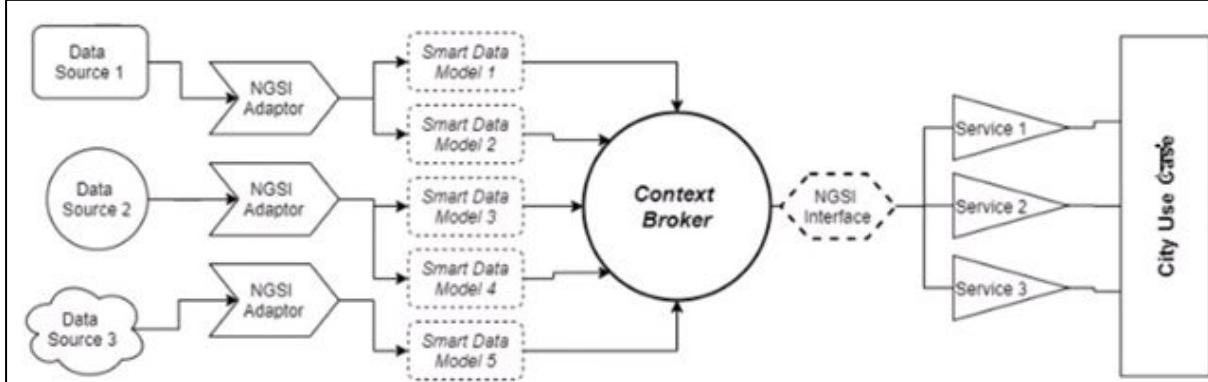
- [AirQualityMonitoring](#)
- [AirQualityObserved](#)
- [NoiseLevelObserved](#)
- [ParkingSpot](#)
- [station_information](#)
- [station_status](#)
- [TrafficFlowObserved](#)
- [WeatherObserved](#)

To be created

- Noise pollution
- Vehicle Emission Label
- Public Transport

Services under definition

- Air Quality Index calculation
- Air Quality forecasting
- Traffic environmental impact calculation
- Traffic forecasting
- Bikes' availability forecasting
- Bicycle real time availability
- Noise annoyance calculation
- Noise annoyance forecasting
- Traffic recommendations generation



OSLO and FIWARE Smart Data Models

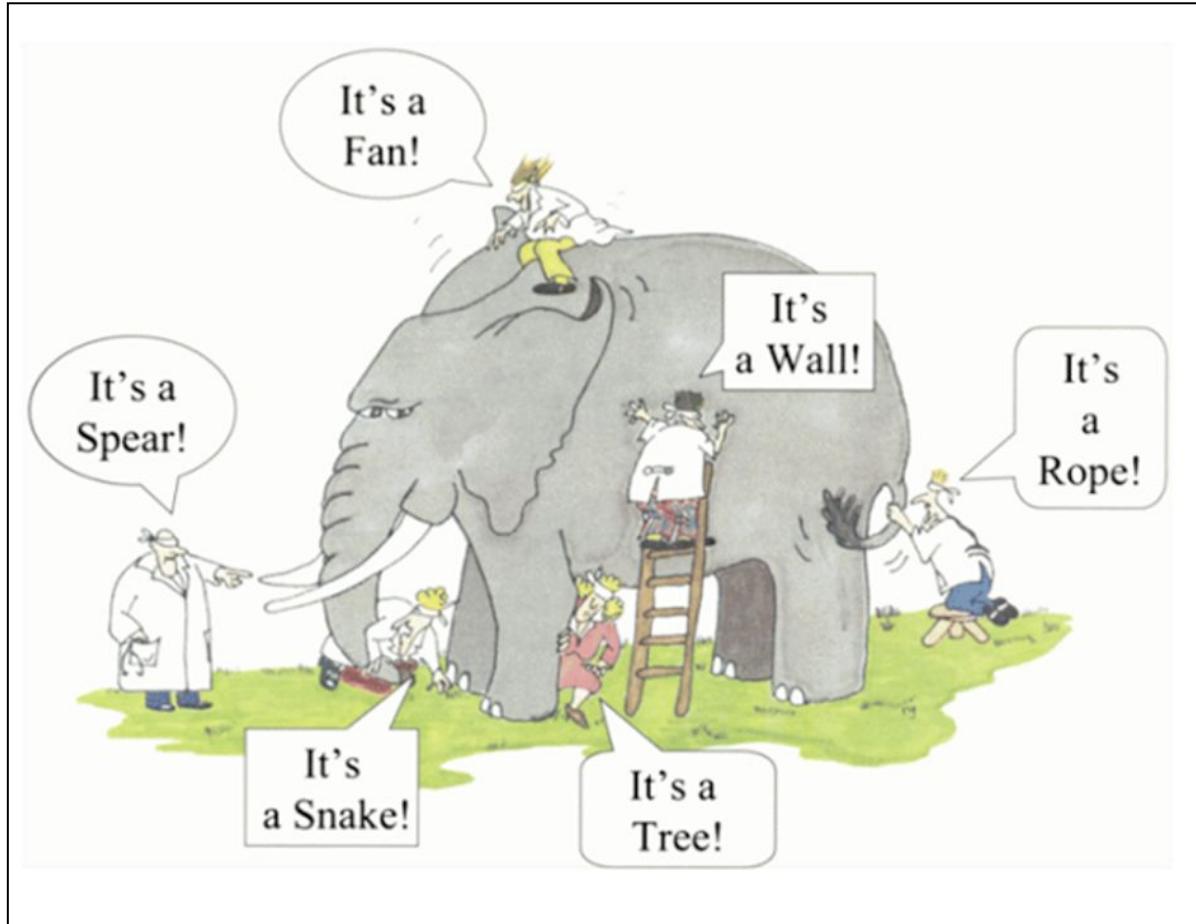
How work together

- A smart data model that is aligned with the vocabulary used in OSLO will be created
- With the smart data model specification, developers have better guidelines how to let OSLO data flow through the NGSI-LD ecosystem
- Hoppin points vocabulary and application profile will be translated into English
- Possibility of making extensions (e.g. GBFS).
- Co-creation workshops are organized to build OSLO for all

So, here we are...

Open Standards for Linked Organisations (OSLO)

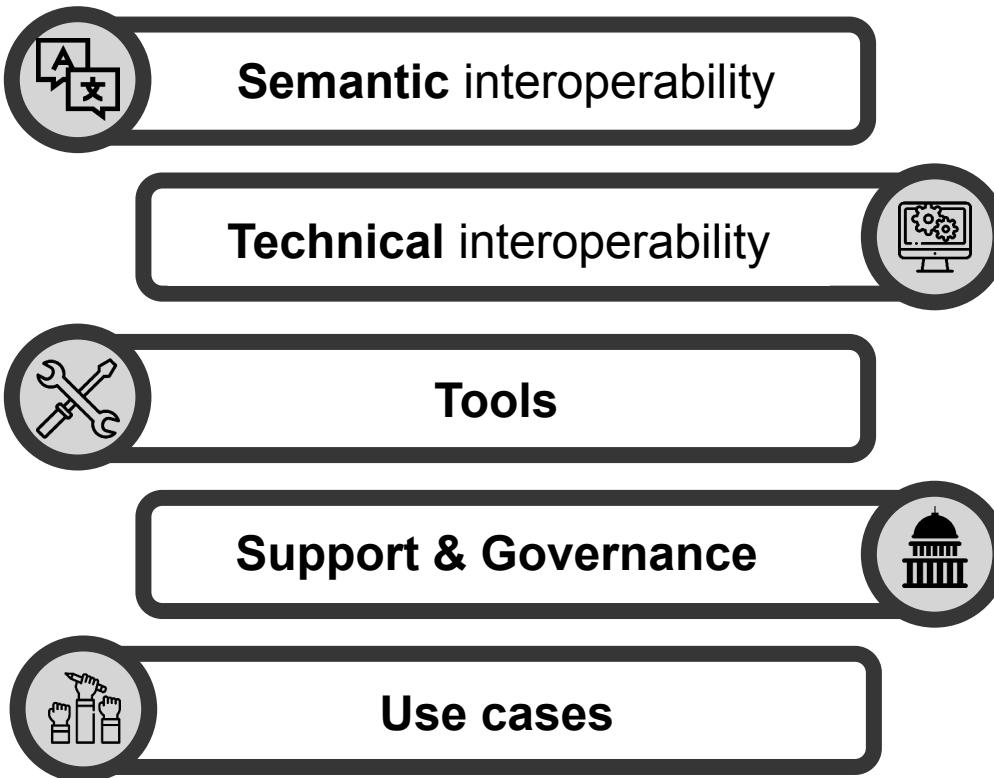




A photograph showing several hands reaching towards a large, interlocking puzzle piece set on a wooden table. The puzzle pieces are shaped like clouds and are colored red, yellow, blue, and green. The hands belong to different people, suggesting teamwork and collaboration.

Interoperability is the ability of different autonomous organisations or systems to communicate and work together.

OSLO

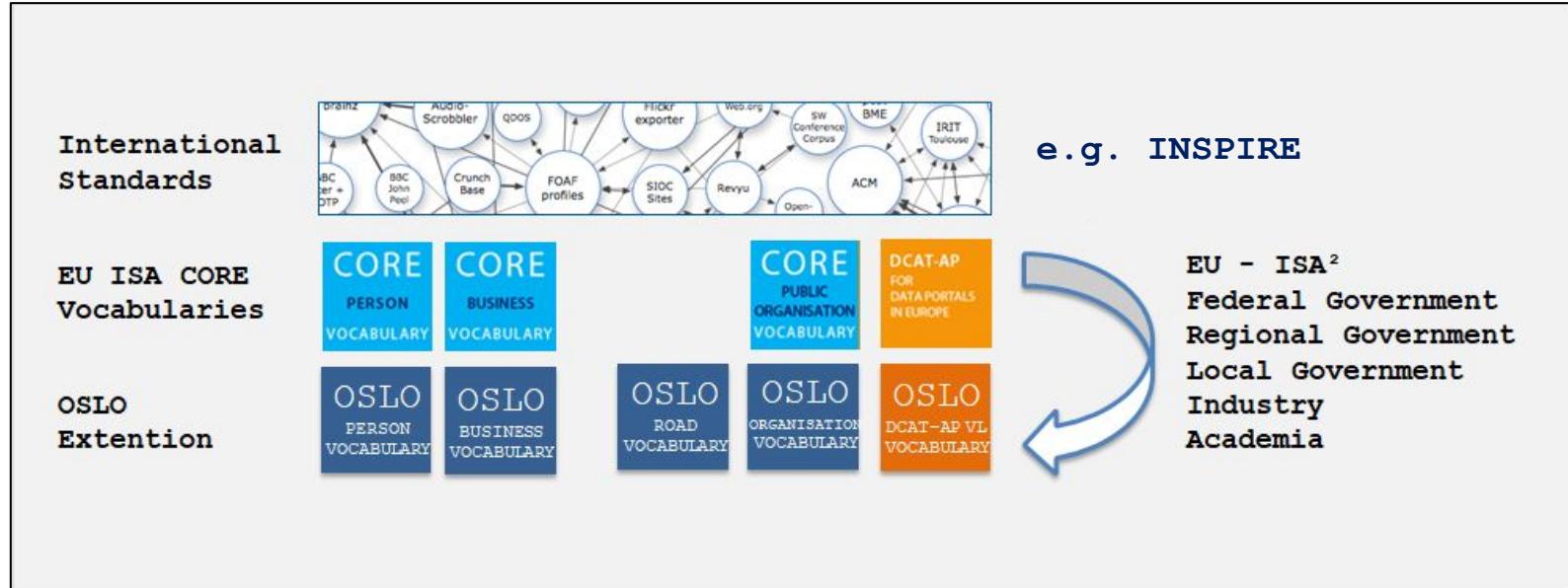


Bottom-up development





Share and reuse



Process and method

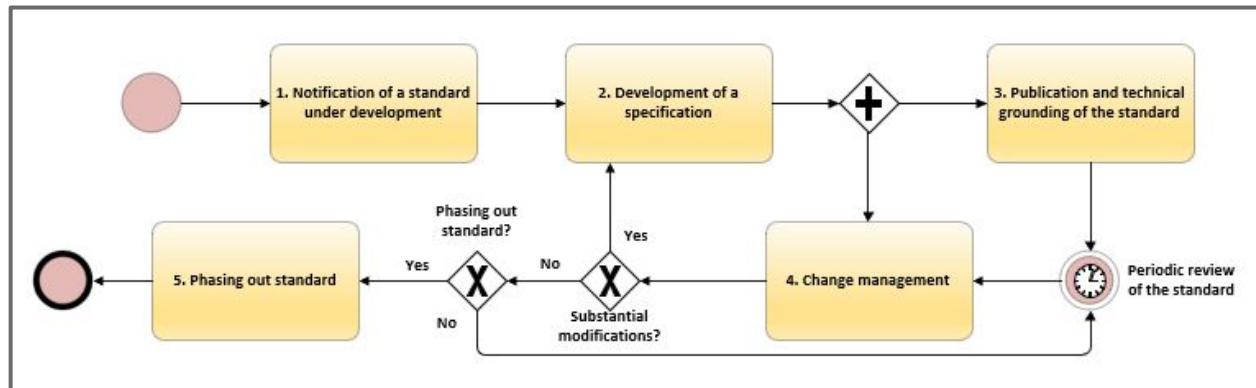
Scalable process for connecting, developing, adapting and phasing out data standards
Download the file via the following link: [process and method](#)



Context of the workshops

Workshops as part of a wider process

- Objective: Consensus around data standards carried by multiple stakeholders
- Process and method for the development of a data standard



PURL.eu

PURL.EU \ OPEN STANDARDS FOR LINKED ORGANISATIONS

Applicationprofiles
START WITH OUR APPLICATIONPROFILES

Vocabularies
DISCOVER OUR VOCABULARY

OSLO-Steps
AUTOMATED CUSTOMER JOURNEY

 **PURL.EU**

With Open Standards for Linked Organisations on PURL.EU, we want to commit to an explicit standard for the exchange of information. All identifiers of information resources that are available via this domain in the form of a URI are persistent and semantically unambiguous. In other words, users of the URIs with the domain purl.eu can assume that these identifiers will always exist and that, over time, these identifiers will always refer to one and the same object.

 **OSLO**

What is OSLO ?

OSLO is the acronym for Open Standards for Linked Organisations. Many (public) organisations keep all kinds of data and exchange them with each other. In order to simplify, streamline and automate this process, OSLO, Open Standards for Linked Organisations, was created. This initiative wants to make the sharing of data and information run more smoothly by establishing the meanings of concepts, words and definitions (thus avoiding semantic discussions) and how to structure them in one's own databases or software packages. In this way, high-quality up-to-date data can be created and local shadow databases can be avoided.

ON THIS PAGE

Purl.eu
OSLO

 **Applicationprofiles**

> Timetables > Stopplaces > Vehicle scheduling

> Air & Water - Core > Air & Water - Air Quality > Air & Water - Water Quality

> Consent

 **Vocabularies**

> Air & Water - Core > Air & Water - Air Quality > Air & Water - Water Quality

> Consent

Flemish model OSLO Hoppinpunten



Vlaanderen
verbeelding werkt



Introduction

Joris Cornu
Department of Mobility and Public Works
Government of Flanders
26 April 2022

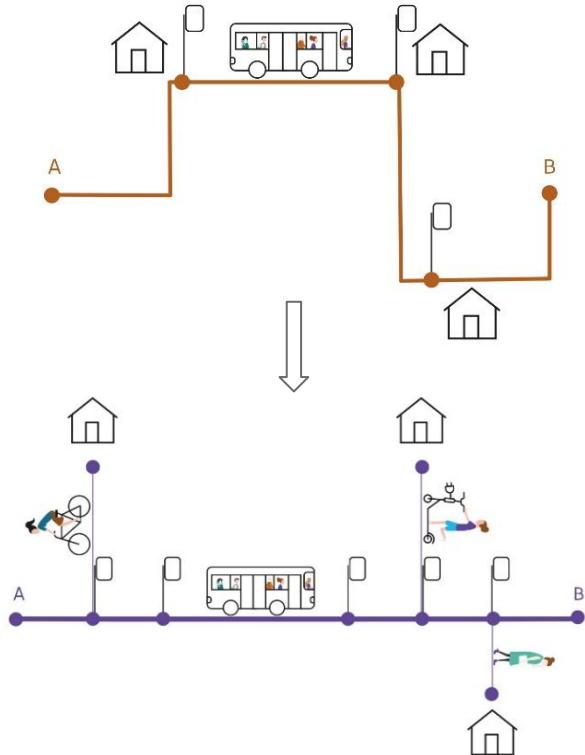
Overview

- The new mobility vision
- Hoppinpoints
 - Realization
 - Database

The new mobility vision

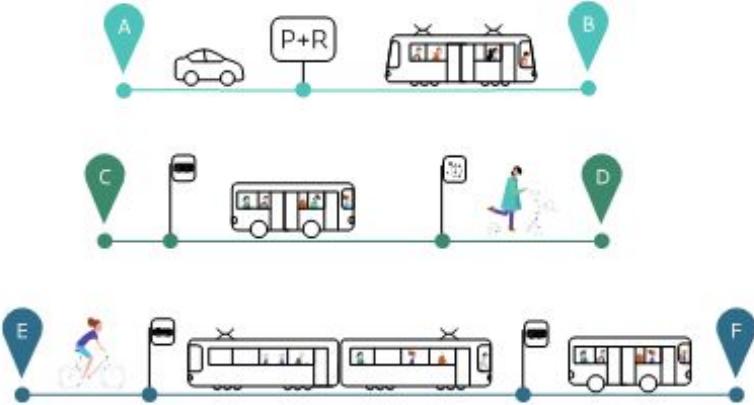
The new mobility vision

- Accessibility
- Important locations from a societal point of view must be easy to reach for all users.
- Redraw the network and infrastructure for all transport modes.
- Sustainable, safe, intelligent and multimodal mobility system.



Combining modes, a reflex

- Stimulate change in behaviour by making it easier to combine modes
- The new mobility brand **Hoppin** will guide travelers through the mobility landscape



Example: application of Hoppin on flexible transport and location for shared mobility



Example: Hoppin column in Leuven



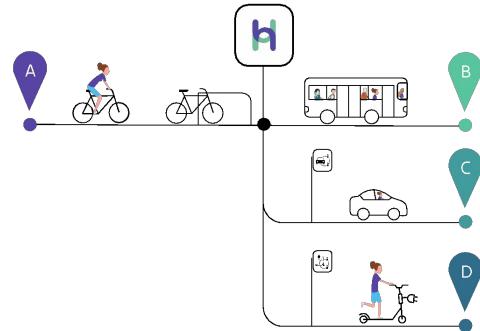
Example: application of Hoppin on app and website



Hoppinpunten Realization

What is it about?

- A Hoppinpoint is a type of Passenger Transport Hub, a **node of different transport options adjusted to each other** enabling users to change transport means smoothly
- Hoppinpoints can provide other services (besides transport options)
- Types ('BVR Hoppinpunten'):
 - Interregional
 - Regional
 - Local
 - Neighbourhood



Quality requirements

'BVR Hoppinpunten'

- Accessibility
- Minimal equipment
 - Parking (if needed, with adjusted and reserved places for disabled people)
 - Bicycle sheds (with space for outsized bikes)
 - Information carriers
 - Infrastructure for data exchange



[Link](#) to 'BVR Hoppinpunten'

Hoppinpunten Database

Database

- Build a database (Digitaal Vlaanderen)
 - Based on OSLO Hoppingpunten
- Content
 - Implementation & follow-up
 - Operational part (i.e. infrastructure)

Database

Content - Implementation & Follow-up

- ID
- Name
- Location
- Road infrastructure manager
- Type
- Status: Passenger Transport Hub vs. Hoppinpunt
- Accessibility
- Subsidies
- ...



Database

Content - Operational part (i.e. infrastructure)

- Column (digital or not?)
- Charging points (e-mobility)
- Mobility services
 - Train
 - Bus
 - Flex
 - ...
- Additional service
 - Post
 - Lockers
 - Bike repair service
 - ...
- ...

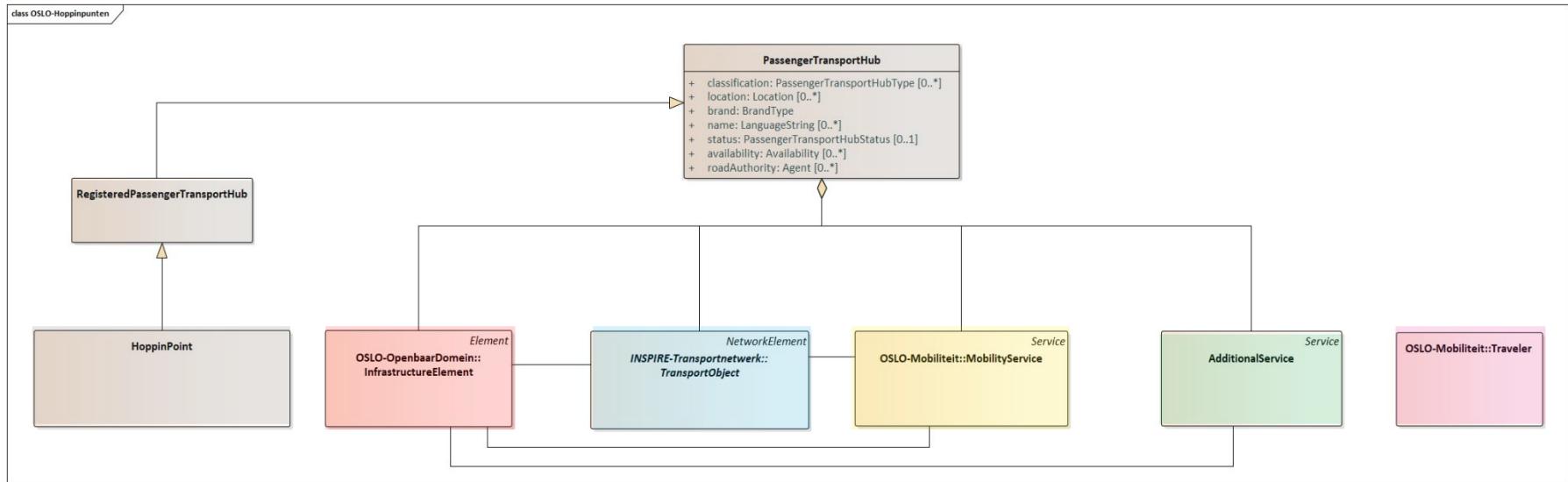


The model Hoppinpunten

Reuse of Flemish standard

- Existing Flemish standaard ([OSLO Hoppinpunten](#))
 - Basis of this track
 - Based on (inter)national standards
 - [Inspire \(transport networks\)](#)
 - [Mobivoc](#)
 - [NeTEx \(Stop Places\)](#)
 - [OSLO Mobiliteit: Trips en aanbod](#) (OSLO Mobility: Trips and offers)
 - [OSLO Mobiliteit: Planning en dienstregeling](#) (OSLO Mobility: Planning and schedule)
 - [OSLO Openbaar domein](#) (OSLO Public domain)

Foundation of the model



Full model

M U R A L

OSLO Hoppingpunten



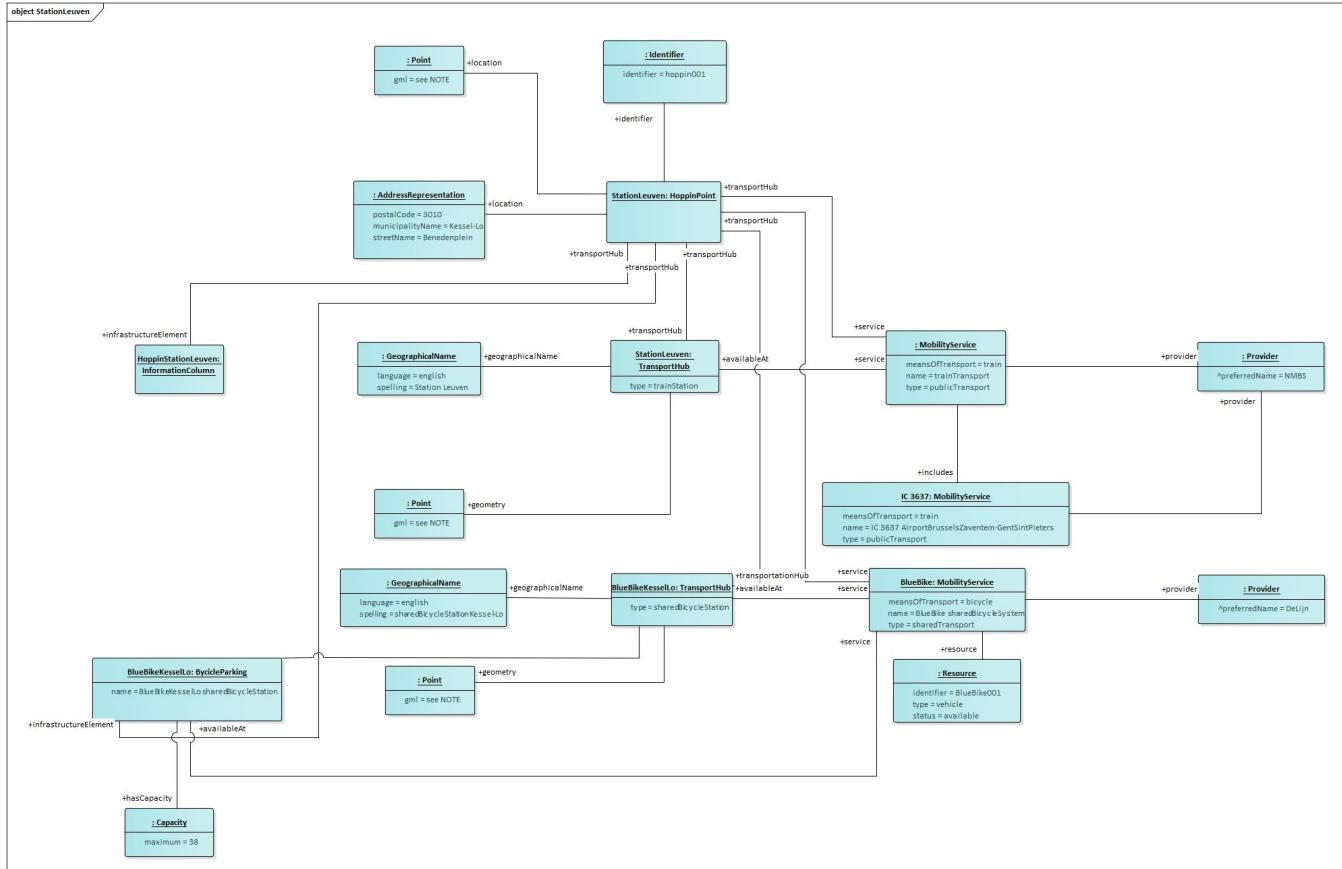
Break

Object Diagram

- Address
 - Benedenplein
 - 3010 Kessel-Lo
- Train station
 - Station of Leuven
- Bike sharing
 - 38 bikes of Blue-bike in a covered bicycle parking
- Infrastructure
 - Information column



Object Diagram



Brainstorm



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Time for action!

M U R A L



Q&A and Next Steps



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What do we do...?

Don't we have to add ...?

Can't we better ...?

What about ...?

Didn't we forget ...?



Next steps



Process the input of the brainstorm exercise.



Distribution of a report from this workshop. Feedback is certainly welcome!



Further investigation and preparation of the first thematic workshop

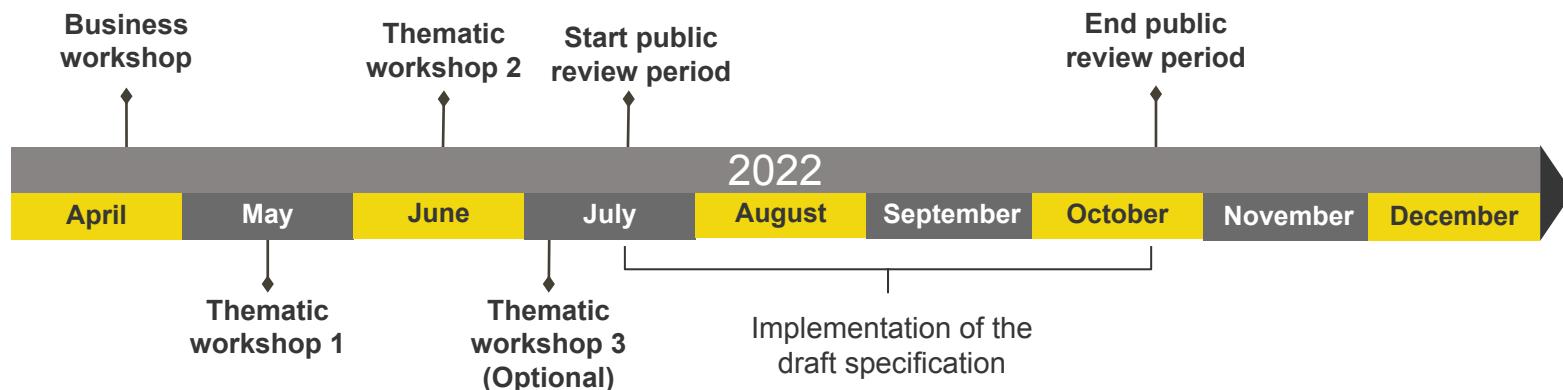


Information gathering via GitHub!

Planning

Thematic workshop 19th of May (09:00am - 12:00am)

Register via the following link: [Thematic workshop 1](#)



Feedback & cooperation



Feedback can be provided by e-mail to the following persons:

- digitaal.vlaanderen@digitaal.vlaanderen.be
- laurens.vercauterden@vlaanderen.be
- arne.scheldeman@vlaanderen.be
- Hoppinpunten:
joris.cornu@mow.vlaanderen.be
- GreenMov: clara.pezuela@atos.net



Feedback/input can be provided via GitHub:

<https://github.com/Informatievlaanderen/OSLOthema-passengerTransportHubs>

Through the creation of **issues**

Thank you!



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