

API standards for eHUBS and MaaS integration

29-05-2020 - eHUBS Webinar

eHUBS: What are they and how do they connect different modes in a MaaS landscape?

Tjalle Groen – Into operability

Taxistop vzw





Content

- Taxistop vzw
- eHUBS - the digital side
- Standardisation
- How we used the TOMP-API

The background consists of a large blue area with a green triangular shape on the left side and a dark blue triangular shape at the bottom right.

Taxistop

What is Taxistop?



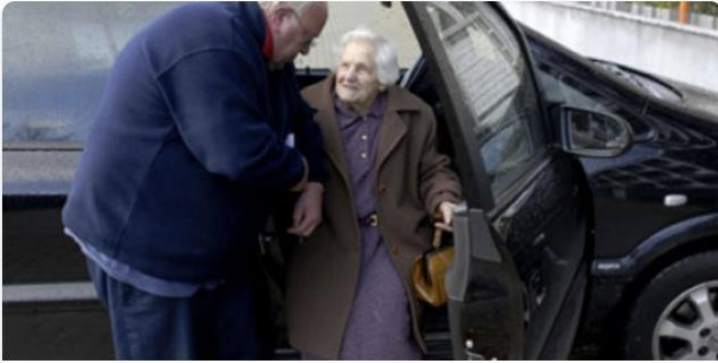
Non-Profit

Founded in 1975

Do more with less

Offices in Ghent, Brussels & Gembloux

Services... a few of them.



The Less Mobile Services

A Less Mobile Service connects people with a mobility need to voluntary drivers in order to meet their needs. You probably...

[› know more](#)



Carpool.be

Through carpool.be you can find a carpool partner for regular or single rides. Why carpool? By carpooling, your journey...

[› know more](#)



Cozycar

Have you ever considered starting a carsharing group to share the costs, use and maintenance of a car? Cozycar, by Autodelen.net...

[› know more](#)

Values of Taxistop

We enable more efficient use of resources linked to mobility.

We create real solutions for people and increase the political and public awareness. That's how we realize a social and ecological impact. We prefer to do this through cooperation

eHUBS – the digital side



Bricks

Bytes



Bricks - Marking the territory

- Landmark
- Sense of place
- Information about services at hub
- Gathering point



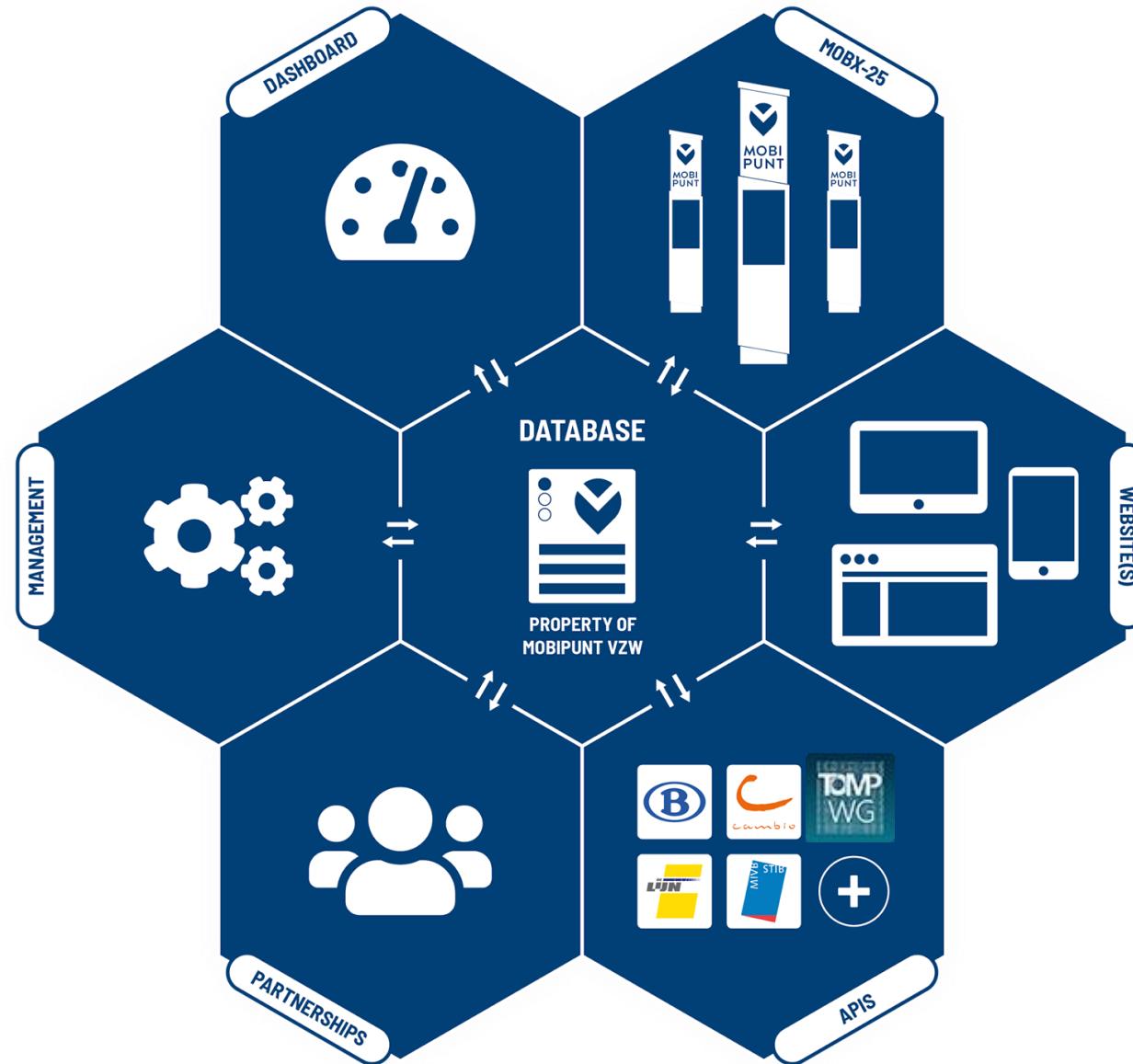
Examples



Bytes - the digital side

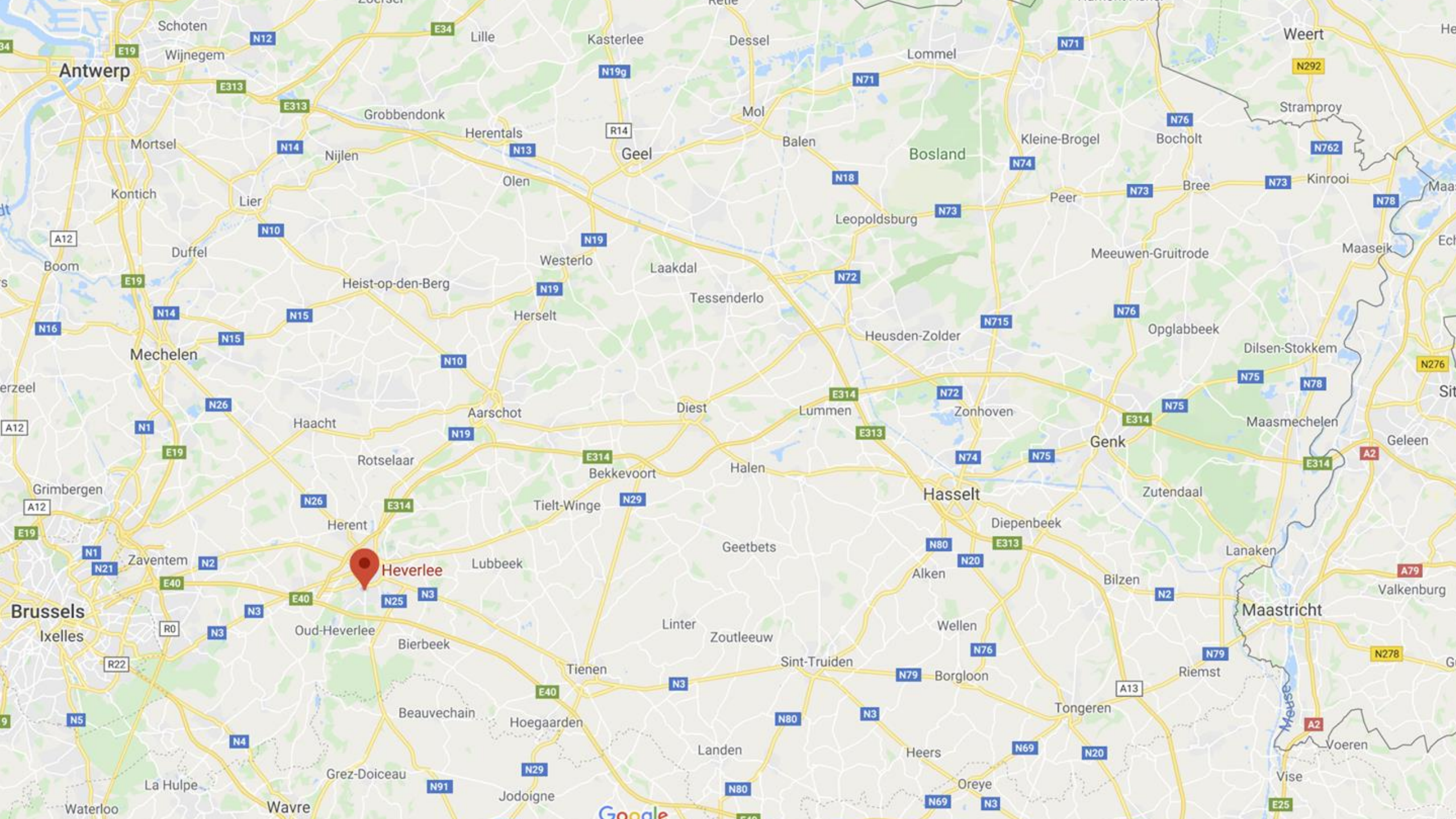


Environment



An eHUB in Heverlee





Kiosk Demo



SCHAAL 1:10

Poll Question 1

When was Taxistop founded?

- a. 1999
- b. 1975
- c. 2002
- d. 2010

How we integrate the TOMP-API

The struggle of fitting in data



It can be quite the puzzle.

- It's all different
- Find/work for the perfect fit
- Each piece has its own specifications.
- Forcing it will break it

If you make them fit, you can build what you want... Fast.



This is where the TOMP-API comes in

- One of the goals in our project :
Deliver an Application Programming Interface standard for communication between **T**ransport **O**perators & **M**aas **P**roviders.
- Join the TOMP-API working group!
- Open workgroup - members form a broad spectrum
- Grown into a mature working group
- Direct goal, become a European standard for TO - MP communication

Some of the organisations involved



TOMP City Data Specifications

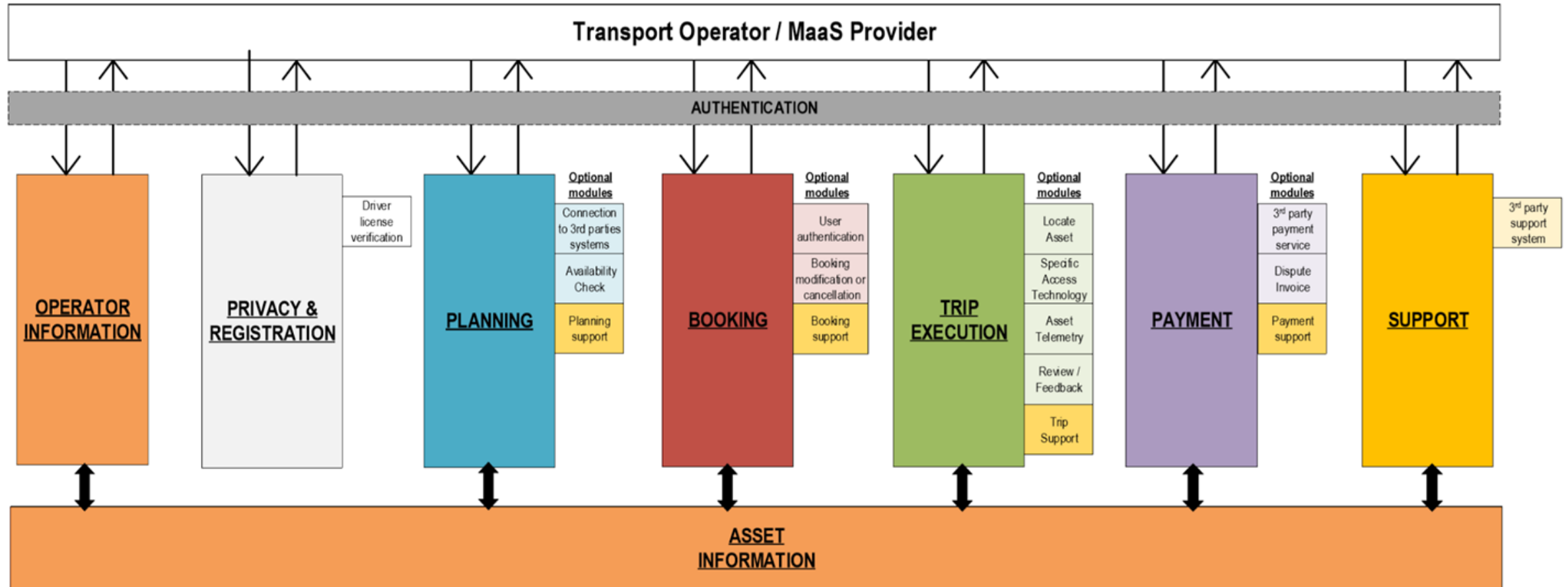
- Return data to cities
- Support decision making processes
- Define a standard
 - Creates broader data sharing opportunities.
- GDPR - compliant

=> Are you interested? Welcome to join the Working Group!

Transport Operator to/from MaaS Provider API

Functional Blocks

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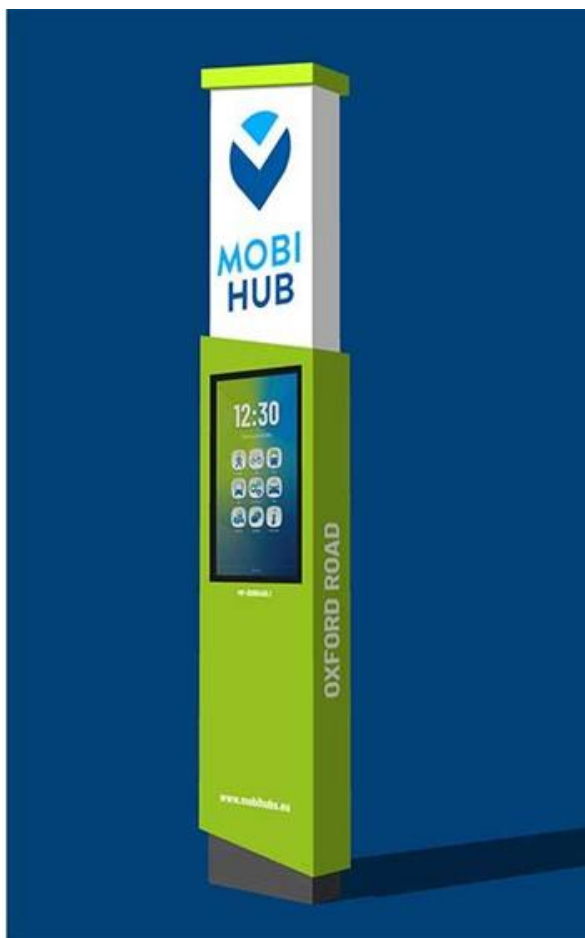
Poll Question 2

Who is the TOMP-API targeted at?

- a. Transport Operators & Maas Providers
- b. Technical Organisations & Multiplex Partners
- c. Travel Opportunities & Management Peers
- d. Trade Organizers & Marketing People

Spreading information with our eHUBS

- Inform users about real-time travel options
 - Cater to people without a smartphone
 - Raise awareness for Multimodal solutions
-
- No booking
 - No routeplanning



Operator Information
Planning-Options

operator/information

```
{
  "information": {
    "systemId": "TX-CPL",
    "language": "nl,fr,en",
    "name": "Carpool",
    "shortName": "cpl",
    "operator": "Taxistop",
    "url": "https://www.carpool.be",
    "purchaseUrl": "https://www.carpool.be",
    "phoneNumber": "+32 70 222 292",
    "email": "carpool@taxistop.be",
    "startDate": "01-01-1975",
    "licenseUrl": "https://www.carpool.be/en/common/privacy",
    "timezone": "CEST",
    "typeOfSystem": "carpool",
```

```
    "serviceAreas": {
      "points": [
        {
          "name": "Taxistop vzw",
          "coordinates": {
            "lat": 51.035884,
            "lng": 3.704466
          }
        },
        {
          "name": "Taxistop asbl",
          "coordinates": {
            "lat": 50.839798,
            "lng": 4.361555
          }
        }
      ]
    }
  }
}
```

planning-options

```
{
  "leg": {
    "startTime": 1590768000,
    "endTime": 1590770400,
    "startTime_r": "29-05-2020 17:00",
    "endTime_r": "29-05-2020 17:40",
    "from": {
      "lat": "50.86453",
      "lng": "4.68077"
    },
    "to": {
      "lat": "50.99763",
      "lng": "4.753283"
    }
  },
  "typeOfAsset": {
    "type": "carpool",
    "name": "Carpool to : Tremelo",
    "assetClass": "OTHER",
    "assetSubClass": "Carpool",
    "co2-per-km": 110,
    "smoking": false,
    "persons": 2
  },
  "asset": {
    "assetId": "672643/8371920",
    "name": "Bart",
    "image": "https://www.carpool.be/pics/users/avatars/avatar003.png",
    "rentalUrl": "https://www.carpool.be/rides/ad/672643/8371920?sj=eyJzdGF0dXMiOiJPSyIsInByZWYiOiIyZnRyeSI6IkJFIiwiaWY2I0eSI6IkxldXZlbiIsInBvc3RhbnQzLjBlbyI6eyJjb3VudHJ5IjoieUkUICJjaXR5IjoieVHJlbWVsbyIsInBvc3RhbnQzLjBlbyI6eyJjb3VudHJ5IjoieUkUICJaXR5IjoieVHJlbWVsbyIsInBvc3RhbnQzLjBlbyI6eyJjb3VudHJ5IjoieUkUICJmVyZyIsImxhdCI6NTAuOTk3NjMslmxvbil6NC43NTMyODN9fQ==",
    "place": {
      "physical-address": {
        "address": "Aan de Berg",
        "city": "Tremelo",
        "postalCode": "3128",
        "country": "BE",
        "type": "destination"
      }
    }
  },
  "pricing": {
    "estimated": true,
    "description": "The price may vary when booking, this is price for the total ride of the driver.",
    "class": "carpool_price",
    "parts": [
      {
        "name": "Price trajet driver",
        "amount": 2.2,
        "currencyCode": "EUR",
        "type": "FIXED",
        "unitType": "KM",
        "class": "carpoolPriceDriver"
      }
    ]
  }
}
```


Connect & build whatever you can think of.



Raising some points

- New release of the TOMP-API : Dolores - July 2020
- Support (local) TO's in adopting the TOMP standard
- The more adoption, the faster technology can evolve.

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2020

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BRUSSELS**

#SIMR2020

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Links & credits

Links :

www.taxistop.be

www.mobihubs.be

www.nweurope.eu/projects/project-search/ehubs-smart-shared-green-mobility-hubs/

<https://github.com/TOMP-WG/TOMP-API>

<https://github.com/TOMP-WG/TOMP-API/wiki>

www.shared-mobility.rocks

Photo credits :

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markus-winkler

odd-sun

amelie-mourichon

=> Unsplash.com

Thank you!



Thank you for listening and watching!

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