DATA INTEGRATION FOR eHUBS #TOMP-API

09-12-2021 - Webinar

Tjalle Groen – Mpact vzw

mpact

Interreg North-West Europe eHUBS

European Regional Development Fund

www.mpact.be

tjalle.groen@mpact.be

DATA INTEGRATION FOR EHUBS: TOMP-API AND CDS-M

WEBINAR
09.12.2021
11AM-12AM

Interreg
North-West Europe
eHubs

Topics for today

1. Mpact
2. eHUBS
3. Why should we standardize?
4. TOMP-API

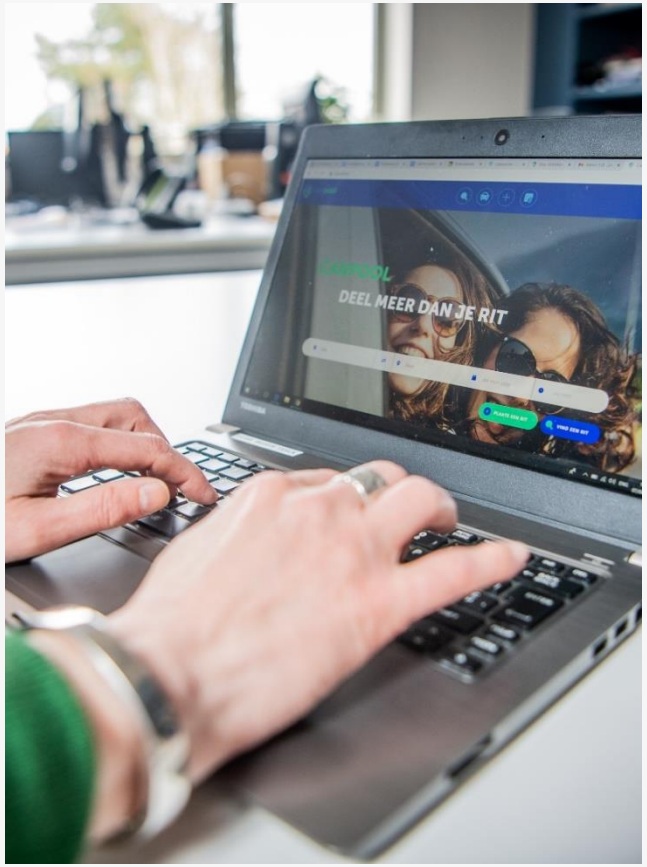
Mpact

The organisation formerly known as Taxistop.
Do more with less – since 1975

More efficient mobility by mpact

Solutions

Innovation



Awareness

- We enable more efficient use of resources, often linked to mobility.
- Create real solutions for people.
- Increasing political and public awareness.
- Aim to realize a social and ecological impact.
- We prefer to do this through cooperation

Some of our services in shared mobility

Cozywheels

Cozywheels is a service that allows you to share a vehicle with your neighbors, friends or acquaintances (individuals ...

› know more

Mobitwin

Everybody knows someone who can no longer get around independently due to his age or due to another cause. In order to avoid...

› know more

Carpool home-work

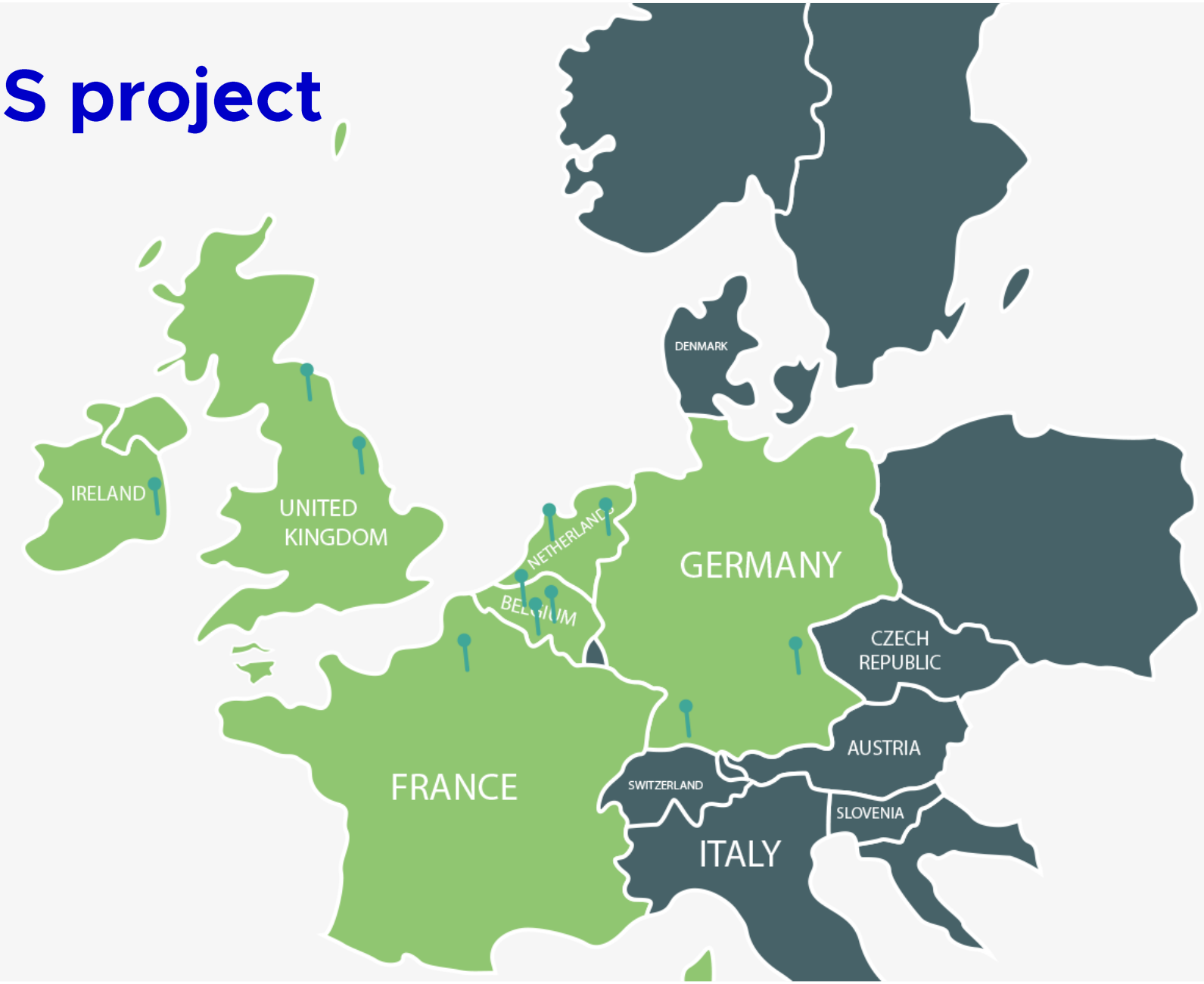
Driving together allows you to share costs, makes driving more fun and helps protect the environment. Place an ad and Carpool...

› know more

eHUBS

Let’s get physical

The eHUBS project



What is an eHUB?

- A landmark in the public space where multiple electric mobility modes come together.
- This offers a wide range of possibilities to get from A to B without taking the most obvious mode : a private car.

What have we created?

Different tools to manage & inform:

- A website - User
- eHUBS kiosk - User
- eHUBS dashboard - Municipality

The kiosk

Hoppin
Vier Jaargetijdenlei
9:25
hoppin.be

TREINEN BIJ VERTREK
12:30
ANTWERPEN-BERCHEM
12:30 IC CHARLEROI SUD +5' 9
12:30 S33 ANTWERPEN CENTRAAL 8
12:31 IC ANTWERPEN NOORDERDOK 10
12:37 S34 ANTWERPEN CENTRAAL 7
12:37 IC LEUVEN 5
12:38 IC AMSTERDAM CENTR +23' 10
12:42 IC BRUSSEL ZUID 12
12:43 IC POPERINGE 6
12:44 S32 ESSEN 7
12:44 S1 NIJVEL 5
12:47 IC ANTWERPEN CENTRAAL 8
12:48 S32 PUURS 6
12:50 IC ANTWERPEN CENTRAAL 7
STARTSCHERM
HOE BETALEN?
KAART
INFORMATIE

12:30
23°C
maandag 28 juni 2021
12:36 136 CAMPUS
12:40 S32 ESSEN
12:42 72 INDUSTRIEZONE IV
12:57 928 LUCHTHAVEN
13:07 IC BRUSSEL ZUID
13:09 120 KERKPLEIN
13:18 IC ANTWERPEN C
FIETSDELEN
AUTODELEN
TREIN
BUS
TAXI
OPLADEN
STALLING
LOCKERS
STALLING
FIETSPOMP
FIETS HERSTELLEN
MEER INFO

12:30
23°C
maandag 28 juni 2021
12:36 136 Campus
12:40 S32 Essen
12:42 72 Industriezone IV
12:57 928 Luchthaven
13:07 IC Brussel Zuid
13:09 120 Kerkplein
13:18 IC Antwerpen C
Fietsdelen
Autodelen
Trein
Bus
Taxi
Opladen
Stalling
Lockers
Stalling
Fietspomp
Fiets herstellen
Meer info

KAART
12:30
Startscherm
Inzoomen
Uitzoomen
Informatie

The importance of data

Let’s get digital

Some key principles

- Mobility mode : a means of transport
- MaaS : Mobility as a Service
- API : Application programming Interface
- Transport Operator / Mobility provider

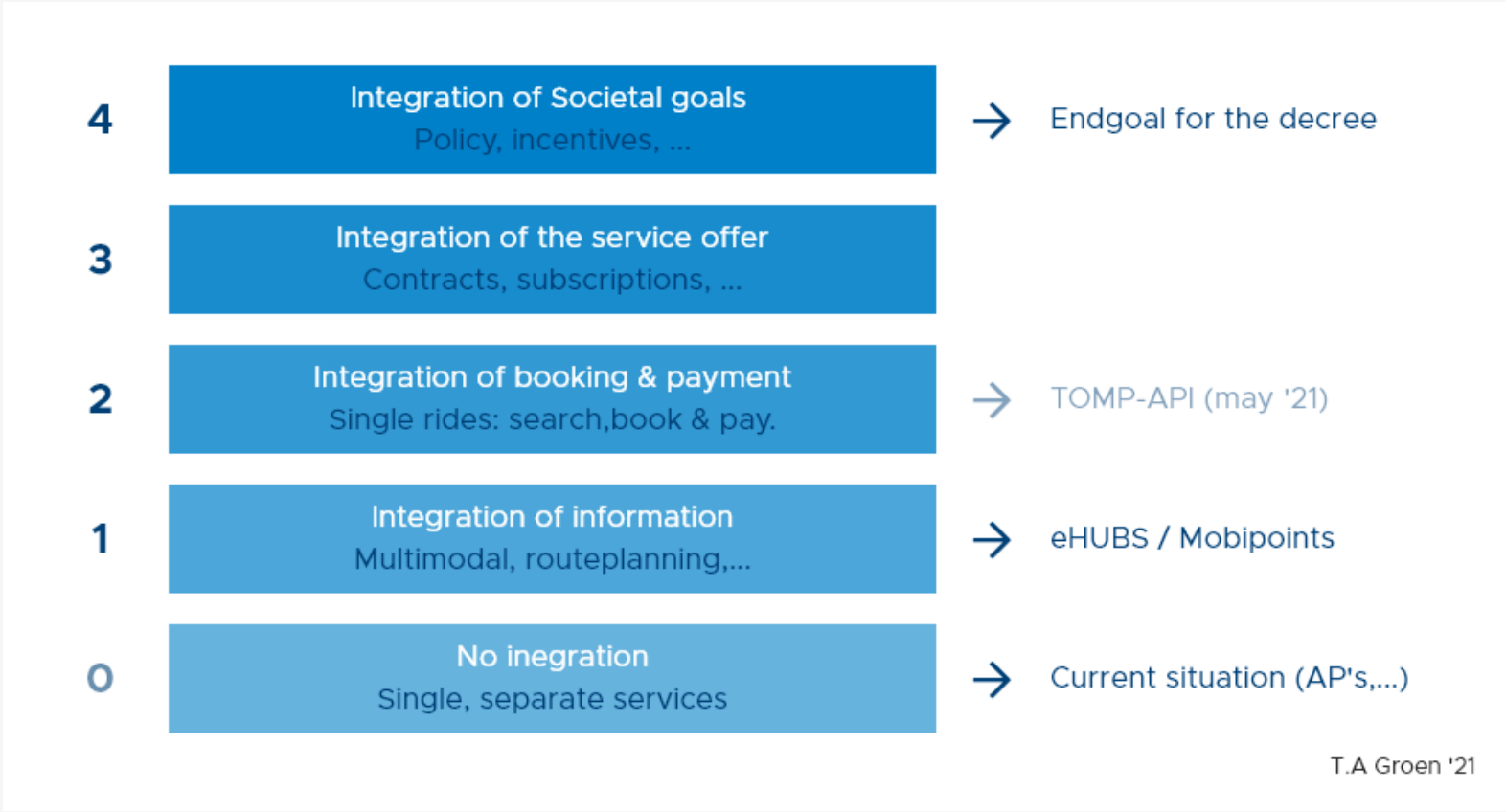
What’s data for?

- Helps with making well founded decisions
- Analyzing the trends over long/short periods of time
- Make targeted improvements & follow up the effect.
- Even if you can’t use the data now, in the future you most likely can.

Why standardisation

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

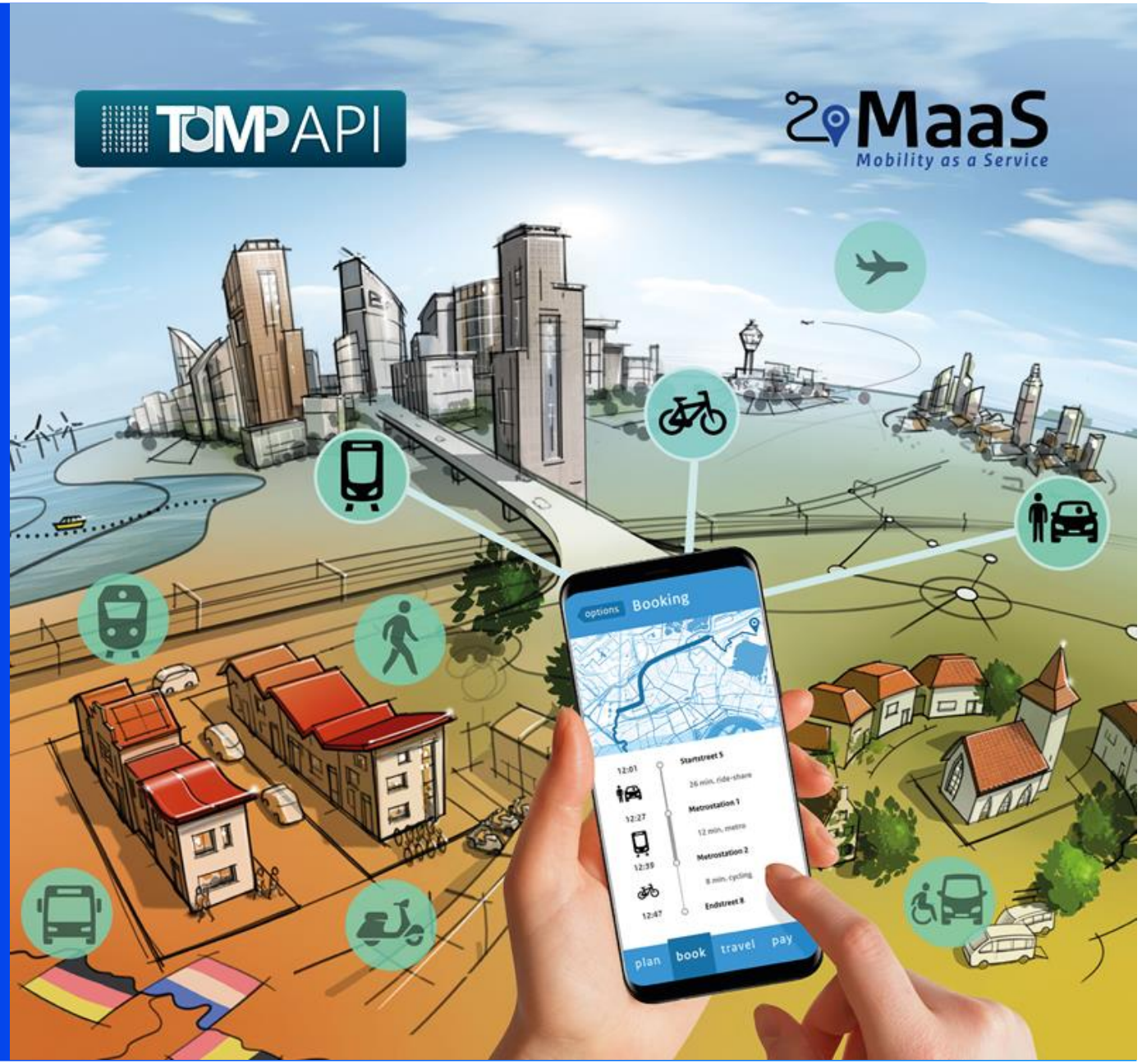
The four levels of MaaS (sochor et al.)



Data & MaaS (standardized)

- Get mobility modes integrated faster & easier into a MaaS(-like) platform.
- Facilitate regulation for mobility modes
- Create a fair & equal opportunities for all players.
- Offer cities/municipalities/… an insight in the use of mobility on their territory.

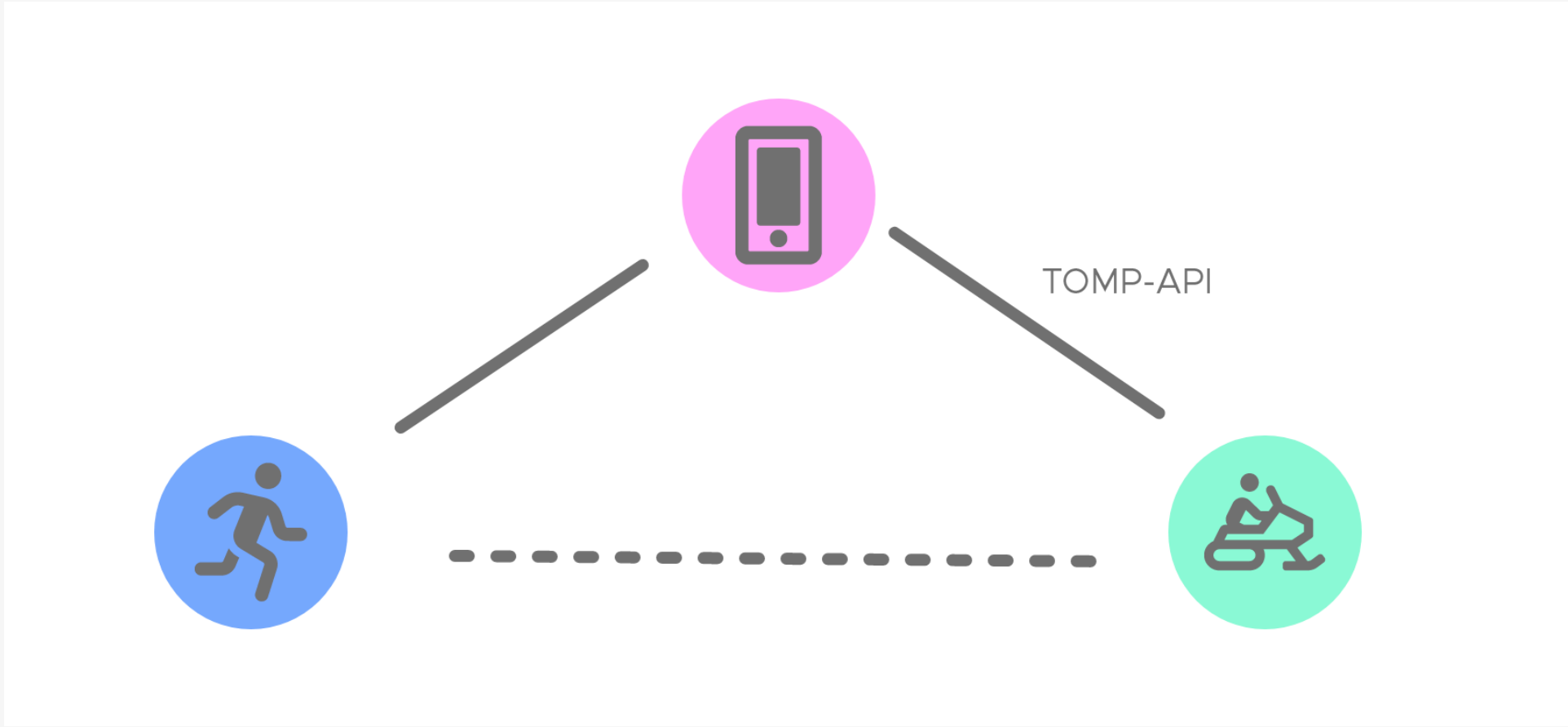
TOMP-API


TOMPAPI
MaaS
Mobility as a Service
options
Booking
plan
book
travel
pay

What is the TOMP-API?

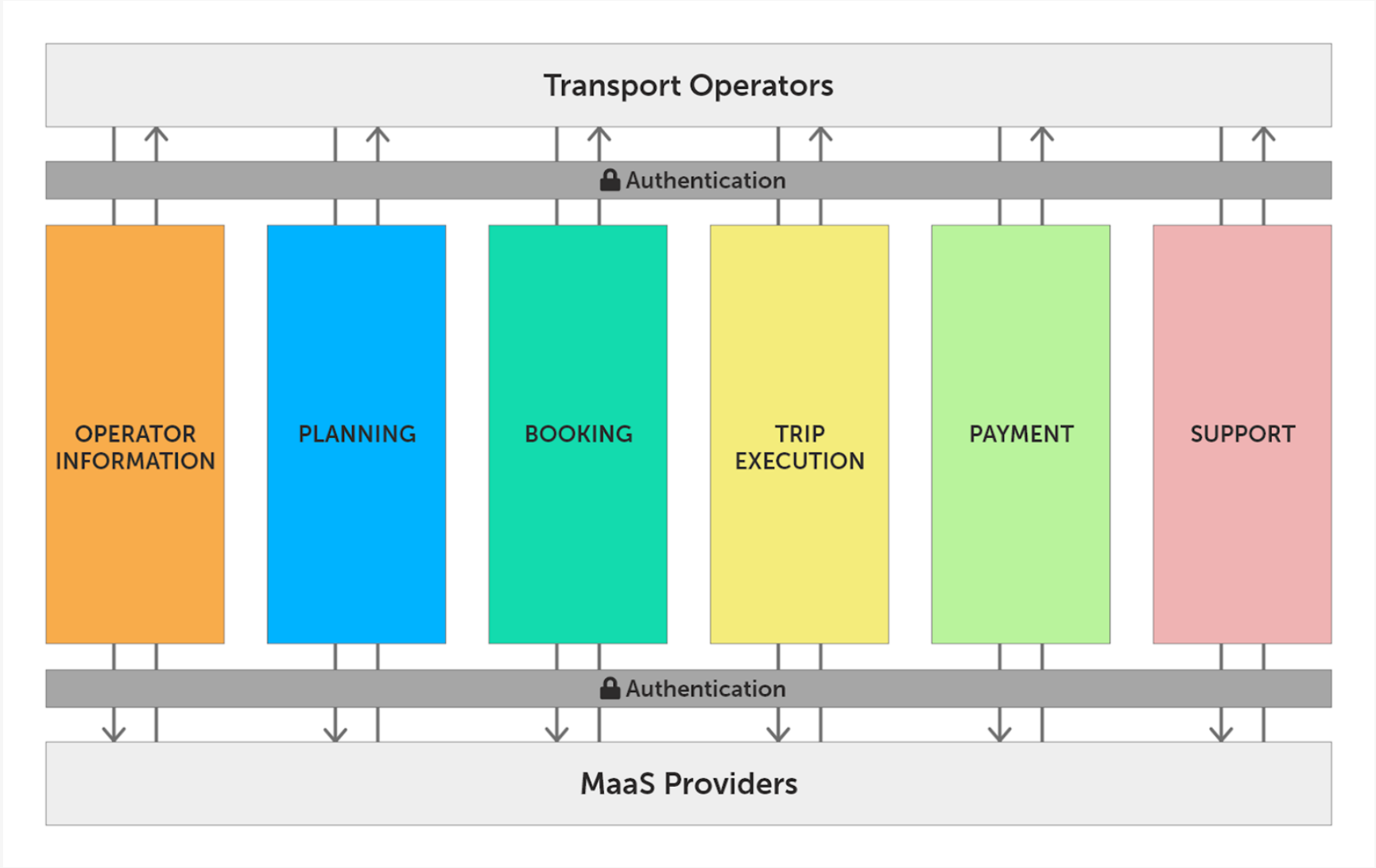
- Technical specification of how to exchange data between **T**ransport **O**perators & **M**aaS **P**roviders
- Transport Operators will need to provide data conforming to this protocol, MaaS Providers need to interact according to this protocol.
- Covers the complete trip for a user – for any Mobility mode
- Open Source model working group with players over the whole spectrum.

How does it work?

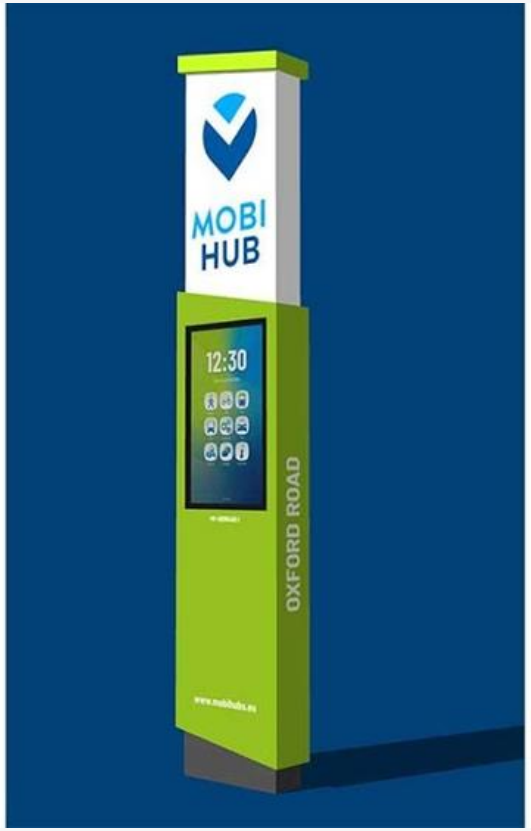


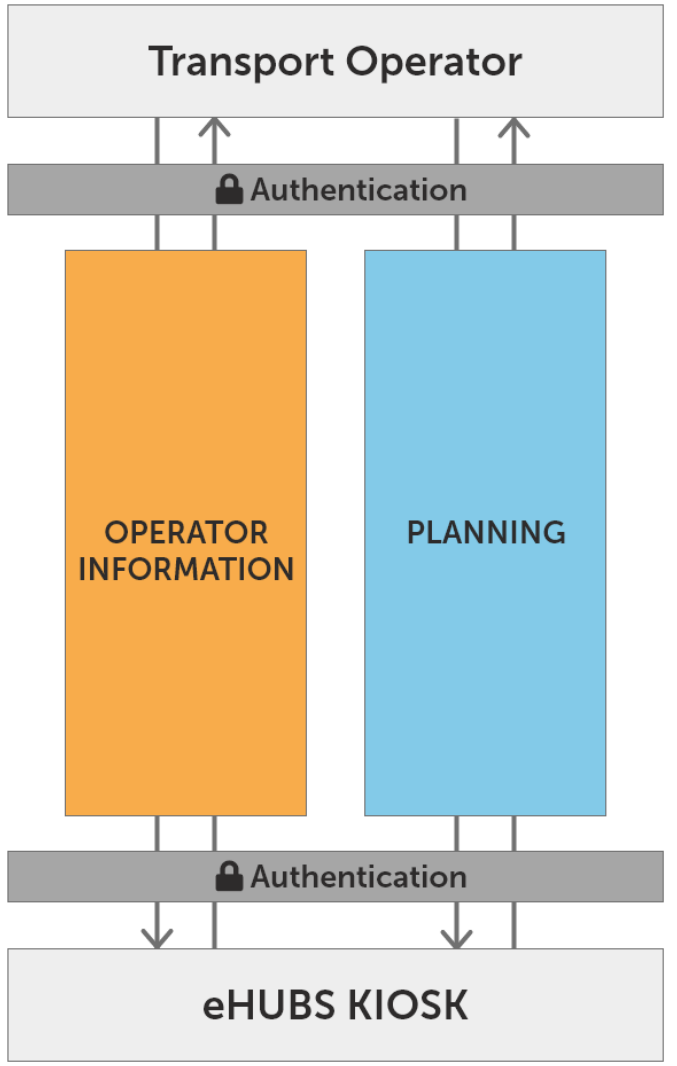
The TOMP working group aims to develop and sustain an internationally governed interoperable open standard for technical communication between Transport Operators and MaaS Providers, by means of definition, improvement, alignment and dissemination.

The modules

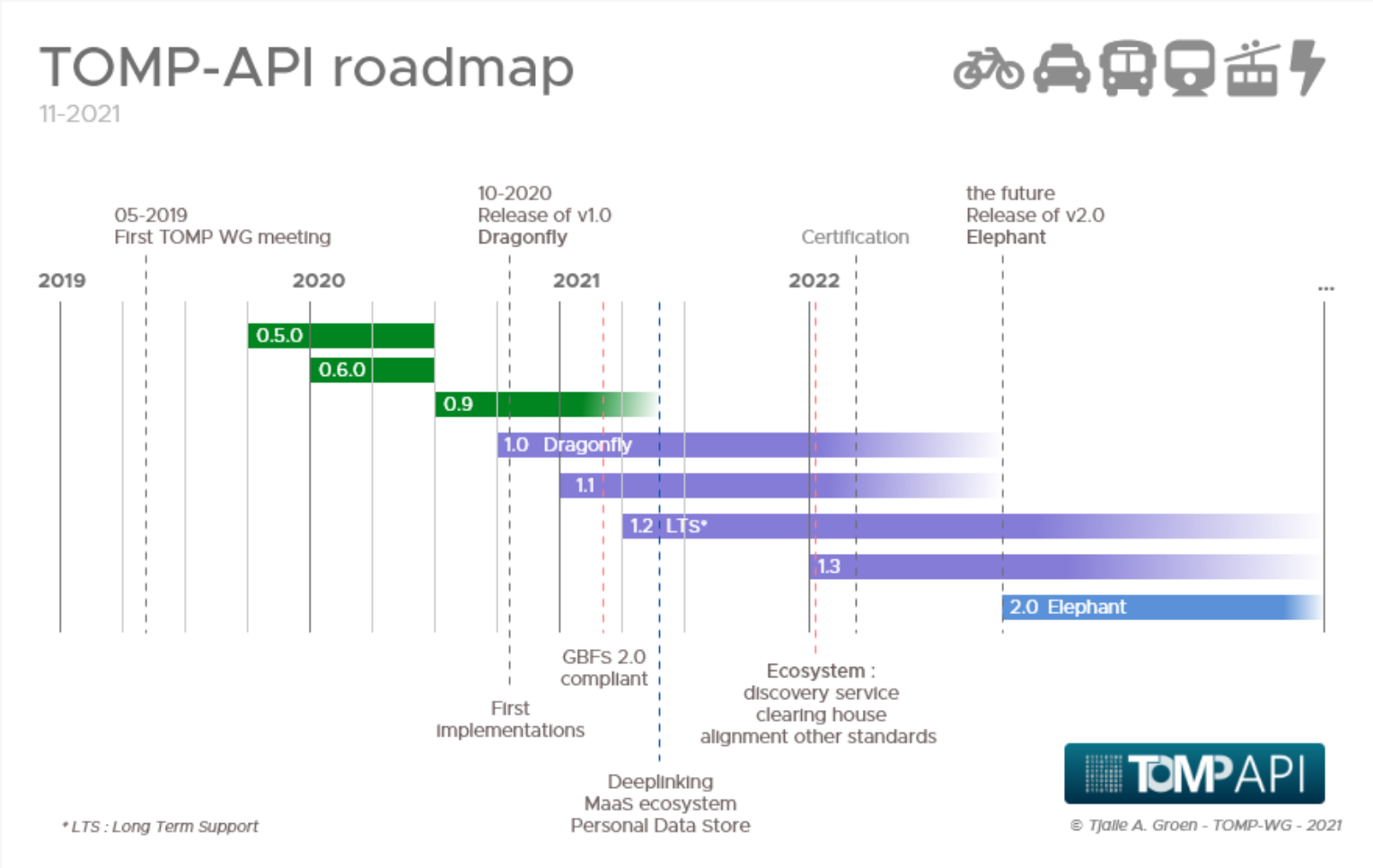

Transport Operators
Authentication
OPERATOR INFORMATION
PLANNING
BOOKING
TRIP EXECUTION
PAYMENT
SUPPORT
Authentication
MaaS Providers

eHUBS


MOBI
HUB
12:30
OXFORD ROAD


Transport Operator
Authentication
OPERATOR INFORMATION
PLANNING
Authentication
eHUBS KIOSK

Roadmap


TOMP-API roadmap
11-2021
05-2019
First TOMP WG meeting
10-2020
Release of v1.0
Dragonfly
Certification
the future
Release of v2.0
Elephant
2019
2020
2021
2022
...
0.5.0
0.6.0
0.9
1.0 Dragonfly
1.1
1.2 LTS*
1.3
2.0 Elephant
GBFs 2.0
compliant
First
implementations
Ecosystem :
discovery service
clearing house
alignment other standards
Deeplinking
MaaS ecosystem
Personal Data Store
TOMPAPI
* LTS : Long Term Support
© Tjalle A. Groen - TOMP-WG - 2021

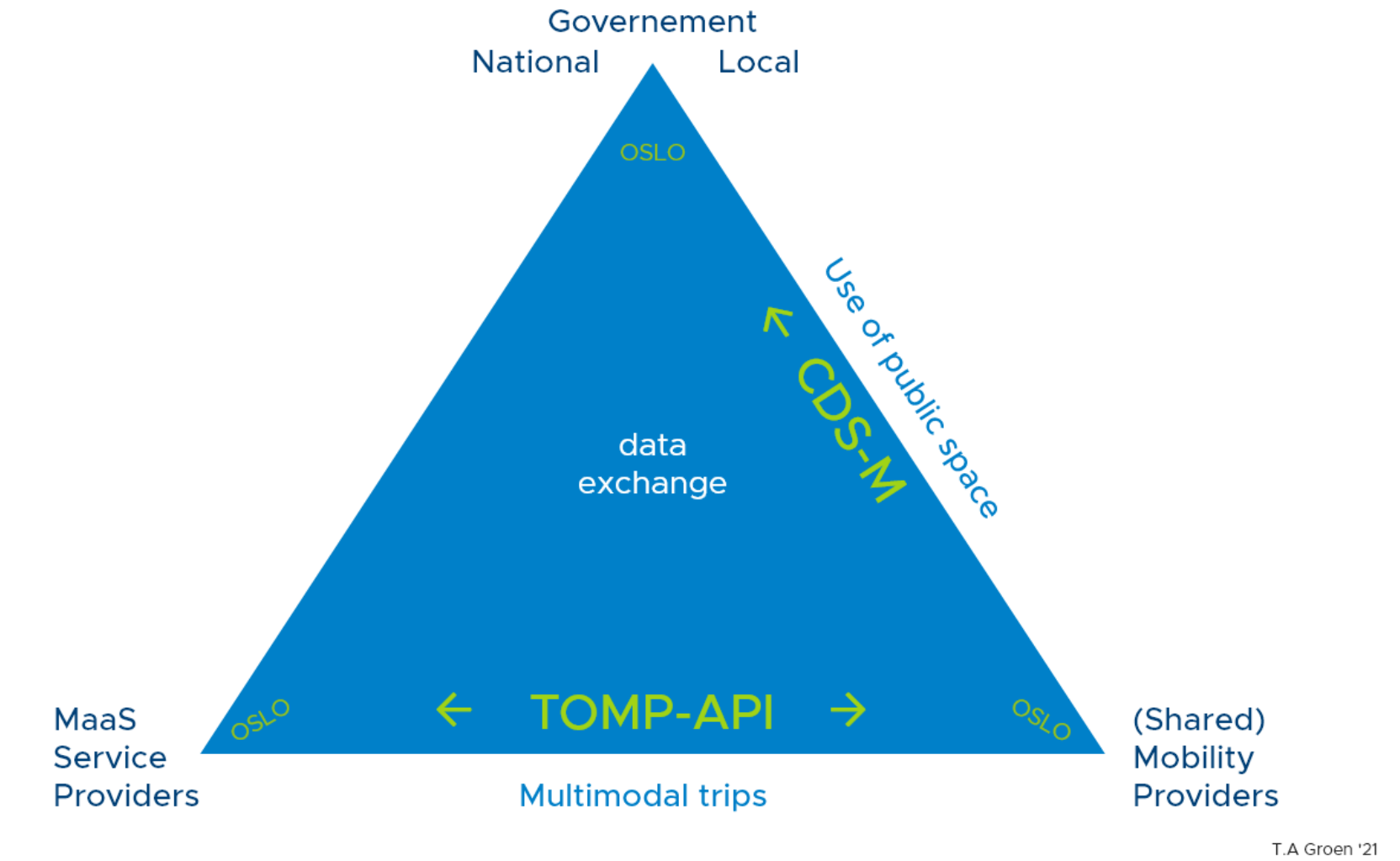
New version coming up

- Early 2022 a new version will be released.
- Compatible with the current version.
- New features :
  - Integration with “On-Demand” mobility solutions (GOFS)
  - More ancillary options (accesibility)
  - Support for external user verification (Blockchain?)

The future

- TOMP-API standard itself is mature, ready & currently being used in real life applications in multiple countries.
- 50+ production versions, 100+ working on implementation.
- Frees up time for other things
  - Dissemination
  - (self)Certification
  - MaaS islands
  - Ecosystem of trust
  - Discovery services
  - Personal information – standardized
  - Governance

How do TOMP-API & CDS-M compare?



Other standards

- Europe : NETEX & SIRI
- Global : GTFS (google, apple) - GTFS RT (PT), GOFS
- Duitsland : IXSI5 - carsharing
- France & USA : GBFS+ - bike sharing
  - TOMP-API is built upon GBFS.
- MDS - protocol for data exchange between operators and cities
  - CDS-M = European alternative.

Dig a bit deeper?

- TOMP-API
  - Website : https://tomp-wg.org/
  - WIKI : https://github.com/TOMP-WG/TOMP-API/wiki/TOMP-API-for-dummies
  - Swaggerhub : https://app.swaggerhub.com/apis-docs/TOMP-API-WG/transport-operator_maas_provider_api/1.2.0
  - eHUBS : DL LTP6.3 : https://www.nweurope.eu/projects/project-search/ehubs-smart-shared-green-mobility-hubs/#tab-7
- CDS-M
  - https://www.polisnetwork.eu/wp-content/uploads/2021/03/Principles-CDS-M2.pdf

MON
13

13 December @ 14:00 - 15:00

Webinar ‘Data integration for eHUBS: TOMP-API and CDS-M’ (FR)

Online

As one of the partners in the Interreg North-West Europe project eHUBS, focussing on electric mobihubs, Mpact organizes two webinars about data integration and hubs. We want to share with the new pilot regions and cities within the project, but also with every interested stakeholder, our insights into data integration and data sharing. In December, we’re...

TUE
14

14 December @ 17:00 - 19:00

Student Challenge Final

Online

On Tuesday December 14 (17h-19h CET), the final online event of the international Student Challenge will take place. It is an initiative by A Tribe Called Transport, the youth platform by Mpact. The finalists will present their ideas on how to make their mobility to campus futureproof. The jury is based on the 'FACES' principle....

QUESTIONS?

Tjalle Groen

tjalle.groen@mpact.be

mpact

www.mpact.be

@mpactbe

mpact_vlaanderen