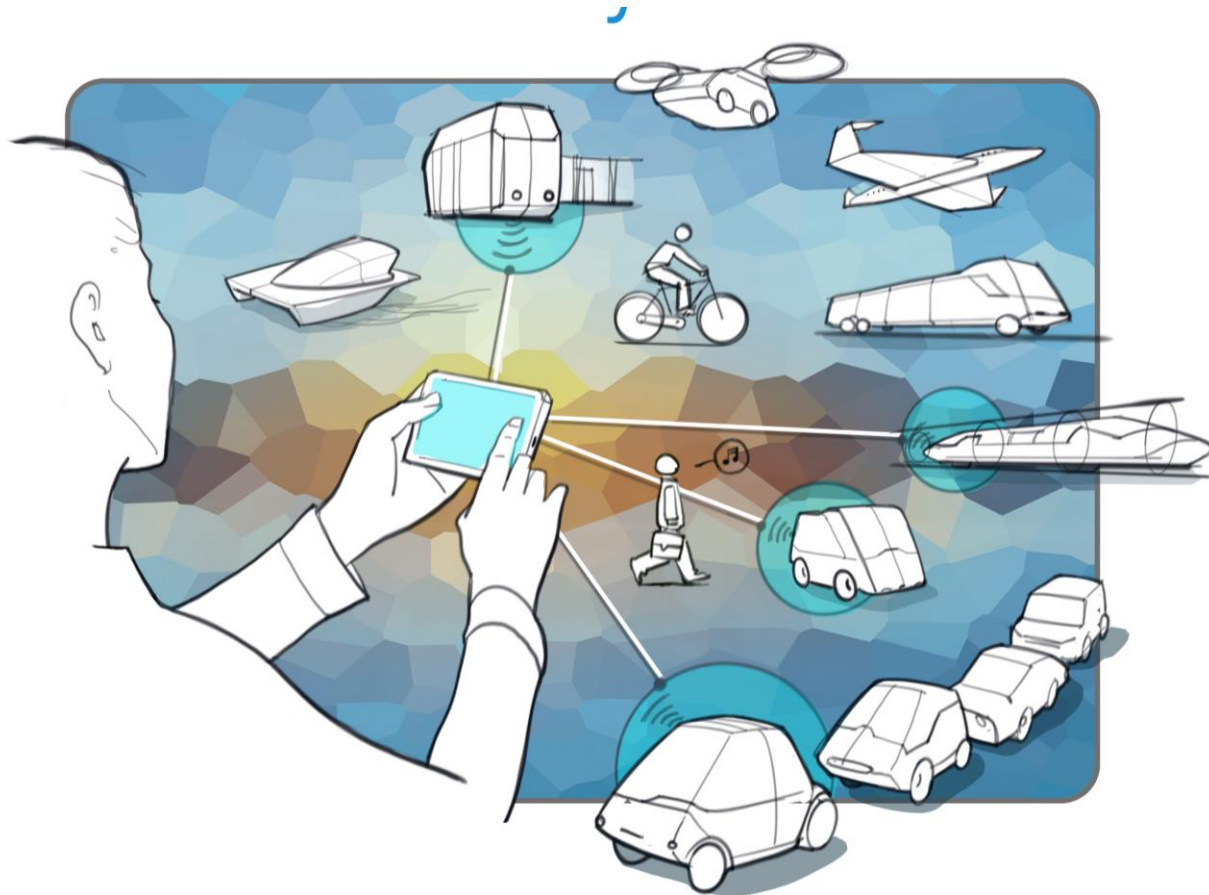




Ministry of Infrastructure  
and Water Management



# Optimising mobility in the Netherlands via 7 national MaaS-pilots

Developping an ecosystem via co-  
operation, standardisation and  
data-sharing

11 April 2019



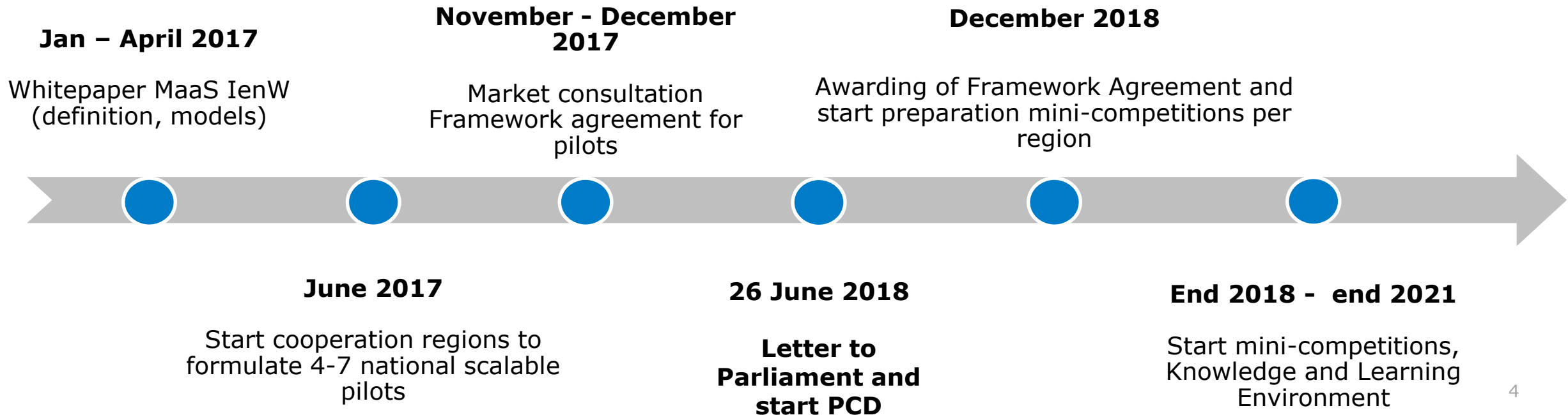






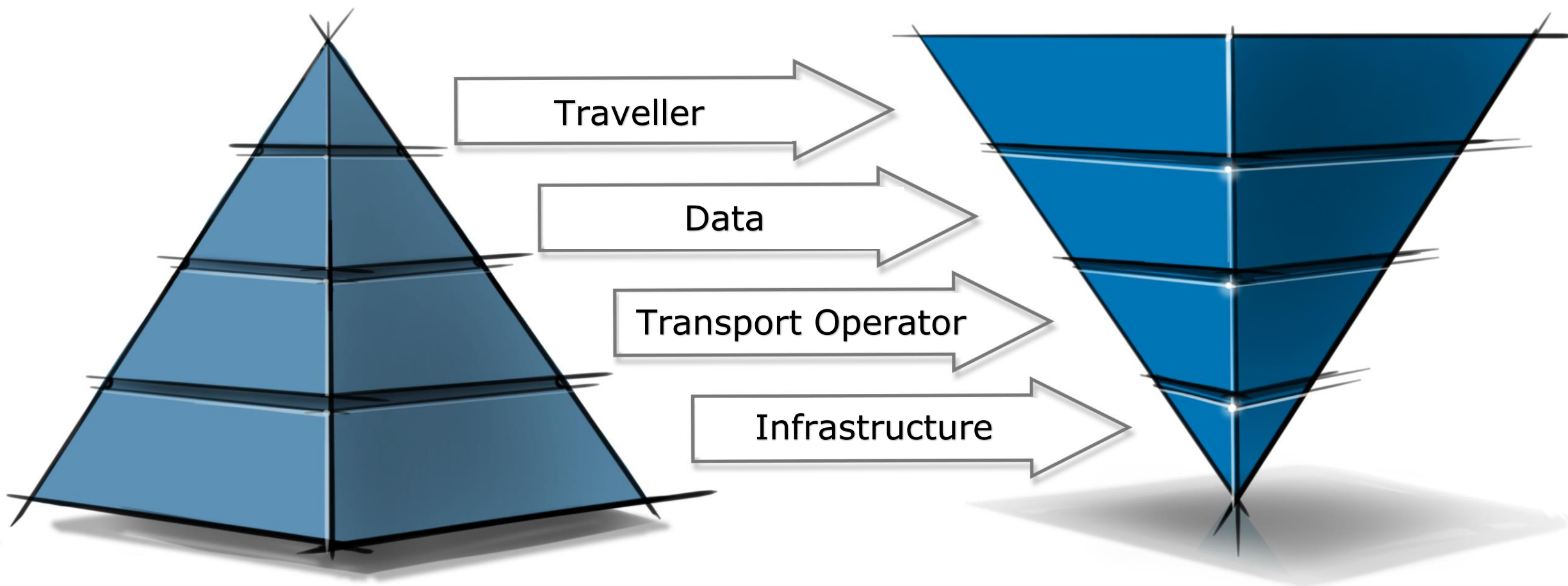


# Timeline





# New approach for mobility



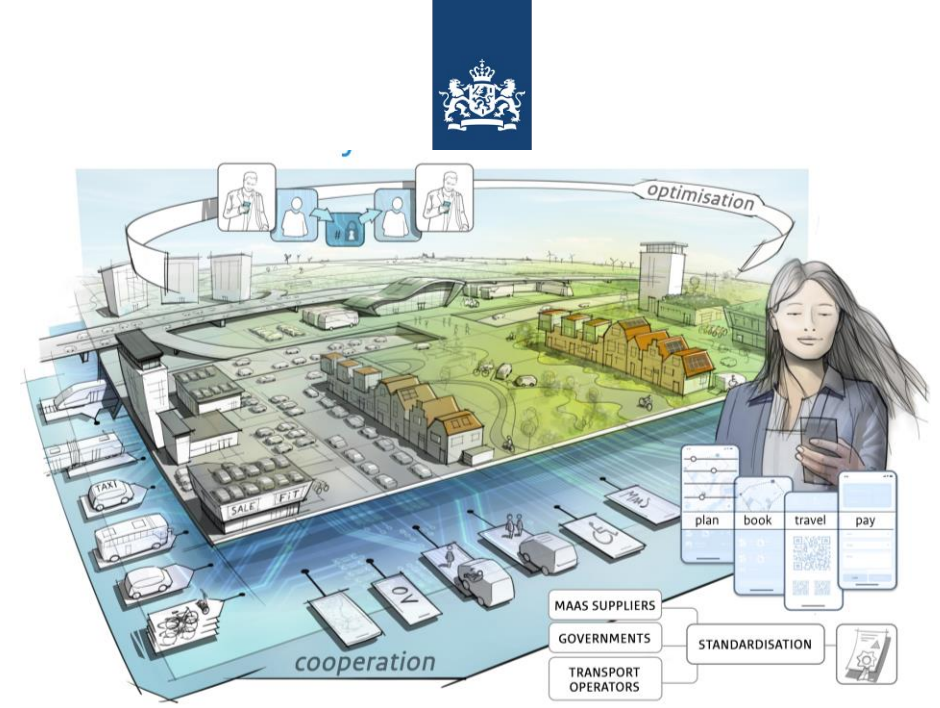


# MaaS: Definition, scale, and policy objectives

The offer of **multimodal, demand-driven** mobility services, with **customised** travel options being offered to **customers** via a **digital platform** (e.g. mobile app) with **real-time information**, including **payment and finalisation** of transactions

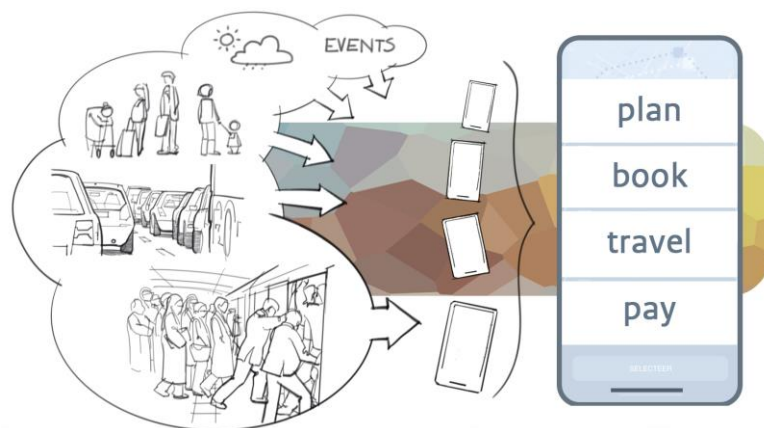
**Scale** is necessary to study **policy impact** or to achieve feasible **businesscases**

7 regional, **national scaleable pilots** with focus on different policy objectives



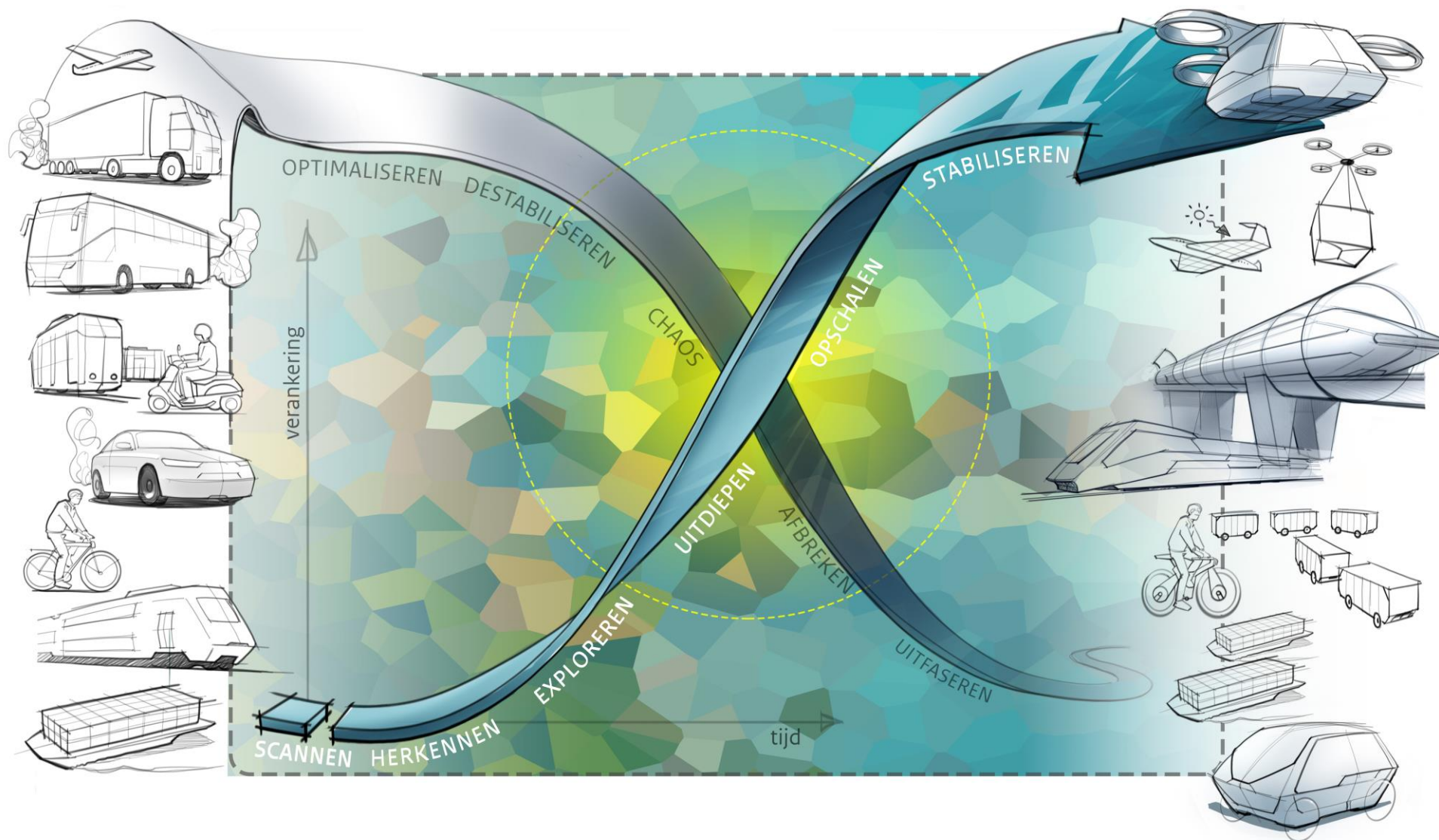
# 7 functions of MaaS

1. Personal aspects and preferences
2. Plan
3. Book
4. Travel
5. Support
6. Modify
7. Pay





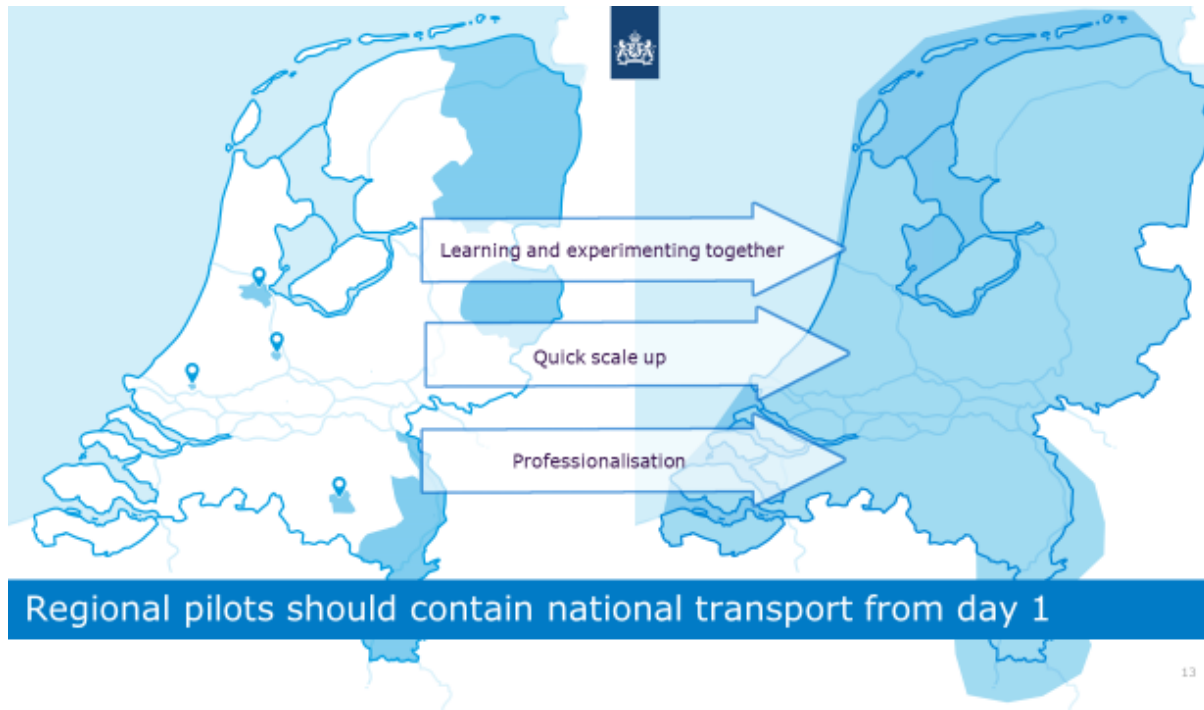
# Transition requires direction from governments







# Framework agreement for 7 pilots



hoofdschrijver	consortiumpartners	gemeemde onderaannemers
1 Go About B.V.		
2 Next Urban Mobility B.V.		Shuttel BV/ Collect Car, Deloitte BV, CGI, Innovactory, Fluidtime Data Services
3 IBM Nederland B.V.		
4 Mobility Concept B.V.		Arval (BNP Paribas), Munchhof Groep, Amber B.V.
5 BeSite BV		
6 Transvision B.V.		
7 Thales Transportation Systems B.V.		
8 ARS Traffic & Transport Technology B.V.		
9 Over Morgen B.V.		Yor24, Taxi Electric
10 KPN B.V.		Amber B.V., Connexxion, Syntex, Syntex, Transvision
11 Rijksovervoer Nederland B.V.		
12 Sandstorm International B.V.		MapInfo, Rabobank, Syndesmo, MAPtm
13 Tranzer B.V.		Over Morgen, Sier
14 Mobiliteitsfabriek B.V.		
15 ING Bank N.V. (Ridecloud)		
16 Trevel B.V.		
17 Connexion Nederland N.V.		
18 GetYouThere B.V. (Beamrz)		
19 Keolis Mobilities B.V.		
20 Dierma B.V.		
21 ICT-Consulting Nederland B.V.		GoOV, Kyyti Group
22 moovel Group GmbH (Daimler)		
23 RNV Mobility		
24 West Tech Solutions B.V.		ICT Nederland, InTraffic, NedMobil

NB: de volgorde van deze lijst is bepaald op basis van het tijdstip van indienen van de inschrijving en niet op basis van de beoordeling

Automotive

Banks/Insurers

PTO's

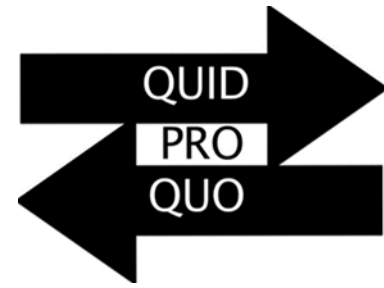
Shared mobility

ICT

Start-up's

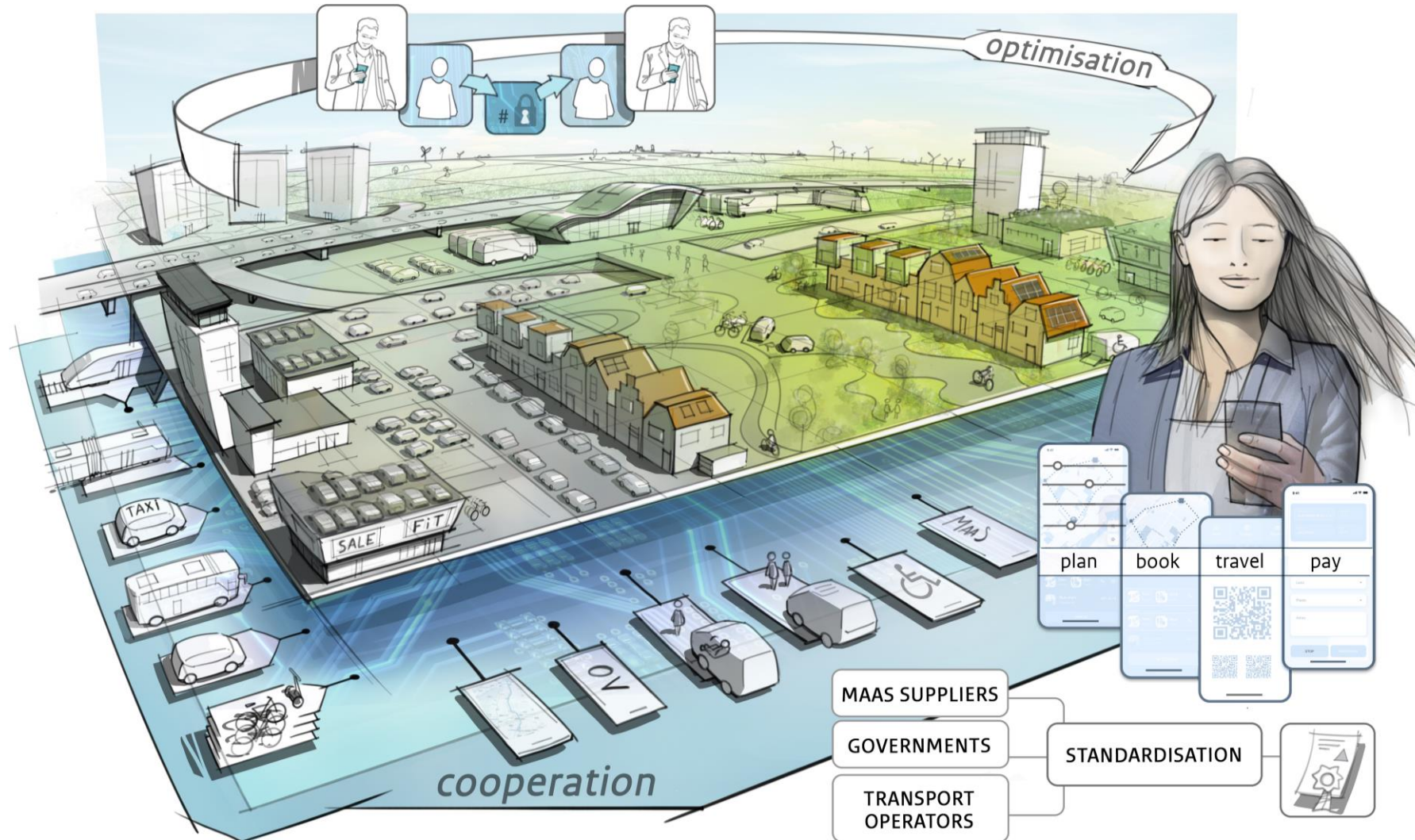
MaaS-providers

Business card providers





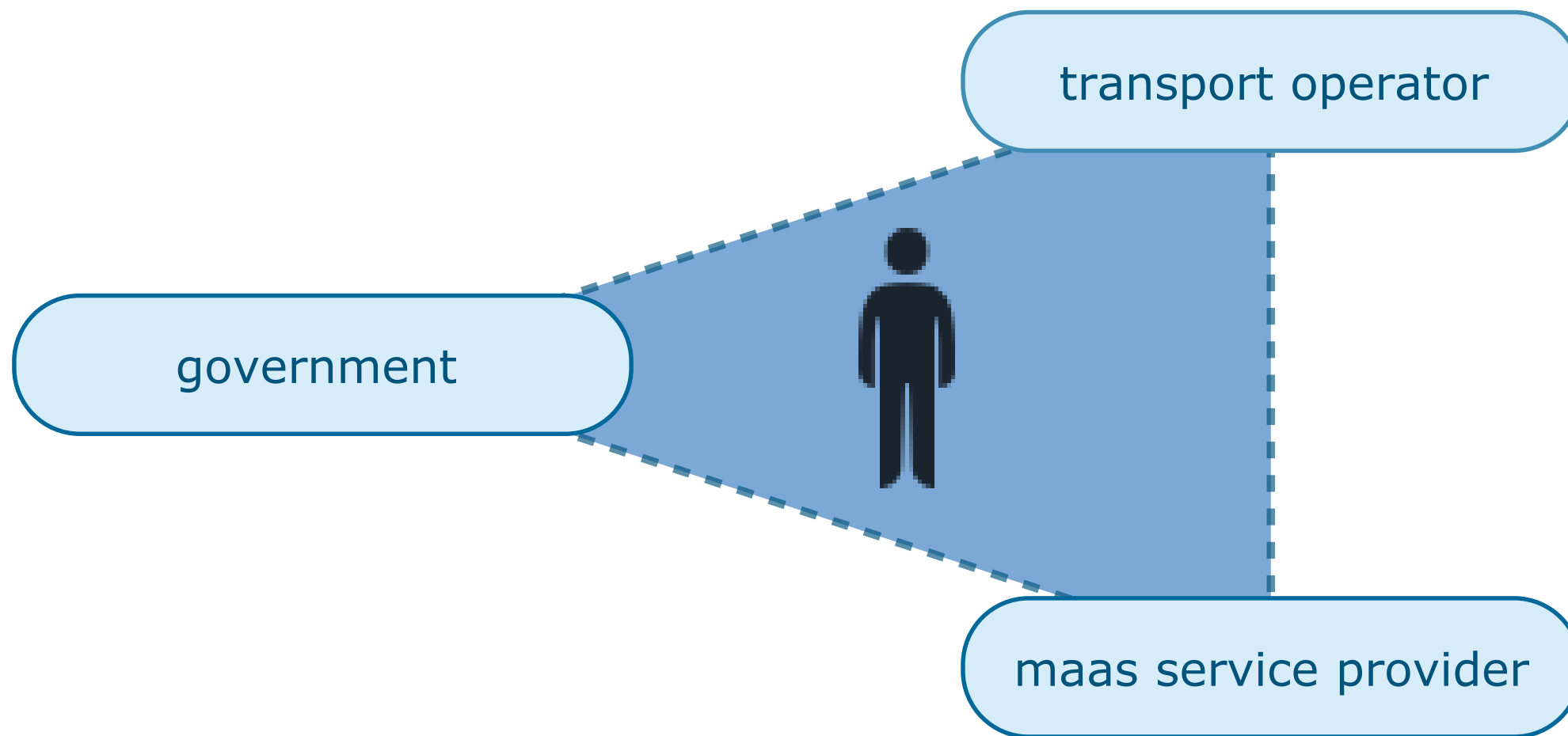
# Optimising on public-values requires co-operation







# Win-win-win-win





# Standardisation via API-description in OpenAPI 3.0

For shared mobility and (possibly) international ticketing public transport

← GTOAS 1.0.2 </> Design View ↻ Export

Search

GENERAL INFORMATION ^

- GET /information/system\_info
- GET /information/station\_info
- GET /information/system\_hours
- GET /information/system\_calendar
- GET /information/system\_regions

ASSET AVAILABILITY ^

- GET /availability/free\_asset\_status
- GET /availability/system\_alerts

PRICING ^

- GET /pricing/system\_pricing\_plans

BOOKING ^

- GET /bookings/

```
1 openapi: 3.0.0
2 # Added by API Auto Mocking Plugin
3 servers:
4   - description: SwaggerHub API Auto Mocking
5     url: https://virtserver.swaggerhub.com/efe185/GBFS/1.0.0
6 info:
7   description: General Transport Operator API Specification
8   version: "1.0.2"
9   title: General Transport Operator API Specification
10  contact:
11    email: edoardo.felici@ndw.nu
12  license:
13    name: Apache 2.0
14    url: 'http://www.apache.org/licenses/LICENSE-2.0.html'
15
16 tags:
17   - name: general information
18     description: gives information about systems, stations, operating hours
19   - name: asset availability
20     description: gives information about transport asset availability
21   - name: pricing
22     description: gives pricing information
23   - name: booking
24     description: a booking is the main object exchanged between MaaS and a
25     TSP.
26   externalDocs:
27     description: Booking scenarios
28     url: 'https://github.com/maasglobal/maas-tsp-api/blob/master/specs/Booking.md'
29   name: ticketing
```

Read Only

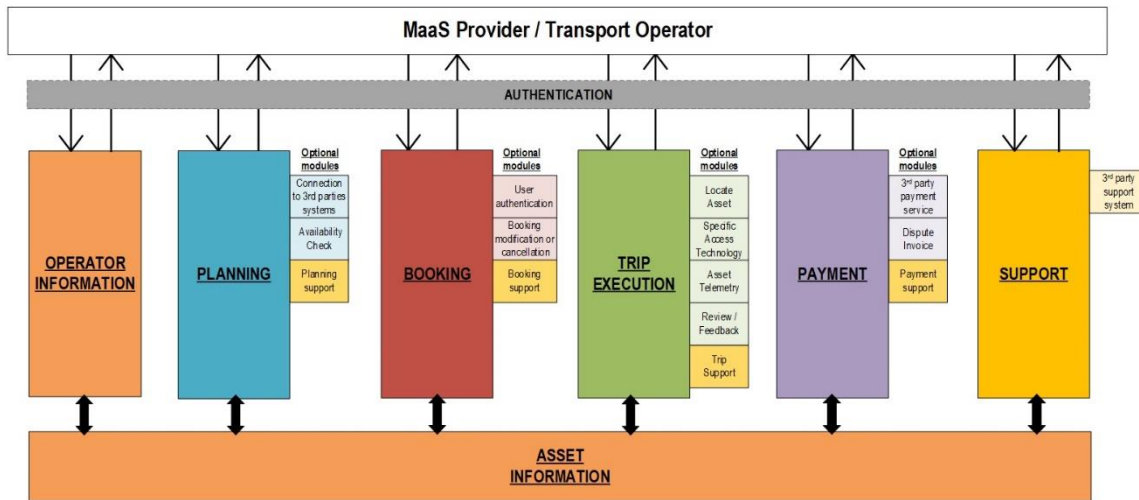
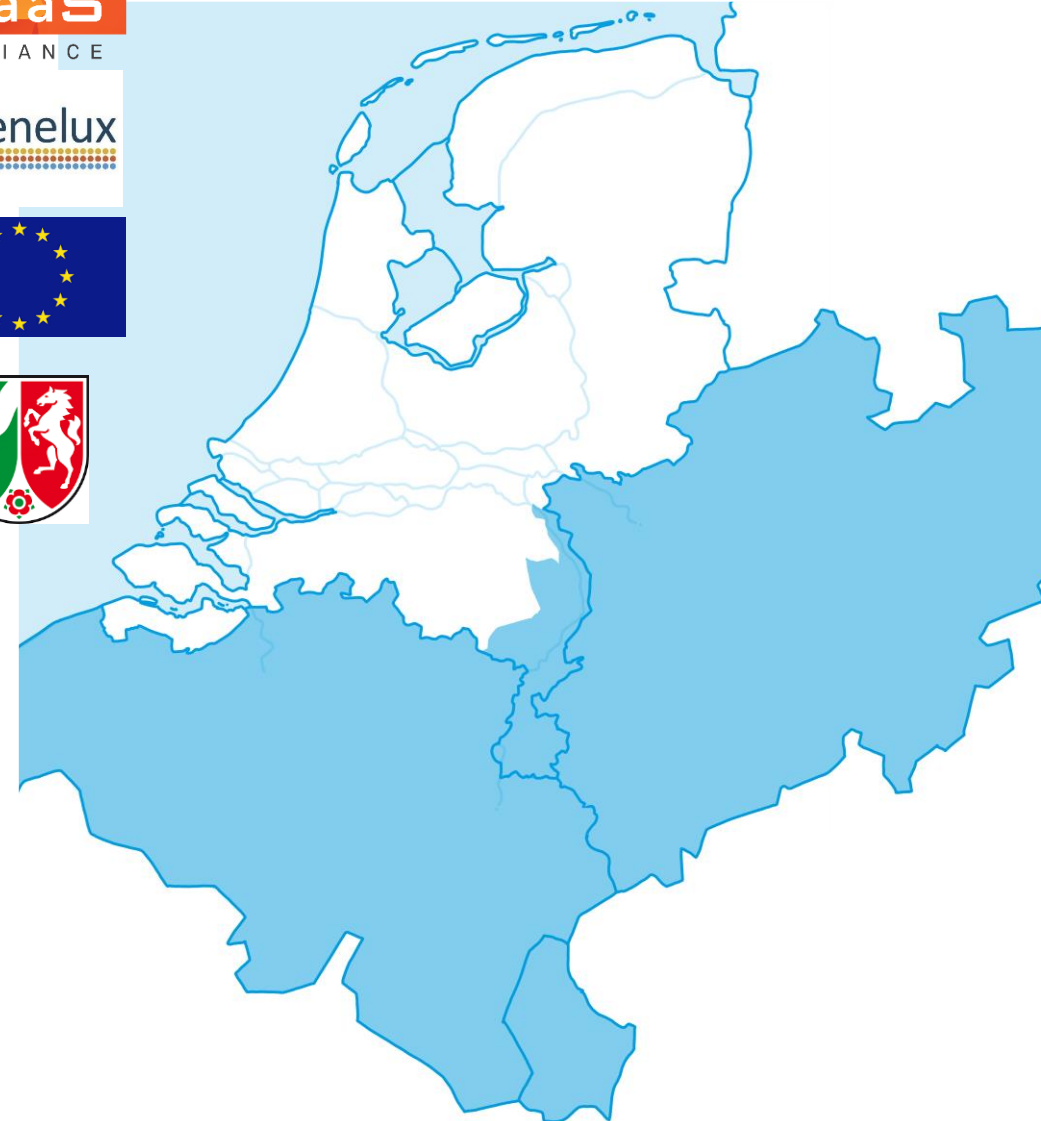
general information gives information about systems, stations, operating hours

- GET /information/system\_information describes the system
- GET /information/station\_information describes all available stations
- GET /information/system\_hours describes the system hours of operation
- GET /information/system\_calendar describes the operating calendar for a system. An array of year objects defined as follows (if start/end year are omitted, then assume the start and end months do not change from year to year).
- GET /information/system\_regions describes regions for a system that is broken up by geographic or political region. It is defined as a separate feed to allow for additional region metadata (such as shape definitions).

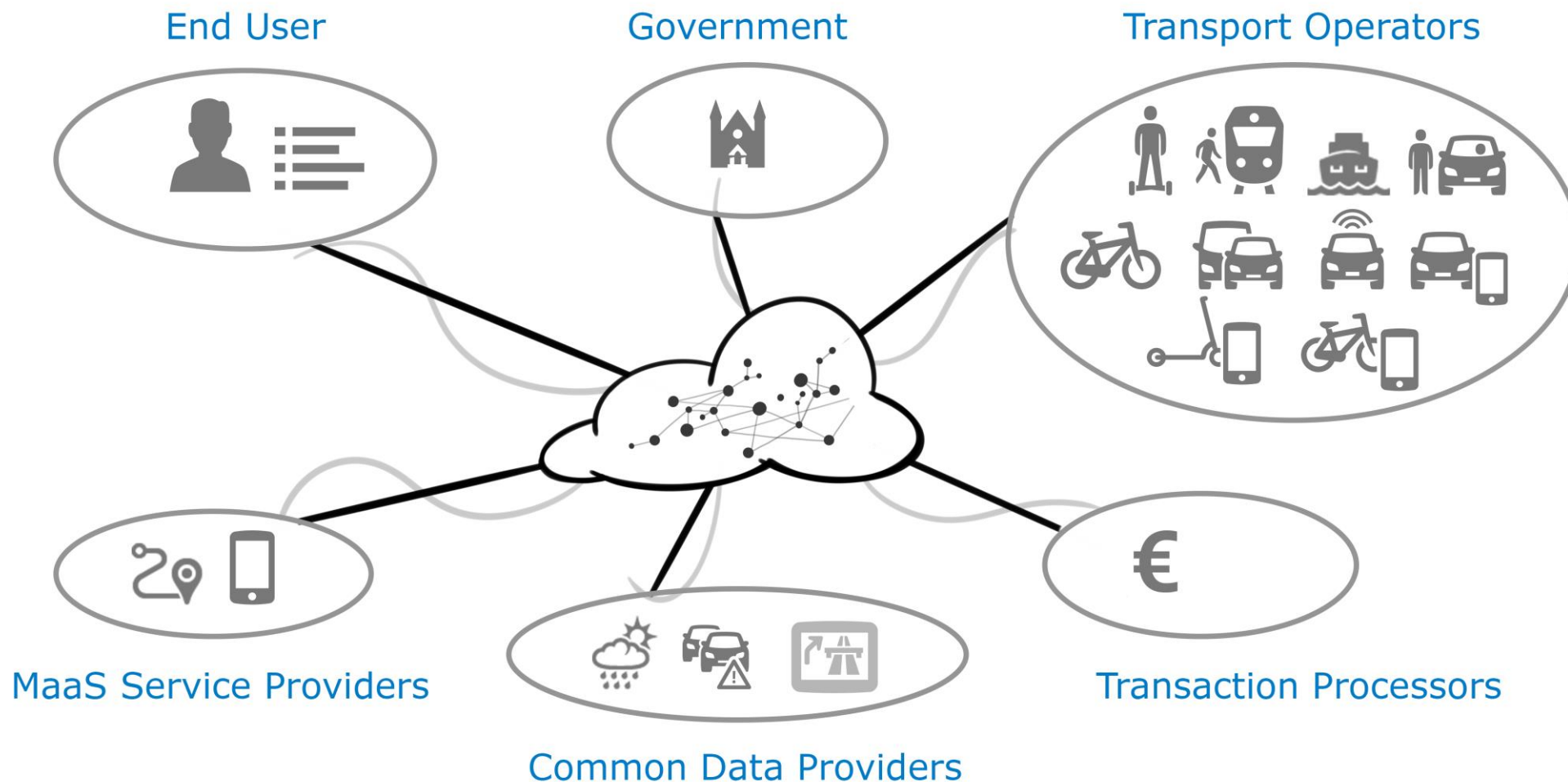




# Standardisation

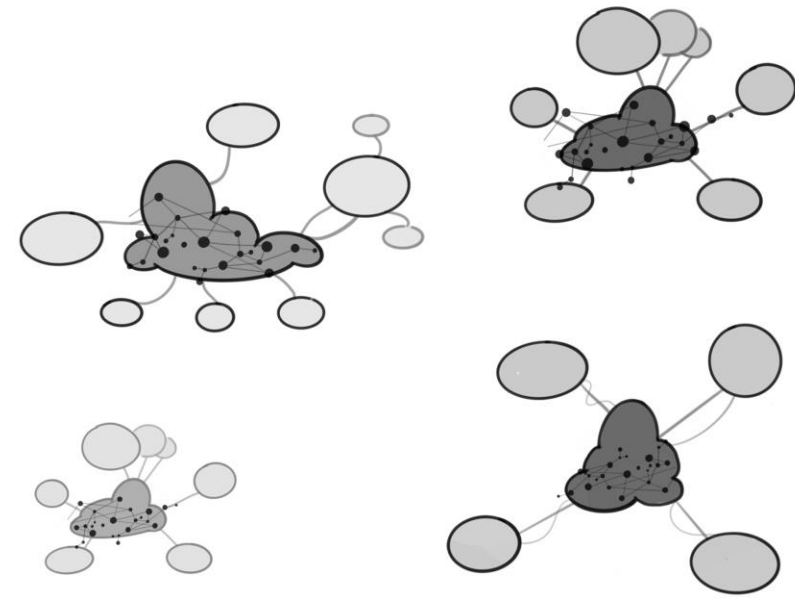
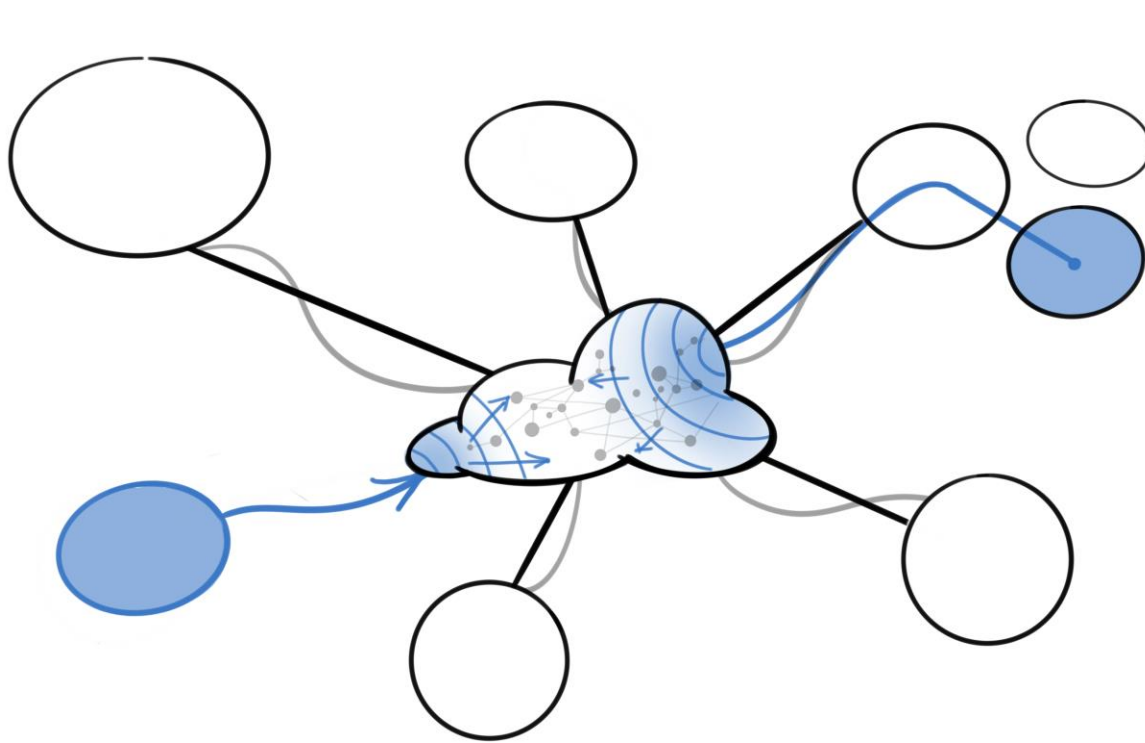


# API's/standardisation results in efficient ecosystem





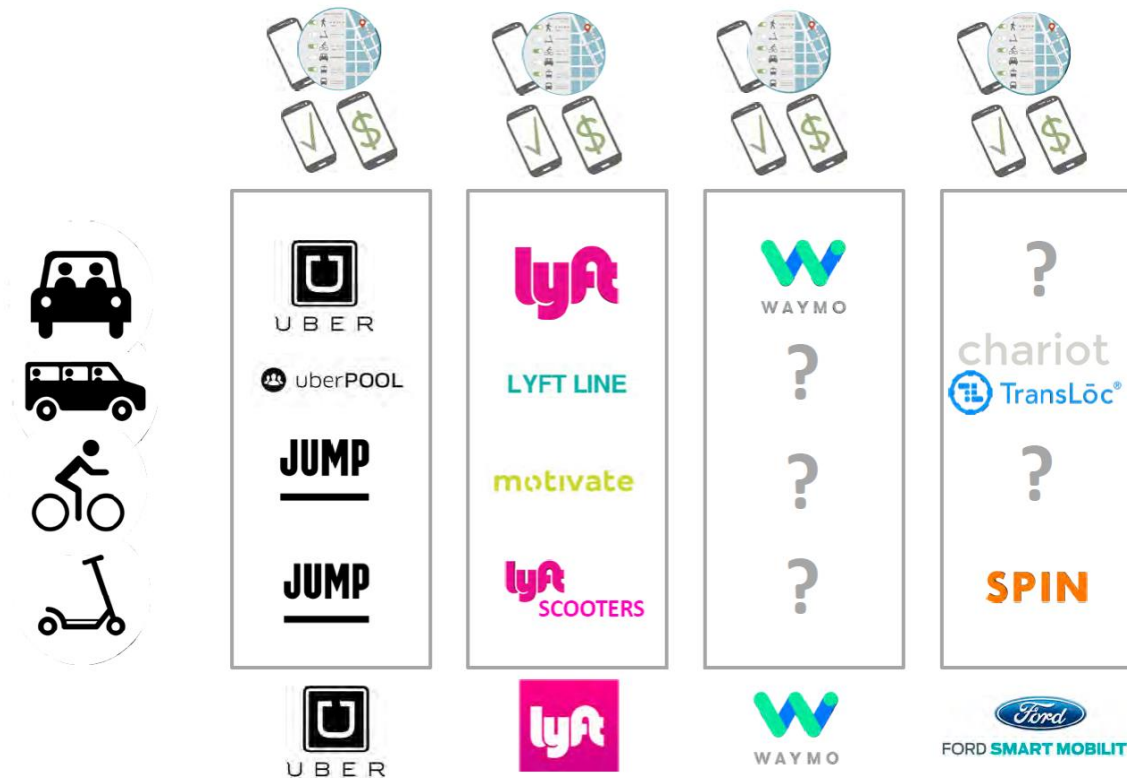
# Ecosystem vs. platforms





# Integrated monopolies vs. open ecosystem?

## VERTICALLY INTEGRATED MAAS





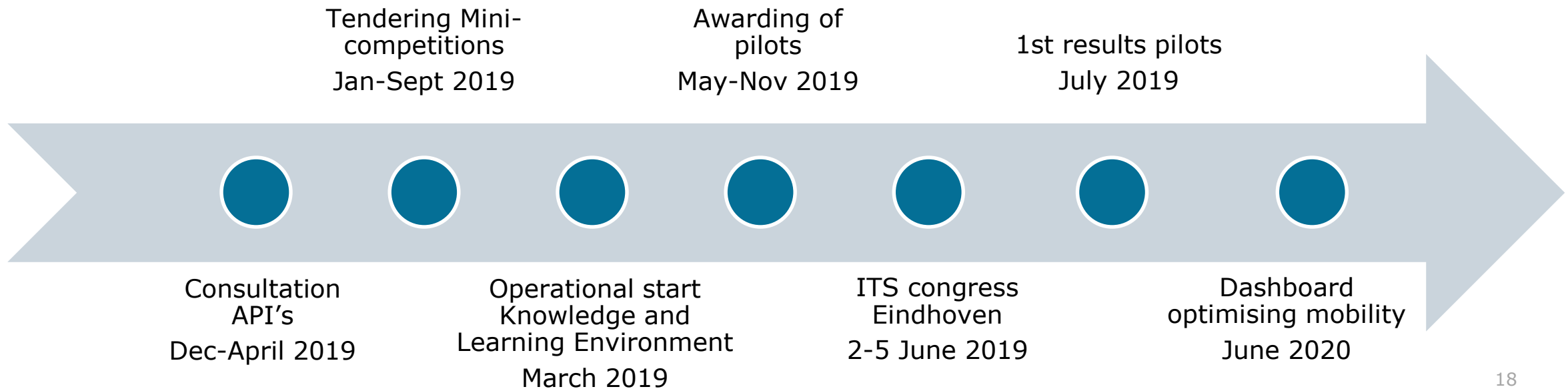
## Next steps on international level

- › International ticketing for (public) transport
- › Data vault for travellers
- › Portability of data
- › (International) governance body for standards/API and ecosystem (commons)?

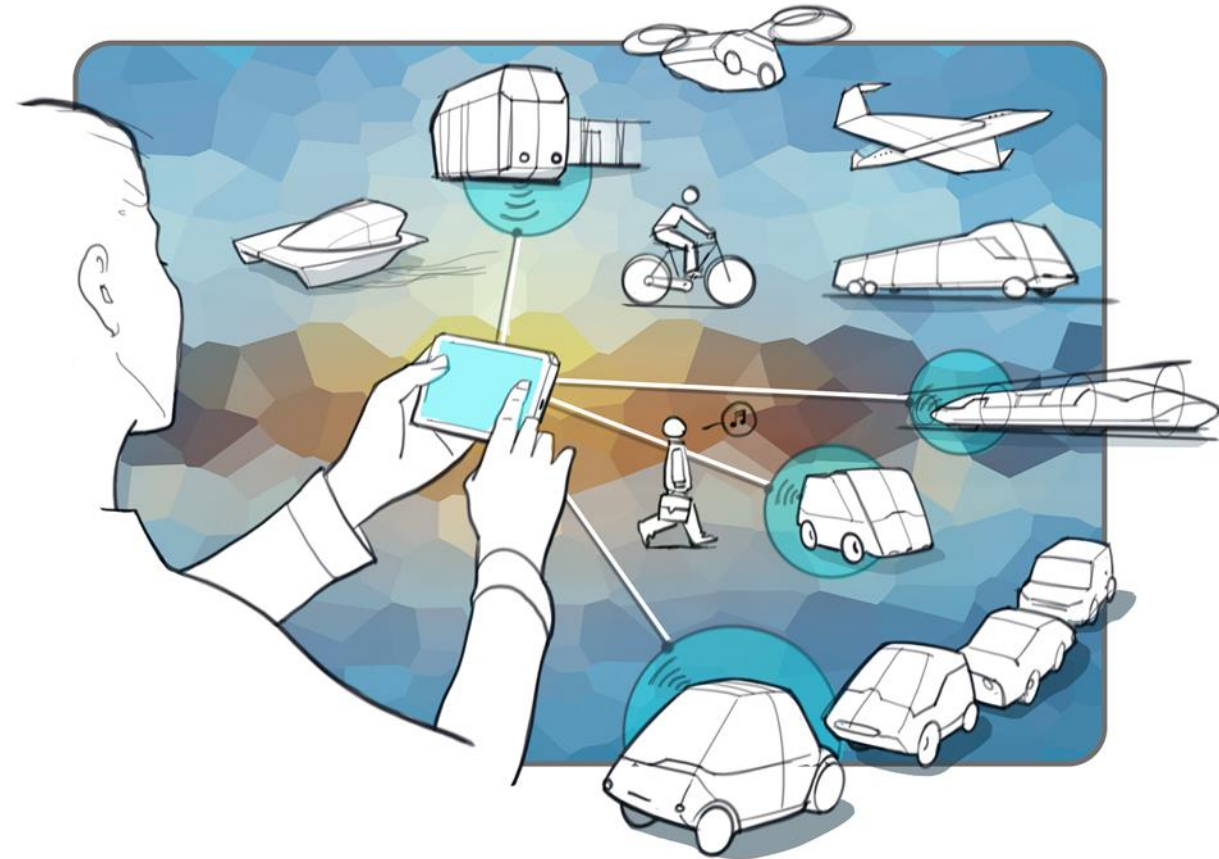




# Planning



# Discussion



- > [www.dutchmobilityinnovations.com](http://www.dutchmobilityinnovations.com)
- > [eric.mink@minienw.nl](mailto:eric.mink@minienw.nl)
- > @MaaSMinIenW