ITS CONGRESS 2019:
INNOVATION FOR SUSTAINABLE MOBILITY

TOWARDS EUROPEAN MAAS APIS

AGENDA

- The Dutch MaaS APIs

Edoardo Felici, Dutch Ministry of Infrastructure & Watermanagement

- Towards European MaaS APIs

Erwin Vermassen, ERTICO & European MaaS Alliance

- Towards Flemish MaaS APIs

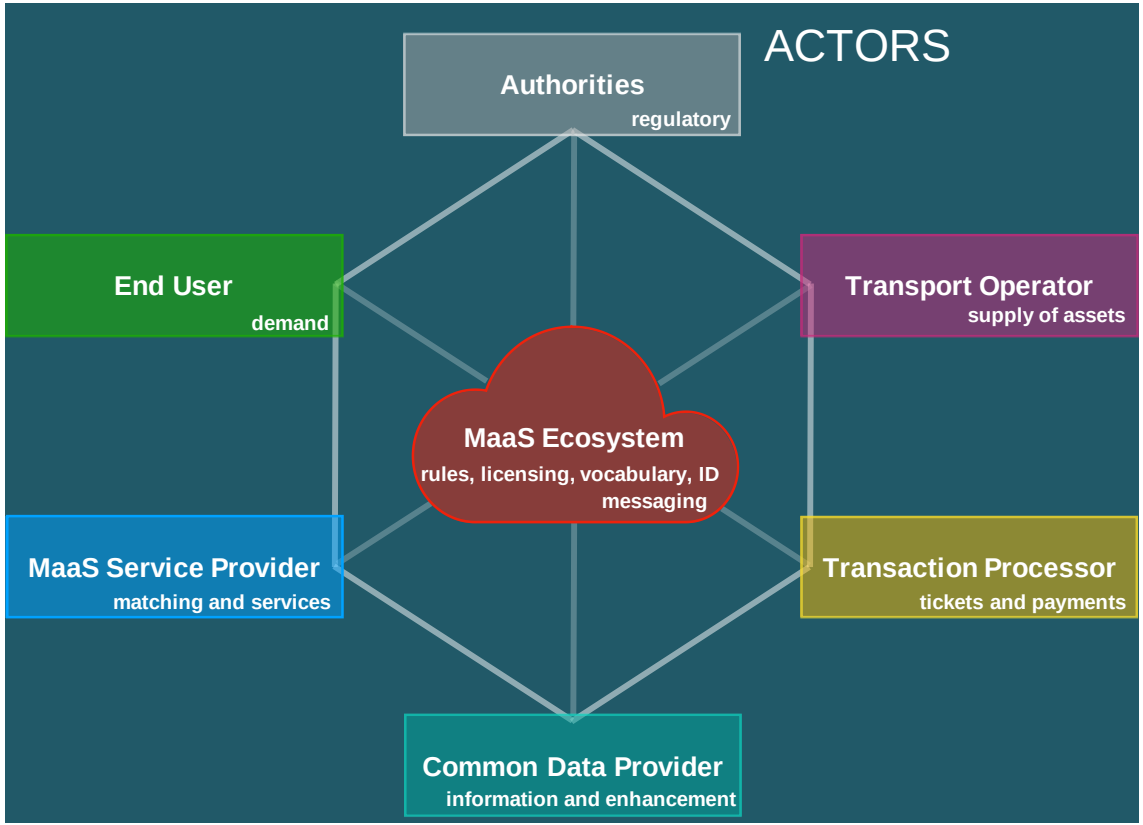
Raf Buyle, Flemish Information Agency

- Steps going forward

MAAS-PROGRAMME IN NL

- Framework agreement with 23 consortia signed in december 2018
- Consortia to compete for 7 nationally scalable pilots in 2019 and 2020
- Deployment based on unified and standardized ecosystem for all MaaS actors

MAAS ECOSYSTEM



MAAS DATA STRING

API SCOPE

Users

Standardising the interface between MaaS-providers and Transport Operators, taking the whole chain into account

Mobility-providers/integrators or TO's

API | API | API | API

Transport operators | Transport operators | Transport operators | Transport operators

MAAS-API

- From bikesharing to carsharing to generic Transport Operator to MaaS Provider-API (TOMP-API)
- Building on existing specs:
  - » GBFS (+)
  - » MaaS-alliance Booking API
- Open collaboration for all

MODULAR APPROACH

Transport Operator to/from MaaS Provider API Functional Blocks

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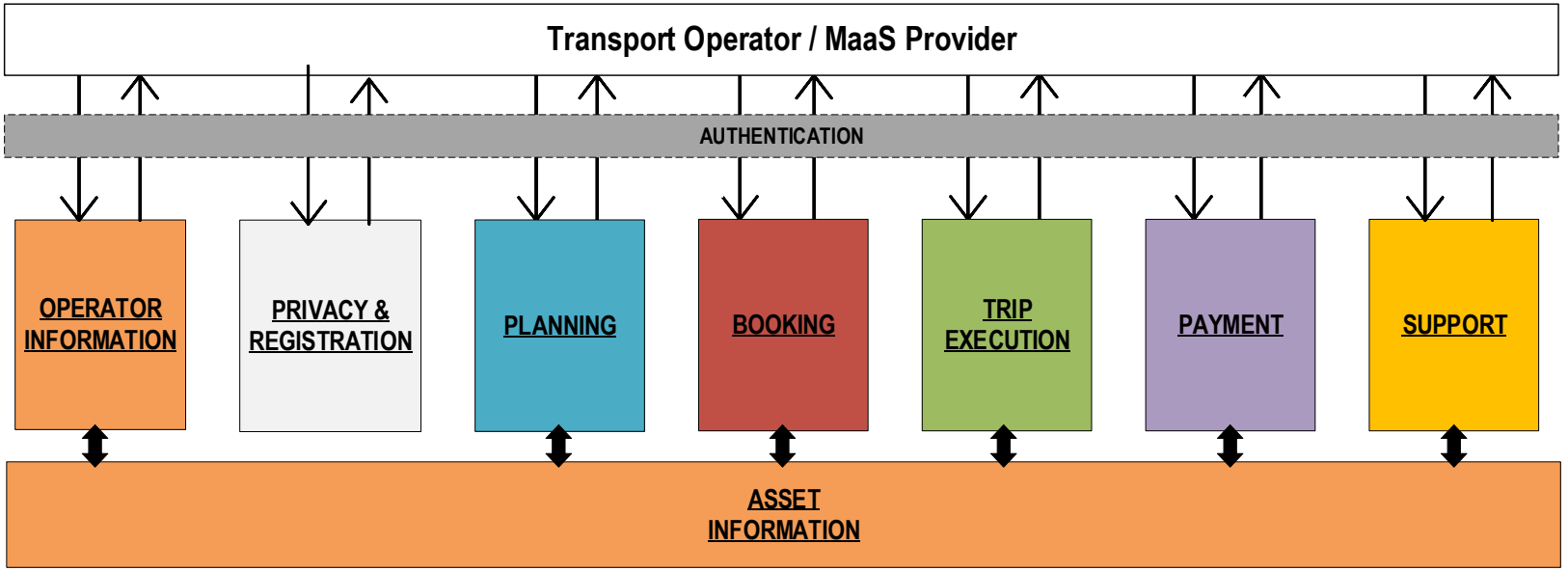
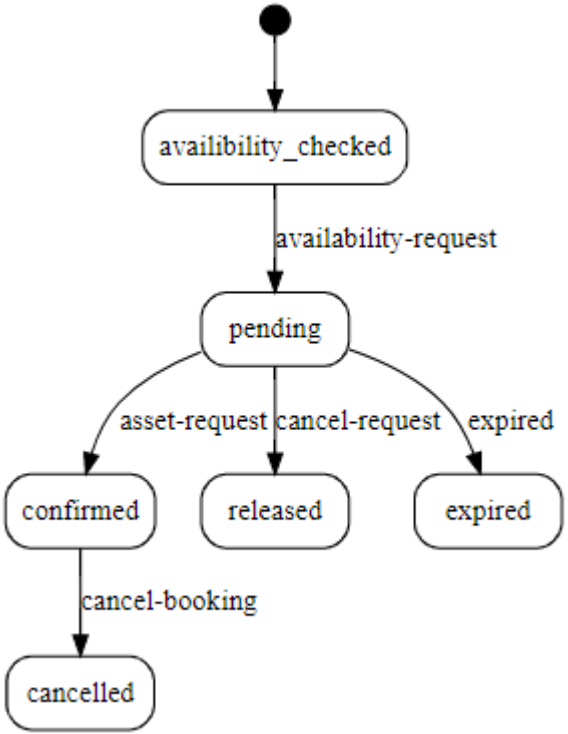
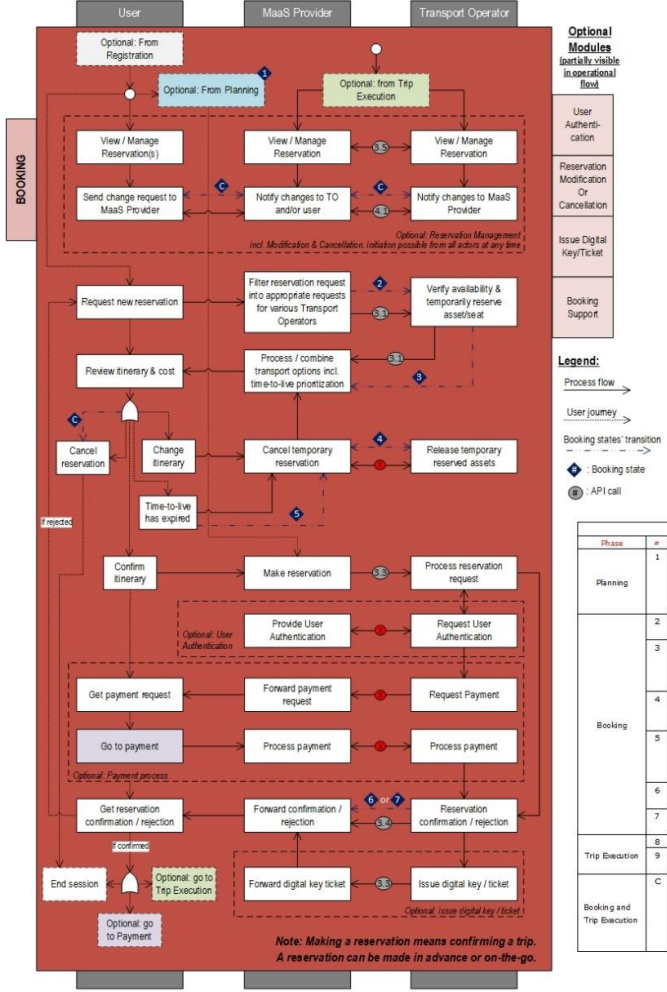


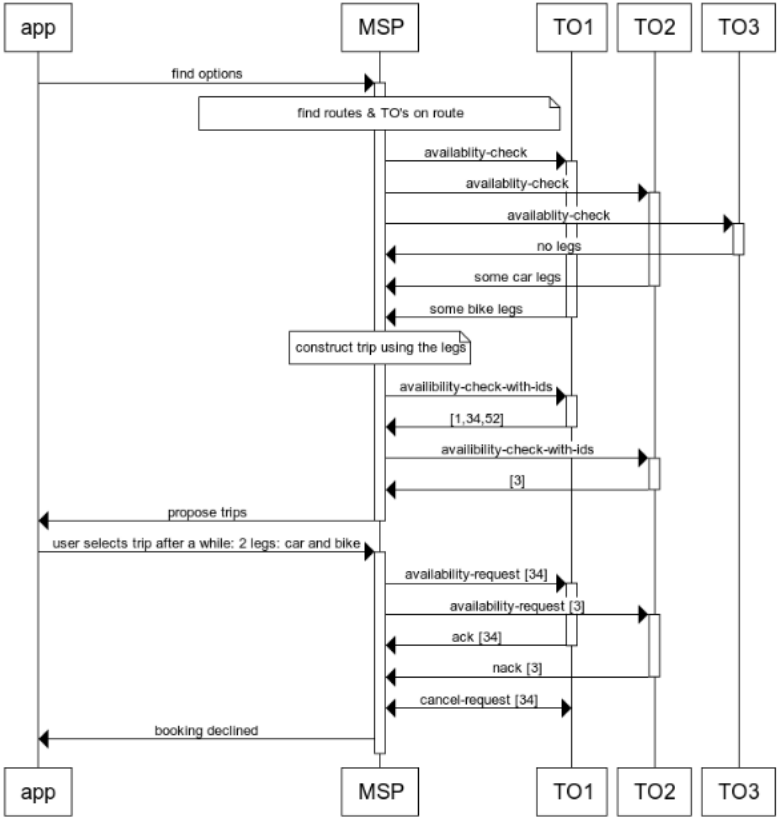
DATA EXCHANGE

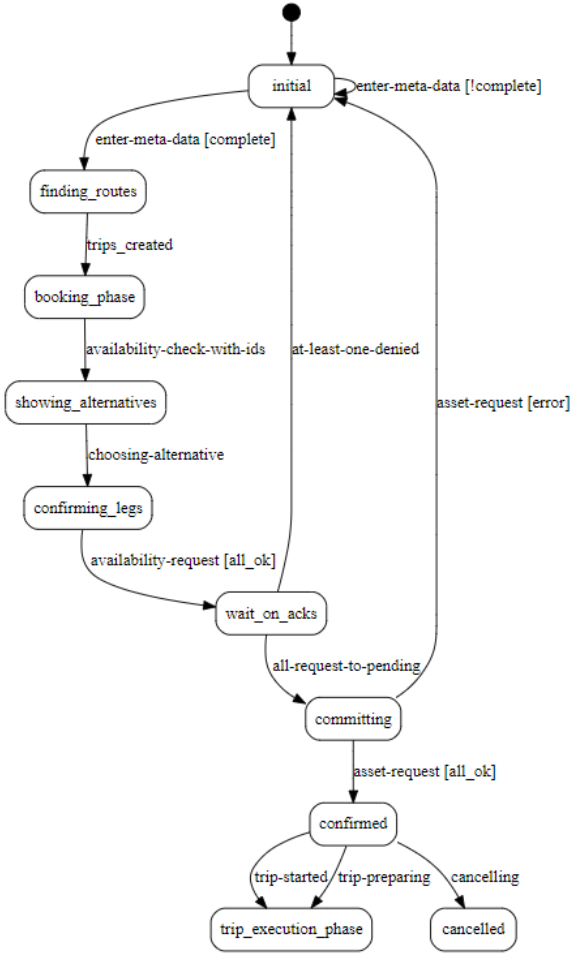




Booking states			
Phase	#	State	Description
Planning	1	Availability check	In the planning phase, a MSP can check the real-time availability of assets from a TO. In this way, a MSP can offer their Users an overview of which assets and options are currently available following the User's request (for a specific mode, a specific location or other User conditions). A time-to-live can optionally be added to the response to show the User how long the information will be valid for.
Booking	2	Availability request	Once the User has narrowed down their selection, the MSP can send an availability request to the TO for a specific asset (or asset type) selection. This changes the Booking State to PENDING and temporarily 'freezes' an asset while the User is finalizing the selection (i.e. while the User is having to choose multiple options for multiple legs of a journey). A time-to-live in the availability confirmation response is mandatory.
	3	Pending	
	4	Released	If a User decides to go for other options than the one(s) which was or were narrowed down, the PENDING state can be cancelled by the MSP. The Booking State is changed to RELEASED.
	5	Expired	If the expiry time for the PENDING state is reached (as defined in the time-to-live in the availability confirmation), because the User has not (yet) made a selection, the Booking State changes to EXPIRED and the corresponding asset(s) are no longer 'frozen' for the specific request.
	6	Confirmed	If a User confirms the selection of a given option, the asset (or asset type) is requested from the MSP to the TO and the Booking State changes to CONFIRMED (in case the "authentication" and payment conditions are met) or to REJECTED (in case the "authentication" and/or "payment" conditions haven't been met)
	7	Rejected	
Trip Execution	8	Started	Once the confirmed asset is in use, the Booking State is changed to STARTED.
	9	Finished	Once the asset is returned, the leg is considered completed and the Booking State is changed to FINISHED.
Booking and Trip Execution	C	Cancelled	If the asset confirmation is cancelled by the MSP (which could also happen upon request from the User), the Booking State changes to CANCELLED, and the corresponding terms and conditions for cancellations between TOs and MSPs apply. If the asset confirmation is cancelled by the TO (in case of a broken down vehicle, late return etc.), the Booking State changes to CANCELLED, and the corresponding terms and conditions for cancellations between TOs and MSPs apply.

DATA EXCHANGE





COLLABORATION

- Participation from 20+ (international) organizations
- Physical meeting in Utrecht (NL) every two weeks
- Active collaboration on Github
- Feedback to MaaS-alliance Technology and Standards Working Group
- Open to international adoption

TIMELINE

- Blueprint v1.0 published on June 3rd, specs also available on Swaggerhub in OpenAPI 3.0
- This week: finishing Blueprint v1.1 with updated specs and JSON examples
- Now testing Operator Info, Planning, Booking and Trip Execution modules to update specs to v1.2 by January 2020

TOMP-API

- Join us!
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Thank you for your attention!