What is MaaS?

MaaS or Mobility as a Service is integrating seamless end-to-end trip planning, booking, electronic ticketing, and payment services across all modes of transportation, public or private.

Rather than having to locate, book, and pay for each mode of transportation separately, MaaS platforms let users plan and book door-to-door trips using a single app.

By answering the question of how best to get individual users where they're going based on real-time conditions throughout the network, taking account of all the possible options and each user's own preferences (for example, time and convenience vs. cost), and facilitating seamless mobile payment, MaaS is in essence personalised and user-centered.

Relevance and market

Factor 6

By 2050 Belgium needs to reduce emissions in transport and mobility by 60% as compared to 1990. Since 1990 our economy has grown and demand for transport and mobility has increased. The question therefore is: how are 2,5 times more movements possible with 2,5 times less emissions, in other words: a productivity increase of a factor 6? An open, flexible and collaborative market of service providers offering shared mobility solutions making optimal use of the existing multimodal infrastructure will be essential.

A huge market

As MaaS is an alternative or evolution of car usage, its potential market is huge (more than 10 billion € per year for Belgium[1]): Belgian adults spend €300 per month on mobility on average (about ten times more, for instance, than on connectivity). Studies (eg [4]) show that MaaS and shared mobility will first and mainly pick up in urban areas. Also, for the foreseeable future MaaS subscriptions and car ownership are likely to co-exist, evolving toward an integrated multimodal system.

ARPU
(Average Revenue Per User)

in transport
~300 € / month

telecom
~30 € / month
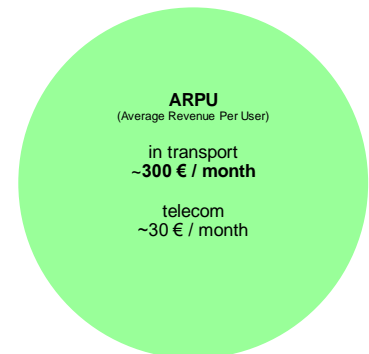
Link to ITS.be strategy

MaaS is a top priority and an enabler of achieving seamless multimodality.

Overall, the ITS.be 2018-2021 strategy focuses on two markets and four priorities:
1. Seamless multimodality
    1. Mobility as a Service (MaaS)
    2. Multimodal Mobility Management by regions and cities (MMM)
2. Intelligent vehicles
    3. Autonomous, Connected and Electrical vehicles (ACE)

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[1] yearly car sales: 550 000 cars @ €22 000 on average (Volkswagen Golf), total fleet: 5 500 000 cars

4. Road User Charging (RUC).

There is a link between multimodal mobility management by regions and cities and MaaS. In everyday policy and operations, authorities can foresee the necessary support and enablers for MaaS. As an example, take-up of MaaS in a city can be facilitated by encouraging mobility providers (that often have a concession to operate in a city) to foresee open access mechanisms to data, ticketing and payment.

Roles - stakeholders

The following stakeholders play a role in MaaS:
- MaaS providers - new players or existing providers such as leasing or assistance companies evolving to MaaS
- Mobility providers - examples are car sharing operators, bike sharing operators, public transport operators, parking operators, taxi operators, rental car and leasing operators
- Data providers - organisations providing data relevant in a multimodal context such as car and road usage data, public transport or parking data
- OEMs - Original Equipment Manufacturers such as car and coach manufacturers
- Authorities - federal, regional and urban authorities
- Technology and connectivity providers - examples are platform providers and telecom operators
- Knowledge centres - public and private research providers
- End users - for instance represented by mobility organisations such as VAB, Touring, TreinTramBus or the "Netwerk Duurzame Mobiliteit".

Note
- As the leading providers of shared mobility in Belgium that can give MaaS a flying start it is clear that public transport operators play a central role in MaaS.
- End users can be individuals or organisations: MaaS is both a both a B2B and a B2C market.
- A MaaS coalition also exists at the European level (maas-alliance.eu/).
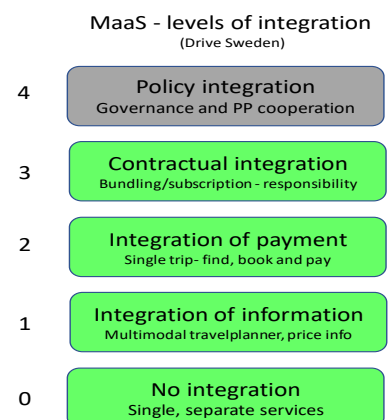
Need for a platform

A neutral MaaS platform is needed, because of:
- the multitude of stakeholders
- policy-instruments at different levels (federal, regional, urban)
- the need for public-private cooperation

As such, the platform should:
- be open
- focus on
  - exchanging the emerging best practice
  - realising enablers - such as the promotion of large-scale "MaaS Experiences".

As can be seen in the figure on the right, public-private cooperation can lead to the highest level of integration in MaaS: policies actively facilitating and enabling and open market for MaaS.

MaaS - levels of integration
(Drive Sweden)

4	**Policy integration** Governance and PP cooperation
3	**Contractual integration** Bundling/subscription - responsibility
2	**Integration of payment** Single trip- find, book and pay
1	**Integration of information** Multimodal travelplanner, price info
0	**No integration** Single, separate services

Action plan

In this plan, overall goals, 2018-2019 targets and specific actions are proposed to help overcome the four categories of obstacles mentioned before. As they are closely related, action points for MaaS and *Multimodal Mobility Management for cities* are shown below *(the last one in italics).*

The following types of actions are repeatedly used below:

1. <u>Position papers</u> are the basis for later co-operation and communication (B2B, B2C, B2P)
2. <u>(High-level) Meetings</u> are targeted encounters, in which only direct stakeholders are involved with the goal to come to an agreement
3. <u>(Open) Workshops</u> are open to all stakeholders and intend to lead to consensus
4. <u>Repositories</u> are websites with best-practice documents or examples

Overall goal

- MaaS - Mobility as a Service: help create a thriving market in which various MaaS players provide a rich offer of compelling services
- *MMM - Multimodal Mobility Management: help evolve regions and cities towards pro-active and multimodal mobility management.*

2018-2019 targets for enablers

1. **Organise MaaS Experiences in at least 3 cities (marketplaces), with an overall budget of at least 4 M€ (for all policy levels together)**
2. **Obtain insights on balanced commissions on sales of tickets**
3. **Reach a common position on legislation for a mobility budget, and on access to data and ticketing**
4. **Facilitate technical access to data, ticketing and payment (such as for public transport and parking, or to car data).**

2018 actions

- Awareness:

    o **(done) Write a common position paper on MaaS**
    Including benefits and best practice recommendations.

    o **(done) Organise an open workshop on the best practice of "marketplaces for mobility"**
    Spread the experience of cities that provide budgets to find their way to mobility solutions (such as MaaS Experiences) in collaboration with private service providers.

    o ***Write a common position paper on multimodal mobility management by cities***
    Including benefits and best practice recommendations.

    o ***Create a common repository for tenders***
    Bring together relevant examples.

    o ***Organise an open workshop on ITS benefits for cyclists and pedestrians***
    Including best practice recommendations.

    o ***Organise an open workshop on how to map and mitigate cut-through-traffic ('rat running')***
    Leading to best practice recommendations.

    o ***Provide ITS training***
    Aimed at public officials (similar to training on port management) (eg on traffic information, traffic management, road charging, open data …).

    o ***Organise an open workshop on carpooling***
    Including the recommended use of emergency lanes and criteria for successful locations.

- Business enablers:

- o **Organise a high-level meeting on enabling the business model for MaaS**
  With representation of key mobility and MaaS providers.

- o *Organise an open workshop on the use of FCD in traffic management*
  Involving regional and urban road operators, public transport operators, as well as industry.

- o **(done)** *Organise an open workshop on the benefits of "Traffic management as a service"*
  Leading to best recommendations.

- o *(on-going) Promote the use of common (open data) components in tenders*
  Promote as best practice for cities (as is currently done for parking).

- o **(done) Organise an open workshop on the vision behind and research agenda for MaaS**
  What are the long-term vision, impact and implications behind MaaS, also in 'dependent' domains such as urban planning, and what relevant unknowns and research needs to be derived from this? (possibly combined with the related ACE workshop).

- Legal and fiscal enablers:

  - o **(done) Organise an open workshop on obstacles to the mobility budget**
    (if no breakthrough before summer) Leading to an action plan on how to move forward.

- Technical enablers:

  - o **(done) Organise a high-level meeting on a common approach to open data by public transport and traffic operators**
    Leading to best practice recommendations.

  - o **Organise a high-level meeting on a "roadmap for access to data and ticketing"**
    With representation of all four public transport operators and the key MaaS providers.

  - o **Organise an open workshop on regional/national access points**
    Identify best practices and recommendations to go forward.

Implications for policy makers

From the above, the following policy recommendations can be derived:

- All levels
  - o Appoint mobility management "champion", create mobility management entities in key administrations (budget, competences, harmonised tender documents)
  - o "Transition" budgets should be foreseen to organise large-scale MaaS experiences (possibly as a part of a marketplace for mobility)
  - o In mobility plans, it should be explicitly foreseen that it will be checked whether
    - an open data component should be added to new (or updates of) tenders or concessions (including the operating agreements of public transport operators)
    - access to ticketing and payment should be added to new (or updates of) tenders or concessions (including the operating agreements of mobility providers)

- Alternatively this should be foreseen by law
  - Legislation and harmonised fiscal and parafiscal measures for a real mobility budget should be introduced
  - Urban, regional and/or national access points for data should be set-up
  - Harmonised legislation licensing organised transport should be agreed
  - Harmonised legislation licensing shared mobility should be agreed

References

[1] ITS.be Final strategy report, July 2017, Deloitte

[2] The world's most valuable resource - Data and the new rules of competition, Economist, 6 May 2017

[3] How transportation technology and social trends are creating a new business ecosystem, Deloitte Future of Mobility Series, 2015

[4] The rise of mobility as a service, Deloitte Future of Mobility Series, 2017

[5] Governing the future of mobility - Opportunities for the US government to shape the new mobility ecosystem, Deloitte Future of Mobility Series, 2017

[6] La mobilité au cœur de la disruption, Espaces-Mobilité, 22 June 2017 (@ Innoviris)

Participants

Anyways	Wim Michiels
AMS (Antwerp Management School)	Nicole Van Doninck
	Nils Wuytens
Arcadis Belgium	Marian Lauwers
Athlon	Luc Blockx
BAAV	Jan Deman
Be-Mobile	Stéphane Jacobs
BMC	Pierre-Paul Bertiaux
	Filip Francois
Bosch	Sandra Vancolen
De Lijn	Wim Nicque
	Tom Geerts
Departement MOW	Matthias Buelens
	Luc De Ryck
DriveNow	Christian Lambert
	Julien Vandichel
Espaces-mobilité	Guillaume Servonnat
	Xavier Tackoen
Europcar	Dominique Vanhomwegen
FOD Mobiliteit en Vervoer	Stéphanie Vandendries
Fluidtime	Gregor Petri
Hertz	Frank Oudshoorn Spaargaren
ITS.be	Peter Van der Perre
	Kurt Marquet
Keolis	Vincent Traen
KUL	Chris Tampère
Lab-Box	Jens Verhiest
MaaS Global	Ralph De Jong
Modalizy	Allain Allyn
	Iris Rassios
	Etienne Rigo
NMBS	Luc Craps
Olympus Mobility	Koen Van de Putte
Optimile	Wim Iliano
	Pieter Glorieux
Orange Belgium	Tom Sorgeloos
Proximus	Eric Ibens
PTV Group	Koenraad Verduyn
Siemens	Jean-Pierre Deknop
Stad Antwerpen	Marijke De Roeck
	Stijn Vernaillen
Stad Hasselt	Tim Hemeleers
STIB-MIVB	Diégo Eggermont
	Michel Genot
Taxistop/Cambio	Emily Muhr
TML	Sven Maerivoet

Touring	Philippe Leeman
Tractebel	Sven Vlassenroot
	Filipe Fraga
Traxio	Philippe Decrock
	Carl Veys
Uber Belgium	Joost Verdiesen
UGent	Frank Witlox
VBO	Nicolas Cooman
VUB	Tias Guns
Worldline	Bert Vanbrabant
	Hervé Kerouédan
	Bernard van der Lande