WHAT IS THE DEFINITION OF MAAS?

Carol Schweiger
President, Schweiger Consulting
Mobility Management Committee Meeting
Thursday, April 18, 2019
PRESENTATION OUTLINE

- Terms that are not MaaS
- Compilation of Definitions as part of J3163 Effort
- MaaS Alliance
- Can we use Existing Work, such as the MaaS Topology?
- What are the Key Components of the MaaS Definition?
INTERNET OF MOBILITY – NOT MAAS

Mode-agnostic, global approach to MaaS, based on an open protocol framework for discovery, booking, and payment for mobility services.

Theoretical open protocol structure to enable MaaS integration for all users and mobility service providers anywhere in the world.

• IoM protocols would create massive new opportunities for transportation service providers, current and potential customers, and mobility aggregators.
NEW MOBILITY SERVICES – NOT MAAS

- Ridesourcing
- Carsharing
- Bikesharing
- Microtransit
- Other Shared Mobility Services (see SAE J3163)
Service offerings and incentives to get commuters out of their own single-occupancy vehicles

Well-documented strategies through pilots, programs and services that have been operating for decades
MOBILITY MANAGEMENT – NOT MAAS

- Provide congestion mitigation
- Viable alternatives for non-drivers
- Is Mobility Management 2.0 actually MaaS?
MOBILITY ON DEMAND (MOD) – NOT MAAS

Based on principle that transportation is a commodity

Modes have economic values:

- Cost
- Journey time
- Wait time
- Number of connections
- Convenience

Enables consumers to access mobility, goods, and services on demand by dispatching or using following through an integrated and connected multi-modal network:

- Shared mobility
- Delivery services
- Public transportation solutions
MOD AND MAAS

Mobility on Demand
- Passenger and goods movement
- Transportation systems management (i.e., managing supply and demand through feedback control)

Mobility as a Service
- Mobility aggregation
- Subscription services

Multimodal Integration (Physical, Fare, Digital)

https://www.move-forward.com/mobility-on-demand-mod-and-mobility-as-a-service-maas-how-are-they-similar-and-different/
MOD AND MAAS: KEY DIFFERENCES

MOD includes *passenger and goods movement*

MOD incorporates principles of transportation systems management (managing supply and demand)

MaaS emphasizes mobility aggregation and subscription services that bundle multiple services into a pricing package

https://www.move-forward.com/mobility-on-demand-mod-and-mobility-as-a-service-maas-how-are-they-similar-and-different/
### PART OF SAE J3163 EFFORT – 13 DEFINITIONS SO FAR

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility as a Service (MaaS)</td>
<td>MaaS differs considerably from existing definitions of MOD in that MaaS emphasizes mobility aggregation, smartphone and app-based subscription access, and multimodal integration (infrastructure, information, and fare integration).</td>
<td><a href="https://rosap.ntl.bts.gov/view/dot/34258">https://rosap.ntl.bts.gov/view/dot/34258</a></td>
</tr>
<tr>
<td>Mobility as a Service (MaaS)</td>
<td>MaaS emphasizes mobility aggregation, smartphone and app-based subscription access, and multimodal integration (Infrastructure, Information, and fare integration). MaaS tends to emphasize the integration and convergence of passenger mobility services, mobile devices, realtime information, and payment mechanisms.</td>
<td><a href="https://rosap.ntl.bts.gov/view/dot/34258">https://rosap.ntl.bts.gov/view/dot/34258</a></td>
</tr>
<tr>
<td>Mobility as a Service (MaaS)</td>
<td>MaaS primarily focuses on passenger mobility aggregation and subscription services. Brokering travel with suppliers, repackaging, and reselling it as a bundled package is a distinguishing characteristic of MaaS.</td>
<td>Next Generation Mobility Systems (forthcoming)</td>
</tr>
</tbody>
</table>
MAAS ALLIANCE DEFINITION

Integration of various forms of transport services into a single mobility service accessible on demand

- Facilitates diverse menu of transport options
- Offers added value through single application
- Offers single payment channel
- Provides best value proposition
  - Help meet mobility needs
  - Solve inconvenient parts of individual journeys and entire system of mobility services
Successful MaaS brings:

• New business models
• New ways to organize and operate transport options, with **advantages for transport operators** including:
  • Access to improved user and demand information
  • Access new opportunities to serve unmet demand
The aim of MaaS is to provide an alternative to the use of the private car that may be:

- As convenient
- More sustainable
- Help to reduce congestion and constraints in transport capacity
- Even cheaper

Schweiger Consulting
MAAS TOPOLOGY

Level 0
No Integration:
Single, separate services

Level 1
Integration of Information:
Multimodal trip planner, price info

Level 2
Integration of booking & payment:
Single trip – find, book and pay

Level 3
Integration of the service offer:
Bundling/subscription, contracts, etc.

Level 4
Integration of policy:
Governance & PP-cooperation

Source: Jana Sochor, Hans Arby and MariAnne Karlsson, “The topology of Mobility as a Service: A tool for understanding effects on business and society, user behavior, and technical requirements,” Paper No. EU-SP1013, 2017 ITS World Congress, Montreal
<table>
<thead>
<tr>
<th>Reference (Term)</th>
<th>Definition/description</th>
<th>Key words/concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A.D. Little, 2018), p. 59 (MaaS)</td>
<td>“The concept of ‘Mobility-as-a-Service’ (MaaS) aims to provide consumers with integrated, flexible, efficient and user-oriented mobility services. It shifts away from the personal ownership of individual motorized transportation modes, and non-integrated means of transportation towards the use of integrated multimodal mobility solutions consumed as services. This shift is enabled by combining transportation services from public- and private-transportation providers through an ‘integrated mobility platform’ that creates and manages the journey and integrates planning and payment (based on mobility packages tailored to the needs of each customer segment) on a one-stop-shop principle.”</td>
<td>Service; Multimodality; User-centric; Integration; Platform; Planning; Payment; Packages; One-stop-shop; Public and private; Personalisation; Flexible; Efficient; Non-ownership</td>
</tr>
<tr>
<td>(Atkins, 2015), p. 19 (MaaS)</td>
<td>“MaaS can be defined as: The provision of transport as a flexible, personalised on-demand service that integrates all types of mobility opportunities and presents them to the user in a completely integrated manner to enable them to get from A to B as easily as possible.”</td>
<td>Service; Multimodality; Integration; On-demand; Personalisation; Flexible; Easy</td>
</tr>
<tr>
<td>(Ghanbari et al., 2015) (MaaS)</td>
<td>“MaaS, a multi-actor environment that provides seamless door-to-door services for end users by combining several modes of transportation.”</td>
<td>Service; Multimodality; Ecosystem; Seamless; Door-to-door</td>
</tr>
<tr>
<td>(Heikkila, 2014), p. 8 (MaaS)</td>
<td>MaaS is “a system, in which a comprehensive range of mobility services are provided by customers to mobility operators.”</td>
<td>Customers; Operators; Comprehensive Customer’s needs; One interface; Service provider; Bundling</td>
</tr>
<tr>
<td>(Hietanen, 2014), pp. 1–2 (MaaS)</td>
<td>“MaaS is a mobility distribution model in which a customer’s major transportation needs are met over one interface and are offered by a service provider. Typically, services are bundled into a package.”</td>
<td>Customers; Operators; Comprehensive Customer’s needs; One interface; Service provider; Bundling</td>
</tr>
<tr>
<td>(ITS Australia, 2018), p. 20</td>
<td>“MaaS systems offer customers personalised access to multiple transport modes and services, owned and</td>
<td>Multimodality;</td>
</tr>
</tbody>
</table>
CONCLUSIONS FROM EXPLORATION OF DEFINITIONS AND DESCRIPTIONS

No established definition of MaaS

Likely premature to provide ‘one definition’

Some common and different central elements related to e.g.:

- Technology
- Organization
- Function
- Value offering
- Society
CONCLUSIONS FROM EXPLORATION OF DEFINITIONS AND DESCRIPTIONS (CONT’D)

Offering a service with customer/user/traveler/consumer transport needs as the main focus

Offering (multimodal) mobility rather than transport

Offering integration of transport services, information, payment and ticketing
WHAT ARE THE KEY COMPONENTS OF THE MAAS DEFINITION?

- Technology
- Organization
- Function
- Value offering
- Society
THANK YOU!

Carol Schweiger
President
Schweiger Consulting LLC
781-424-2208
carol@tech4transit.com