What is Mobility as a Service?
Presentation Outline

What is MaaS?

Four Pillars of MaaS

MaaS compared to Mobility Management

Progress of MaaS deployment in the US

Accessibility Challenges and Opportunities
Passenger Transportation Ecosystem
Mobility as a Service (MaaS)

- **Scalable door-to-door mobility** services without owning a car
- **Better level of service** than private car
- **Seamless and efficient flow** of information, goods and people
- **Open interfaces** to transport services
- **Example**: Personal mobility package for $200/month:
  - Transportation from A to B according to service level agreement (SLA)
  - Including all transportation services
  - Including transport related services (health care, city logistics, home deliveries etc.)
  - Roaming in other cities and countries
Multimodal and sustainable mobility services addressing customers’ transport needs by integrating planning and payment on a one-stop-shop principle.
# Whim’s Mobility Packages

<table>
<thead>
<tr>
<th></th>
<th>Whim To Go</th>
<th>Whim Urban</th>
<th>Whim Unlimited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly payment</td>
<td>Free</td>
<td>40€</td>
<td>400€</td>
</tr>
<tr>
<td>Local public transport</td>
<td>Pay per ride</td>
<td>Unlimited Single Tickets</td>
<td>Unlimited Single Tickets</td>
</tr>
<tr>
<td>Taxi (5km radius)</td>
<td>Pay per ride</td>
<td>10€ per ride</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Car</td>
<td>Pay per ride</td>
<td>49€ per day</td>
<td>Unlimited</td>
</tr>
<tr>
<td>City Bike</td>
<td>Coming spring 2018</td>
<td>Coming spring 2018</td>
<td>Coming spring 2018</td>
</tr>
<tr>
<td>Cancel anytime</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Add-ons incl regional HSL**

- **Car subscription**: ✓
- **HSL Regional**: ✓
- **HSL Regional 3**: ✓

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*2018 Innovation & Mobility Exchange*
## MaaS in Different Geographic Areas

<table>
<thead>
<tr>
<th>Rural Areas</th>
<th>Suburban Areas</th>
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<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td><strong>Objectives:</strong></td>
</tr>
<tr>
<td>• Increase efficiency and utilization rate</td>
<td>• No need for a 2nd car</td>
</tr>
<tr>
<td>• Maintain sufficient service level</td>
<td>• First-/Last-mile accessibility</td>
</tr>
<tr>
<td>• Improve accessibility</td>
<td>Based On:</td>
</tr>
<tr>
<td></td>
<td>• Park &amp; ride services; on-demand transport; and other services connecting suburban to city transport services</td>
</tr>
<tr>
<td><strong>Based On:</strong></td>
<td></td>
</tr>
<tr>
<td>• Demand-responsive transport, taxis, buses and connections to long-haul transport and carpooling</td>
<td></td>
</tr>
<tr>
<td>• Parcel deliveries, library services, and food and medicine distribution</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Cities</th>
<th>National and International</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives:</strong></td>
<td><strong>Objective:</strong></td>
</tr>
<tr>
<td>• Reduce the use of private cars (congestion, parking)</td>
<td>• Offer easy all-in-one packages</td>
</tr>
<tr>
<td>• Reduce emissions</td>
<td>Based On:</td>
</tr>
<tr>
<td></td>
<td>• Long-haul transport including air traffic</td>
</tr>
<tr>
<td><strong>Based On:</strong></td>
<td>• Additional services: accommodation, event tickets, activities, etc.</td>
</tr>
<tr>
<td>• Existing public transport</td>
<td></td>
</tr>
<tr>
<td>• Extended with rental and shared cars and bikes</td>
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</tbody>
</table>
Four Pillars of MaaS

- Data
- Partnerships
- Infrastructure
- Transportation Options

MaaS
MaaS Comparison to Mobility Management: Similarities

• Improves **livability** in community/region
• Emphasizes **travel needs** of individuals
• Emphasizes **entire trip**
• Offers **full range of travel options** to SOV
• Cultivates **partnerships** and multi-agency activities
• Offers **single point of access** to multiple modes
• Applies **advanced technologies**
• Improves **information available** about services
MaaS Comparison to Mobility Management: Differences

• MaaS:
  – Consumer purchases “package” of transportation services
  – Operated by 1 or more entities (public or private) responsible for negotiating relationships with transportation service providers

• Objectives:
  – Mobility management’s objectives more focused on traveler with special needs
  – MaaS objectives focused on providing individual mobility with better level of service than that of SOV
Progress of MaaS Deployment in the U.S.

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
Accessibility Challenges and Opportunities

MaaS must be usable by everyone, including elderly, disabled or low-income individuals

• Planning for aging (e.g., aging in place)
• Ensuring people can get to medical appointments or grocery store, and retain their independence
• Providing translators who can work with older adults to help them access new transportation choices
• Creating new access points
• Ensuring you can call from your desktop and not just from your smartphone
Accessibility Challenges and Opportunities (continued)

• Agencies transforming to tackle changing mobility needs:
  – Embrace **connected mobility** while bridging digital divide
  – Must continue to **guarantee access** for most vulnerable
    • Trip-planning kiosks at stations
    • Basic fare cards or tickets with QR codes
    • Consolidated call centers for users without phones
• Uber taking requests by SMS message and by phone
MaaS for Vulnerable Individuals

• Upstream project in UK
• Travel needs of individuals with dementia being identified
• Approach to defining user needs:
  – Use a Service Design approach - co-design
  – Listen to peoples’ stories
  – Understand real user challenges, requirements and expectations
  – Create a strong value proposition
    • Create gains
    • Relieve pains
  – Design the service touchpoints
  – Design the full user experience
Tompkins County, NY

Vision by 2020: “Integration of existing systems: coordination among existing resources that creates a seamless and comprehensive system offering access to people wherever they are in the county and whatever their transportation needs are. It follows that this will lead to more efficient and effective use of existing resources.”

• Short term: Explore feasibility of MaaS
• Long term: Introduce MaaS concept and application to Tompkins County
Thank You!

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