Will MaaS Solve the Congestion Problem on Freeway No.5

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Outline

1. Current Situation and Issues of Transportation in Taiwan
2. MaaS Service Concepts
3. MaaS in Taiwan
4. MaaS APP Services
5. Vision & Prospection
1. Current Situation and Issues of Transportation in Taiwan

Taipei
- Population density: 9,897 Person/sq.km.
- Public transport market share: 42.8%

Kaohsiung
- Population density: 942 Person/sq.km.
- Public transport market share: 9.3%

Yilan
- Population density: 213 Person/sq.km.
- Public transport market share: 10.3%

Public Transport is the key:

- Lack of integration and seamless connection between public transport services.
- People own vehicles, but 95% of the time of their car are in the parking lot.

33.6 (unit/hundred person)
91.8 (unit/hundred person)
1. **MaaS**: Utilize ICT & AI technologies to resolve the long term arguments between a wise choice for personal mobility and a better choice for living environment.

![Diagram of MaaS Service Concepts]

- **User**: Door-to-Door One-stop transport service
- **Transport Mobility Services Provider**: Transport Journey Planner
  - Bundle package, Monthly ticket
- **Public Carrier**: Booking, bill
  - User preference analyze and learning
- **Infrastructure**
03 MaaS in Taiwan

The government acts as a facilitator

Mature ICT Technology

Mobile APP

E-ticket
Online Payment

One-stop service

Taipei-Yilan MaaS Project

Train
MRT
Light rail
Bus

Ferry
Taxi
Ride Sharing
E-Bike
Bicycle

Kaohsiung MaaS Project

Policy + Integrated Services + Customer Oriented = MaaS
03 Implementation Area

1. The northern MaaS program implementation area includes Taipei City, New Taipei City and Yilan County.

2. The number of trips is 160,000 on the weekday and **255,000 on the weekend and holidays**.

Private vehicle use accounts for **61.2%**.

3. High demand and high percentage of private vehicle usage causes serious recurrent congestion needed to be solved.
1. Severe congestion on Freeway No.5 during weekend and holidays.
2. Low willingness to use Provincial Highway No.2 and No.9 due to long driving time.
3.2 Problem and Solution

◆ Problems

- High tourist attraction during weekend and holidays
- Severe congestion on Freeway No.5
- Roadway expansion is not likely a feasible option
- Local public transit need to be improved

◆ Solution - Provide incentivizes to trigger behavior change

- Incentives for Cars
  - Travel time prediction
  - Provide optimized departure time and routes
  - Give incentives to the followers

- Incentives for MaaS Users
  - Create a better local connected transportation service
  - Provide an attractive customer oriented service environment
  - Give incentives to the behavior changers

Taipei-Yilan MaaS Service
3.3 Potential Benefits

Expected External Benefits

- Reduction in gas use
- Reduction in travel time
- Reduction in the number of accidents
- Encouraging new ways of doing business

KPI

- Changing travel behavior
- No. of horizontal alliances
- Integrated modes of transportation
- Economic benefit
- Financial benefit
- Service level indicator
- Satisfaction Indicator
03 MaaS solution in Taiwan

Public-Private Partnership

Central Government

Local Government
Public/Private Carrier
Electronic Stored Value Cards Provider

MaaS Provider

Short Term : Satisfy both “Consumer” and “Provider”

1. Data Information (data from MOTC Transportation Info. Center, Freeway open data, CHT big data)

2. Cross-field cooperation & alliance

Long Term : Sustainable Operation Business Model
04 MaaS APP Functions

“Manage and master traffic related services via a digital interface (e.g. App), which meets the needs of each consumer on mobility”

<table>
<thead>
<tr>
<th>Journey Planner</th>
<th>EC Platform</th>
<th>Reservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Where To Go</td>
<td>- Transportation</td>
<td>- Ride Sharing Reservation</td>
</tr>
<tr>
<td>- Trip Planner (Origin-Destination)</td>
<td>- Accommodation</td>
<td>- Chartered Vehicle Reservation</td>
</tr>
<tr>
<td>- POI info</td>
<td>- Ticket &amp; Coupon</td>
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<tr>
<td></td>
<td>- Promotion</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Member</th>
<th>Personal Secretary</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Profile / Billing settings</td>
<td>- My Journey (Including reminder)</td>
<td>- Ad Banner</td>
</tr>
<tr>
<td>- My Order</td>
<td>- My Favorite Spots</td>
<td>- Function list/ Search bar</td>
</tr>
<tr>
<td>- Quest / Bonus</td>
<td>- Share to Community</td>
<td>- Customer Support</td>
</tr>
<tr>
<td>- My Coupon</td>
<td></td>
<td>- Wish list</td>
</tr>
</tbody>
</table>
04 MaaS APP – Journey Planner

Seamless Mobility Service

First Mile
- MRT/Bus
- Taxi
- Chartered Vehicle
- Ride Sharing

Taipei-Yilan Corridor
- Highway shuttle bus
- Train
- Chartered Vehicle
- Ride Sharing
- Alternative time or route choice

Last Mile
- Local Bus
- Taiwan Trip Bus
- Chartered Vehicle
- Taxi
- Shared
- Car Rental

Value-added Services

Attractions
- Restaurant & Cuisine
- Scenic Spots
- Gift & Souvenir
- Accommodation
- Parking Reservation
04 MaaS APP Features

1. Powerful engine for journey planning
2. User preference learning and analysis
3. Demand-responsive Personal Secretary
4. Provide incentives to members who making better choices
5. Provide a powerful user oriented EC platform
04 MaaS APP Main Keys

- **Journey Planner**
  - Transfer planner
  - Event Notification
  - Personal Secretary
  - Item classification
  - Shopping Cart
  - Checkout

- **User Behaviour Learning Mechanism**
  - User preference analysis and learning
  - Personalized travel advice

- **EC Platform**
  - Offer the most optimal route
  - Dynamic Information Push Notification
  - Demand-responsive Personal Secretary
  - Provide bundle services, including dining, accommodation, travel, shopping and transportation.
  - Aggregation of data from a variety of sources and logistics
  - Online checkout and billing
05 Vision & Prospection

Vision: MaaS APP will be a friend you can trust. She knows you well, always stands behind you answer your request and provide you a good shopping experience.

1. Integration of multiple public transportation
2. Green transportation options
3. Personalized transportation services

1. Before: Planning and ordering services
2. During: Reminding information related with dining, accommodation, travel, shopping and transportation
3. After: Experience sharing
Changing the ways of thinking and choosing makes our life better

Thank you for your attention