Mobility-as-a Service

Moderator: Susan Zielinski, independent consultant and mobility innovator
At the ICLEI Local Governments for Sustainability EcoMobility World Festival 2017
Kaohsiung, Taiwan
October 1, 2017
MY (LONG TERM) RELATIONSHIP WITH MAAS

- 30 years (it just wasn’t called MaaS yet)

- City of Toronto in the 90’s: Linking Sustainable Multi-modal mobility + emerging New Mobility industry (”Moving the Economy”). First conference, first global study on the cluster

- Boosted by Michael Glotz-Richter (he’ll be here - seek him out)

- U of M SMART: Industry support to advance MaaS. Developed approach to accelerating implementation of MaaS led in over 25 cities (attend Thursday)

- Most recently a study on the recent MaaS phenomenon (supported by Ford Motor; a consortium of national innovation & research leads from the Nordic countries & beyond + over 60 global expert interviews) 
SOON TO BE RELEASED
A FEW HIGHLIGHTS FROM THE STUDY

(soon to be released)

“Accelerating the Demonstration-Learning-Deployment Cycle of Mobility as a Service: Success Factors”
MaaS and ”MaaS-Like”
(or “MaaS-ish”)

SEARCH TERMS:

Mobility-as-a-Service * Transportation-as-a-Service * New Mobility-Hub-Networks * Combined-Mobility * Connected-Transport * Egg-Laying-Wool-Milk-Sow* MobilPunkt * EcoMobility * Green-Transport* Integrated-Mobility* Integrated * Urban-Mobility * Mobility-as-a-Service * Mobility-On-Demand * New-Mobility * New-Mobility-Services * On-Demand-Transport * Smart-City * Connected-and-Automated * Smart-Transportation * Smart-Mobility * Sustainable * Transportation * Etc *
Mobility-As-A-SERVICE (MaaS)

Pulling it all together: Public Private Innovation advancing sustainable future mobility systems and the industries and enterprises to supply them

MaaS = Mobility-as-a-Service
(Service & Product BUNDLING for the end user)

Seamless connected multi-mode multi-service IT-enabled door-to-door on-demand sustainable equitable mobility bundle

... car share, bike share, transit, shuttle, taxi, informal, trains, boats, planes, connectivity, automation, parking, wayfinding, apps, traffic management, safety, security, measuring, monitoring, moving goods, tele-work, tele-other, sensing, marketing, tourism, learning, gaming, ...

BUSINESS MODELS

INNOVATION RESEARCH
TECH TRANSFER
CAPACITY BUILDING

POLICY & LEGISLATION

ENABLING INFORMATION TECHNOLOGY

PHYSICAL DESIGN, PLANNING INFRASTRUCTURE

SYSTEMS & PRODUCT OPTIMIZATION, ENGINEERING & DESIGN

MARKETING (DECISION MODELS, ATTITUDES, BEHAVIOR)
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INNOVATION RESEARCH TECH TRANSFER CAPACITY BUILDING

POLICY & LEGISLATION
IN A NUTSHELL, MaaS’s IMPACT:

- Radically moves us to META - from many single solutions to whole SYSTEM door to door (i.e. MaaS is not an App)

- Builds on & connects what’s there (+ even what is still to be invented) AS A SYSTEM or platform

- Radically flips the focus to serving the PERSON or the CUSTOMER or END USER door to door (not the individual mode or technology)

- Uses a range of integrated ENABLERS to advance MaaS
  - New information technologies + platforms
  - New business models
  - New policy frameworks & platforms
  - New integrative approaches to physical design & infrastructure
  - New decision models and end user relationships
  - And more
DRIVERS

WHY IS THIS HAPPENING NOW?
BECAUSE IT NEEDS TO
BECAUSE IT CAN
The quest to get a driver's license at 16 -- long an American rite of passage -- is on the wane among the digital generation, which no longer sees the family car as the end-all of social life.

The holdouts include Kat Velkoff, who turned 17 in Chantilly without a license. Focused on tough classes, the debate team, dance and color guard, she turned 18 without taking the wheel. Then 19.

"It just wasn't a priority," said Velkoff, who got her license last year at 20. "It was just never the next thing that needed to get done in my life."

Federal data released Friday underscore a striking national shift: 30.7 percent of 16-year-olds got their licenses in 2008, compared with 44.7 percent in 1988. The difference is even sharper in Virginia and Maryland, state figures show. Numbers from the District, which go back to 2003, show a decline in the past two years.
BECAUSE IT’S
AN INVESTMENT (not a cost)

→ REGIONAL COMPETITIVENESS /
PRODUCTIVITY

→ SAVES MONEY (OPTIMIZATION)

→ CREATES JOBS

→ A WHOLE NEW MOBILITY INDUSTRY
Multi-trillion $ global market / industry cluster

MULTI-TRILLION $ INDUSTRY

Industry Cluster:
Automotive; Transit;
Energy; Real
Estate; IT;
Logistics; Planning
& Architecture;
Telematics; Retail;
Tourism; etc…

ENTERPRISE & TECH TRANSFER

SMART MobiPrize

ENTREPRENEURSHIP & ENTERPRISE
Meeting customized local needs. Replicating and scaling globally. Catalyzing investment, building capacity.

INDUSTRY MOBILIZATION
Ford Motor
Ashok Leyland
Cisco Systems
Michelin
IBM
Intel
Infosys
Mapunity
Velankani
eolia
etc

BIG BUSINESS is transforming supply to meet emerging global market needs & opportunities.

NEW MOBILITY INDUSTRY CLUSTER DEVELOPMENT
Scotland
Finland
Brazil
Sweden
Spain
Austria
etc
CURRENT META DRIVERS

✓ Change is changing faster
✓ Technology is outpacing policy
✓ We don’t know what we don’t know
✓ Wider field of actors / movers
✓ It’s an infinite game
✓ It’s an eco-system
ON THE GROUND SHINING EXAMPLES

From around the world

Over 50 in our study

(see me after)
CHALLENGES & SUCCESS FACTORS

Flip sides of the same coin
CHALLENGES & SUCCESS FACTORS

Public-private balance (who owns / leads)

(NUMBER ONE CITED)
CHALLENGES & SUCCESS FACTORS
Ecosystems:

Much wider set of public, private, NGO players need to be involved and working together

(THIS ALSO CAME UP A LOT)
CHALLENGES & SUCCESS FACTORS
Complexity:

✓ MaaS Can be Hard to understand or overwhelming at first

✓ Lack of common language (both cultural and technical) for discussing and implementing

✓ Harder to adapt & scale more complex systems
CHALLENGES & SUCCESS FACTORS

Customer:

✓ End user variance

✓ Culture & demographics

✓ Changes by purpose & over time
CHALLENGES & SUCCESS FACTORS

Business models:

✓ (across complex systems)

✓ jury out on winners & losers in terms of whole system business models (blurry line between MaaS & apps)

✓ vary according to existing conditions, legacy business and government

✓ procurement (what and from whom and by whom)

✓ replication and scaling is hard given the range of actors and variance in local conditions
CHALLENGES & SUCCESS FACTORS

Technology:

✓ platform vs. apps vs non-technology components standards / system architectures

✓ digital divide (ensuring it serves the underserved)

✓ cyber security

✓ ends vs means

✓ connected & automated infrastructures (V2V, V2I)
CHALLENGES & SUCCESS FACTORS

Data:

✓ ownership (user; business; government, all or none or some of the above)

✓ monetization

✓ availability

✓ accuracy
CHALLENGES & SUCCESS FACTORS

Physical space & DESIGN:

- essential but now a neglected element
- needs integrative work according to needs & legacy
- varying mental maps of physical planning /infrastructure leads (from knowing little to smart city champions)
- environmental & resilience elements can be overlooked
- rural vs urban comes up
CHALLENGES & SUCCESS FACTORS

Policy, legislation & insurance

- more diverse policy actors need to be involved
  - they need to work together
- the how not just the what of policy needs to change (frameworks not just rules)
- need to develop & enforce standards / architectures
Evidence Base:

✓ lack of research / evidence base in an increasingly competitive environment, slowing / weakening the demonstration-learning-deployment cycle
CHALLENGES & SUCCESS FACTORS

Marketing

✓ Complexity

✓ Overshadowed by self driving cars, drones and other sexy tech / simpler innovations
CHALLENGES & SUCCESS FACTORS
Confusing means & ends

✓ enablers & goals. i.e. seeing the technology platform, business result, or policy suite or even mobility itself as the goal (as opposed to meeting user / customer needs / accessibility / sustainability being the goal)
SUCCESS FACTORS  (outweigh the challenges)

Robust end-user analysis + design (across the whole system)

Enabling open data / API’s / codes to support interoperability

Supportive policy / legislation

Contracts & agreements to support public private innovation

Robust public private eco-system

Smaller countries sometimes have advantage (incl. eco-system)

Culture: non car-dominated cultures

Compelling & exciting narratives
NEXT STEPS:

1. Corner the Panelists

2. You are invited to attend the MaaS Implementation workshop Thursday afternoon
WhereIsMyTransport, South Africa
Avego Ride Sharing Technology, Ireland
Zagster provides bicycle sharing systems for the world’s leading businesses and institutions. We design, build, and operate solutions to fit your organization’s unique needs and provide a great rider experience.
YOUR RIDE, ON DEMAND
TRANSPORTATION IN MINUTES WITH THE UBER APP

SIGN UP
Chair Lift in Rio

Dr. AM Speradio, Faculdade Jaguariuna
MellowCabs, South Africa
Priyadarshini Taxi Service, India
Bikes On Buses in Bage
Rio Grande Do Sul

Dr. AM Speradio, Faculdade Jaguariuna
Eco-Cabs Dial-a-Rickshaw, India
Roadify, USA

Roadify Text Service

B67 Bus to Downtown
Stop: 7ave/12st
Scheduled: 7:50, 8:02

Roadify ETA: 7:56

Please give when it arrives and help others.

mobiprize.com
Hangzhou Omnipay, China
A transit revolution fighting for a connected Detroit. "Biofuel-powered transit with a healthy shot of uncommonly good customer service."
Caronettas, Brazil

**How does it work?**

- **Passenger**
  - Buy Caronetas from the website and choose the best option that suits its urban trip.
  - In the car, provide to the driver a ticket (or conf N#) to confirm the payment.
  - Insert the ticket on the smartphone or website.

- **Driver**
  - Spend the Caronetas to schedule a ride and get the confirmation N#.
  - Redeem Caronetas accumulated by products and services.

- The commuters exchanged GHG production by products and services.

**mobiprize.com**
MISTER Guideways, New Zealand, Poland
Electric Tricycles in Blumenau Shopping Centers

Dr. AM Speradio, Faculdade Jaguariuna
City Ryde Zagster, USA

Bicycles are the newest amenity!

Make your property more attractive.
Provide on-demand bikes.
We do everything. You do nothing.
Our system arrives two weeks from order.

Login  Register

E-mail (we won’t spam you) *

Trying to login or register for a Zagster bike program that already exists? *
- Yes
- No

Next

mobiiprize.com
Ride Amigos Commute Optimization, USA

[Map and contact information for matches]

mobiprize.com
Rising Pheasant Farms Urban Farming & Sustainable Delivery, USA
Getaround Car Share, USA

Rent a car from someone nearby.
Convenient hourly rentals. Full insurance included.

yeti
MINI Cooper
San Francisco, CA
$8.50 / hour

ModelS
Tesla Model S
San Francisco, CA
$25.00 / hour

pluto
MINI Cooper
San Francisco, CA
$8.50 / hour

midnightmarina
Porsche Cayenn
San Francisco, CA
$9.50 / hour

mobiaprize.com
Federal District 235 more kilometers of bike lanes

Dr. AM Speradio, Faculdade Jaguariuna
Tuk Tuk Factory Electric Shuttles, Netherlands
GoMetro, South Africa

On your phone. On your way
Pocket-sized personal transporters could soon be seen on the streets of Tokyo

by SMART on August 7, 2015 in Innovations (InspireMobility), News from the Field, Videos

"WalkCar" car in a bag / COCOA MOTORS.Inc. Japan
Jayride Spare Capacity, Australia

Where are you?

mobiprize.com
Provides accessible, high-quality information and analysis to drive informed decision-making in Detroit.
Ford’s definition of Mobility: Accessibility for people, goods and services to go where they need or want safely, efficiently and affordably – providing a simplified and fun customer experience. Our goal is to make mobility affordable in every sense of the word – economically, environmentally and socially.

By 2050 we will have a true network of mobility solutions, and automobiles will likely look very different from how they look today.
Zambikes, Zambia

1 Zambulance = $1,000
1 Zambulance = 1 life saved every 2 weeks
$1,000 = 26 lives saved per year
5 Years = 130 Lives Saved

mobiprize.com
Flocksourcing Buses, Bangladesh
AUTOLIB PARIS
Banking Boat in Manaus

Dr. AM Speradio, Faculdade Jaguariuna
A Way To Be, South Africa

ea way to be anywhere using public transport, buses, trains and teksis.
PHD: Party Hard Drivers, India

If You Party, Party Right. Get A PHD Tonight!

Our uniformed drivers are reliable, professional, trained and capable of driving all cars. Our services are reasonably priced so you no longer need to worry about how to get home after a couple of drinks.

1. Call 7738087500 to book your driver. (Between 12 p.m. and 12 a.m.)
2. Driver reaches your destination. Hand him your keys.
3. Drink responsibly and party hard.
4. Get driven home safe and problem free!

Drinking and Driving is dangerous for health

License To Party 🚗
The Green Cab, South Africa
Buenos Aires Launches Automated Bike Share

March 3, 2015
Health Care On Boats (Floating Hospital)
Ideophone Apps, India

just launched

TripThirsty

introducing

PYKA the smart wake-up alarm

mobiprize.com
E & E recognized that its employees needed a more convenient, easy-to-use tool to find carpool matches and report their commute, which led to the design and implementation of the Web- and map-based system called GreenRide.
Detroit Labs is a team of thinkers, doers, and makers. We dream up and ship beautiful, intuitive apps.
A luxury goods maker located in Detroit creating a community that will thrive through excellence of craft and pride of work. Where we will reclaim the making of things that are made well. And define American luxury through American quality.
MindHelix, India
Thula Lula, South Africa
Moovit, Israel
Neosphere Invisible Bus Bay, India

Cars or other vehicles can use IBB area but can't park in INVISIBLE BUS BAY area.

DIGITAL SMART POLE (DSP)

INVISIBLE BUS BAY

BUSES HAVE TO PARK IN INVISIBLE BUS BAY

Passengers have to wait outside IBB

ARTISTS IMPRESSION *EXAGGERATED*
Bill Ford:

A future beyond traffic gridlock

TED2011 · 16:48 · Filmed Mar 2011
Subtitles available in 26 languages

View interactive transcript

INDUSTRY LEADERSHIP
City Driving On-Demand; Car Swap; Dynamic Social Shuttle; Share Car; Remote Positioning; Ford Carsharing; Painless Parking; Parking Spotter; Data Driven Insurance; Big Data Drive; Info Cycle; Fleet Insights; Rapid Recharge & Share; Data Driven Health Care; LA Parking Lot 2.0; Traffic Tamer; City Mobility; Future of Mobility; Accessory Challenge; Australia Accessory
The European Mobility as a Service Alliance

Working to create a seamless, demand-based travel experience

Launched at the 2015 ITS World Congress in Bordeaux
All Grappling With THE FOUR SOLITUDES

SERVICE
Car Share / Car Pool / Peer to Peer
Lyft / Uber
Home Delivery
Senior Chauffeur
Auto Rickshaw
Taxi / Pedicab
Etc

PRODUCT / MODE
Car / Bus / Train
Plane / Boat
Bike / Trike
Shoes / Skates / Skateboards
Etc

TECHNOLOGY
Fare Payment / Parking
Wayfinding
Traffic Management
Congestion Pricing
Mesh Network / Cloud
Border Crossing / Security
Connectivity / Automation
Etc.

DESIGN / INFRASTRUCTURE / REAL ESTATE
Urban Design
Product Design
Real Estate
Roads
Network Design
Etc.

PERSON / USER / CUSTOMER