SMART MOBILITY



Jean-Claude Zhang 张少华 Sep. 2016 **Introduction – Shared economy** What is a "Smart Mobility"? New mobility services (NMS): models & challenges **Smart mobility & automotive industry Karnet's offer in China: Carpool Management Services (CMS)**

Ownership vs. Usership

• We do not need to own an asset in order to use it

"Unused value is wasted value"

- Space: housing rooms, car seats, parking space...
- Household tools: drills, screwdrivers, vacuum...
- Knowledge & entertainment: books, music, video...
- Invisible: time, skill
- Cash

The concept of shared economy emerged early 2000 in USA and has inspired many new start-ups with disruptive business models...

Blooming of shared economy start-ups











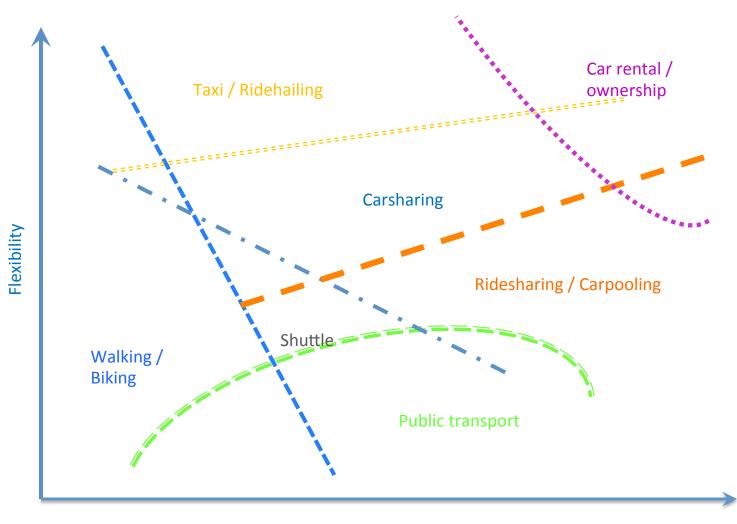








The City of Helsinki has announced a goal: by 2025, the city plans to make it unnecessary for any city resident to own a private car. (Deloitte University Press)



Trip distance

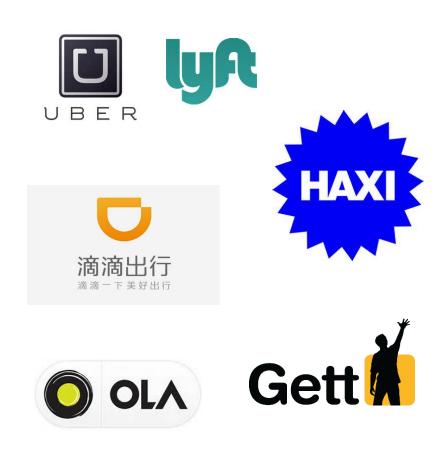
- Transportation
- Mobility
- Green mobility
- Smart mobility

System centric



User centric

<u>Smart mobility:</u> On-demand mobility system that would allow customers to choose among public and private transport providers and assemble the fastest or cheapest way of getting anywhere they need to go at any time.



- Disrupt conventional taxi
 and car rental industries
- Disrupt car ownership and public transports
- Ill-defined regulatory framework
- Relatively low entry barriers, but fierce competition
- Winner-take-all

Digital marketplaces that link self-employed drivers with customers and collect a fee for making the connection.











- Has existed since decades
- Disrupts public transit, car ownership
- Often incentivized by policy planners because environmental friendly
- More popular in Europe
- Critical mass of community members a must

Arranging shared rides by private vehicles between travelers with a common destination. Travelers share trip costs through ridesharing apps that charge a fee.









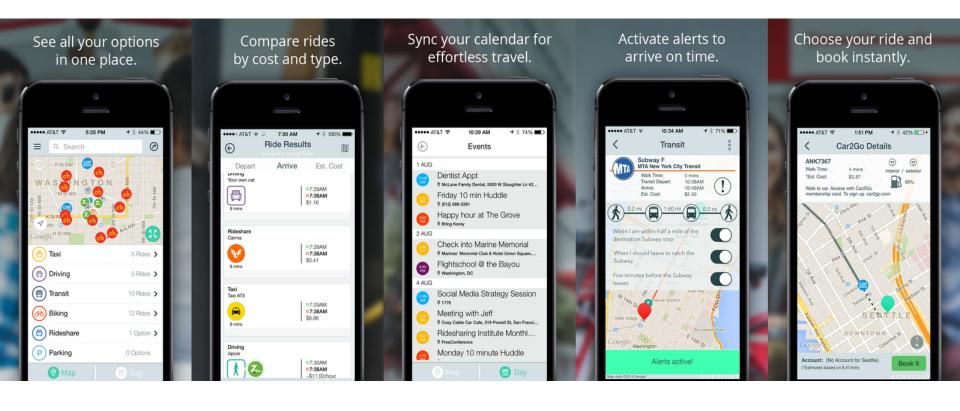




- Started in Europe, it has experienced exponential growth in US until 2010's, challenged by other mobility services
- One-way flexible vs. round trip,
 P2P vs. Business
- Disrupts car rental industry
- Initial fleet as entry barrier
- China the greatest potential for growth? (Car2go in Chongqing, 78K members in 2 months)

Short-term car rental with unattended access and inclusive of gasoline and insurance. Distinction with car rental becoming blurred.

Mobility-as-a-Service (MaaS)

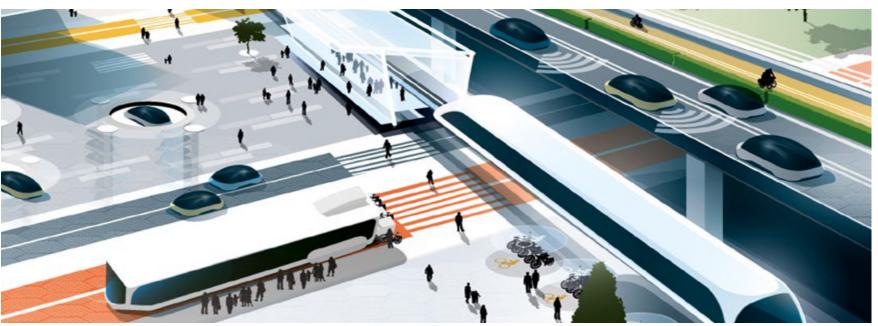


Mobility services aggregator in which a person's needs are met by one service planner and the service is paid for through a singe account.

Shared Autonomous Vehicles (SAV)



- When?
- Who will own the cars?
- What will become the hailing service? And car markers?
- How will insurance work?
-?



Opportunities for Automotive Industry

Challenges

Ownership / volume

Supply chain

Insurance

Maintenance

Opportunities



Venture capital in startups

R&D on mobility solutions

Fleet sales to mobility providers

New financing model



















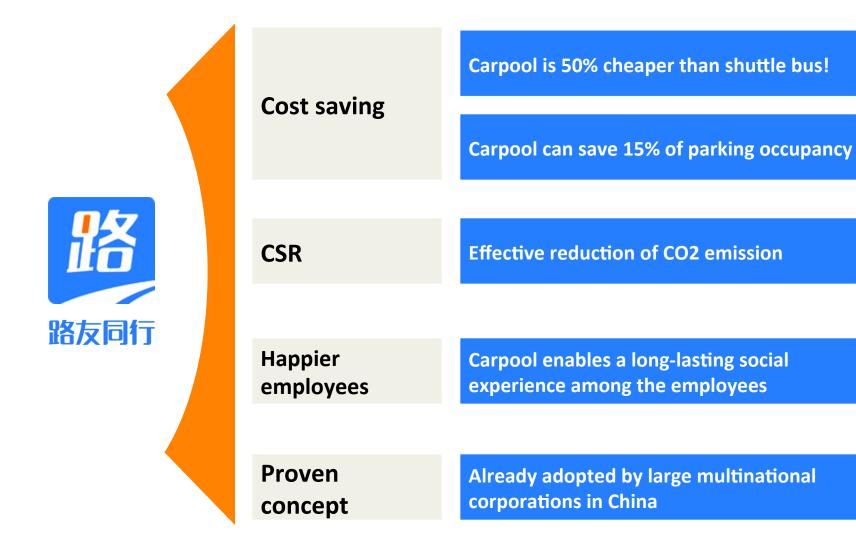


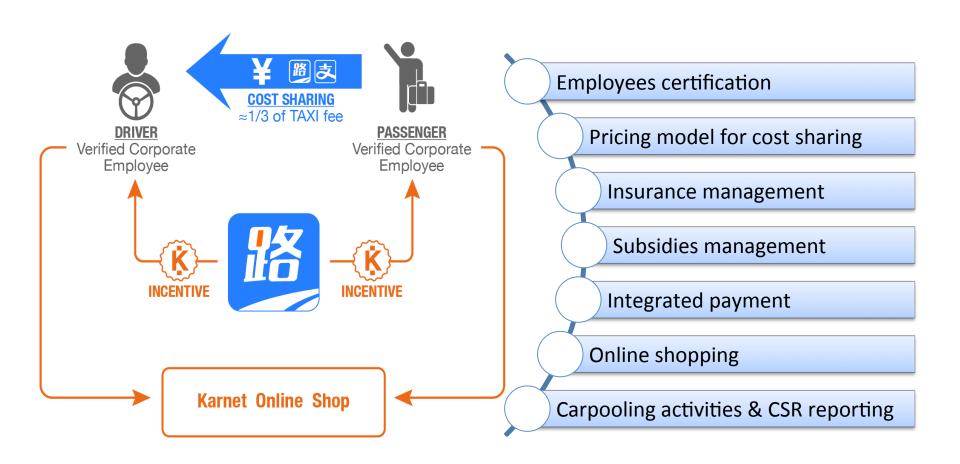






Carpooling Management Service (CMS)







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