Data, to better understand the past and future of carsharing

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Will the next 15 years see:
• More growth?
• More independent operators?
• Fully integrated mobility across all modes?

modified from Shaheen & Cohen, 2012; 2013; 2014; University of California Berkeley Transportation Sustainability Research Center, 2015
Trend of Preferences or Constraints?

- Are millennials choosing not to drive or have a car?
- Are millennials unable to afford private cars?

And going forward:
- How do other mobility options meet trip requirements?
In Canada, “truck” expenses are tax deductible
and the financial crisis was not too deep and did not last long
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Alberta New Vehicle Sales (1990=100)

Truck sales
Total
per capita
Car sales

...and local prospects shape local choices
New Cars per Capita: a tale of three Provinces

- Alberta
- Quebec
- BC
BC demographics

1990: 3,323,000

2016: 3,709,000 (1,064,000)
Vancouver Household Expenditures *cf.* Canada

"...and cost of living has an impact"
Millennials not getting a driver’s licence is likely a forced choice
A 2016 Survey of Generation Z
Gen Z Expectations
...and local public transit is critical
4 Factors shaping the future of CS

- Evolution of preferences
  → determines aspiration about different mobility forms
- Income, non-discretionary spending + cost of driving
  → determines capacity for private vehicle ownership & operation
- Housing density + Investment in public transit
  → determines quality of public transit
- Hardware and software innovators
  → Alternatives in mobility service offerings
My expectation for 2030: Dystopian

• AI will drive cars and occupy jobs,
• Universal Minimum Income will be insufficient to own cars, ...
• Public transit will be under-funded and over-crowded.
• OEMs will offer a range of mobility services at different price points.

OEMs (may) use CS to connect with consumers.
My expectation for 2030: Utopian

• AI will drive cars *in traffic* and occupy *boring* jobs,
• Universal Minimum Income will be enough for *healthy consumerism*
• Public transit will evolve to *on-demand private pods*.
• OEMs will offer a range of mobility services at different price points.

OEMs (may) use CS to connect with consumers.
What is missing?

• Tracking data on:
  • Why trends are as they are.
  • Relative impacts of one-way and two-way carsharing on mobility choices
  • Broad array of factors that influence CS utilization rates

• Systems innovations:
  • New financial models for supporting CS vehicles
  • Integration of CS with public transit for seamless integrated operation
Thank you!

To CSA for inviting us here.

IMHO,
Guinan was more insightful than Data.

Even if we had all the data we could wish for, we could not predict reliably.
Additional slides
Canadian Household % Expenditures by Income Group (2013)
...and local cultures and geography has an impact
New Building Permits by Type: Vancouver (1990=100)

- Singles (units)
- Multiples (units)