Implications of Technology on Travel
ITE / ITSCA – May 19, 2016
Helsinki's ambitious plan to make car ownership pointless in 10 years

Finland's capital hopes a 'mobility on demand' system that integrates all forms of shared and public transport in a single payment network could essentially render private cars obsolete.

*Should we ban cars in city centres?*
Next-Gen Valet Services
Microtransit
Electric Vehicles and E-Bikes
Carsharing
Transportation Network Companies
Autonomous Freight
Autonomous Vehicles
Background

www.fehrandpeers/fpthink
VMT per capita will be 10% to 20% above its 2004 peak, suggesting a need to accelerate transportation investment to keep pace with population growth.

Your Forecast

2040
15,350

Published Forecasts

- 17,100 VMT per capita
  U.S. DOT
- 16,300 VMT per capita
  Transportation Financing Commission
- 13,400 VMT per capita
  U.S. Energy Administration
- 12,200 VMT per capita
  Public Interest Research Group: High
- 8,200 VMT per capita
  Public Interest Research Group: Low
Will Robot Cars Drive Traffic Congestion Off a Cliff?

By THE ASSOCIATED PRESS  MAY 15, 2016, 12:57 P.M. E.D.T.

Self-driving cars might cut costs but make traffic worse, researchers say

Originally published May 16, 2016 at 6:25 pm | Updated May 16, 2016 at 10:32 pm
ARC Preliminary Findings
ARC Preliminary Findings
### PSRC Preliminary Findings

#### Table 2. Scenario Results, Base Year 2010, Summaries by Average Travel Day.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
<th>Base</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT</td>
<td>Total Daily</td>
<td>78.7 M</td>
<td>81.5 M</td>
<td>82.6 M</td>
<td>94.1 M</td>
<td>50.8 M</td>
</tr>
<tr>
<td></td>
<td>% Change (Versus Base)</td>
<td>---</td>
<td>3.6%</td>
<td>5.0%</td>
<td>19.6%</td>
<td>-35.4%</td>
</tr>
<tr>
<td>VHT</td>
<td>Total Daily</td>
<td>2.82 M</td>
<td>2.72 M</td>
<td>2.76 M</td>
<td>3.31 M</td>
<td>1.67 M</td>
</tr>
<tr>
<td></td>
<td>% Change</td>
<td>---</td>
<td>-3.9%</td>
<td>-2.1%</td>
<td>17.3%</td>
<td>-40.9%</td>
</tr>
<tr>
<td>Trips</td>
<td>Trips/Person</td>
<td>4.1</td>
<td>4.2</td>
<td>4.2</td>
<td>4.3</td>
<td>4.1</td>
</tr>
</tbody>
</table>

1=Capacity  
2=Travel time utility  
3=Parking $  
4=Operating $
(a) “Have our cake and eat it too”
(b) “Stuck in the middle at Level 2”
(c) “Strong responses”
(d) “Dystopian nightmare.”
LA Model Results (with AV’s)

- Increased VMT
- Decreased Transit Usage
- Model not well-suited to AV testing
So... what to do?

- Congestion pricing
- Personal VMT tax
- Urban growth limits
- Parking restrictions
- HOV/HOT lane expansion
- Invest in alternatives
Implications of Technology on Travel

Thank you! Questions?
Impacts on Capacity

Fleet Mix

50%

Capacity Increase

0-5%