

# Innovative Mobility and Driverless Cars

Tony Dutzik, Frontier Group

*Driverless Cars: What Will They Change and When?*

Metropolitan Area Planning Council  
and Transportation for Massachusetts

13 June 2016

FRONTIER GROUP



# 349

**Deaths on Massachusetts roads in 2012, along with >4,000 serious injuries.**

**Commonwealth of Massachusetts, Executive Office of Public Safety and Security**



**\$5.8  
billion**

**Economic losses due to motor  
vehicle crashes in Mass. in 2010.**

National Highway Traffic Safety Administration, *The  
Economic and Societal Impact of Motor Vehicle Crashes,  
2010 (Revised)*



# 1,300

**Premature deaths in  
Massachusetts annually  
from particulate air  
emissions from road  
vehicles.**

Commonwealth of Massachusetts, Executive Office of Public  
Safety and Security



By Rene Schwietzke - Own work, CC BY 2.0,  
<https://commons.wikimedia.org/w/index.php?curid=165289>

# 64

Hours of peak period  
delay experienced by  
typical Boston-area car  
commuter each year.

Texas A&M Transportation Institute



# 70%

**Share of Boston metro area jobs that cannot be accessed via a 90-minute transit trip.**

Adie Tomer et al., Metropolitan Policy Program, Brookings Institution, *Missed Opportunity: Transit and Jobs in Metropolitan America*



# 15%

Transportation share of household expenditures in Boston metro area, 2013-14.

U.S. Bureau of Labor Statistics



Photo: The Birkes -  
<http://www.flickr.com/photos/brbirke/8136033826/>, CC BY 2.0

# 80%

**Greenhouse gas emission reductions required in Massachusetts by 2050 under Global Warming Solutions Act.**





# 17.5%

Projected population increase  
in inner core of Greater Boston  
between 2010 and 2030.

*A Better City, State of the Built Environment: Greater  
Boston's Infrastructure*

**Innovative mobility technologies and services create an opportunity to address our greatest transportation challenges.**

**Harnessing that opportunity is up to us.**



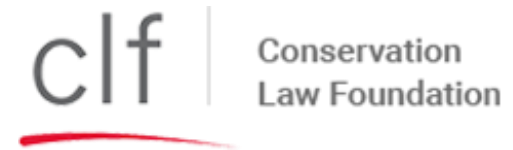


# T4MA Innovative Mobility Project

- Summarize status of innovative mobility.
- Identify opportunities and challenges.
- Develop public policy framework.
- Identify potential pilot projects.

*White paper due to be published Sept. 2016.*

# Innovative Mobility White Paper



# Innovative Mobility White Paper

## Informed by:

- Interviews with innovative mobility practitioners.
- Four roundtables (including w/organizations representing low-income communities and communities of color).
- Survey of T4Mass members.
- Literature review.

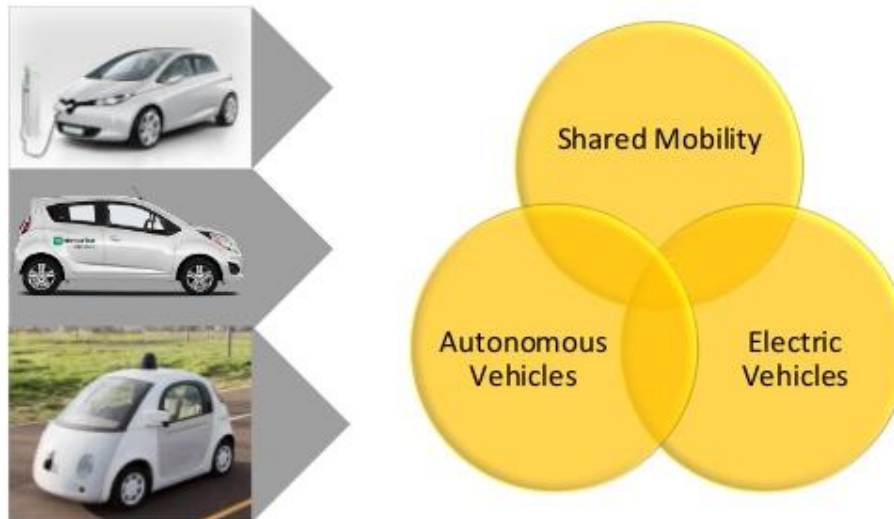


# “Innovative Mobility”

- **Information technology supporting sustainable modes of travel**  
e.g. real-time transit info, multi-modal apps, mobile payment
- **Shared mobility services**  
e.g. carsharing, bikesharing, ridesourcing/TNCs, microtransit
- **Autonomous and connected vehicles**

# Many changes happening at once...

## FUTURE: CONFLUENCE OF TRENDS



Shaheen, 2015

# Innovative Mobility White Paper

| <b>Impacts</b>           | <b>Communities</b>  |
|--------------------------|---------------------|
| Congestion               | Urban Core          |
| Transit                  | Suburbs             |
| Active Transportation    | Gateway Cities      |
| Economy                  | Rural Massachusetts |
| Built Environment        |                     |
| Quality of Life          |                     |
| Government Finance       |                     |
| Public Health and Safety |                     |
| Social Equity            |                     |
| Climate                  |                     |



# Autonomous Vehicle Impacts

Appear to depend on:

- Deployment model (shared v. individual ownership; evolutionary v. revolutionary)
- Integration into the transportation system

**Policy is critically important and may be decisive.**

**Transitions are worth our attention.**

