Electric Vehicles in an Automated Age

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“The thing that people associate with expertise, authoritativeness, ⋯ don't correlate very well with who's actually good at making predictions.”

- Nate Silver
Revolution in Transportation

Why did we switch from horse power to horsepower?

- Faster
- More powerful
- More reliable
- Lower maintenance
- Lower cost
- Less pollution (arguably)
Revolutions in Transportation

- 253 million cars in the United States
- ~800 million parking spots
- Cars are parked ~95% of the time
Revolutions in Transportation

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WRONG!
What are the outstanding questions?

How will AVs be used?
- Who?
- Shared?
- Transit?
- Number of vehicles
- Vehicle Miles Traveled
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What are the public’s priorities?
- Safe travel
- Equitable services
- Strong economy
- Environmental protection
- Using public space for it’s highest purpose
The Geometry Problem

space required to transport 60 people

car  bus  bicycle
Transit and Automated Vehicles

The Challenge:

- AV’s could cause steep ridership decline
- Revenues would decline
- Services would be cut
- Etc. . .
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The Opportunity:
- Integrate transit and AVs
- Better serve communities without transit access
- Reduce trip costs even further
- Reduce emissions
- Reduce congestions
- Improve reliability system-wide
But how do we do it?

- Partner with MaaS providers and coordinate services
- Create integrated payment platforms for one button purchasing of AV, transit, and bikeshare trips
- Transit workers could perform more of a community engagement and security role
- An occupancy fee or VMT/congestion pricing tax could steer behavior towards preferred outcomes
AVs and MaaS are creating more transportation data than ever before and that will only increase over time

- High resolution visualizations
- Improved Modeling
- Data management will be a growing challenge for public agencies
AVs are not a singular technology

AVs are not a panacea

Some fundamentals of transportation will remain constant

Transit needs to adapt

Big Data is a big deal
Shaping a smarter transportation experience.™

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