MEET THE JETSONS

Track: Data and Innovation

In the not-so-distant future, connected and autonomous vehicles will change the way we travel, with impacts for cities, transportation agencies, and YOU.

• What does a self-driving future look like?
• What are the implications to planners, policy makers, and citizens?
• What steps need to be taken now to prepare for this future?
The Ongoing Application and Implementation of Connected and Autonomous Vehicle Technology

Presented by:
Jonathon Hart, AICP
Potential Applications/Benefits of CAVs

Intersection Collision Avoidance • Signal Prioritization

Queue Warn • Speed Harmonization

Predictive Braking • Dynamic Cruise • Blind Spot Detection

Platooning • Wireless Inspection
Adoption of New Vehicle Technology

Average of 14-15 Years to Reach 50 Percent Market Penetration
Adoption of New Vehicle Technology

Fleet Turnover – Average Age All Light Vehicles
Self-Driving Cars: Implications for Transit Update

or “Will the Google Car Replace my Bus?”

Transport Chicago       June 10, 2016
Transit Agency –
Shared Mobility Partnerships

1. Marketing coordination

2. Trip planning app integration

3. Operations integration
Fixed Route Service Competitiveness

Productivity (passengers per hour)

- T3
- T2
- T1
- A3
- A2
- A1

Taxi/AV Fare Level

- Traditional Taxi
- TNC Single Ride
- TNC Shared Ride
- Shared AV at $0.75/mile
- Shared AV at $0.50/mile
- Shared AV at $0.25/mile
Autonomous Transit

Sensor technology advances allow operation in mixed traffic

Numerous trials of low-speed 8-12 passenger vehicles around the world
Connected and Autonomous Vehicles

What Does Our Self-Driving Future Mean for Transportation Planning?

presented to
Transport Chicago

presented by
Cambridge Systematics, Inc.
Sam Van Hecke

June 10, 2016
Top 5 Things Planners Need to Know…

1. Self-driving vehicles will happen
2. It’s connected AND autonomous
3. Commercial vehicles will be first
4. Capacity expansion may be a thing of the past
5. The shared economy will play a huge part in the mobility of the future

http://www.linkedin.com/pulse/top-5-things-planners-need-know-self-driving-vehicles-chris-hedden-1
# Impact on Planning Products and Processes

## PRODUCTS
- TIP
- Regional ITS Architecture
- Bicycle and Ped Plan
- LRTP
- Asset Management Plan
- SHSP
- Transit Development Plan
- Public Involvement Plan
- Freight Plan
- Financial Plan

## PROCESSES
- Long range planning
- Project selection/programming
- Project design
- Travel demand forecasting
- Safety analysis
- Data collection
- Data management
- Infrastructure maintenance
- Operations
- Workforce development

[http://www.its.dot.gov/connected_vehicle/cv_planners.htm](http://www.its.dot.gov/connected_vehicle/cv_planners.htm)
Dealing with the Uncertainty

- Don’t focus on how
- Don’t pick sides
- Build relationships
- Use Robust Decision Making
  - Near-term strategies
  - Deferred adaptive strategies
  - Hedging strategies
  - Shaping strategies

Top 5 Things Planners Need to Know About Self-Driving Vehicles
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Let’s Discuss...