Florida’s Transportation Future: Autonomous and Connected Vehicles

By Beth Kigel,
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For Treasure Coast Regional Planning Council
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What is the Florida Transportation Commission?

• Created in 1987 - Section 20.23, Florida Statutes
• 9 members appointed by Florida’s Governor, confirmed by Senate
• Oversight board for performance and policy
  • FDOT, Expressway Authorities, and Regional Transportation Authorities
• Recommend major transportation policy to the Governor and Legislature
• For FDOT Secretary vacancies, recommend 3 candidates to the Governor
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A perspective of Florida’s growth

- Additional 6 million residents by 2030
- 160 million visitors annually by 2025
- 69% increase in freight tonnage by 2040
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Efficient and Safe Mobility A Must!
U.S. DOT’s Perspective – 2015 Crashes

- 94% caused by human error
- > 35,000 fatalities nationally

Economic Cost: $242B; Societal Harm: $836B
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25% congestion events caused by traffic accidents

94% crashes caused by human error

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• 94% caused by human error
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~ 3,000 Florida road fatalities in 2015

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Autonomous vs. Connected Vehicles

What’s the difference?
An autonomous car or self-driving car is a vehicle that is capable of sensing its environment and navigating without human input.
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Connected vehicles (CV) communicate with each other and the world around them resulting in better informed decision-making.

V2X
• V2V (Vehicle to vehicle)
• V2I (Vehicle to infrastructure)
• V2P (Vehicle to pedestrian)
• etc.

Source: http://www.4erevolution.com/tag/voiture-connectee/
Why the push for autonomous and connected vehicles?

NHTSA estimates > 80% reduction in road fatalities involving non-impaired drivers

Increased capacity resulting in reduced congestion

Improved mobility / access, land use, and more . . .
• Federal Automated Vehicle Guidelines – Sept 2016
  • For HAVs – vehicle performance guidance/model state policy
• Proposed V2V Rule – released Dec 2016
  • Would require V2V for new light vehicles beginning 2021
• New USDOT Secretary Elaine Chao
  • “there are also concerns about how they will continue to develop. …. We need to do so in a way that will not dampen the basic creativity and innovation of our country.”
What’s happening in Florida? (some examples)

- Florida Autonomous Vehicle Initiative – 4th Annual Summit Held
- Legislation:
  - 2012 – 2nd state to authorize AV testing
  - 2016 – 1st state to authorize AV without driver behind wheel
  - 2016 – study to enable pilot of Driver Assistive Platooning
  - 2017 – HB725 proposed – autonomous technology is operator
  - 2017 - HB601 proposed – personal delivery device
What’s a personal delivery device?
What’s platooning?

- Up to 5%
- Up to 10%
What’s happening in Florida? (some examples)

• Florida Transportation Commission Workshop
  • Beginning discussion regarding FDOT long-term traffic modeling and impacts / necessary adjustments for new technology implementations
  • Tuesday, March 7
Central Florida Autonomous Vehicle Partnership

USDOT Designated Proving Ground!

January 2017
Central Florida AV Proving Ground
Suntrax – Construction starts spring 2017

- Florida Polytechnic University & Florida Turnpike Enterprise
- Test and research facility (tolling, ITS, and AV/CV technologies)
- 400 acres, 2.25 mile track
- Track complete summer 2018
Next in driverless?

Launching in
Dubai
July 2017

Autonomous
Aerial
Vehicle (AAV)
Or Air taxi!
Come Join Us!

YOU ARE CORDIALLY INVITED TO
BUSINESS BEFORE HOURS:
INNOVATIONS IN TRANSPORTATION & SMART CITIES

WHEN
Wednesday
March 22, 2017
7:15 - 9:00 a.m.
Technology Demonstrations to Follow.

WHERE
Riviera Beach Marina
Event Center
190 E. 13th Street
Riviera Beach, FL
33404

www.pbnchamber.org or 561-746-7111

FLORIDA TRANSPORTATION COMMISSION