



Preparing SIS for CAVs & Other Emerging Technologies



FDACS – Office of Energy EV Roadmap Webinar

June 16, 2020



Statutory Mandate

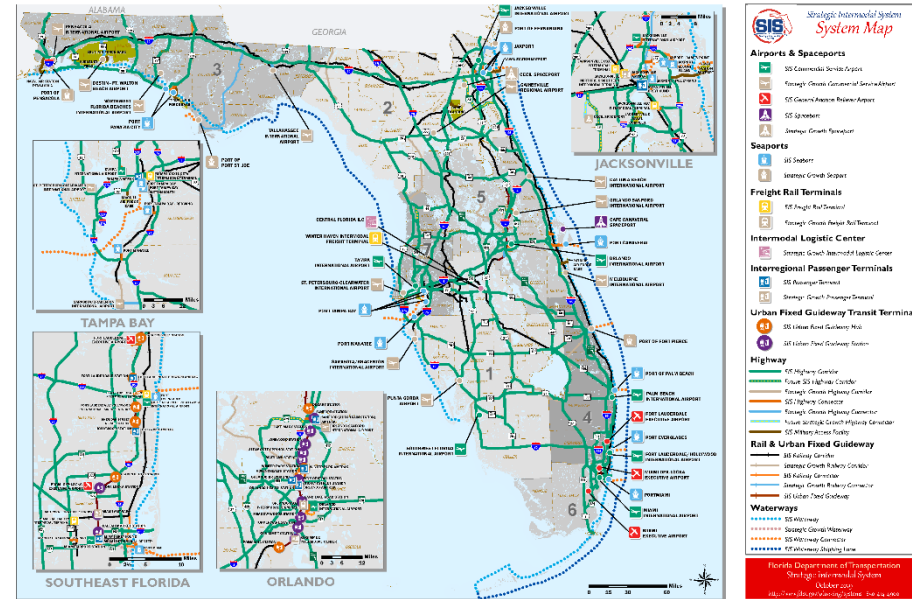
Systems Implementation Office (2018)

- Preparing SIS for AV/CV and other Emerging Technologies
 - Mandated by Florida Statute (F.S. 339.64), passed during 2017 Legislative session.

*“The [SIS] Plan shall include...consideration of infrastructure and technological improvements necessary to accommodate advances in vehicle technology, such as **automated driving systems and other developments.**”*

Project Purpose

- Assessed technology trends and impact on SIS Facilities
- Completed **Safety and Mobility** analyses
- Identified opportunities and challenges (i.e. SWOT analysis)
- Developed strategies to leverage and address emerging technologies and business models
- Developed recommendations for how these considerations may be incorporated into SIS planning processes



Emerging Trends



Changing Demographics

- Millennial travel behavior
- Aging population
- Generation Z

Improved Technology

- Automated vehicles
- Connected vehicles
- Electric vehicles
- Rise of robots
- Improved user information & navigation
- Smart City

Shifting User Preferences

- Urbanization
- Shift from individual ownership to fleet ownership
- Telecommuting
- E-commerce & delivery options

Improved Travel Options

- Better walking and biking options
- Improved public transit
- Shared mobility
- Mobility as a Service

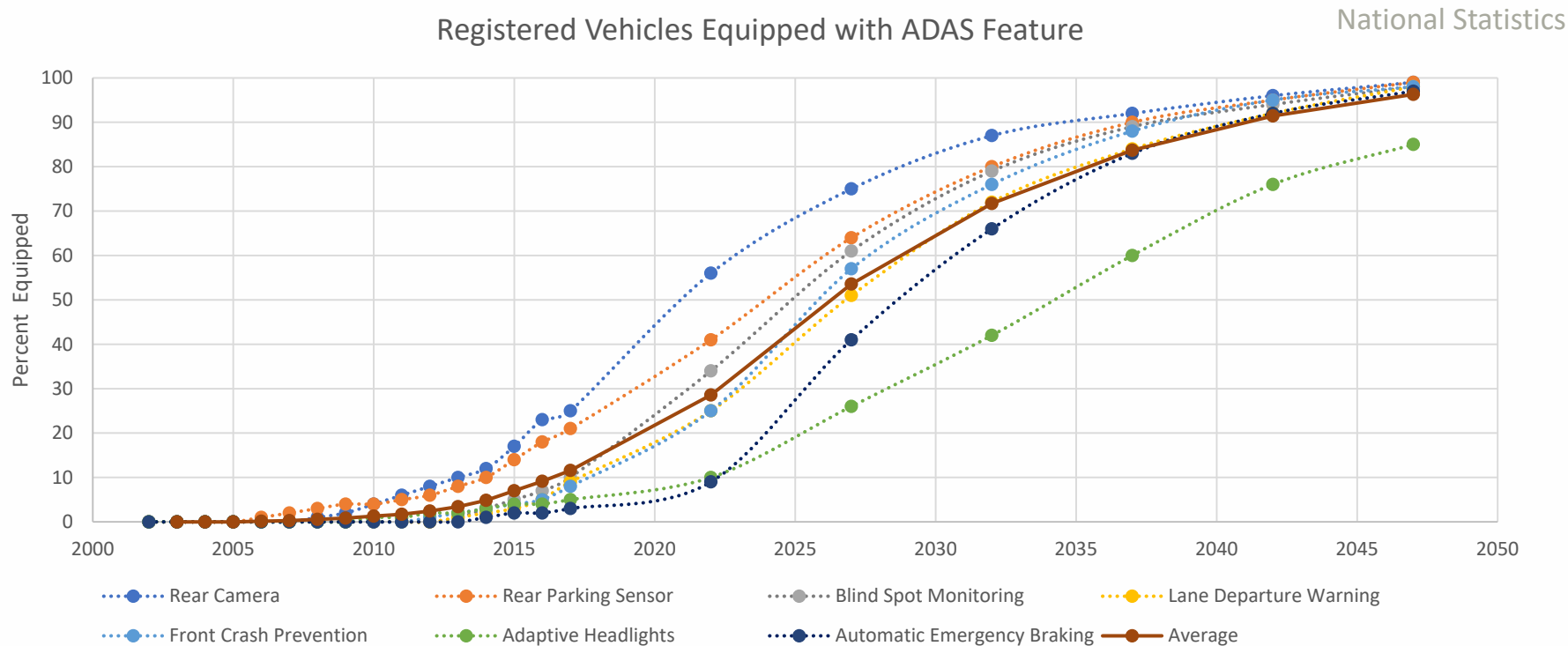
ACES Components and Timeline



ACES Trends Impact on SIS



Market Adoption of ADAS – Observed & Projected



Trend A: Advanced Driver Assistance Systems (ADAS)



Trend	Enabling Technology/ Business Model	Potential Projects	Year/Market Adoption
 Autonomous Vehicles	Advanced Driver Assistance Systems (ADAS)	CAV Ready Design Standards Pavement Markings Signage Locational Reference Markers LED Traffic Signals	2025 (50%)
	Highly Automated Vehicles (HAV)	Special Use Lanes Speed Harmonization Full Depth Shoulders Parallel Corridor Alternatives	2030 (10%)

Electric Vehicle Market Adoption in Florida – Observed & Projected

2011 – 2018 in FL

- BEVs – 61,640
- PHEVs – 59,314
- HEVs – 889,959

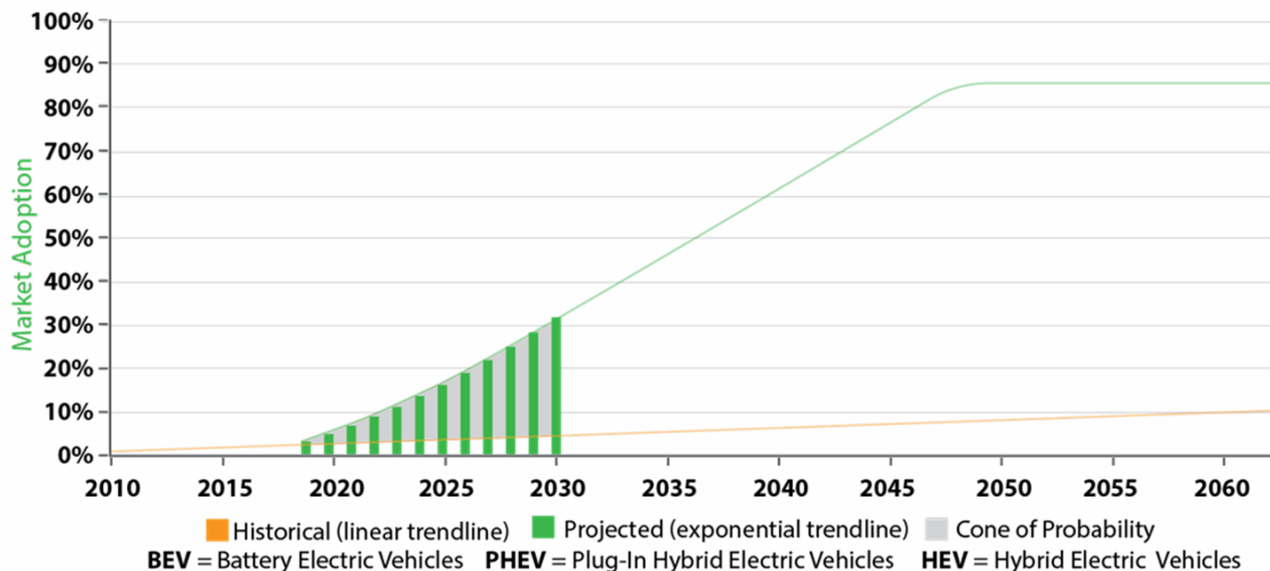
Total EVs – 1,010,913
• 6.5% of all vehicles

Total BEVs + PHEVs –
120,954 (**0.78%** of all vehicles)

2018 – 15.4M registered
vehicles in FL (DHSMV)

HEV = non-plug in vehicles, such as
the Toyota Prius

Percent of BEVs, PHEVs and HEVs Sales in Florida to Total Registered Vehicles in Florida

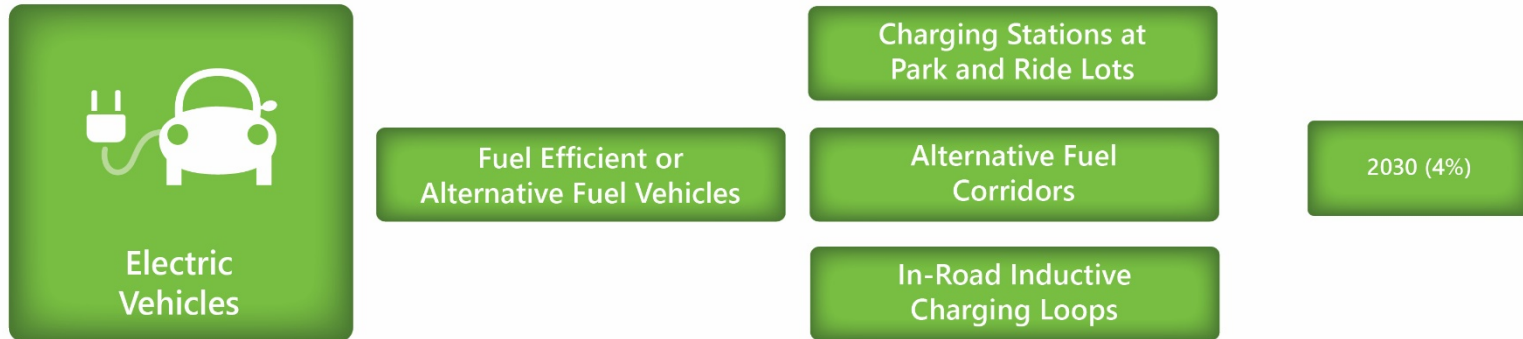


Source Data: www.autoalliance.org and FL DHSMV annual reports.

Trend C: Electric Vehicles



Trend	Enabling Technology/ Business Model	Potential Projects	Year/Market Adoption
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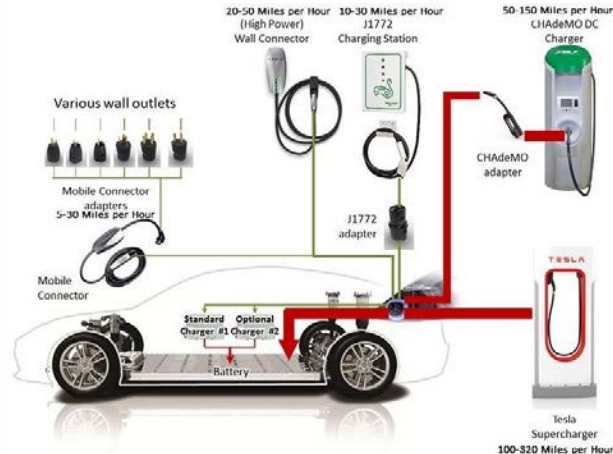


Electric Vehicle Implications



SIS Highway

- Charging stations
- FHWA's Alternative Fuel Corridors program
- Fuel tax impact



Contact:

Florida Department of Transportation

Systems Implementation Office

605 Suwannee Street, MS 19

Tallahassee, FL 32399

850.414.4900

sisinfo@dot.state.fl.us

www.fdot.gov/planning/systems

