FTP Implementation Committee Meeting #1

Webinar

presented to

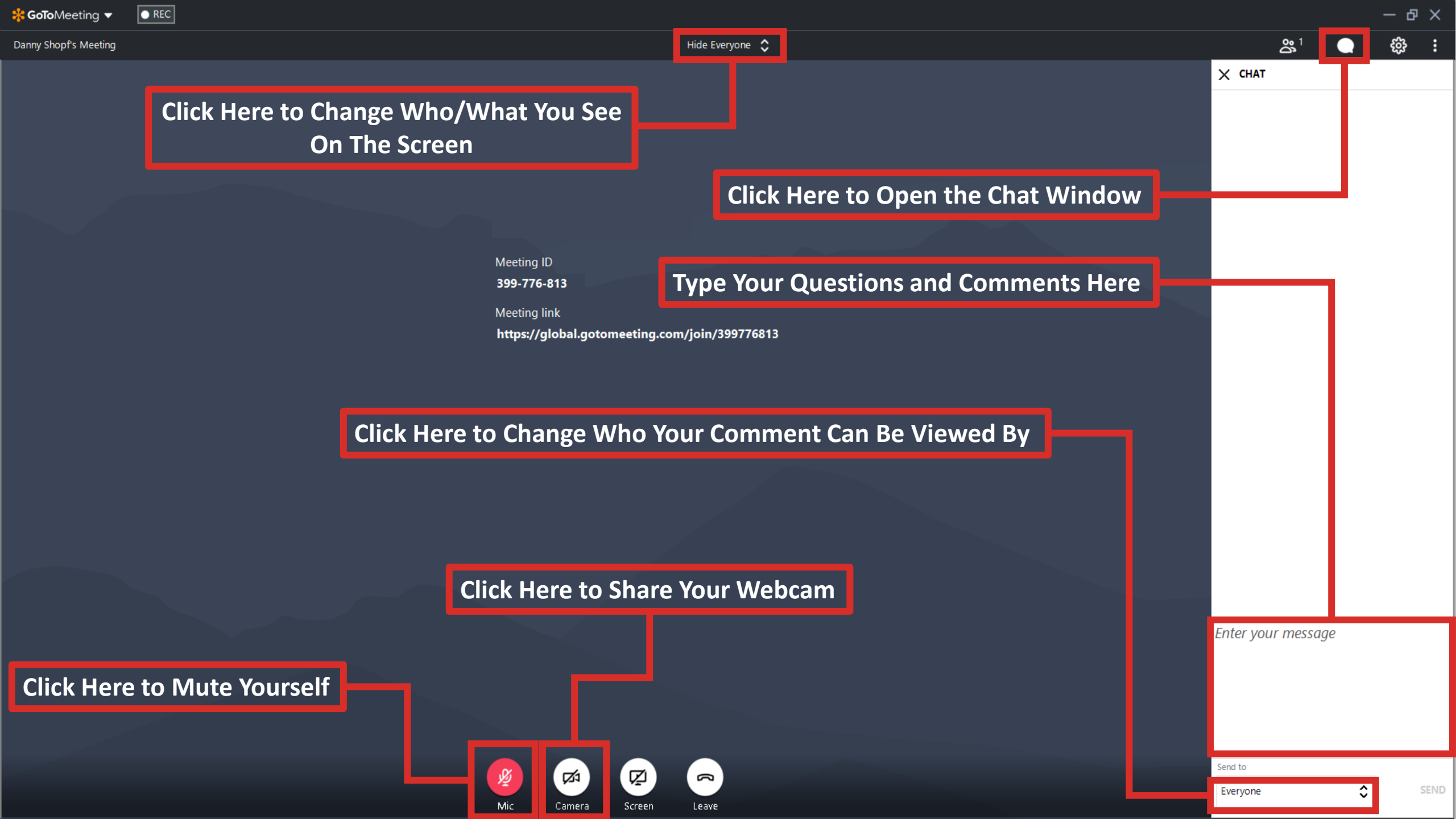
FTP Implementation Committee

February 11, 2021

FLORIDA Transportation Plan

Your Florida. Your vision. Your plan.

Welcome and Introductions


GoToMeeting
REC
Danny Shopf's Meeting
Hide Everyone
1
CHAT
Click Here to Change Who/What You See On The Screen
Click Here to Open the Chat Window
Meeting ID
399-776-813
Meeting link
https://global.gotomeeting.com/join/399776813
Type Your Questions and Comments Here
Click Here to Change Who Your Comment Can Be Viewed By
Click Here to Share Your Webcam
Click Here to Mute Yourself
Enter your message
Send to
Everyone
SEND
Mic
Camera
Screen
Leave

Today's Objectives

- Review FTP Implementation Committee Charge & Work Plan
- Receive background information on Strategic Intermodal System (SIS)
- Discuss implementation strategies related to technology, resilience, and safety for FTP and SIS

Agenda - Morning

Time	Topic	Presenter(s)
Opening and Updates		
9:00 am	Welcome and Introductions	Brad Thoburn, FDOT, Chair
9:20 am	FTP Implementation Committee Charge & Work Plan	Dana Reiding, FDOT
9:40 am	SIS Overview	Gerald Goosby, FDOT
Commit to Vision Zero as our Top Priority		
10:10 am	<u>Background Presentations:</u> FTP Safety Subcommittee Safety in the SIS	 Lora Hollingsworth, FDOT Dana Reiding, FDOT Zach Teders, CDM Smith
10:30 am	Implementation Discussion: Safety	Group Discussion
Expand Transportation Infostructure		
11:00 am	<u>Background Presentations:</u> FTP ACES Subcommittee Preparing the SIS for ACES	 John Kaliski, Cambridge Systematics Jennifer King, FDOT
11:30 am	Break for lunch	

Agenda - Afternoon

LUNCH BREAK (11:30 am- 1:30 pm)		
Time	**Topic**	**Presenter(s)**
1:30 pm	Roll Call	Brad Thoburn, FDOT, Chair
1:35 pm	Implementation Discussion: Technology	Group Discussion
Identify and Mitigate Risks to Florida's Transportation System		
2:05 pm	Background Presentations: FTP Resilience Subcommittee SIS Resilience Planning Study	Jennifer Carver, FDOT Karen Kiselewski, Cambridge Systematics
2:25 pm	Implementation Discussion: Resilience	Group Discussion
Partner Roundtable and Public Comment		
2:55 pm	Partner Roundtable	Group Discussion
3:35 pm	Public Comment	Brad Thoburn, FDOT, Chair
Wrap Up and Next Steps		
3:50 pm	Next Steps	Dana Reiding, FDOT
4:00 pm	Adjourn	

FTP Implementation Committee Charge and Work Plan

FTP Implementation Committee Charge

- Using updated FTP Policy Element, develop **near-term action items** for FTP Implementation Element
- **Provide input on SIS Policy Plan**
- **Maintain partnerships and collaborate** on FTP implementation actions
- **Distribute FTP Policy Element and SHSP** through each partner's networks
- **Support FDOT's task forces**, environmental partners working group, and other committees, as needed
- **Support TransPlex** and other outreach/education as panelists or moderators

Comparison of Key Topics per Meeting

Meeting	FTP Implementation Strategies	SIS Policy Plan Focus Areas and Additional Considerations
February 2021	• Safety • Resilience • Technology	• Safety • Resilience • ACES/Technology/Innovation
May/June 2021	• Connectivity (Transform Florida's major transportation corridors and hubs; Strategically complete transportation systems and networks) • Mobility (Prioritize mobility for people and freight)	• Redefining "Interregional" Connectivity; redefining Capacity • Expanding Mobility
September 2021	• Access to opportunity (Further access to opportunity for those who need it most) • Land use (Integrate transportation and land use decisions) • Environment (Develop transportation systems to protect and enhance air quality, water quality and quantity, critical lands, and habitats)	• Land Use Coordination • Community and Environmental Stewardship
November 2021	• Investments (Strategically align investments with goals; provide sustainable and reliable transportation funding sources) • Workforce (develop and retain a skilled transportation workforce)	• Strategic Investment Decisions/Sustainable Funding

2021 SIS Policy Plan Update

Gerald Goosby,
SIS Planning Manager

Your Florida. Your vision. Your plan.

Presentation Topics

- Brief history of the SIS
- Key SIS policies
  - Designation
  - Needs and funding eligibility
  - Prioritization
- Highlights of 2016 SIS Policy Plan
- Key issues for 2021 SIS Policy Plan

Why Was the SIS Created?

- Help meet growing demand for moving people and freight
- Link Florida's economic regions
- Enhance Florida's competitiveness as a global hub for trade
- Make strategic choices for transportation investments within financial constraints

Brief History of the SIS

- 2000 – Initial call for development of the SIS as part of 2020 FTP
- 2002 – 41-member SIS Steering Committee defines policy framework
- 2003 – Legislation establishes SIS and authorizes designation of initial facilities
- 2004 – Legislation enacts framework for funding future SIS improvements; first projects funded
- 2005 – Legislation provides recurring funding for SIS projects; first SIS Strategic Plan adopted
- 2010 – SIS Strategic Plan updated
- 2016 – SIS Policy Plan updated

Strategic Intermodal System Plan
Statutory Requirements, F.S. 339.64

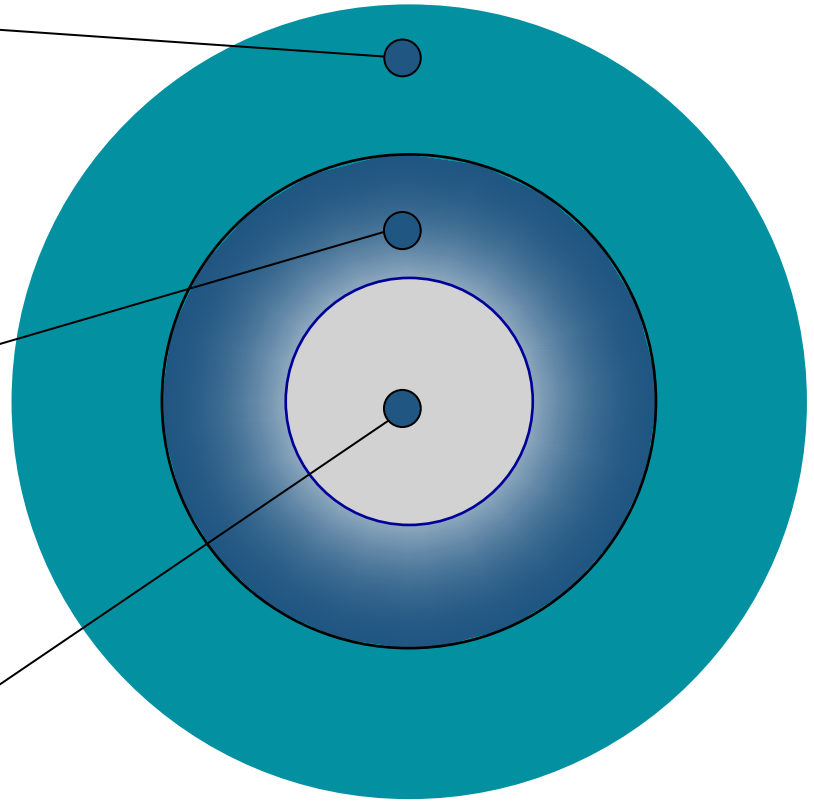
Required Elements	Where Covered
Needs assessment	• **SIS Policy Plan (policy direction)** • Multimodal Unfunded Needs Plan • Work Program Funding Eligibility Guidance
Prioritization process	• **SIS Policy Plan (policy direction)** • Work Program Funding Eligibility Guidance
Map of SIS facilities	• **SIS Policy Plan (policy direction)** • Adopted Criteria • SIS Atlas
Finance plan based on anticipated revenues, including 10- and 20-year cost feasible components	• **SIS Policy Plan (policy direction)** • SIS Funding Strategy (5-Year Plan, Second 5-Year Plan, Cost-Feasible Plan Highway Component
Assessment of impacts of proposed improvements to SIS corridors on military installations	• **SIS Policy Plan (policy direction)** • Periodic Study

Key Strategic Intermodal System Policies

Which facilities are of statewide significance?
Designation Criteria and Policies

What investments are needed, and which needs are eligible for SIS?
Needs Policies, including Eligibility Criteria

Which projects will be funded given available resources?
Prioritization Policies/Process; Finance Strategy



System Designation Overview

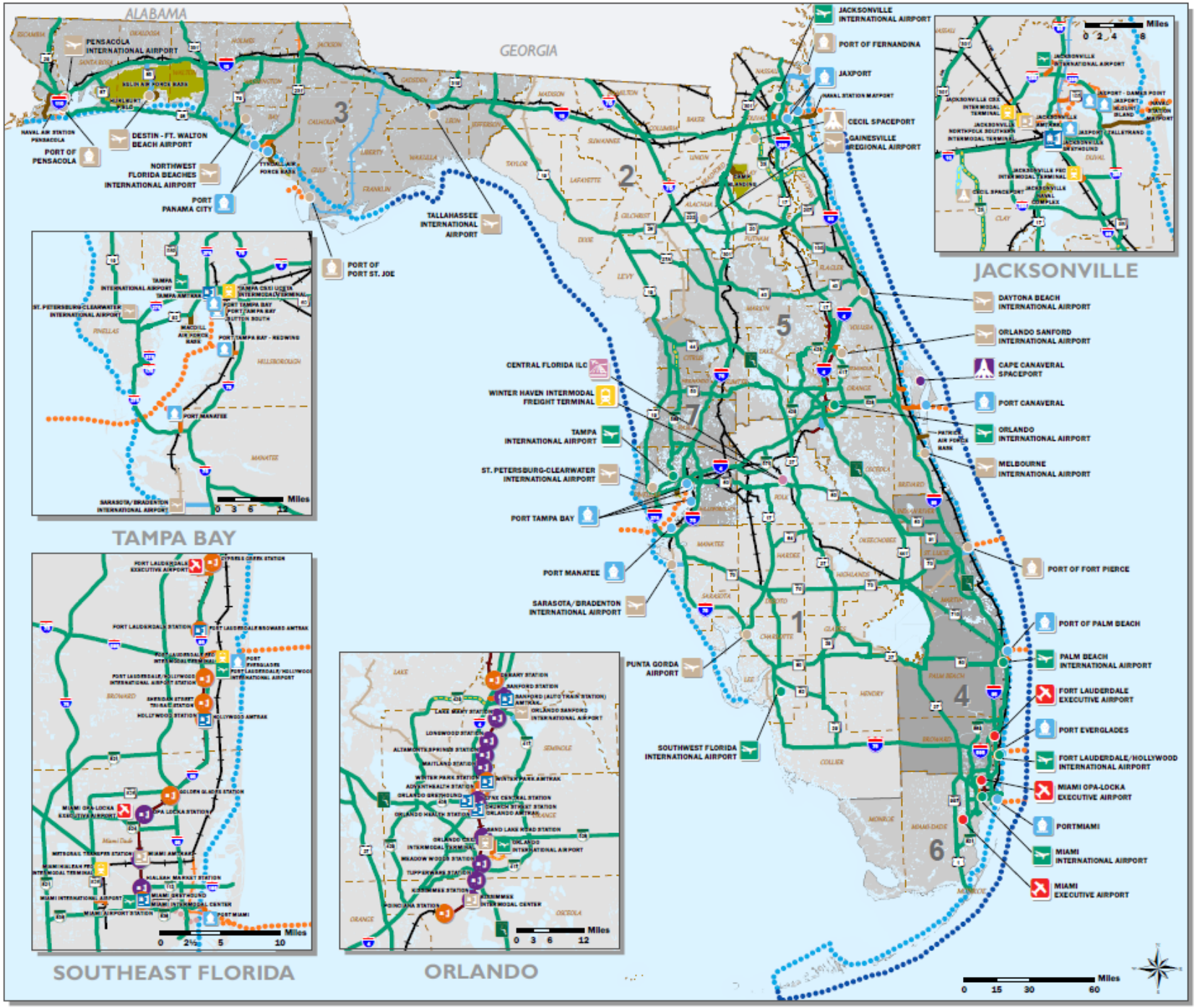
- Two components
  - SIS
  - Strategic growth
- Three types of facilities
  - Hubs
  - Corridors
  - Connectors
- Key principles
  - Emphasis on interregional, interstate, international travel
  - Objective measures using national and industry standards
  - Screening for environmental stewardship

Designation Criteria (examples)

Facility	Criterion	SIS Threshold
Commercial service airports	Passenger enplanements; freight and mail tonnage	2.5% of Florida total
Public seaports	Freight tonnage; containers	2.5% of Florida total
	Home port cruise passengers	250,000 per year
Interregional passenger terminals	Interregional rail or bus passengers	100,000 per year (50,000 if co-located)
Freight rail terminals	Intermodal rail units	5% of Florida total

Strategic Growth Designation Criteria

Strategic Growth Component *(For all hubs and corridors unless otherwise noted)*
Must meet AT LEAST ONE of the following:
☐ Is the facility projected to meet SIS minimum activity levels within three years of being designated?
☐ Is the facility determined by FDOT to be of compelling state interest, such as serving a unique marketing niche or potentially becoming the most strategic facility in a region that has no designated SIS facility?
Must meet ALL of the following:
☐ Does the facility have a current master plan as well as a prioritized list of production ready projects?
☐ Is the facility identified in a local government comprehensive plan, Comprehensive Economic Development Strategy (CEDS), Transit Development Plan, or equivalent?
☐ Does the facility have partner and public consensus on viability of a new or significantly expanded facility?
☐ Does the facility meet Community and Environment screening criteria?



Strategic Intermodal System

System Map

Airports & Spaceports

- SIS Commercial Service Airport
- Strategic Growth Commercial Service Airport
- SIS General Aviation Reliever Airport
- SIS Spaceport
- Strategic Growth Spaceport

Seaports

- SIS Seaport
- Strategic Growth Seaport

Freight Rail Terminals

- SIS Freight Rail Terminal
- Strategic Growth Freight Rail Terminal

Intermodal Logistic Center

- Strategic Growth Intermodal Logistic Center

Interregional Passenger Terminals

- SIS Passenger Terminal
- Strategic Growth Passenger Terminal

Urban Fixed Guideway Transit Terminal

- SIS Urban Fixed Guideway Hub
- SIS Urban Fixed Guideway Station

Highway

- SIS Highway Corridor
- Future SIS Highway Corridor
- Strategic Growth Highway Corridor
- SIS Highway Connector
- Strategic Growth Highway Connector
- Future Strategic Growth Highway Connector
- SIS Military Access Facility

Rail & Urban Fixed Guideway

- SIS Railway Corridor
- Strategic Growth Railway Corridor
- SIS Railway Connector
- Strategic Growth Railway Connector
- SIS Urban Fixed Guideway

Waterways

- SIS Waterway
- Strategic Growth Waterway
- SIS Waterway Connector
- SIS Waterway Shipping Lane

Florida Department of Transportation
Strategic Intermodal System
October 2019
http://www.fdot.gov/planning/systems 850-414-4900

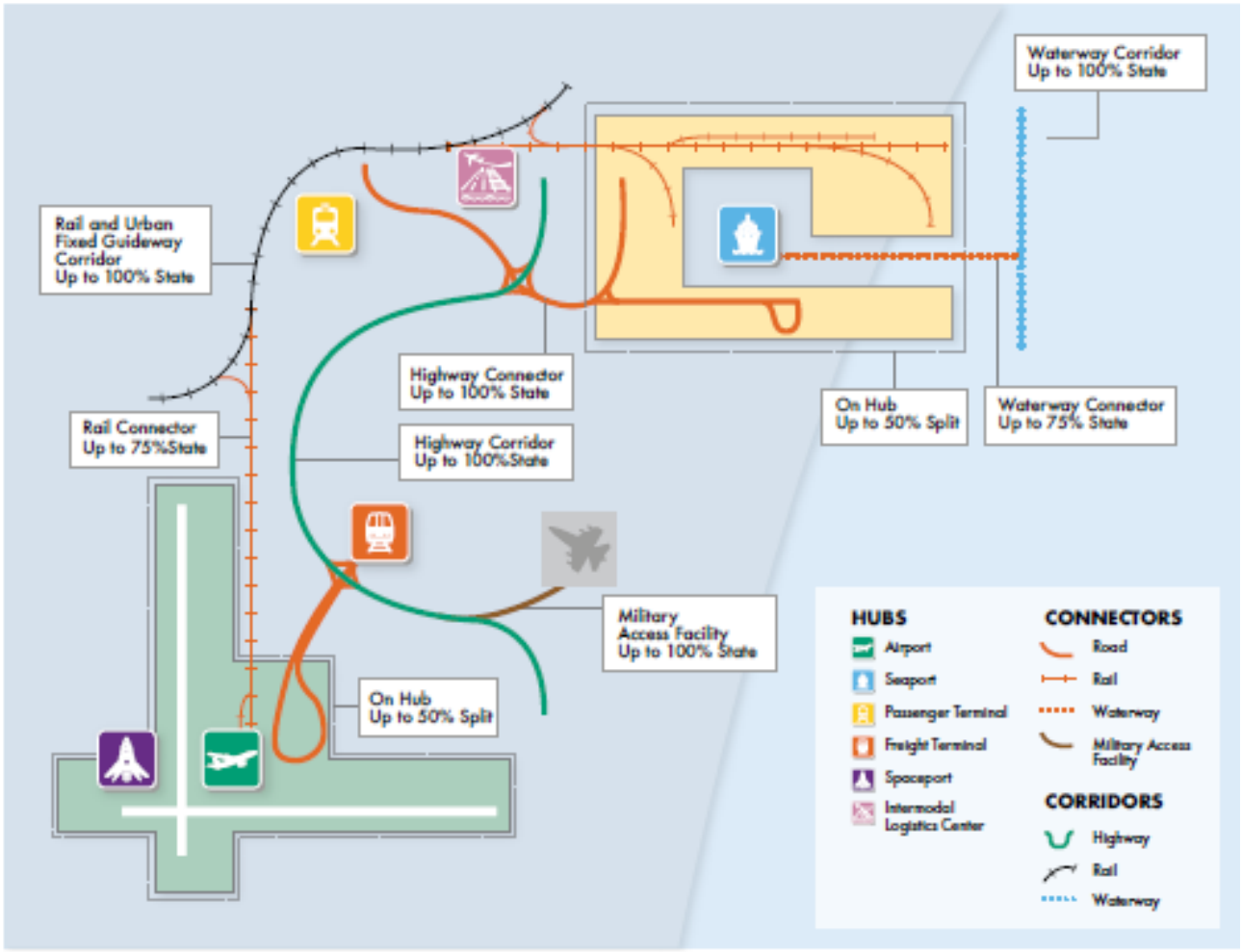
Significance of the SIS

Facility Type	Measure	% of Florida
Airports	Passenger enplanements	>99%
	Air cargo tonnage	>99%
Seaports	Home-port cruise passengers	>99%
	Waterborne freight tonnage	>99%
Rail Terminal	Interregional passengers	>67%
	Freight rail tonnage	>98%
Highways	All traffic on State Highway System	67%
	Truck traffic only	74%

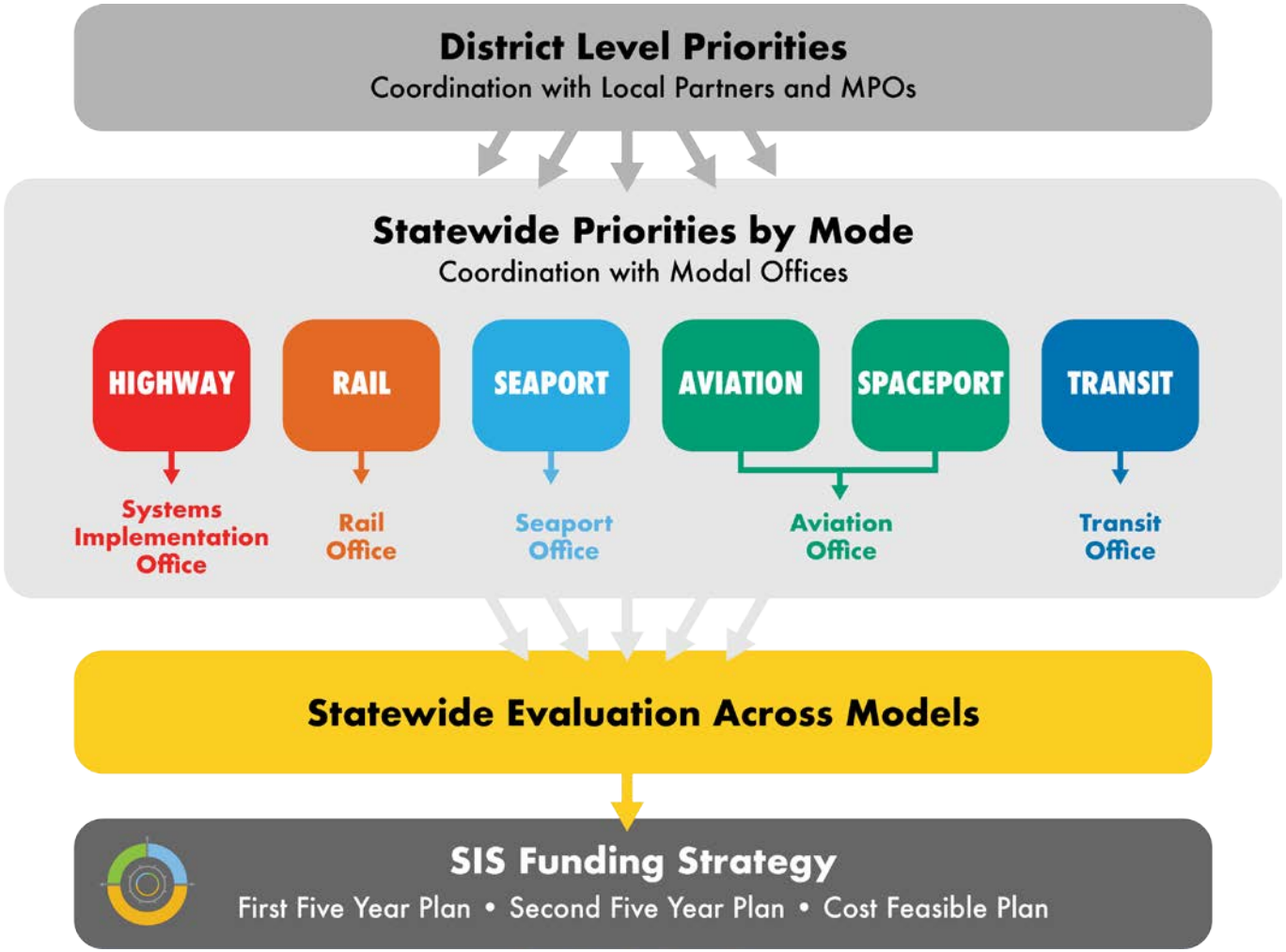
Funding Eligibility Guidance (examples)

Facility Type	Eligible Uses
Commercial service airports	▪ Ground transportation: on-airport facilities supporting primary flow of passenger and cargo ▪ Landside connections: multi-modal connectivity from terminals to other SIS facilities ▪ Airside connections: aprons, taxiways runways serving passenger and cargo facilities ▪ Terminal connections: capacity improvements for moving people and cargo
Highways	▪ Capacity projects (added lanes, special use lanes, interchange/intersection improvements, new facilities, etc.) ▪ Supporting facilities (e.g., park n ride lots, truck parking) with capacity benefits ▪ Infrastructure-based ITS capital projects with capacity benefits on constrained corridors

Leveraging Funding Through Partnerships



SIS Priority Setting Process



SIS Funding Strategy

- Adopted SIS Work Program (1st Five)
- Approved 2nd Five Year Plan
- Long-Range Cost Feasible Plan

2016 SIS Policy Plan

- SIS Objectives

Interregional Connectivity

Intermodal Connectivity

Economic Development

- Continuing Emphasis Areas from 2009
  - Reaffirm statutory intent for *interregional, interstate, and international* travel
  - Continue emphasis on *largest and most strategic facilities*

2016 SIS Policy Plan

- Emphasis Areas

Statewide and Regional Economic Development Opportunities

Freight Mobility and Trade Development

Modal and System Connectivity

Innovation and Technology

Coordination with Regional and Local Transportation and Land Use Decisions

2016 SIS Policy Plan Implementation

- Updated SIS designation criteria
  - Reclassified larger Emerging SIS facilities as SIS
  - Created Strategic Growth component
- Updated needs and funding eligibility guidance
  - E.g., TSMO solutions in congested corridors
- Updated Funding Strategy

Potential Focus Areas for 2021 Policy Plan

- Safety
- Resilience
- ACES/Technology/Innovation

Today's meeting

- Re-defining "Capacity"
- Expanding Mobility
- Re-defining "Interregional"
- Strategic Investment Decisions/Sustainable Funding

Commit to Vision Zero as our Top Priority

FTP Safety Subcommittee

Safety Subcommittee

- Charge
  - Discuss safety **themes, trends, and planning implications**
  - Identify **policy-level objectives or strategies** to address safety and support FTP goals
  - Review **safety data and emphasis areas** for the Strategic Highway Safety Plan (SHSP)
  - Review and provide input, as requested, on **related plans and processes**
  - Serve as **safety subject matter experts** for the FTP Steering Committee
- Products
  - 11 **long-range safety strategies** as input to FTP and SHSP

FTP Safety Subcommittee Membership

FDOT

U.S. Department of Transportation Federal Highway Administration

TEAMFL Transportation & Expressway Authority Membership of Florida

Florida Sheriffs Association

FRCA Florida Regional Councils Association

Florida HEALTH

Florida Transportation Builders' Assn. Inc. 1933

Florida League of Cities, Inc.

Highway Patrol Florida

FACERS Florida Association of County Engineers & Road Superintendents

ULI Urban Land Institute

FPTA Florida Public Transportation Association

AARP Real Possibilities

Florida Police Chiefs Association est. 1952

Small County Coalition of Florida

MPOAC

KEY STRATEGIES › COMMIT TO VISION ZERO

The highest priority of this FTP is to expand and strengthen the statewide commitment to eliminating transportation fatalities and serious injuries – Florida's "Vision Zero." Florida's transportation safety partners have focused on reducing fatalities and serious injuries through the "4Es" of engineering, education, enforcement, and emergency response. To achieve zero, we must expand beyond addressing specific hazards and influencing individual behavior to reshaping our systems and communities to create a safer environment for all travel. Florida will:

- **Create safer communities** through coordinated land use, urban design, and traffic operations decisions that create a safer environment for all modes of travel.
- **Reduce disparities** in transportation safety and other public health outcomes among socioeconomic groups.
- Expand our vision of zero fatalities to **encompass all transportation modes**, including rail, transit, shared mobility, and micromobility.
- Expand use of emerging technologies to **increase driver and vehicle safety**.
- **Engage a broader range of partners** including vehicle manufacturers, technology providers, insurance companies, and health care institutions in developing and implementing safety solutions.
- **Consider all aspects of public health, safety, and security** related to transportation.
- **Design infrastructure to consider access needs for first responders**, as well as operational flexibility during emergencies.
- **Continue to integrate safety** into all aspects of transportation planning and decision making.
- **Strategically allocate and align resources** to advance Florida's vision of zero fatalities, including higher funding priority for projects with an anticipated safety benefit.

FLORIDA'S STR
HIGHWAY SAFE

FDOT worked with tra
safety partners to up
state's Strategic High
Safety Plan in conjun
with the FTP. The SHS
focuses on 13 empha
for achieving Vision Z
including lane depart
impaired driving, vuln
road users, and inters

ROADWAYS
ROAD USERS
USER BEHAVIOR
TRAFFIC RECORDS AND INFOR
EVOLVING EMPHASIS AREAS
WORK ZONES / DROWSY OR ILL DRIVING / CRO

KEY STRATEGIES
COMMIT TO VISION ZERO
IDENTIFY & MITIGATE RISKS

OBJECTIV
ELIMINATE FATALITI
REDUCE CRASHES &
MITIGATE HEALTH, S
IMPROVE EMERGEN

2045

FLORIDA Transportation Plan

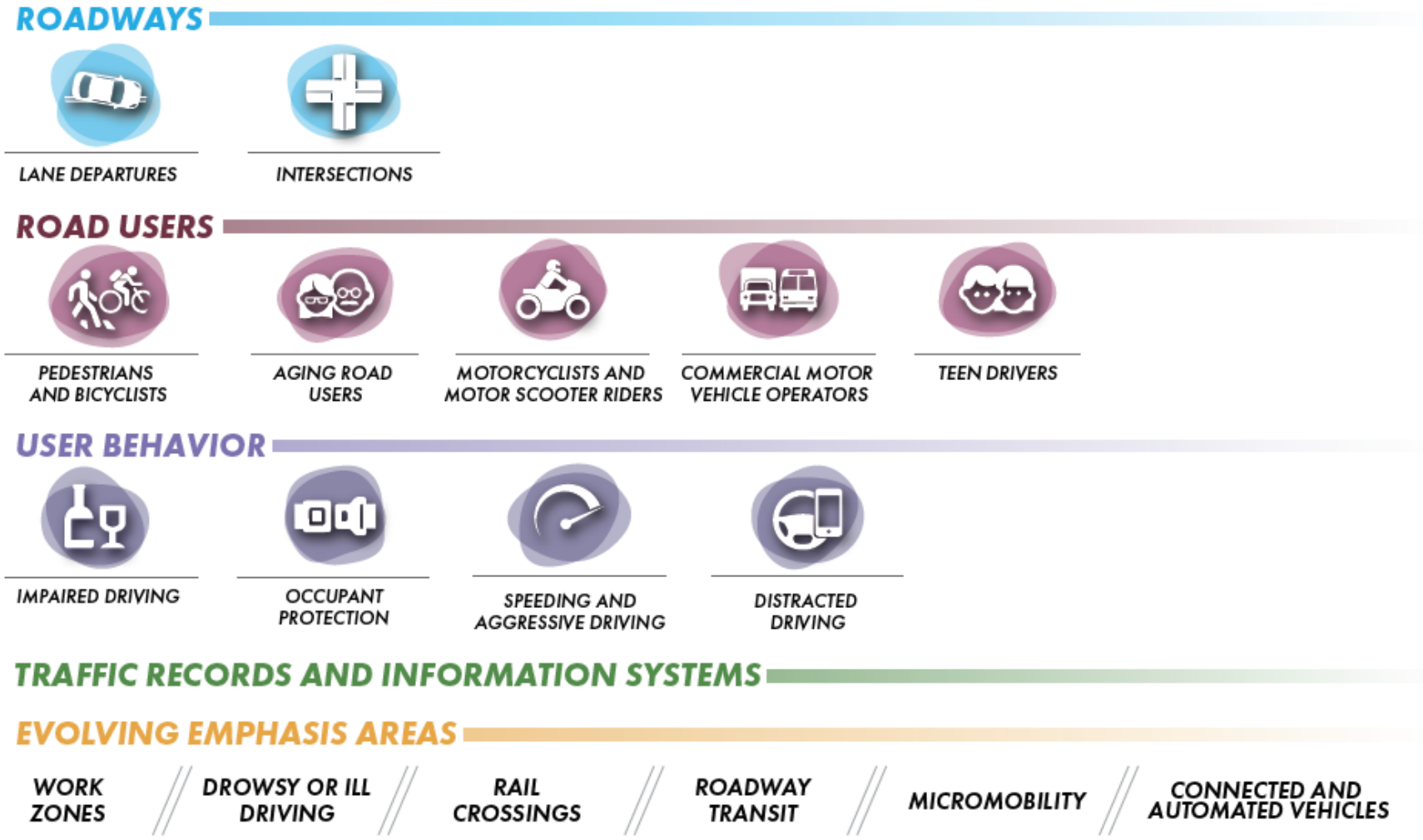
POLICY ELEMENT

DECEMBER 2020

Strategic Highway Safety Plan

- Reaffirms vision and target of zero fatalities and serious injuries
- Builds on the 4Es of traffic safety
  - Engineering; Education; Enforcement; Emergency Response
- Introduces 4Is of traffic safety
  - Intelligence; Innovation; Insight into Communities; Investments and Policies

2021 SHSP Emphasis Areas



Safety Subcommittee Recommendation	FTP Policy Element Strategy												SHSP Strategy
	Align invest-ments & goals	Provide sustain-able funding sources	Develop & retain skilled work-force	Commit to Vision Zero	Identify & mitigate risks	Trans-form major corridors & hubs	Complete transport networks	Expand transport info-structure	Prioritize mobility for people & freight	Enhance access to opportunity	Integrate land use & transport	Protect water, air, lands, habitat	
Design and operate multimodal infrastructure to reduce number and severity of crashes.				●		●		●					●
Implement and evaluate **outreach and communication** campaigns to increase public awareness of vulnerable road users and improve user behaviors.				●									●
Provide and participate in **education and training** with Florida's transportation safety partners.			●	●									●
Focus enforcement activities using data driven approaches.				●									●
Improve emergency response times to quickly and efficiently clear crashes, treat injuries, and prevent secondary crashes.				●	●								●
Improve the quality, availability, and timeliness of Florida's traffic records data and use that data to strategically apply countermeasures.				●									●

Florida Transportation Plan
SIS Policy Plan
Safety in SIS Prioritization

presented to

FTP Implementation Committee

presented by

Zachary Teders, CDM Smith Inc.

Your Florida. Your vision. Your plan.

February 11, 2021

Safety at FDOT

VITAL FEW

- Improve Safety
- Enhance Mobility
- Inspire Innovation

TARGET ZERO
FATALITIES & SERIOUS INJURIES

SURVIVE THE RIDE
TRAUMA | TREATMENT | TRAINING
Funded by the Florida Department of Transportation

SAFE MOBILITY FOR LIFE
FDOT

TEEN SAFE DRIVING COALITION
FLORIDA

DRIVE SOBER OR GET PULLED OVER

ALERT TODAY
FDOT
ALIVE TOMORROW

CLICK IT OR TICKET FLORIDA

PUT IT DOWN

FLORIDA OCCUPANT PROTECTION COALITION

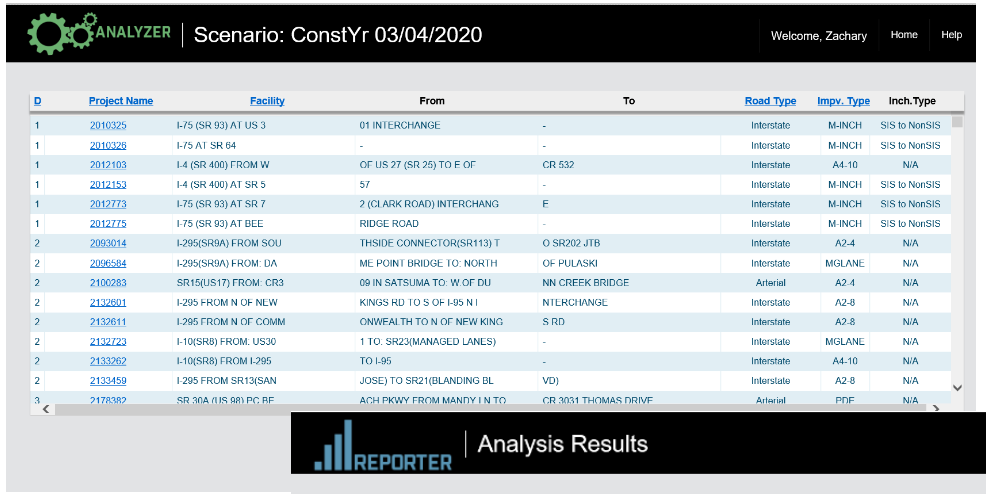
SIS Funding Strategy

1st Five-Year Plan
Work Program

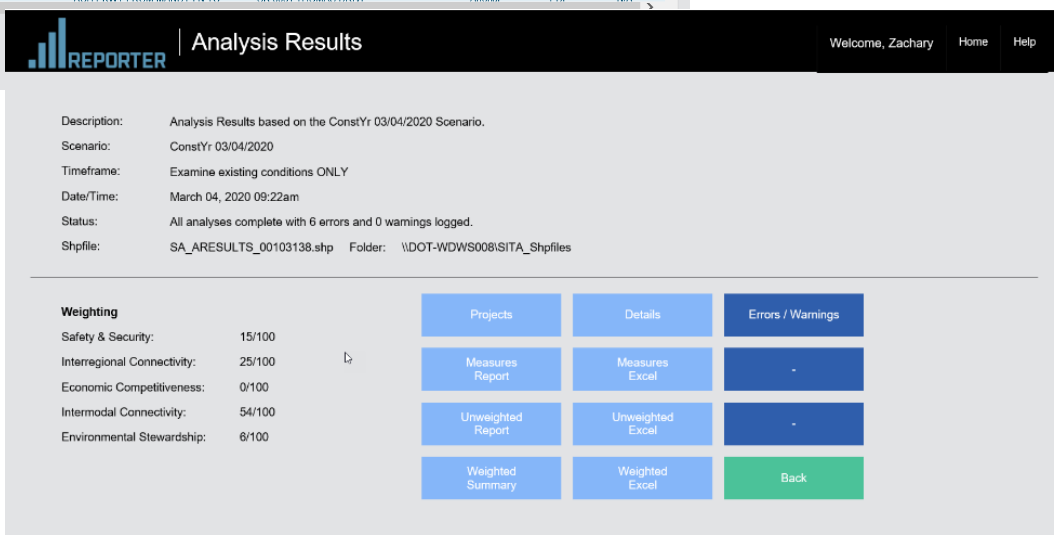
2nd Five-Year Plan

Cost Feasible Plan

SIS Prioritization



D	Project Name	Facility	From	To	Road Type	Impv. Type	Inch.Type
1	2010325	I-75 (SR 93) AT US 3	01 INTERCHANGE	-	Interstate	M-INCH	SIS to NonSIS
1	2010326	I-75 AT SR 64	-	-	Interstate	M-INCH	SIS to NonSIS
1	2012103	I-4 (SR 400) FROM W	OF US 27 (SR 25) TO E OF	CR 532	Interstate	A4-10	N/A
1	2012153	I-4 (SR 400) AT SR 5	57	-	Interstate	M-INCH	SIS to NonSIS
1	2012773	I-75 (SR 93) AT SR 7	2 (CLARK ROAD) INTERCHANG	E	Interstate	M-INCH	SIS to NonSIS
1	2012775	I-75 (SR 93) AT BEE	RIDGE ROAD	-	Interstate	M-INCH	SIS to NonSIS
2	2093014	I-295(SR9A) FROM SOU	THSIDE CONNECTOR(SR113) T	O SR202 JTB	Interstate	A2-4	N/A
2	2096584	I-295(SR9A) FROM: DA	ME POINT BRIDGE TO: NORTH	OF PULASKI	Interstate	MGLANE	N/A
2	2100283	SR15(US17) FROM: CR3	09 IN SATSUMA TO: W OF DU	NN CREEK BRIDGE	Arterial	A2-4	N/A
2	2132601	I-295 FROM N OF NEW	KINGS RD TO S OF I-95 N I	NTERCHANGE	Interstate	A2-8	N/A
2	2132611	I-295 FROM N OF COMM	ONWEALTH TO N OF NEW KING	S RD	Interstate	A2-8	N/A
2	2132723	I-10(SR8) FROM: US30	1 TO: SR23(MANAGED LANES)	-	Interstate	MGLANE	N/A
2	2133262	I-10(SR8) FROM I-295	TO I-95	-	Interstate	A4-10	N/A
2	2133459	I-295 FROM SR13(SAN	JOSE) TO SR21(BLANDING BL	VD)	Interstate	A2-8	N/A
3	2178382	SR 30A (US 98) PC BE	ACH PKWY FROM MANDY LN TO	CR 3031 THOMAS DRIVE	Arterial	PDE	N/A



SIT

STRATEGIC Investment Tool

HIGHWAY COMPONENT

Measures in the SIT

1 SAFETY

Crash Ratio • Fatal Crash Ratio • Bridge Appraisal Rating • Emergency Evacuation • Personal Safety • Adaptation

2 INTERREGIONAL CONNECTIVITY

Volume to Capacity *(V/C)* Ratio • Truck Percentage • Vehicular Volume • System Gap • Change in V/C – LOS *(mainline projects)* • Interchange Operations *(interchange projects)* • Bottleneck • Delay • Travel Time Reliability • Link to Military Base • Rural Areas of Opportunity (RAO)

3 ECONOMIC COMPETITIVENESS

Population • Population Growth Rate • Employment • Employment Growth Rate • Population Density

4 ENVIRONMENTAL STEWARDSHIP

Farmlands • Geology • Archaeological / Historical Sites • Contamination • Conservation and Preservation • Wildlife and Habitat • Flood Plains / Flood Control • Coastal / Marine • Special Designations • Water Quality • Wetlands • Air Quality • Energy and Sustainability • Social Investment / Justice • Residential Community Impact

5 INTERMODAL CONNECTIVITY

Connector Location • Truck Volume • Transit Connectivity • Managed / Special Use Lanes • Distance to SIS Hub Facilities • SUN Trail Proximity

Implementation Discussion: Safety

Discussion Questions

- Are you aware of other key ongoing implementation activities?
- What significant gaps or opportunities exist?
- What safety opportunities should we prioritize, promote, and track for FTP implementation?
  - Safety Subcommittee recommendations
  - Additional opportunities
- What safety opportunities are most important for SIS policy?

Commit to Vision Zero as Our Top Priority

Are you aware of other key ongoing implementation activities?

Policy Element Strategy	Relevant Safety Subcommittee Recommendation	Existing Implementation Examples	Potential Implementation Opportunities and Gaps
Create safer communities through coordinated land use, urban design, and traffic operations decisions that create a safer environment for all modes of travel.	• Design and operate multimodal infrastructure to reduce number and severity of crashes. • Align transportation and land use decisions to promote safe, accessible, and equitable transportation choices. • Use data driven problem identification to direct improvements to communities lacking safe mobility options and limited access to services. • Develop, deploy, and adopt transportation technologies to improve safety by reducing human error and expanding available safety applications. • Improve the quality, availability, and timeliness of Florida's traffic records data and use that data to strategically apply countermeasures. • *Florida SHSP: Engineering; Education; Enforcement; Emergency Response; Intelligence; Innovation; Insight into Communities; Investments and Policies*	• Speed management and context classification (FDOT Design Manual) • Freight Mobility and Trade Plan (FMTP) • Traffic Incident Management (TIM) • TSM&O Strategic Plan • Florida Automated Vehicles and Connected Vehicles Initiative • CAV Business Plan • Florida Impaired Driving Coalition • Florida Occupant Protection Coalition • Ride SMART Florida • Alert Today Florida • Safe Routes to School	•

What significant gaps or opportunities exist?

Expand Transportation Infostructure

FTP ACES Subcommittee

What We've Done So Far...

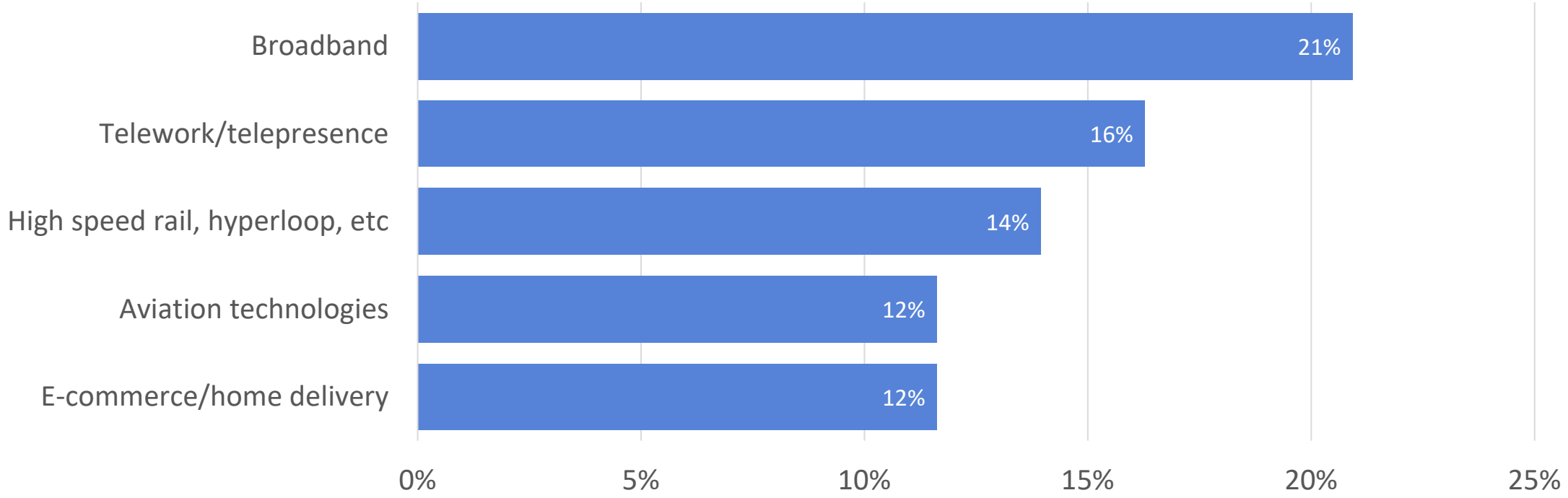
- Review of Existing Initiatives
- ACES Subcommittee
- Preparing the SIS for ACES Study
- FTP Policy Element Strategies

ACES Subcommittee Recap

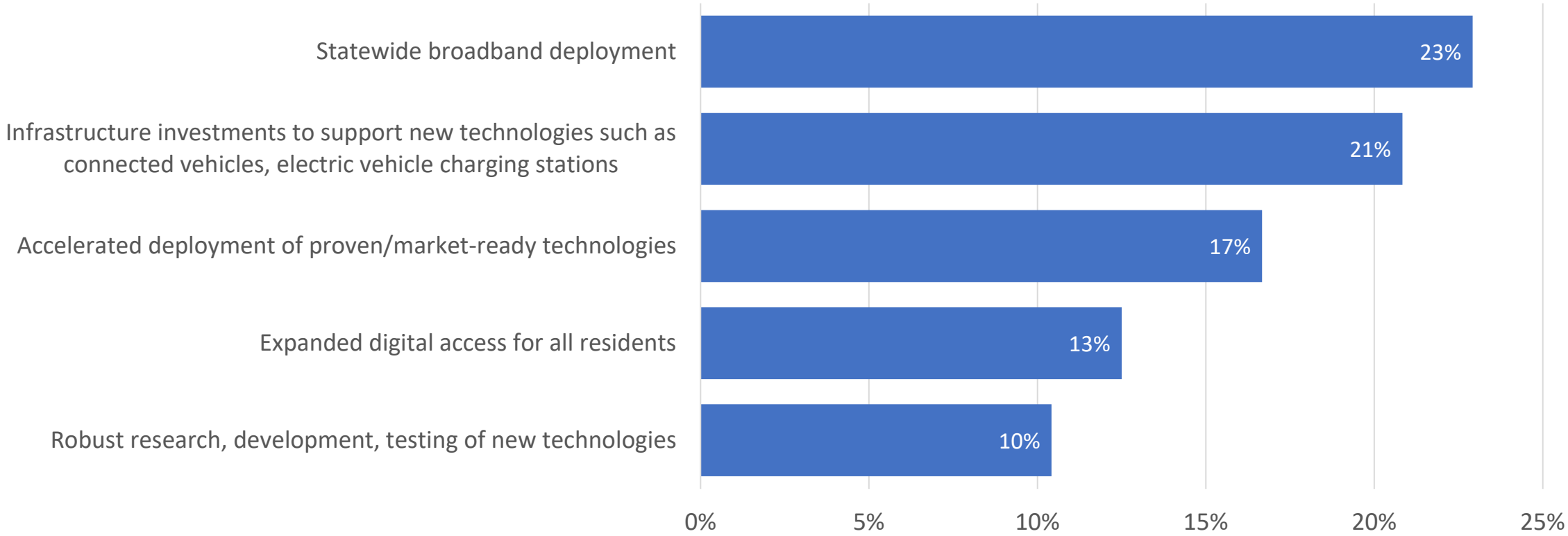
- Charge
  - Focus on automated, connected, electric, shared
- Participation
  - 6 in-person or web conference meetings
  - ~250 total attendees
- Strategy Development
  - 22 strategies drafted, organized into 7 categories
  - Revisions based on Subcommittee and Steering Committee feedback

ACES Subcommittee Strategies Framework

Steering Committee Poll (May 2020): Top 5 Additional Aspects of Technology/Innovation to be Considered in the FTP

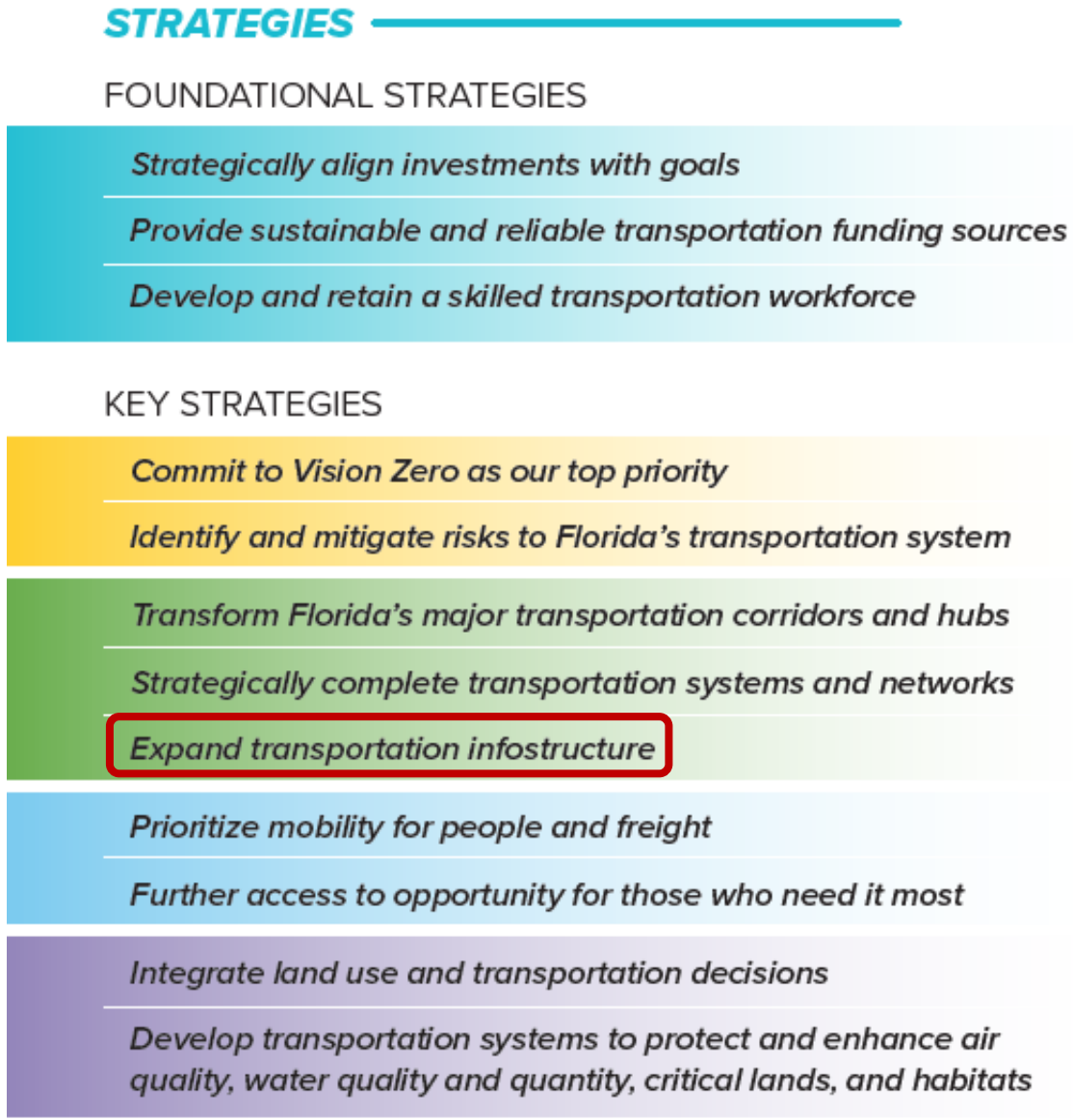


Steering Committee Poll (May 2020): Top 5 Technology/Innovation Strategies that Will Bring the Greatest Gain toward all FTP Goals



Innovation in FTP Policy Element

- Overarching theme
- Suggestions for new progress indicators
- ACES Subcommittee recommendations and other ideas spread among multiple strategies



ACES Subcommittee Recommendation	FTP Policy Element Strategy											
	Align invest-ments & goals	Provide sustain-able funding sources	Develop & retain skilled work-force	Commit to Vision Zero	Identify & mitigate risks	Trans-form major corridors & hubs	Complete transport networks	Expand transport info-structure	Prioritize mobility for people & freight	Enhance access to opportunity	Integrate land use & transport	Protect water, air, lands, habitat
Customers • All customer groups • Special events/emergencies • Public awareness/education • Customer values/preferences					●				●	●		
Economic & Workforce Development • Agile policies/regulations • Business efficiency • Skilled workforce			●					●	●		●	
Infrastructure & Design • Prepare SIS for ACES • Innovative corridor design • Innovative community design				●	●	●	●	●	●	●	●	●
Technology & Data • Public and private roles • Data management • Data and analysis tools • Privacy/information security • Cybersecurity								●				
Partnerships • Nontraditional partners • Public/private partnerships	●	●	●	●	●	●	●	●	●	●	●	●
Planning • Agile process • Link planning & operations • Refocus on safety & mobility	●		●	●	●	●	●	●	●	●	●	●
Funding • Flexible public sector funding • Future funding model	●	●	●	●	●	●	●	●	●	●	●	●

Expand Transportation Infostructure

- Deploy surface transportation infrastructure to support **ACES** and other emerging technologies
- Support statewide **broadband** connectivity
- Adapt and accommodate **emerging air and space technologies**
- Adapt and accommodate **emerging logistics technologies**
- Support **smart region/city initiatives**
- Identify, respond to, and mitigate **cybersecurity and data security** threats

KEY STRATEGIES › **EXPAND TRANSPORTATION INFOSTRUCTURE**

Our definition of transportation infrastructure must broaden from pavement, bridges, and buses to the communications backbone, sensors, and other technologies that allow the transportation system to function – our transportation information technology infrastructure, or "infostructure." We can build on existing Intelligent Transportation Systems and Transportation Systems Management and Operations deployments to incorporate new technologies. This will require closer collaboration with other agency, academic, and private sector partners and more agility in how we plan for, invest in, and maintain our system. Florida will:

- Deploy surface transportation infrastructure to support **automated, connected, electric, and shared vehicles (ACES)** and other emerging technologies, such as deployment of roadside sensors and communication systems, electric vehicle charging stations, electronic payment, and positive train control technologies.
- **Support statewide broadband connectivity**, particularly for rural and underserved areas, to supplement access to services and expand use of transportation technologies.
- Adapt and accommodate **emerging air and space technologies** such as next-generation air traffic control systems, urban air mobility, unmanned aerial systems, and space-based communication networks.
- Adapt and accommodate **emerging logistics technologies** at seaports, air cargo facilities, intermodal logistics centers, rail corridors and terminals, and heavy truck corridors.
- Support **smart region/city initiatives** to leverage transportation technology and data to support economic development, public health and safety, and quality of life goals.
- Identify, respond to, and mitigate **cybersecurity and data security threats** related to transportation systems.

ELECTRIC VEHICLE ROADMAP

The Florida Department of Agriculture and Consumer Services' (DACS) Office of Energy is leading the development of an Electric Vehicle Roadmap for the state of Florida. 2020 legislation requires FDOT, in coordination with DACS, the Public Service Commission, and other partners, to develop a master plan for electric vehicle charging station infrastructure along the State Highway System.

KEY STRATEGIES

TRANSFORM MAJOR CORRIDORS & HUBS
COMPLETE TRANSPORTATION NETWORKS
EXPAND TRANSPORTATION INFOSTRUCTURE

OBJECTIVES

MAINTAIN TRANSPORTATION ASSETS
INCREASE RESILIENCE
MEET CUSTOMER EXPECTATIONS
IMPROVE SYSTEM CONNECTIVITY

Preparing the SIS for ACES

presented to

FTP Implementation Committee

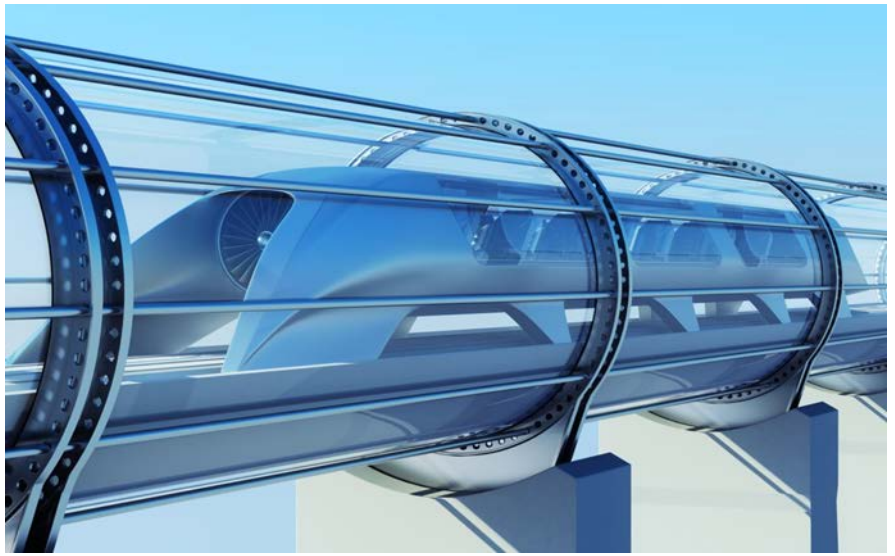
presented by

Jennifer King

Your Florida. Your vision. Your plan.

February 11, 2021

The Future is Now



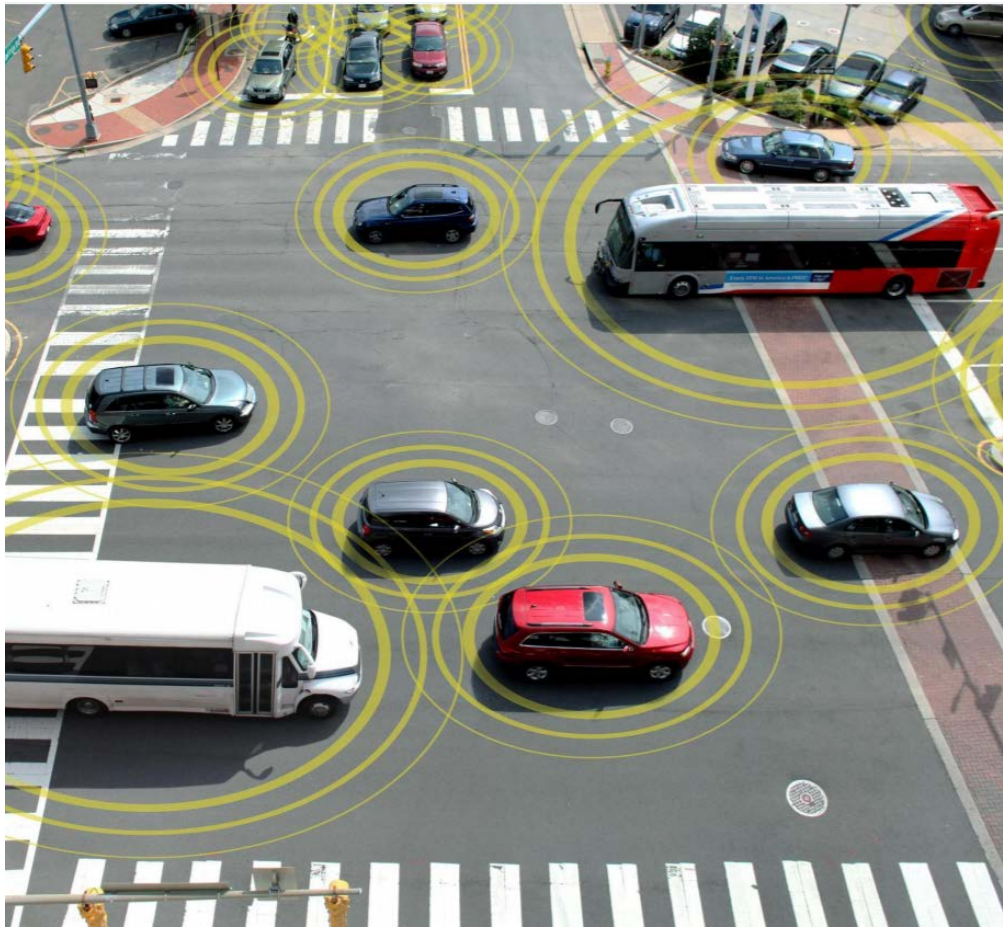
Motivation

- 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****."*

Purpose

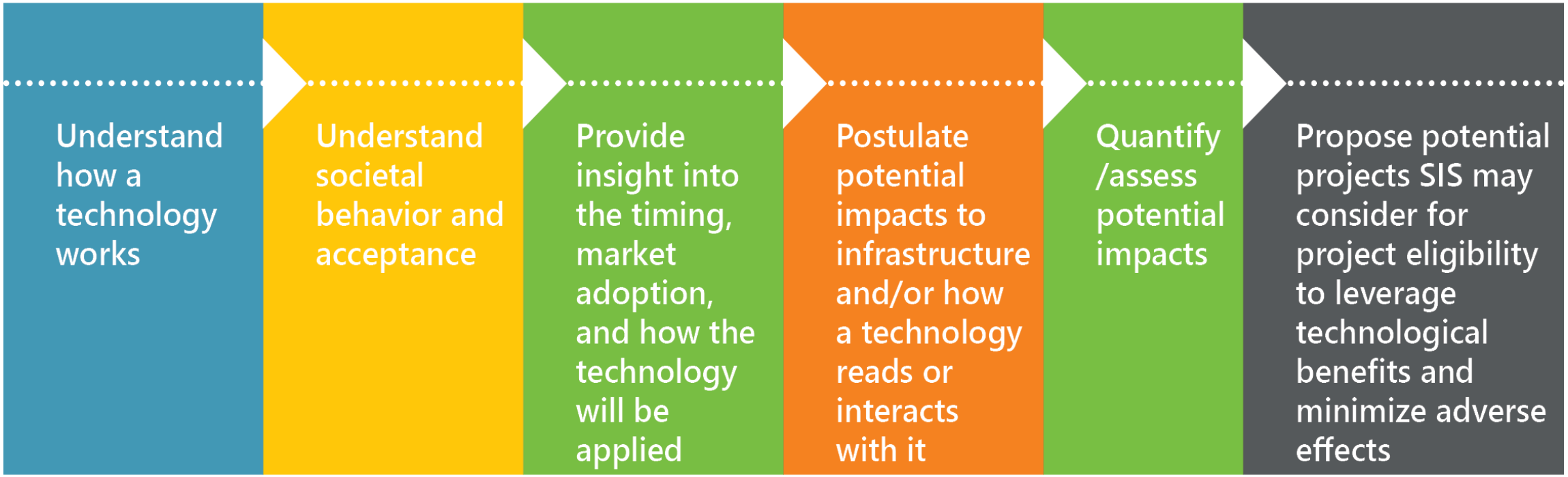
- Assessed technology trends and impact on SIS facilities
- Completed safety and mobility analyses
- Identified opportunities and challenges (i.e., SWOT analysis)
- Developed strategies to leverage and address emerging technologies and business models
- Developed recommendations for how these considerations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



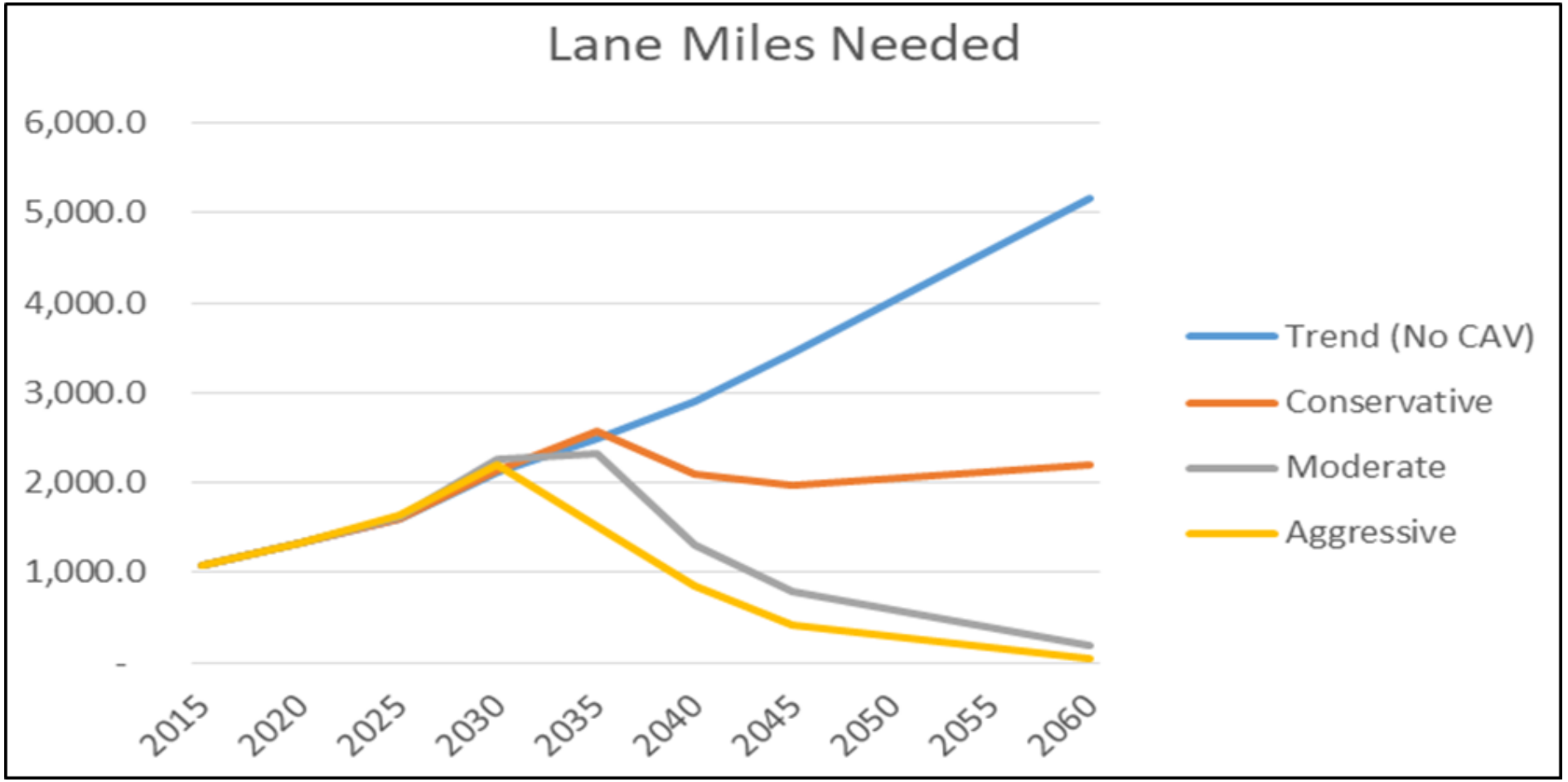
Key Recommendations

1) **Redefine ‘capacity’ for the SIS**
2) **Expand SIS funding eligibility to allow for additional ACES infrastructure**
3) **Review and update appropriate FDOT policies, procedures and manuals to develop, design, construct, and maintain CAV-Ready Infrastructure**
4) **Work with Districts to assess system needs and develop a roadmap to address the needs**
5) **Form partnerships with different organizations to develop innovative strategies to implement emerging technology solutions**
6) **Monitor technology adoption rates**
7) **Include ACES components in updates to SIS Planning Documents**

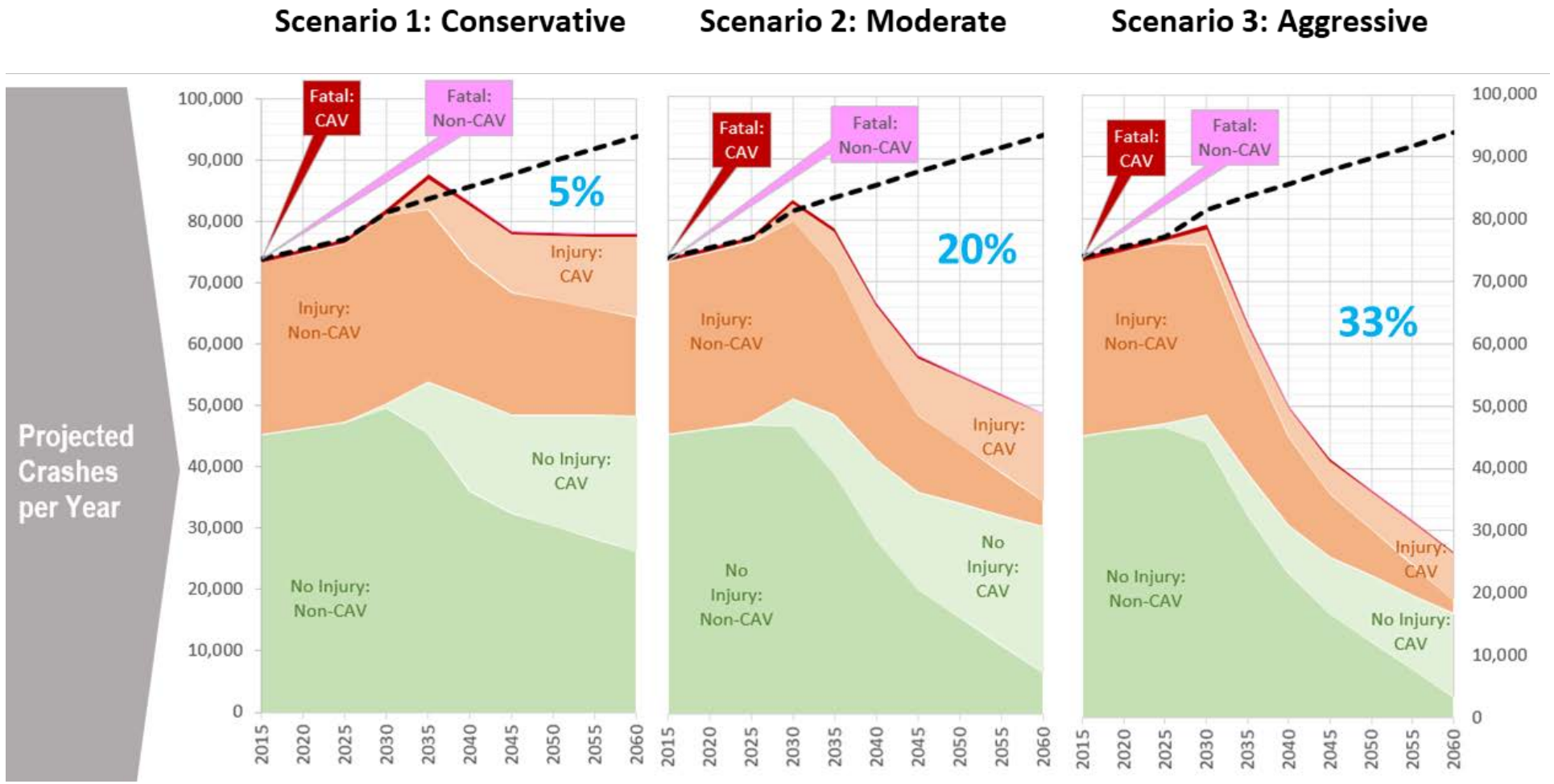
Approach for Preparing SIS for ACES



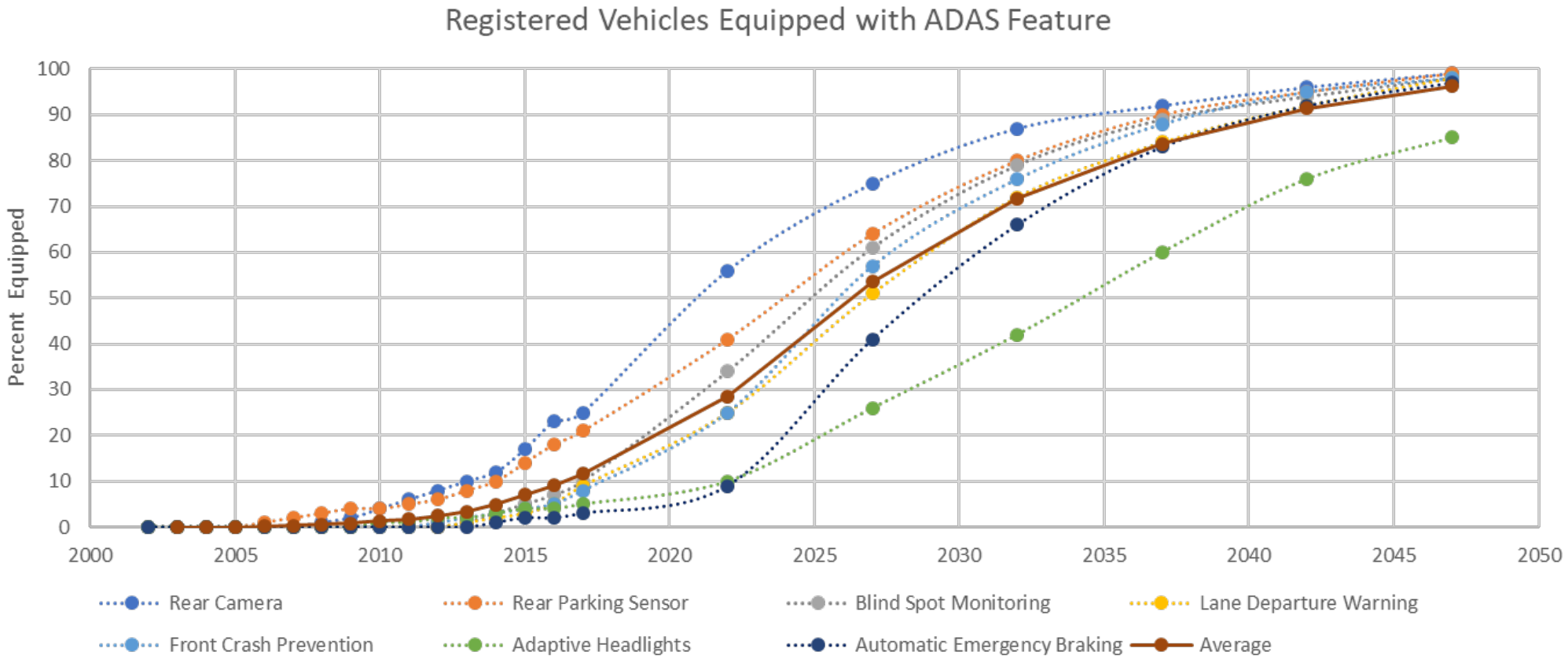
Capacity Impacts on the SIS



Safety Impacts on the SIS

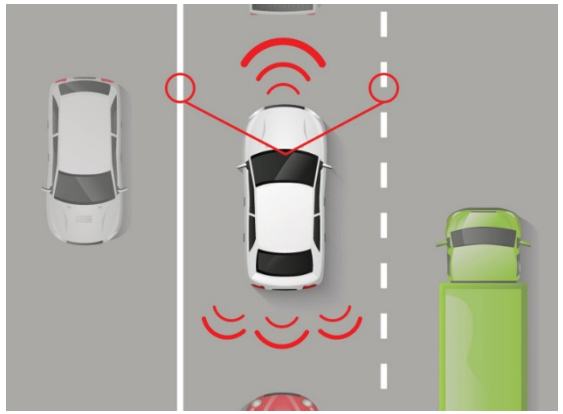


Advanced Driver Assistance Systems – Market Adoption



Data Source: HLDI Bulletin Vol. 34, No. 28: Sept. 2017

Potential SIS Projects



Enabling Technology/ Business Model	Potential Projects	Year/Market Adoption
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%)

Potential SIS Projects

SIS Highway

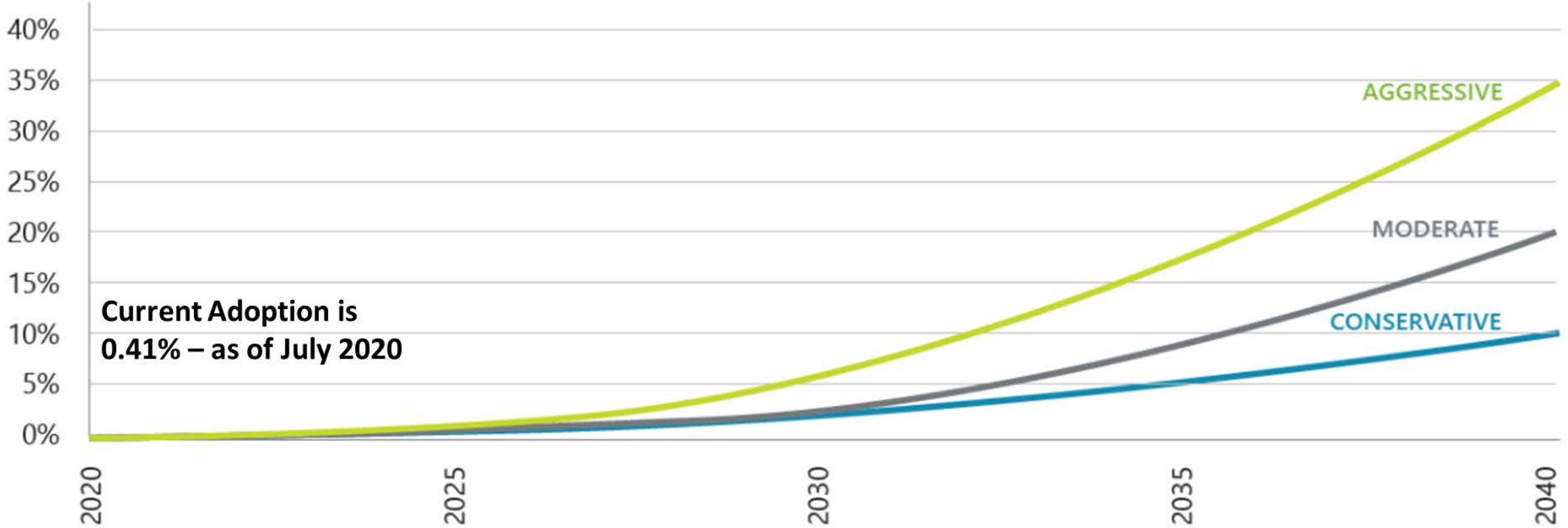
- Fiber Optics
- Road Side Units (RSUs)

SIS Highway Connector

- Advanced Traffic Signal Controllers (ATSC)

Enabling Technology/ Business Model	Potential Projects	Year/Market Adoption
Dedicated Short Range Communications (DSRC) CV to X 5G Cellular	Fiber Optic Cabling Road Side Units (RSUs) Supplemental ITS cameras/ sensors Adaptive Signal Controllers (Arterials)	2027 (30%)

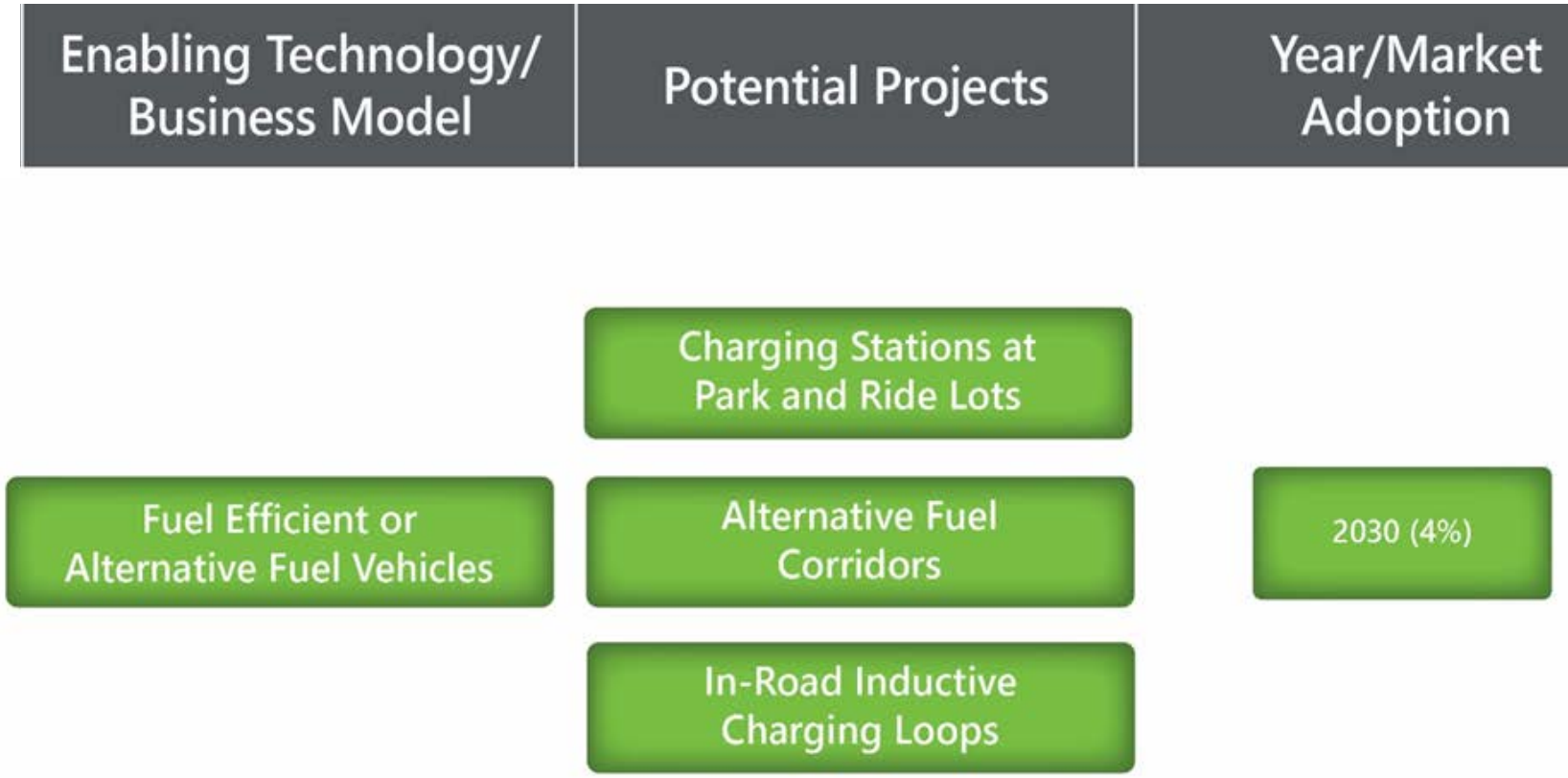
EV Market Adoption in Florida



Potential SIS Projects

<u>SIS Facilities</u>

- EVSE in rural areas to fill gaps in the statewide network – reduce range anxiety for long-range travel and emergency evacuations
- Support the Electric Vehicle Master Plan



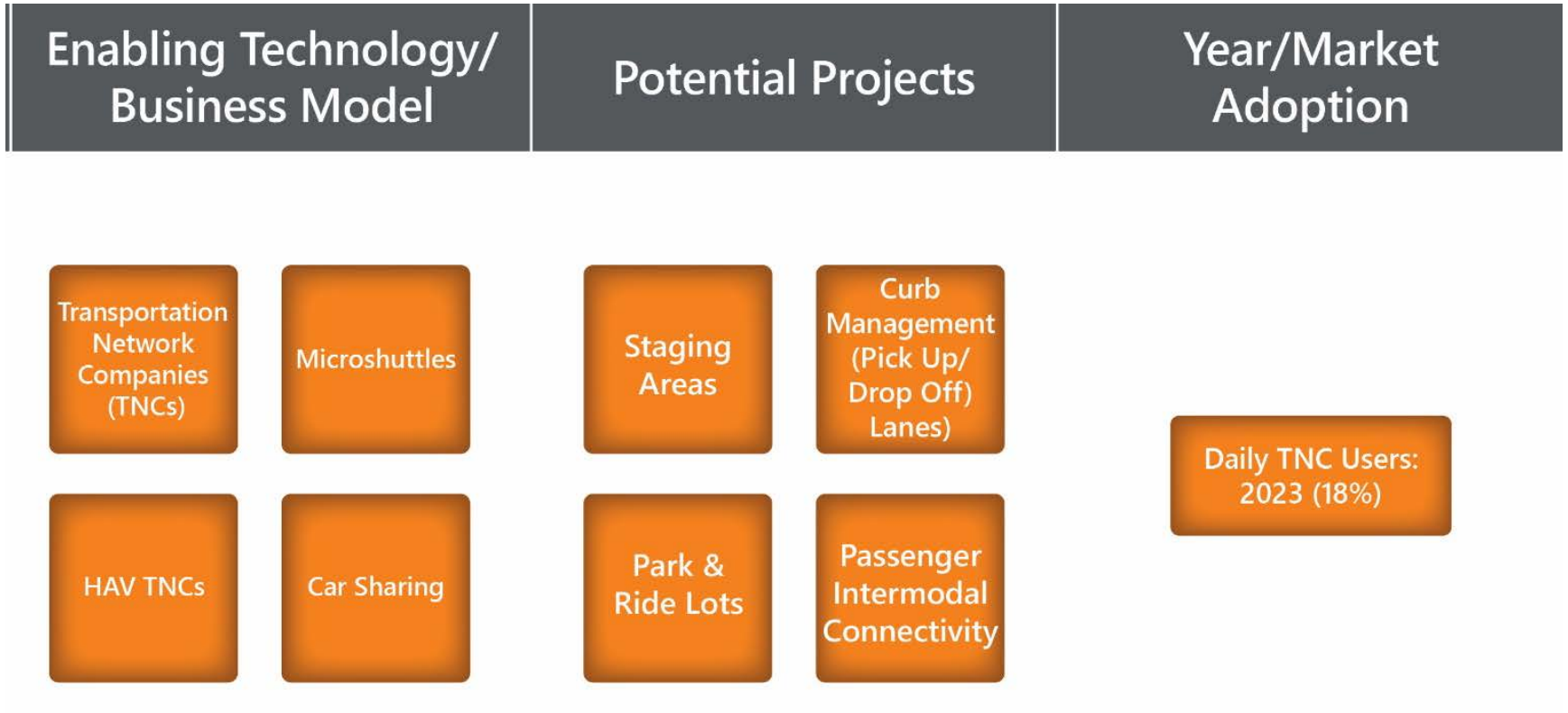
Potential SIS Projects

SIS Highway

- Passenger intermodal connectivity (BRT-to-Park & Ride)

SIS Hubs

- Curb management (pick-up/drop-off lanes)
- Fewer parking garages
- Staging areas



Key Recommendations

1) **Redefine ‘capacity’ for the SIS**
2) **Expand SIS funding eligibility to allow for additional ACES infrastructure**
3) **Review and update appropriate FDOT policies, procedures and manuals to develop, design, construct and maintain CAV-Ready Infrastructure**
4) **Work with Districts to assess system needs and develop a roadmap to address the needs**
5) **Form partnerships with different organizations to develop innovative strategies to implement emerging technology solutions**
6) **Monitor technology adoption rates**
7) **Include ACES components in updates to SIS Planning Documents**

Discussion Questions on Technology (Upcoming Session After Lunch)

- Are you aware of other key ongoing implementation activities?
- What significant gaps or opportunities exist?
- What technology should we prioritize, promote, and track for FTP implementation?
  - ACES Subcommittee recommendations
  - Preparing the SIS for ACES recommendations
  - Additional ideas
- What technology is most important for SIS policy?

See You At 1:30!

FTP Implementation Committee Meeting #1

Webinar

presented to

FTP Implementation Committee

February 11, 2021

FLORIDA Transportation Plan

Your Florida. Your vision. Your plan.

Welcome Back!

Implementation Discussion: Technology

Discussion Questions

- Are you aware of other key ongoing implementation activities?
- What significant gaps or opportunities exist?
- What technology should we prioritize, promote, and track for FTP implementation?
  - ACES Subcommittee recommendations
  - Preparing the SIS for ACES recommendations
  - Additional ideas
- What technology is most important for SIS policy?

Identify and Mitigate Risks to Florida's Transportation System

FTP Resilience Subcommittee

What We've Done So Far...

- Review of Existing Initiatives
- FTP Resilience Subcommittee
- FTP Policy Element Strategies
- FDOT Resilience Policy

Resilience Subcommittee Recap

- Charge
  - Focus on policy-level strategies to address and maximize transportation system resilience
- Participation
  - 4 in-person or web conference meetings
  - ~200 total attendees
- Strategy Development
  - 13 strategies with identification of Top 5
  - Revisions based on Subcommittee and Steering Committee feedback

Resilience Subcommittee Strategy Development Process

Identify/Rank Strategies

July 2019 – October 2019

Resilience Subcommittee meetings, Resilient Florida Workshop, Resilience Campaign, Trends in Resilience Survey, and partner outreach events

Top Strategies

Review in Context of Goals

October 2019

Resilience Subcommittee meeting

- **SAFETY** and **SECURITY** for residents, visitors, and businesses
- **AGILE, RESILIENT,** and **QUALITY** Transportation **INFRASTRUCTURE**
- **CONNECTED, EFFICIENT,** and **RELIABLE MOBILITY** for people and freight
- **TRANSPORTATION CHOICES** that improve accessibility and equity
- Transportation solutions that **ENHANCE FLORIDA'S ENVIRONMENT**
- Transportation systems that **ENHANCE FLORIDA'S COMMUNITIES**
- Transportation solutions that **STRENGTHEN FLORIDA'S ECONOMY**

Priority Resilience Themes

October 2019

Resilience Subcommittee meeting

Review Strategies in Context of Priority Themes

November 2019

Following Resilience Subcommittee meeting

Strategy Refinement and Survey

February 2020

Resilience Subcommittee meeting

FTP Steering Committee

May 2020

Resilience Subcommittee meeting

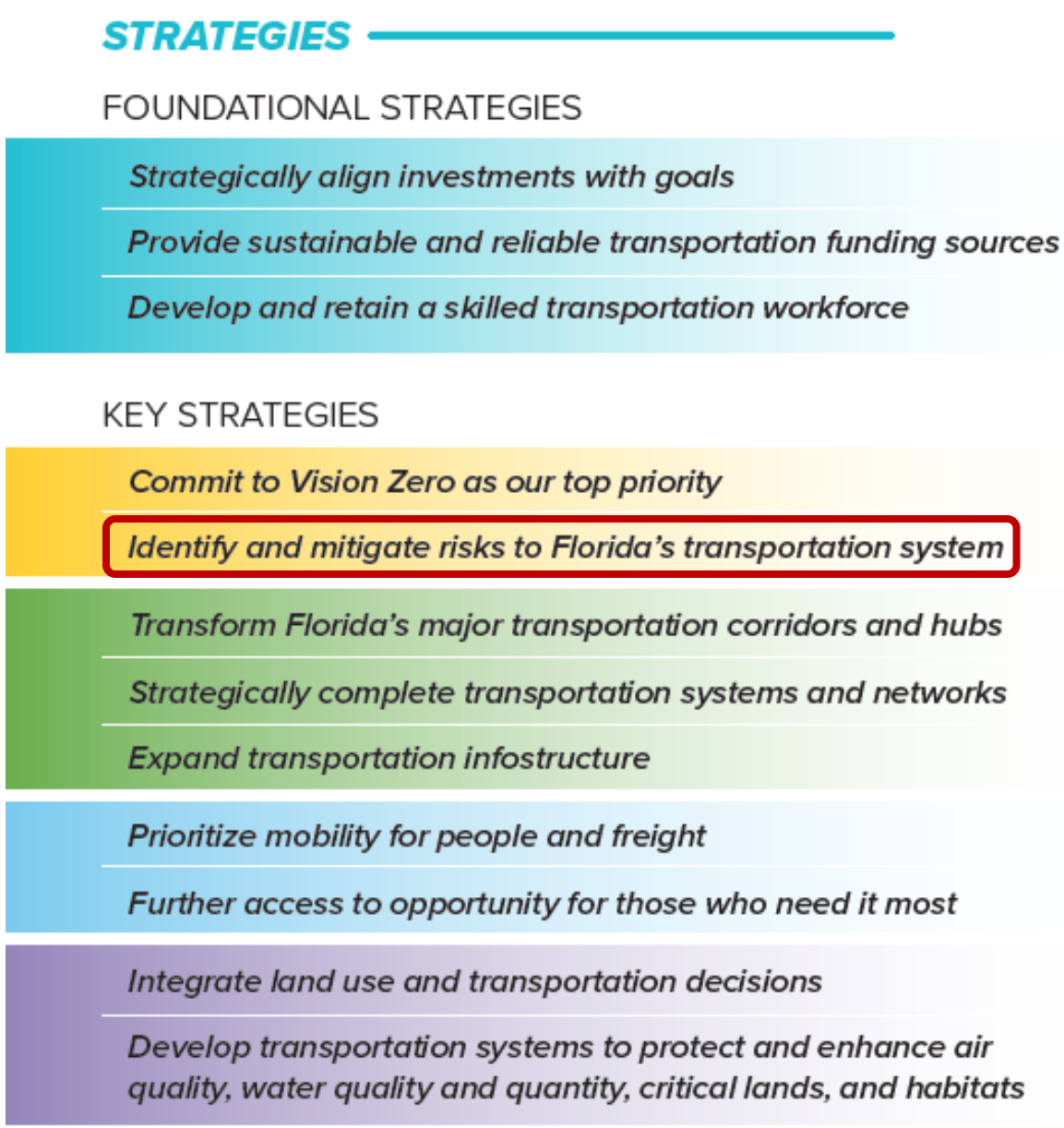
FLORIDA Transportation Plan

Steering Committee Poll (May 2020): Top 5 Resilience Strategies to be Considered in FTP

- Integrate land use, transportation, water planning
- Integrate resilience data & projections in planning, prioritization, and selection
- Create sustainable & stable funding for resilient transportation
- Improve system agility through multimodal options and redundancy
- Incorporate emerging technologies in resilience planning and design

Resilience in the FTP Policy Element

- Key strategy–
  Identify and Mitigate Risks
- Resilience Subcommittee strategies and other ideas spread across multiple strategies



Resilience Subcommittee Top Strategies	FTP Policy Element Strategy											
	Align invest-ments & goals	Provide sustain-able funding sources	Develop & retain skilled work-force	Commit to Vision Zero	Identify & mitigate risks	Trans-form major corridors & hubs	Complete transport networks	Expand transport info-structure	Prioritize mobility for people & freight	Enhance access to opportunity	Integrate land use & transport	Protect water, air, lands, habitat
Integrate **land use, transportation, water planning**	○			○	●	○	○			○	●	●
Integrate **resilience data & projections** in planning, prioritization, and selection	●	○			●	●	●				○	●
Sustainable & stable funding for resilient transportation	●	●	○		●				○	○	●	○
Improve system agility through **multimodal options and redundancy**	○			●	●	●	●		●	●	●	○
Emerging technologies in resilience planning and design	○	○	○	○	●	●	●	●	●			
Improve **coordination** across agencies, plans, programs	●	●	●	●	●	●	●	●	●	●	●	●
Incorporate resilience **design process, criteria, standards**	○				●	●						○
Where practical, utilize **nature-based solutions**	○				●	○					○	●
Incorporate **adaptive design and best practices**	○				●	○					○	●
Incentivize infrastructure **away from vulnerable areas**	○			○	●	○	○				○	●
Involve and consider **vulnerable populations** in transportation resilience planning	○		●	○	●		○		●	●	●	○
Promote solutions that reduce **greenhouse gas emissions**				○	●	●	○	●		○	○	●
Incorporate resilience into transportation **asset & performance management**	●	●	○		●	●	●	●				

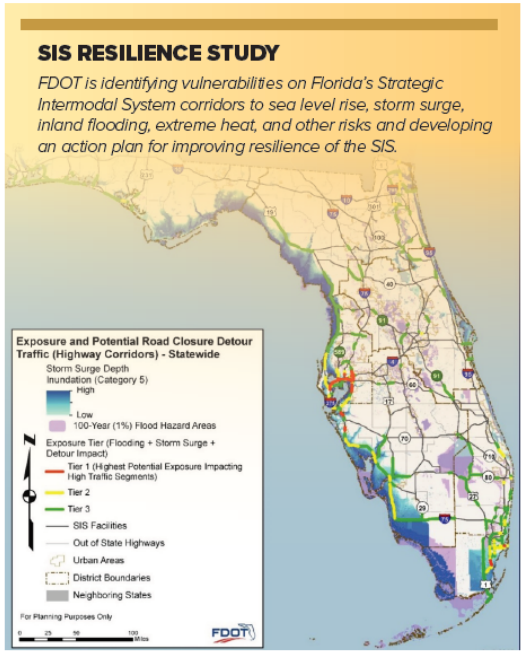
Identify & Mitigate Risks

- **Identify vulnerabilities** to hazards and **implement actions** to avoid, reduce likelihood of, or prepare the system to withstand risks
- Improve **agility of the transportation system** during emergencies and disruptions
- Expand **asset management decisions** to address the long-term costs of known vulnerabilities
- **Adapt transportation planning, design, construction, and maintenance techniques** to reduce vulnerability and improve resilience
- Identify and implement approaches to **coordinate environmental management, land use, and urban design** decisions to improve resilience.
- Incentivize **transition of infrastructure and development** away from vulnerable areas
- **Update emergency management plans** covering preparedness, response, recovery, and mitigation

KEY STRATEGIES › IDENTIFY & MITIGATE RISKS

Florida will place a high priority on identifying risks to its transportation system and the customers that use it. Florida will incorporate these risks into planning and management decisions for all modes. Florida will:

- **Identify vulnerabilities** to hazards such as sea level rise, storm surge, coastal and inland flooding, and extreme heat and precipitation. Implement actions to avoid, reduce the likelihood of, or prepare the system to withstand these risks.
- **Improve the agility of the transportation system** during emergencies and disruptions by expanding real-time information sharing, enhancing system management, providing more multimodal options, and supporting greater redundancy for critical infrastructure.
- Expand asset management decisions to **address the long-term costs of known vulnerabilities**, such as the need for retrofitting existing facilities or repairing certain facilities multiple times.
- **Adapt transportation planning, design, construction, and maintenance techniques** to reduce vulnerability and improve resilience of existing and new transportation facilities, such as use of emerging technologies and advanced materials, stormwater management, and infrastructure modifications.
- Identify and implement approaches for coordinating environmental management, land use, and urban design decisions to **improve overall infrastructure and community resilience**.
- Establish a long-term approach to incentivize, where appropriate, the **transition of infrastructure and development** away from vulnerable areas.
- **Update emergency management plans** covering preparedness, response, recovery, and mitigation to reflect the increasing intensity and severity of extreme weather events and other risks; shifts in Florida's population, development patterns, and travel choices; and increasing use of technologies such as automated and electric vehicles.



Strategic Intermodal System

Resilience Planning Study

presented to

FTP/SIS Implementation Committee

presented by

Karen Kiselewski

Cambridge Systematics for FDOT Systems Implementation Office

Your Florida. Your vision. Your plan.

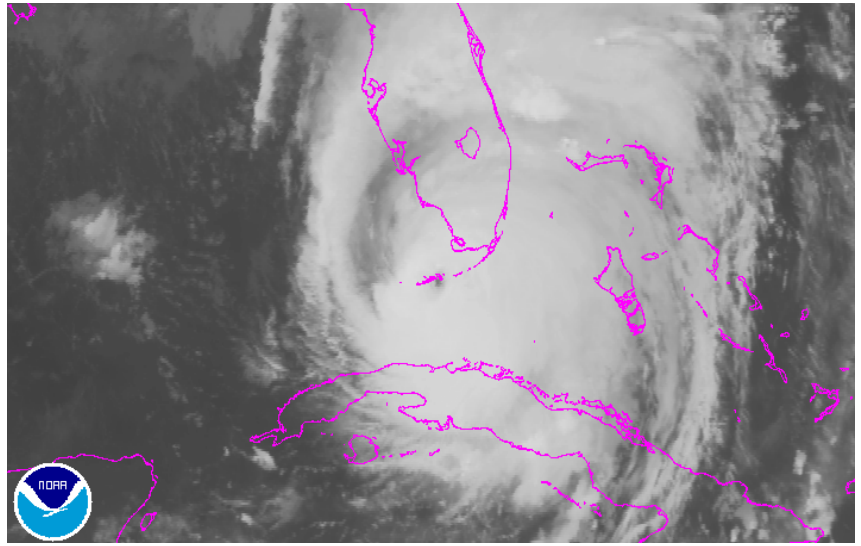
February 11, 2021

SIS Resilience Planning Study

- Emergency Management
- Vulnerability Assessment
- Next Steps

Aerial photo of Mexico Beach after landfall from Hurricane Michael, U.S., October 11, 2018. Time Magazine

SIS Resilience Planning Study



Phase 1

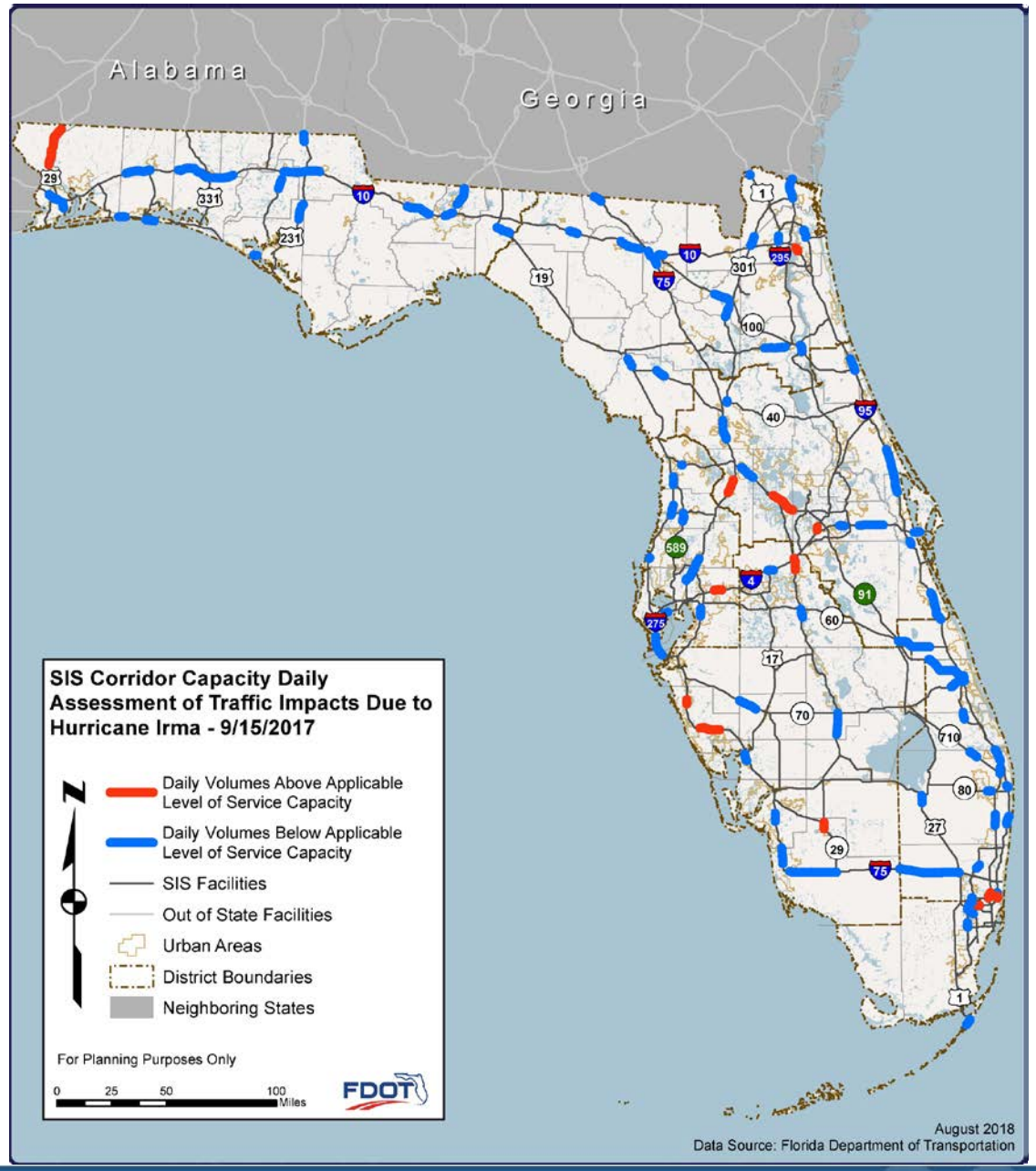
- Risk assessment of storm surge, 100-year flooding, and sea level rise to SIS Highway Corridors and Military Access Facilities
- Hurricane Irma impact assessment on SIS Highway Corridors

Phase 2

- Expand to include rail, hubs, and highway connectors
- Consider wildfire, extreme heat, and sinkholes
- Expand hurricane impact case study assessment
- Develop Resiliency Action Plan

Hurricane Irma: Traffic Impacts

September 4-15, 2017



Emergency Shoulder Use (ESU) Plans

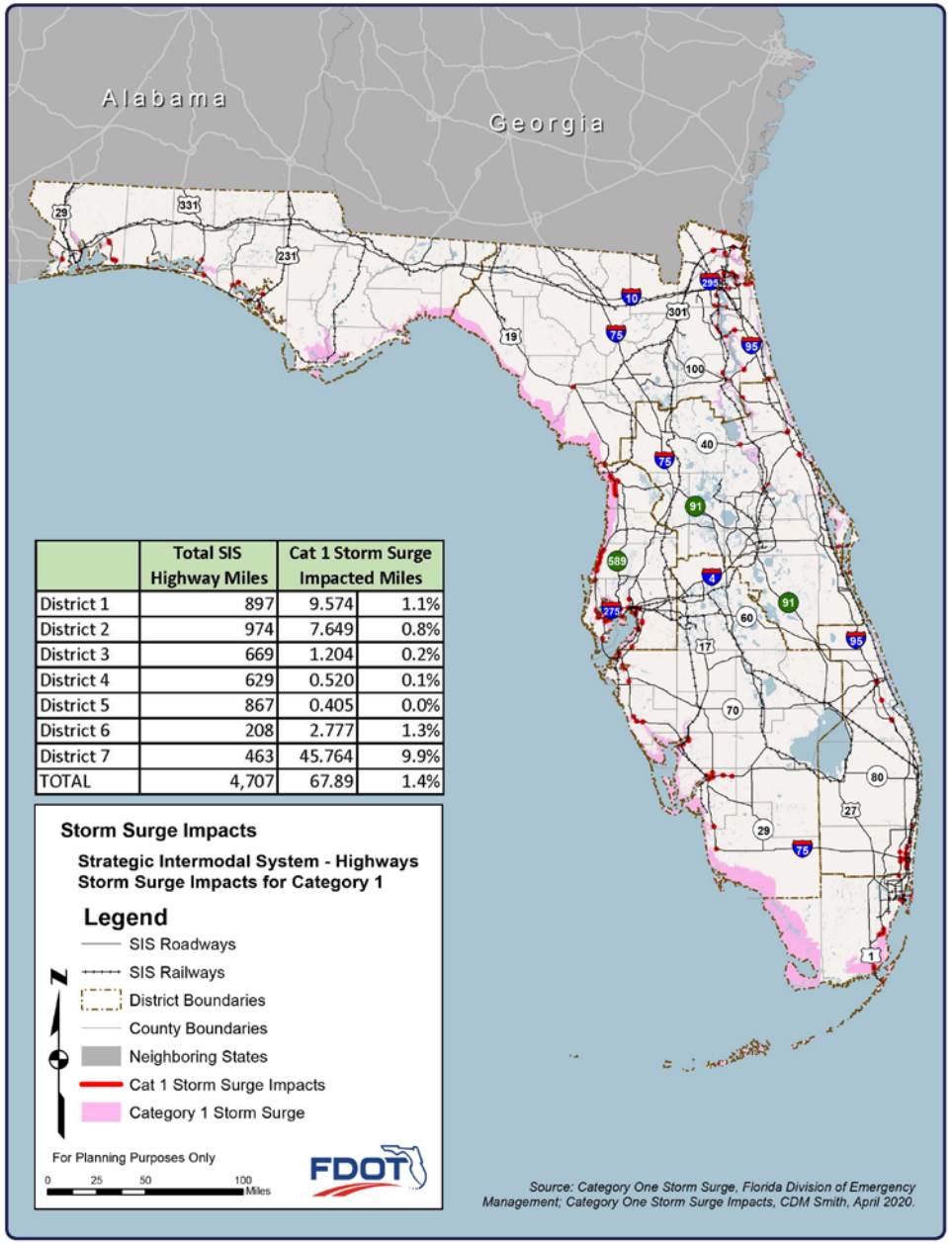
- Replaced previously approved contraflow plans
- Prior to Hurricane Irma, the following ESU Plans were approved:
  - Alligator Alley/ I-75 from Collier County to Broward County (separate plans for northbound and southbound directions)
  - I-10 from Duval County to Columbia County (westbound direction)
  - I-4 from Hillsborough County to Osceola County (eastbound direction)
  - I-75 from Sumter County to FL/GA Stateline (northbound direction)
- ESU Plans and Irma
  - I-4 and I-75 ESU Plans used successfully
  - Due to the success, additional ESU plans were approved for portions of I-95 and Florida's Turnpike. Additional plans were included on I-10 and the I-75 ESU Plan was extended to Collier County.

Natural Hazards Impacting Florida

- **TS/Hurricane Storms**
- **Precipitation (Flooding)**
- **Sea Level Rise**
- Wildfires
- Drought
- Sinkholes
- Extreme Heat

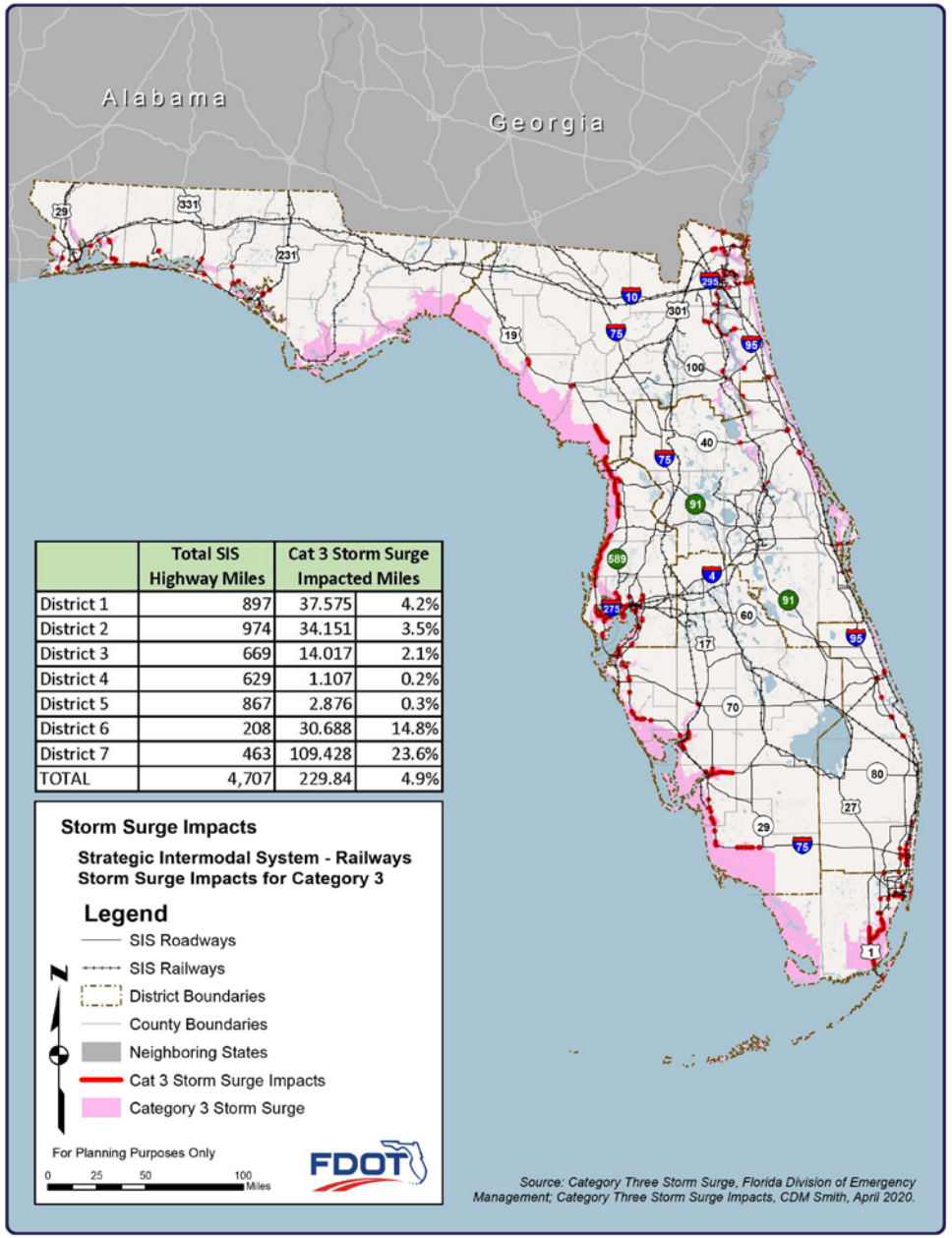
A law enforcement vehicle patrols a flooded street in Everglades City, Florida, U.S., September 11, 2017. REUTERS/Bryan Woolston

Storm Surge Category 1 SIS Highways



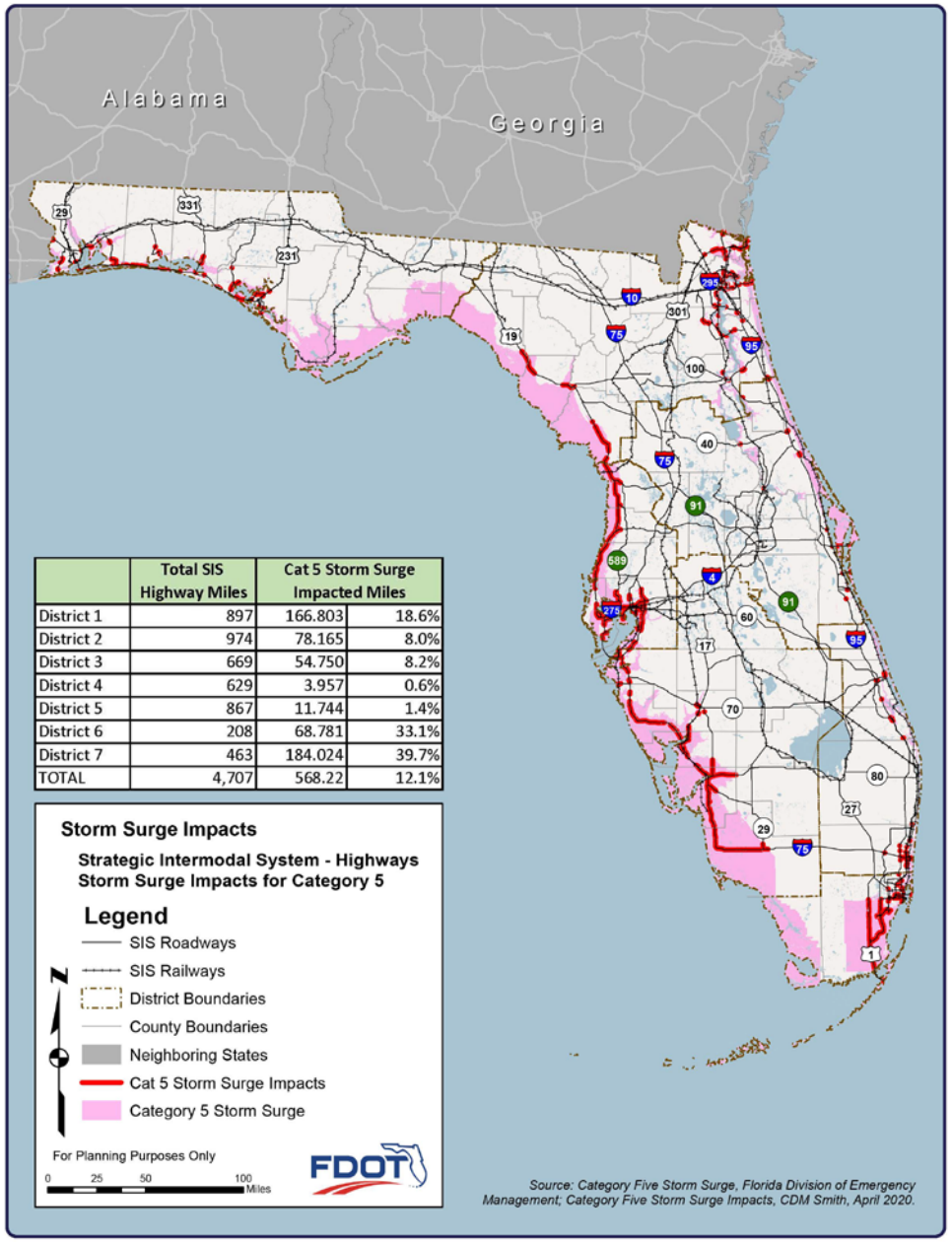
	Total SIS Highway Miles	Cat 1 Storm Surge Impacted Miles	
District 1	897	9.574	1.1%
District 2	974	7.649	0.8%
District 3	669	1.204	0.2%
District 4	629	0.520	0.1%
District 5	867	0.405	0.0%
District 6	208	2.777	1.3%
District 7	463	45.764	9.9%
TOTAL	4,707	67.89	1.4%

Storm Surge Category 3 SIS Highways



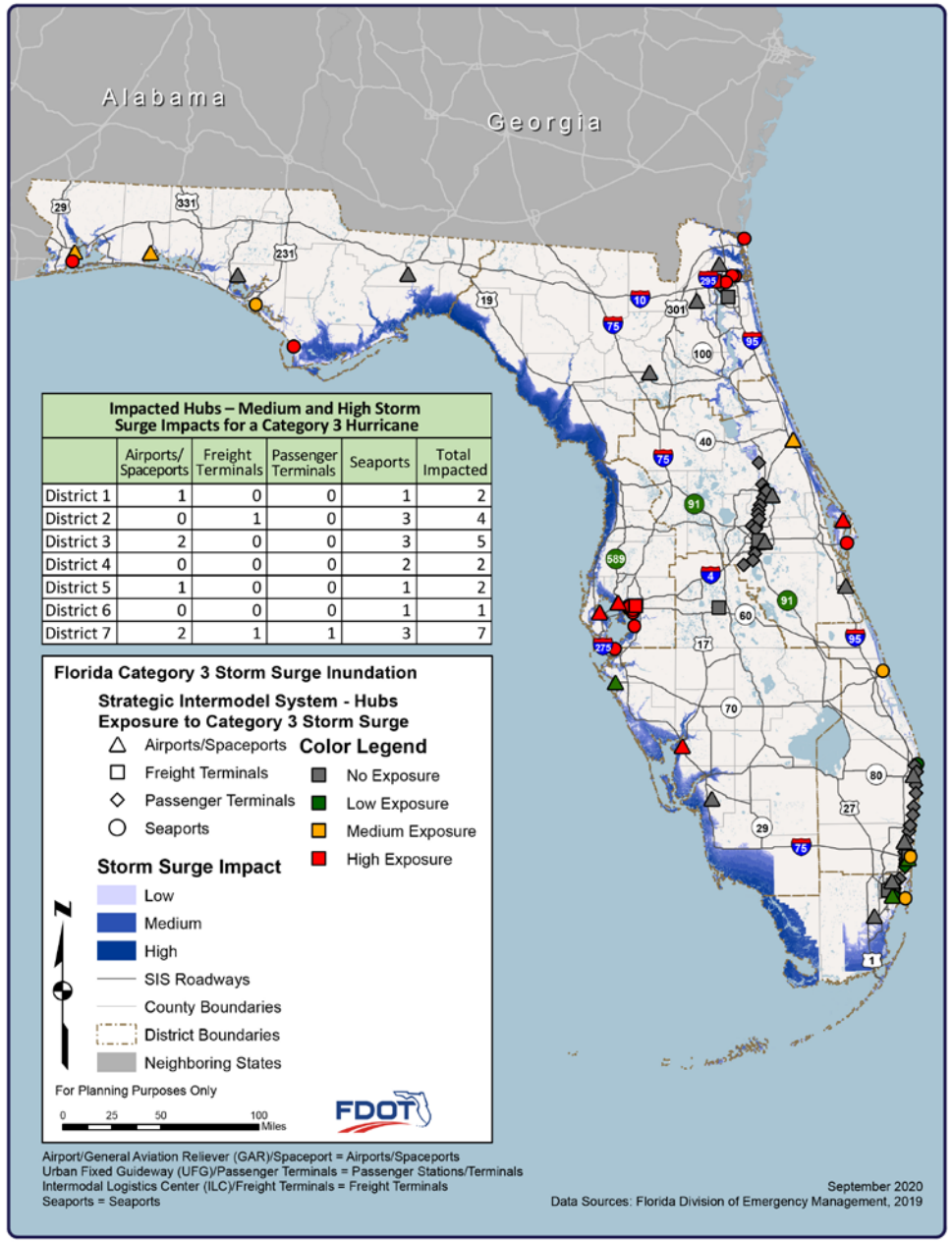
	Total SIS Highway Miles	Cat 3 Storm Surge Impacted Miles	
District 1	897	37.575	4.2%
District 2	974	34.151	3.5%
District 3	669	14.017	2.1%
District 4	629	1.107	0.2%
District 5	867	2.876	0.3%
District 6	208	30.688	14.8%
District 7	463	109.428	23.6%
TOTAL	4,707	229.84	4.9%

Storm Surge Category 5 SIS Highways



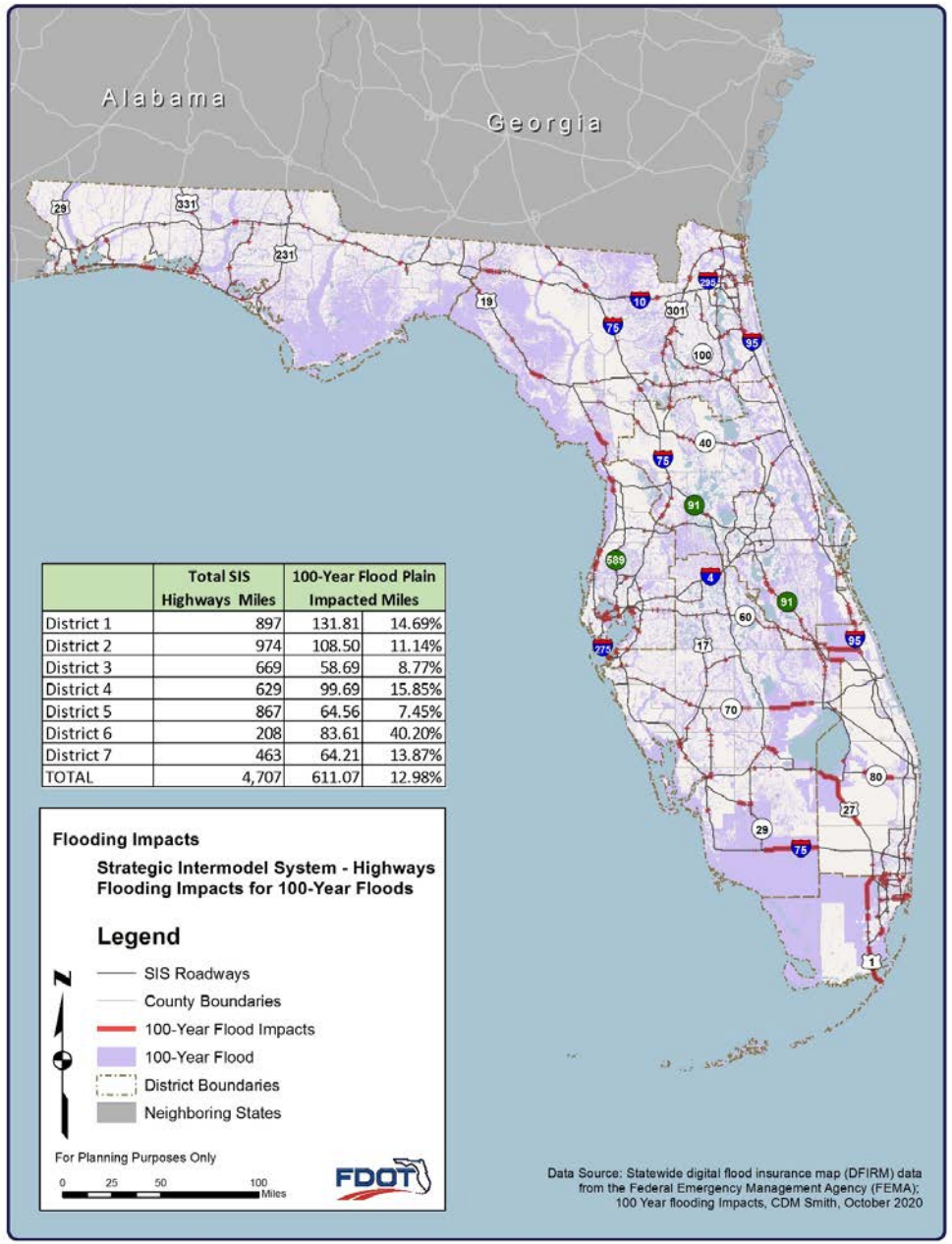
	Total SIS Highway Miles	Cat 5 Storm Surge Impacted Miles	
District 1	897	166.803	18.6%
District 2	974	78.165	8.0%
District 3	669	54.750	8.2%
District 4	629	3.957	0.6%
District 5	867	11.744	1.4%
District 6	208	68.781	33.1%
District 7	463	184.024	39.7%
TOTAL	4,707	568.22	12.1%

Storm Surge Category 3 SIS Hubs



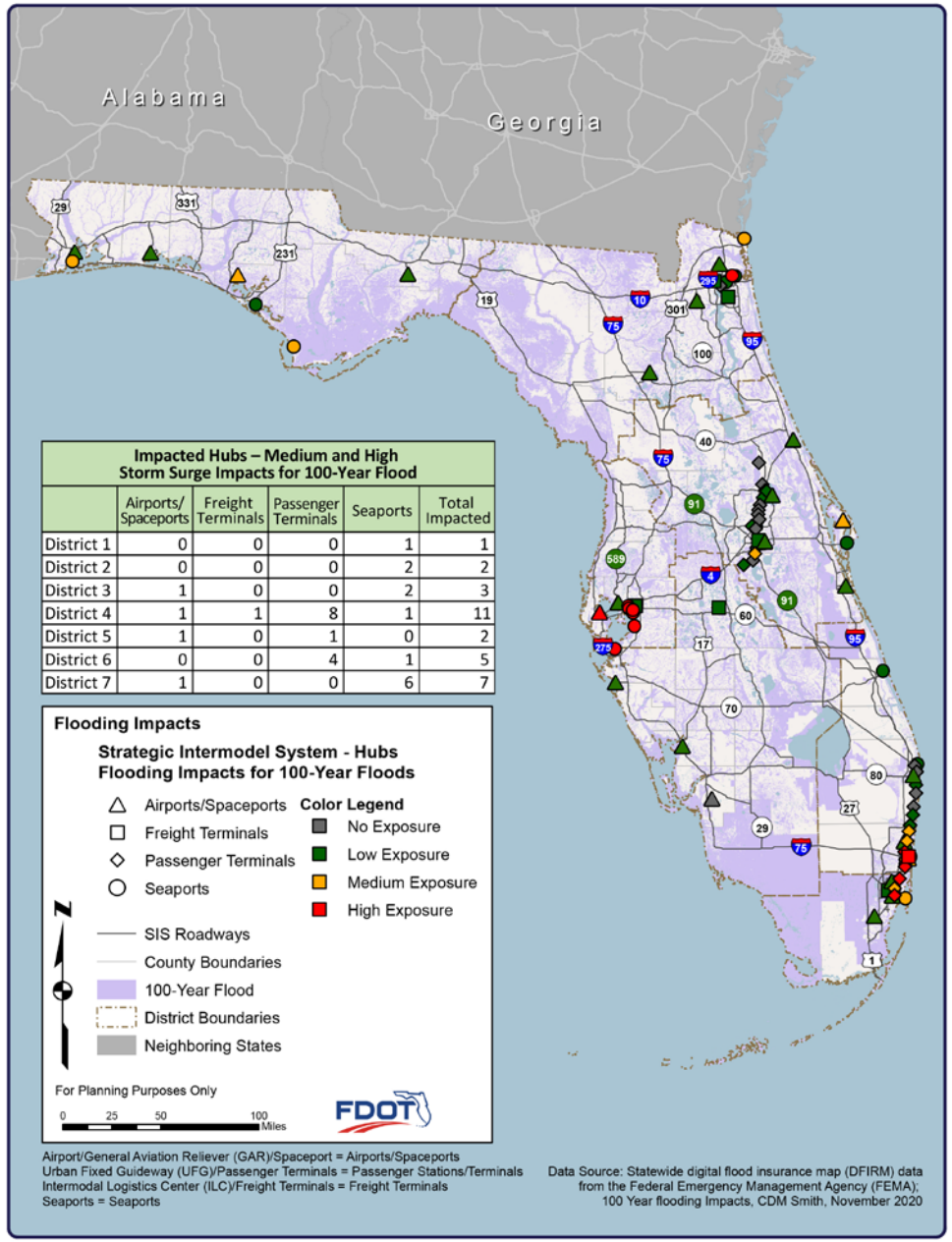
	Airports/ Spaceports	Freight Terminals	Passenger Terminals	Seaports	Total Impacted
District 1	1	0	0	1	2
District 2	0	1	0	3	4
District 3	2	0	0	3	5
District 4	0	0	0	2	2
District 5	1	0	0	1	2
District 6	0	0	0	1	1
District 7	2	1	1	3	7

Flooding (100-year) SIS Highways

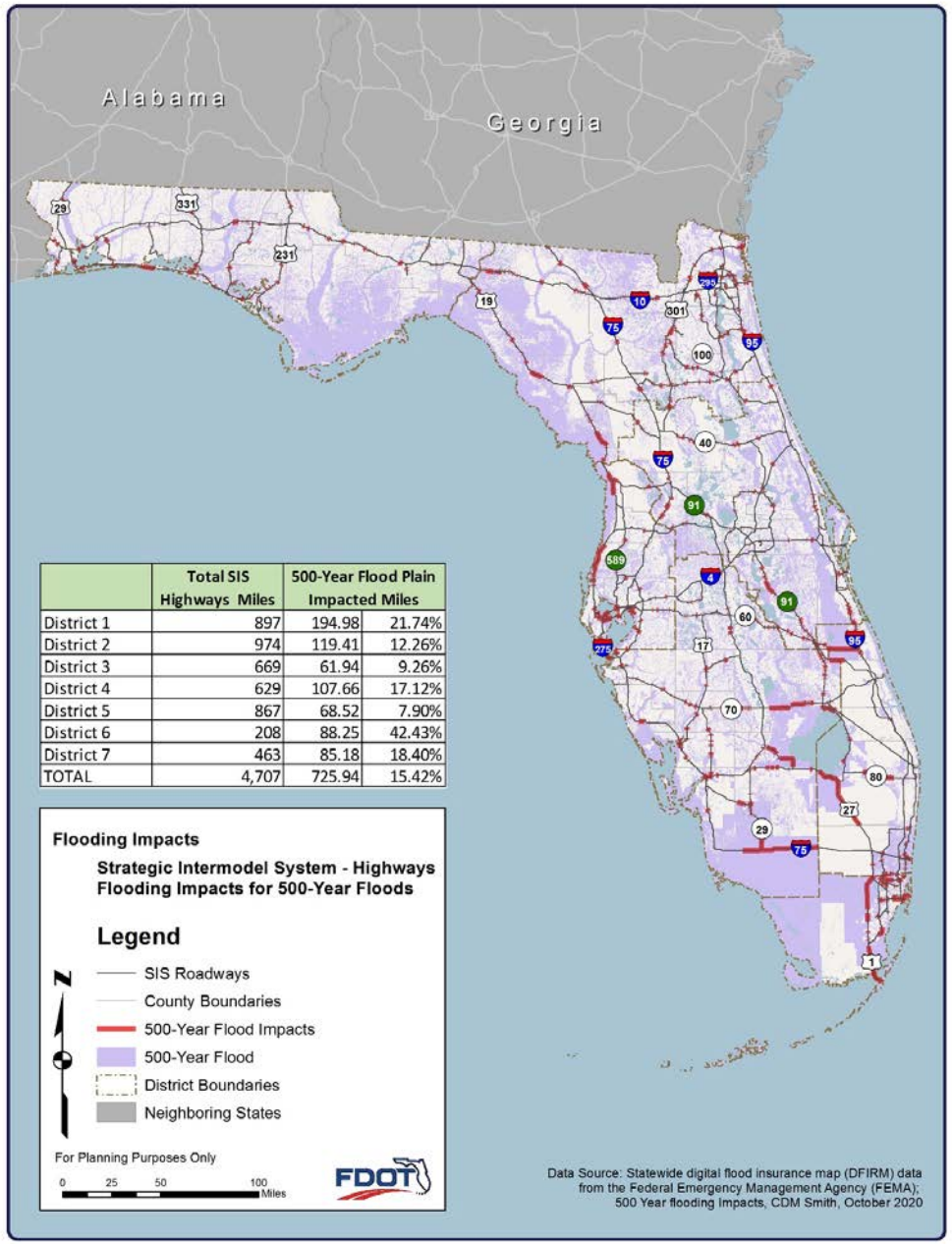


	Total SIS Highways Miles	100-Year Flood Plain Impacted Miles	
District 1	897	131.81	14.69%
District 2	974	108.50	11.14%
District 3	669	58.69	8.77%
District 4	629	99.69	15.85%
District 5	867	64.56	7.45%
District 6	208	83.61	40.20%
District 7	463	64.21	13.87%
TOTAL	4,707	611.07	12.98%

Flooding (100-year) SIS Hubs

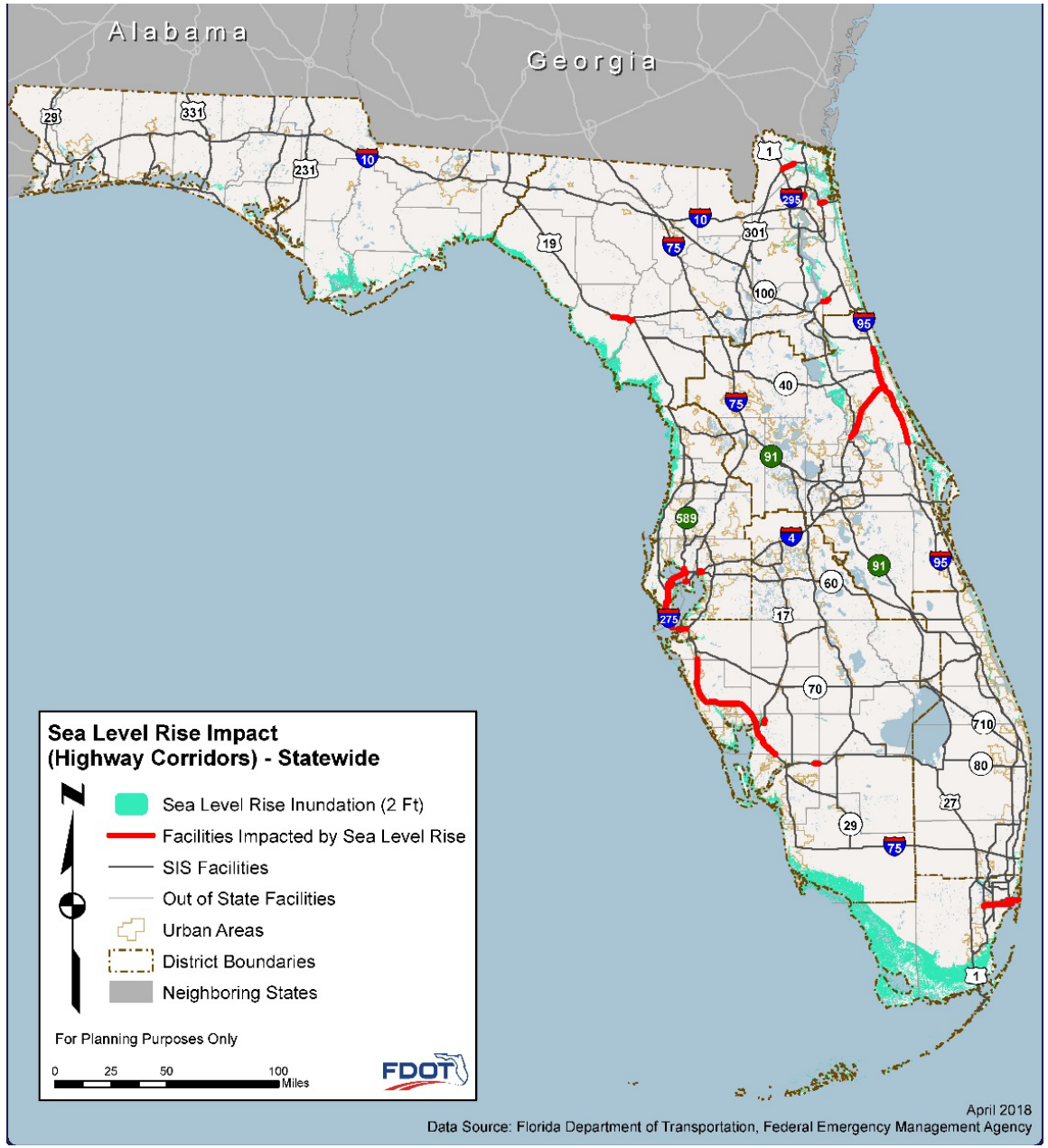


Flooding (500-year) SIS Highways

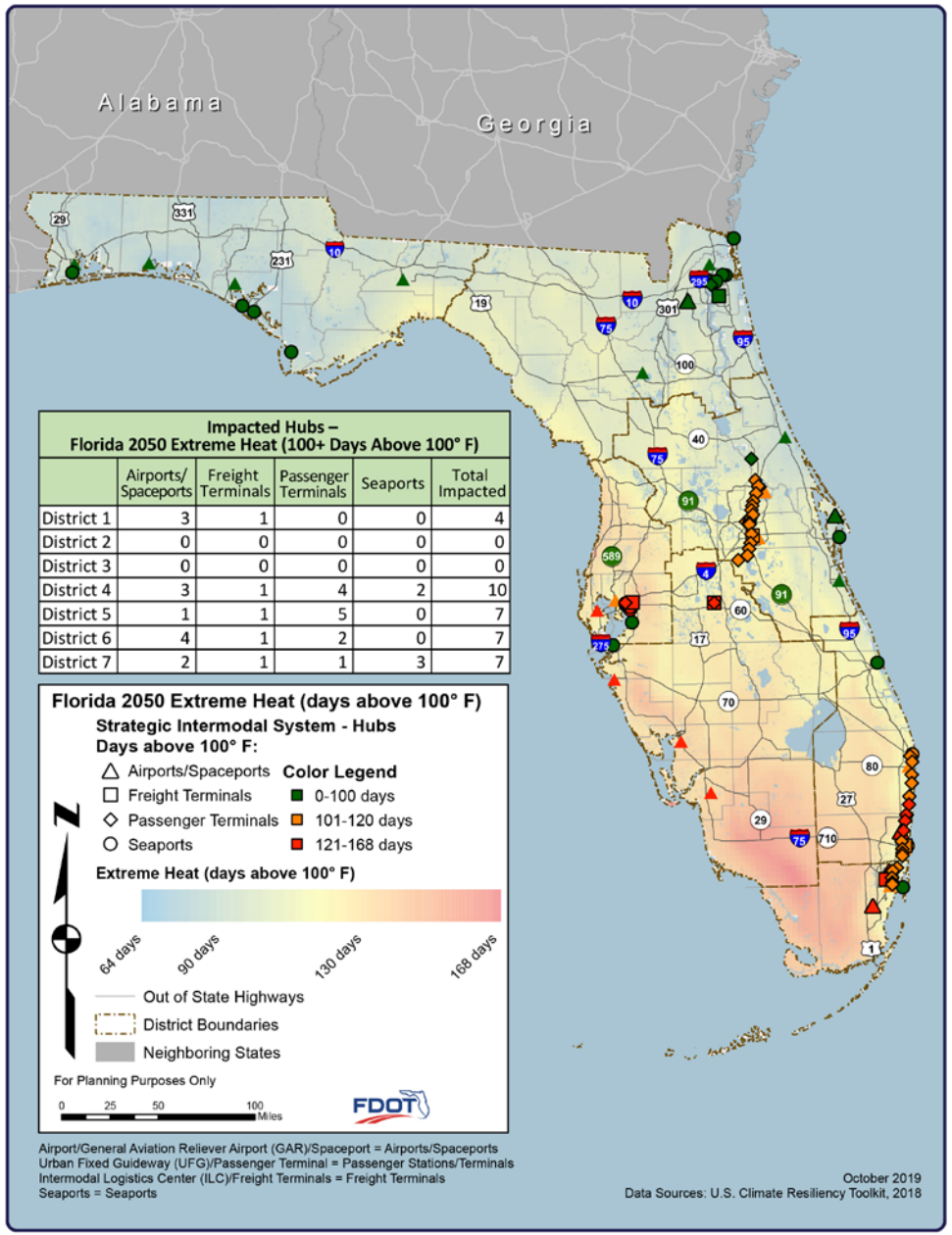


	Total SIS Highways Miles	500-Year Flood Plain Impacted Miles	
District 1	897	194.98	21.74%
District 2	974	119.41	12.26%
District 3	669	61.94	9.26%
District 4	629	107.66	17.12%
District 5	867	68.52	7.90%
District 6	208	88.25	42.43%
District 7	463	85.18	18.40%
TOTAL	4,707	725.94	15.42%

SIS Highway Corridors 2-foot Sea Level Rise



SIS Hubs Extreme Heat Days Above 100ºF



Composite Results - Examples

Facility	District	Total Score (27 highest)
SR 31	1	20
SR 101/ Mayport Road	2	15
US 98/ SR 30/ PC Beach Parkway	3	17
US 27/ SR 25 /US 27	4	15
I-4 to City of DeBary Sign	5	14
US 1/SR 5/ South Dixie Highway	6	22
Port Tampa Bay Redwing (Freight Connector)	7	25

Next Steps – SIS Resilience Planning Study

- Develop Resilience Action Plan
- Preliminary Recommendations
  - Include resilience in SIS Policy Plan; tied to all three statutory objectives
  - Include resilience in SIS long range plans
    - Identify needs as part of Multimodal Unfunded Needs Plan
    - Identify resilience strategies as part of Cost Feasible Plan projects

Implementation Discussion: Resilience

Discussion Questions

- Are you aware of other key ongoing implementation activities?
- What significant gaps or opportunities exist?
- What resilience activities should we prioritize, promote, and track for FTP implementation?
  - Resilience Subcommittee recommendations
  - SIS Resilience Planning Study recommendations
- What resilience activities are most important for SIS policy?

Partner Roundtable

Please share updates on what your organization is doing related to FTP implementation

Public Comment

Provide your name and county of residence

Please keep comments to no more than 3 minutes

Next Steps

Next Steps

- Committee members
  - Share any additional thoughts on implementation actions for the three topics discussed today
  - Let us know if you would like a briefing or update to your group
- FDOT
  - Share final SHSP with Committee once completed
  - Follow up on open issues from today
  - Begin developing background information on next set of topics for spring meeting
- Next meeting date: May/June, TBD

TransPlex April 2021 Web Series

2020 Excellence in Planning Awards

- Help FDOT recognize outstanding transportation planning professionals and projects throughout Florida.
- Nominate a colleague or organization whose work in transportation is advancing efforts to achieve the goals and objectives of the FTP and SHSP.
- Award categories are:
  - Planning Professional of the Year
  - Planning Innovation of the Year
  - Planning Organization of the Year

Deadline for nominations is Friday, March 19, 2021. Submit a nomination at https://www.fdot.gov/planning/transplex/awards
Award recipients to be announced during the Virtual Awards Ceremony held in conjunction with the TransPlex April 2021 Web Series.

Thank You