



# Turnpike State Model Next Generation (TSM NextGen)

**Collaborative Data Inputs** 

Presented by César Segovia, AECOM-FTE Presented to Model Task Force November 08, 2023

## Agenda

- What is the product?
  - A brief introduction to the TSM NextGen
  - Primary purposes
- Data collaboration needs
  - Scrambling for data
- Lessons learned
  - Organized data sharing





### What are we talking about: TSM Evolution







FDO

### Who needs it?

### TSM is used for statewide toll road forecasting

### **Primary Purpose**

 Traffic forecast: Provides estimates for planning, evaluation and design of new roads and alternative alignments

Pensacola

Beach

Revenue forecast: Provides reasonable and defensible revenue forecasts for bond rating on all projects owned and/or maintained by Florida Turnpike Enterprise (FTE)









# Data Consistency & Efficiency (TSM NextGen)

### **Quick Overview of Data and Sources**





### **Household Travel Surveys**

#### North Florida Household Travel Survey (NF)

- Agency: North Florida Transportation Planning Organization (NFTI
- Year: 2017
- Data Collection Method: Web-based travel diary, single day

#### Southeast Florida Household Travel Survey (SF)

- Agency: Miami-Dade Transportation Planning Organization
- Year: 2016/2017
- Data Collection Method: Web-based travel diary, multiday

#### Treasure Coast Regional Household Travel Survey (TC)

- Agency: Florida Department of Transportation
- Year: 2016-2018
- Data Collection Method: mail, phone, web, smartphone, single data

#### Tampa Bay Regional Travel Survey (TA)

- Agency: Florida Department of Transportation (FDOT) District 7 (E
- Year: 2019
- Data Collection Method: rMove, online

#### National Household Travel Survey (NHTS)

- Agency: Florida Department of Transportation
- Year: 2009
- Data Collection Method: telephone, single day

#### Household Travel Survey Data [24104]





### **Socioeconomic Databases**



**Florida Department of Transportation** 

We need this data at TAZ level, not just for base year but for future year as well

### Census 2020 Data





### **Employment 2020**



FDO

o x

### **Parcel Data 2020-2022**





### **Visitor Data**



**S** Florida Department of Transportation

FDO

### **Network Manager**

Statewide Network – Year 2022

#### **Network Data**

- Navteq GIS database
- Represents MPO/Districts LRTP & Cost Feasible

Future Year Improvements – Years 2025: 2050





### **Network Manager Application**



**Florida Department of Transportation** 

FDOT

### **O-D Data**

#### Weekday (Mon-Thur)

O-D	State Border	I-10 East	l-10 West	Lake City South	Gainesville North	Gainesville South	Ocala North	Ocala South	Turnpike	I-75	Total
tate Border	0%	14%	0%	0%	31%	25%	0%	18%	7%	6%	100%
-10 East	38%	0%	56%	0%	2%	2%	0%	1%	0%	1%	100%
-10 West	0%	26%	0%	0%	26%	21%	0%	15%	8%	4%	100%
ainesville Iorth	60%	2%	39%	0%	0%	0%	0%	0%	0%	0%	100%
ainesville outh	11%	0%	7%	25%	0%	24%	0%	18%	8%	6%	100%
ake City outh	9%	0%	6%	19%	24%	0%	0%	24%	10%	8%	100%
ocala North	9%	0%	6%	20%	26%	39%	0%	0%	0%	0%	100%
5	5%	0%	3%	10%	14%	19%	22%	0%	13%	13%	100%
urnpike	4%	0%	3%	10%	13%	18%	21%	30%	0%	0%	100%
75 South	4%	0%	2%	9%	12%	16%	20%	36%	0%	0%	100%



### **Lessons Learned**

- Significant amount of data is already available
- Sometimes data is collected for very different reasons
- Available data needs re-processing
- Aggregation/disaggregation of raw data is important
- Data sharing and institutional collaboration needs rules







### **Questions**?

Further questions, comments please contact:

Cesar.Segovia@dot.state.fl.us

Venkat.Sarvepalli@dot.state.fl.us