



TSM&O CONSORTIUM MEETING SUMMARY

Meeting Date: December 14, 2017 (Thursday) **Time:** 10:00 AM – 12:00 PM

Subject: TSM&O Consortium Meeting

Meeting Location: FDOT's Orlando Office
133 S. Semoran Blvd., Orlando, FL
Lake Apopka B Conference Room

I. OVERVIEW

The purpose of this recurring meeting is to provide an opportunity for District Five FDOT staff and regional agency partners to collaborate on the state of the TSM&O Program and ongoing efforts in District Five. Jeremy Dilmore gave a short introduction regarding the purpose of the meeting and had everyone introduce themselves for the benefit of all in attendance. Following introductions, the agenda for the meeting commenced.

II. TSM&O DOCUMENTATION UPDATE – DAVID WILLIAMS, VHB

David Williams gave a brief update to Consortium members on the status of District Five TSM&O documents:

- Gave a brief tour of the www.cflsmartroads.com website to explain what TSM&O documents are stored there
 - TSM&O Organizational Chart for District Five – meant to support local agencies who need to contact someone from District Five; each District Five TSM&O staff member was represented in the organization, including their position title and contact information
 - The goal was to make communication more efficient for local agencies and District Five
 - Planning for TSM&O Guidebook – Final version submitted to FHWA
 - FDOT District Five TSM&O Implementation Plan- Iterative document meant to guide the growth and development of District Five's TSM&O program; Version 1.0 is currently available, and will be updated as the TSM&O program evolves
 - TSMO Strategy Guide and Proven TSM&O Strategies – Tools meant to support the District's goal of stronger integration between Planning and Operations processes
 - The TSM&O Strategy Guide provides a list of potential TSM&O strategies to address specific issues within the transportation network
 - The Proven TSM&O Strategies documents are “one-pagers” for different strategies that can be used by transportation practitioners to determine appropriate strategies for given situations, and can also be used as handouts to garner support from public officials and other stakeholders
- Network Services Labor Sharing agreement is still with FDOT Legal
- Updated Corridor Planning and PD&E Scopes (in development) – updating the current District Five Planning and PD&E scopes of work to include stronger language regarding the incorporation and

consideration of TSM&O strategies along with the standard strategies considered in typical corridor studies

- At various stages of the project, discussions will be required with District Five TSM&O personnel to ensure the most appropriate strategies are being adapted for the project
- Orange Technical College Signal Technician Program (coordination in progress) – District Five has been in contact with Orange Technical College to develop a training program for signal technicians, to support the regional need for signal technicians

III. SIGNAL TECHNICIAN PROGRAM – DAVID WILLIAMS, VHB

David Williams provided a brief explanation of the District's efforts to improve the labor pool of available signal technicians for local, regional, and state agencies, as well as for private firms.

- During the June Consortium, local agency presenters indicated a lack of signal technicians to hire as staff
 - Comment: We'd like to be able to provide some suggestions to HR to make a state standard and make it easier to push change through
- Discussions with Orange Technical College
 - Orange Technical College has asked for a formal letter indicating the expected technician hires per year, in order to establish a verifiable need for the signal technician program
 - Comment from Jeremy: We'd also like to discuss with them the breadth of the industry because a signal technician is only one role and people could be hired into many different roles
- Also looking to address the training side with UCF

IV. TSM&O STRATEGY GUIDE / PROVEN TSM&O STRATEGIES– DAVID WILLIAMS, VHB; JORGE BARRIOS – KITTELSON

David Williams and Jorge Barrios presented brief updates on their work on the TSM&O Strategy Guide and Proven TSM&O Strategies one-pagers. David opened the strategy guide file in excel and showed how users can utilize the strategy guide. Jorge explained the format and use of the Proven TSM&O Strategies one-pagers.

David Williams

- The TSM&O Strategy Guide is formatted as an interactive spreadsheet rather than a document
 - The spreadsheet prompts the user with the following questions/requests:
 - What type of facility?
 - Where is the issue?
 - Select a symptom.
 - Recurring or non-recurring?
 - Upon providing inputs for the above items, the spreadsheet will generate a list of applicable TSM&O strategies, complete with a description of each relevant strategy, helpful webpages, complementary strategies, conflicting strategies and generalized benefit-cost ratios
- The goal is to make it simple and easy to digest, so that it is non-technical, and the planning side of the house becomes more comfortable and familiar with these strategies; the tool would be incorporated into Planning and PD&E Studies, as well as the overall planning process
- A companion *User's Manual* will also be available, providing an explanation of each symptom and strategy

Jorge Barrios

- Kittelson was tasked with taking 50+ strategies and highlighting the ones most relevant to Central Florida in order to make the strategies more approachable and useable
 - Examples: Ramp Metering, Roundabouts, Adaptive Signal Control Technologies, Transit Traveler Information
- Currently have 14 “Proven TSM&O Strategies” – Developing one-pagers for all
 - Tailored towards specific region and general audience
 - Basic cost and benefit information with success stories provided
 - Also developing more detailed documentation for more technical side
 - Procurement examples provided
 - Jon Cheney: Why is the FDOT Logo on the one-pagers?
 - Jeremy: We’d like to make an ITS or TSM&O Consortium logo to put on this documentation so that more local organizations feel comfortable, and to communicate that the information is for them, not just for the State
 - Sources will be listed on the bottom of the one-pagers for those interested in taking a deeper dive into the strategies

V. CONNECTING TSM&O PROJECTS TO ORGANIZATIONAL GOALS – JEREMY DILMORE, FDOT DISTRICT FIVE

Jeremy Dilmore provided a status update on District Five TSM&O efforts, as well as how TSM&O connects to the broader organizational goals of FDOT, MPOs, and local jurisdictions.

- Shift towards focusing on multimodal benefits
- Integrated Corridor Management Systems (ICMS) – Software
 - Decision Support System (DSS)
 - Signal Optimization tools – prioritized work and data for signal timing
 - Predictive Engine
 - Information Exchange Network
 - Data Fusion Environment (DFE)
 - Feeds ICMS
 - Dashboard for insights (Bottleneck ID, Reliability of corridors, recurring/non-recurring congestion)
 - Analytics
 - Predicting impact on community, land value
 - Are we contributing to safety or to urban sprawl?
- What transportation challenges are we addressing?
 - Safety – especially pedestrian and bicycle safety
 - Automated/Connected Vehicle (AVCV) technology
 - There is likely to be a 70%-90% reduction in crashes once AV/CV technology matures
 - Knowing what project to build
 - We are efficient at pushing progress, but are we choosing the right things in which to progress?
 - Get data from operations
 - Research Analytics

- Efficiency
 - Making data available to reduce duplicate collection efforts (share information)
 - How to get information converted into actions and in the hands of the right people?
- Modal Choice
 - Give data to the consumer so they can make better and more efficient choices; this will also drive competition (it is difficult to plan a trip without a car)
- Making things work: technology, security, connecting information
- Inform the public
- What will the Department be asking of you?
 - Get information in the hands of locals
 - Stopbar detection – Intersection Movement Counts (Gridsmart, Myovision, Iteris)
 - Method of Advanced Detections
 - Controller and Cabinet Types
 - Invest in type 6 cabinets instead of type 5
 - RSU compatibility for all controller sides (Roadside unit for connected vehicles)
 - Physical data collection doesn't make sense anymore compared with new available tech
 - Question: Can we get recommended standards from the District for some of these pieces of hardware? Ex: Dedicated Short-Range Communication (DSRC), 4G, 5G? What investments should we make?
 - Jeremy: A standard would be great, but it likely will never happen on the controller side. This is because there is a business interest. We shouldn't give up hope, but standards are hard because there is competition in the market. We are trying to make investments that are adaptable and can make use of DSRC or 4G, whichever is used.
 - Jon Cheney: If we have chosen to invest in a particular brand, will we have problems getting funding? Ex: Myovision
 - A: We have an easy application, and the District is looking to develop a proprietary products letter that looks the same for everyone else. The District will provide locals with a specific letter for each product to make everything easier for everyone. Katie King will be able to assist locals with any questions. The form is easy and in a WORD document; the letter is standardized for easier use. Katie recommends speaking with Jim Stroz.
 - We would like to develop a visual alert for buses. The District would like a tablet to be at every stop and attach device to the nearest system. Lynx and Votran can maybe even put advertising on this. As long as federal funding is not involved, integrating advertising should be simple.
 - Q: Are you not a big believer in ramp metering? How do we integrate ramp metering effectively?
 - Jeremy: Sometimes ramp metering doesn't make sense. We spend \$60 million on expanding the capacity of a facility, then reduce the capacity by using ramp metering. How can we integrate metering in appropriate ways?
- What are our roles? (That won't change with AV/CV)
 - Role of FDOT
 - Ease burden of Federal requirements
 - Software development
 - Support data solution efforts
 - Control ATMS (Signals, Ramp Meters, Pricing)

- Operate and maintain systems for the public good
 - Integrate future technology
- Role of the MPO
 - Monitor and report on system performance
 - Identify and Improve O&M Funding (establish funding targets)
 - Eric Hill: This makes sense to me, but we need to have clarity on how we can use our SU funds, we know we can use EDR, but can we use federal dollars for O&M? This would help us better identify targets and measure if we can meet those targets.
 - A: We will take that back as an action item, but the source of the funds isn't as important as the use of the funds. Before doing expensive and complex projects we need to head in the right direction
 - **Answer from the TSM&O Section of the Work Program instructions [following meeting]:**
 - "Additionally, federal funds may be used for the operating costs for traffic monitoring, management, and control systems, such as integrated traffic control systems, incident management programs, and traffic control center. Operating costs as defined by legislation include labor costs, administrative costs, cost of utilities and rent, and other costs associated with continuous operation of traffic systems. These costs are all eligible for Federal reimbursement from the National Highway Performance Program (NHPP), Highway Safety Improvement Program (HSP), and Surface Transportation Program (STP). If a project is located in air-quality non-attainment and maintenance areas, and in compliance with the eligibility requirements of 23 USC 149(b), Congestion Mitigation and Air Quality Improvement (CMAQ) funds can be used for three years for operating costs over a 5-year period, but those systems must measurably demonstrate reductions in traffic delays."
 - From Steve Friedel, D5 Work Program Manager: "The SU funds should qualify for the TSM&O operating costs based on the guidelines listed above in the Work Program instructions. SU funds fall under the Surface Transportation Program (STP) listed above. There are also other Federal fund sources under the NHPP, HSP and STP federal programs that could be used, but we typically would concentrate those on capacity, safety, resurfacing, etc."
 - Inform public officials with data (and build support for alternative solutions)
 - Inform public officials of future technologies
- Role of Local Agency
 - Maintain devices
 - Populate platforms
 - Leverage platform for additional solutions outside of transportation
 - Approve actions
 - Integrate future technology
- Transit Agency
 - Use data to adjust routes and services
 - Establish technology standards (AVL, APC, Dynamic Transit Information)

- Maintain kiosks
- Q: Where is the money coming from (for everything)?
 - A: Standardized intersection detection costs 20k today and 30k in the future. Establishing a standard for the future doesn't mean we have to change immediately. We would like to incorporate some of the strategies into current projects or future projects that would have already happened, we will still go through conventional funding mechanisms.
- Q: Eric Hill: We'd like information to be able to evaluate if we are making the right investments so we can sell our decisions. It's not about capital, it's about maintaining. If it's an upgrade, the money comes from a different place as opposed to an improvement (semantics).

VI. TSM&O AND THE CENTRAL FLORIDA MPO ALLIANCE – JEREMY DILMORE, FDOT DISTRICT FIVE

Jeremy Dilmore distributed a chart explaining some of the thought processes and organization of the FDOT TSM&O programming.

- In the *What We Do* handout chart (attached), blue represents what we're working on right now; black represents a future project
- The message here is: FDOT District Five is working hard to empower MPOs and local jurisdictions. Since we've done the back office work, everything should work more quickly on their end. Implementation should be simple and efficient.
- Q: Eric Hill: How does this fit into the architecture?
 - Jeremy: Within Turbo, no this does not fit into the architecture; but it will fit into the future architecture.
- Agencies have had success implementing localized TSM&O projects, how do we leverage this success into regional applications of TSM&O? We would like to use the momentum from recent successes to talk to the MPO alliance
- Should we establish a foundation of knowledge, or present a regional project to the MPO Alliance for their consideration?
 - A: Jon Cheney: You've got to be a salesman and you've got 5 to 10 minutes to speak, so you need to be engaging. ITS master planning is happening outside of District Five, so knowledge is being passed on. Some MPO directors think the funding is their own, some think it's a partnership. Directors would like to see a list of priority projects; they would like forewarning of projects that are coming down the FDOT pipeline, so things work together for regional projects. Can we get a list of projects in the region so that TSM&O can work because the funding is more integrated? We will not spend a dime on operational amendments.
 - Eric Hill: My thoughts are similar to Jon. Begin with very brief "TSM&O 101," showing a list of projects, but it doesn't help officials to understand what part of those projects is TSM&O and what it means. We need to cast a vision for officials to know what "success" means.
 - Jon: I think that we have already presented some of the fundamentals, so specific projects is may be simpler.
 - Eric: This is a cultural shift, so it takes time and messaging before we can suggest specific projects.
 - Stevel Bostel: Spoke about Active Arterial Management as a pilot in Orlando, and how it moved out to the "little guys" like SCTPO.
 - Brian: Why does this have to be a one-time deal? Can we make it a series of presentations where we walk through both?
 - Through discussion, Eric and Jon agreed that the first meetings with the MPO Alliance should be introductory and vision-casting. The second part should be an ask with specific projects.

- Jeremy: We are trying to take care of the upfront work. We are sending projects to FDOT Central Office and getting some funding back. We were successful with strategic plan and convinced them that a 10-year plan makes more sense. We have not been told that we will be asked what is in the plan, but know that they are 50% of the way through the plan. Maybe someday there will be a list of projects that the state of Florida is planning on, but we can't really do that right now. More generally, we can tell you what types of technology that we think you should invest in.
 - Jon: This makes sense, but we can't go to the MPO alliance yet, because we need a harder list from FDOT before we can get MPOs to decide to move forward with projects
 - Jeremy: We would like to provide a list of regions and technologies but not specific projects

VII. CURRENT INITIATIVES – JEREMY DILMORE, FDOT DISTRICT FIVE

- ATCMTD Grant award for \$11.9 Million (Have not signed with USDOT, but work is in progress)
 - Way to build multimodal system integration
 - AV Shuttle on UCF Campus
 - Talk to AV vendors
 - Majority of the money goes to app development, AV shuttle and PedSafe
- Connected Vehicle Pilot on 434
 - 6 Locations, RSU, ATSPM, SPAT, TSP, Pre-emption
 - Put some mock cabinets together
 - Middle of January will be getting together; any party looking for an invite should get in touch with Jeremy
 - Go up to Tallahassee and get a permit and test it in the field
 - Then will turn the cabinets over to UCF and train people to work on it
- RTMC
 - New building near SR 417 / I-4
 - Q: Will the consortium meet in the RTMC when it opens?
 - Jeremy: It is likely, but we can keep you updated on this item
- PedSafe and Greenway Development
 - Packing with technology
 - 284 locations (UCF, SR 50, etc.)
- I-75 Frame
 - In testing, will start to diverge beginning in April
 - 88 Locations (I-75 and US 301)
 - METRIC
- ICM software done before the end of the year
- TSP for Sunrail Phase 2 up and running
- TTS agreement got through Tallahassee legal and will be signed soon
 - FDOT approved locals being able to give TTS the State's data
 - **See attachment for signed agreement**
- ATSPM (Automated Traffic Signal Performance Measures)
 - Seminole County is set up; FDOT working with Osceola county to set up AOC3
 - MetroPlan Orlando programmed \$3 million for ATSPM
 - SCTPO looking to change existing controllers
 - Kickoff meeting on December 15

- Charles Wetzel: Is there a volume issue?
 - A: We have checked against other systems, but we can take a second look at this.
 - Updates on the bus side: We had the vendor come down and went on a Lynx ride and verified that everything is set up correctly
 - What is the timeframe? Phase 1 is being implemented
 - Charles: Positive Train Control (PTC): If it comes around, can it identify SunRail vehicles? Is it true that it can't tell the difference?
 - ACTION: Find out who is the person to talk to about PTC
 - Kat in D1 has an RFP for PTC, may be a good contact
 - More information to come on this topic
- Next Meeting will be February 8, 2018

VIII. ATTACHMENTS

- A – Sign in sheets
- B – Presentation Slides
- C – *What We Do* Handout
- D – Executed Agreement with Traffic Technology Services (TTS)
- E – Meeting agenda

END OF SUMMARY

This summary was prepared by Jordan Crandall and David Williams, and is provided as a summary (not verbatim) for use by the Consortium Members. The comments do not reflect FDOT's concurrence. Please review and send comments via e-mail to dwilliams@vhb.com so they can be finalized for the files.



TSM&O Consortium Meeting

December 14, 2017

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TSM&O Consortium Meeting

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Welcome to the TSM&O Consortium Meeting December 14, 2017



Transportation Systems Management & Operations



Meeting Agenda

1. Introduction
2. TSM&O Documentation – Update
3. Signal Technician Program – Update
4. TSM&O Strategy Guide – Update
5. Connecting TSM&O Projects to Organizational Goals
6. TSM&O and the Central Florida MPO Alliance
7. Current Initiatives



TSM&O Documentation

David Williams, VHB



Transportation Systems Management & Operations



TSM&O Documentation on CFLSmartRoads

www.CFLSmartRoads.com

Welcome to District 5 Intelligent Transportation Systems

Traffic congestion affects the quality of life for our residents, visitors and businesses alike. With local population continuing to grow, the need for a sound transportation management system is essential to achieve the levels of mobility necessary to ensure regional growth and prosperity. Construction of new highway capacity has not kept pace with the growing demand of the traveling public. The implementation of ITS has proven to be a valuable and cost-effective alternative to traditional highway expansion projects. ITS is the application of advanced communications technologies, Closed Circuit Television Cameras (CCTV), Dynamic Message Signs (DMS), Variable Speed Limit Signs (VSL) and Vehicle Detection Systems (VDS) that assist in managing our transportation systems to enhance the efficiency and safety of our roadways. District Five, in its ongoing mission to maintain the mobility goals set within our region, continues its commitment to implement and operate the ITS program along the roadways within Central Florida.



Status of D5 TSM&O Documents

- Planning for TSM&O Guidebook - **Complete**
- District Five TSM&O Implementation Plan – **Version 1.0 complete**
- TSM&O Strategy Guide – **In development**
- TSM&O Proven Strategies – **In development**
- Network Services Labor-sharing agreement – **In development (FDOT Legal)**
- Updated Corridor Planning and PD&E Scopes – **In development**
- Orange Technical College Signal Technician Program – **In coordination**



Signal Technicians Program at Orange Technical College – Update

David Williams, VHB



Transportation Systems Management & Operations



Signal Technician Program

- Orange Technical College has asked for a formal letter indicating the expected signal technician hires per year
 - Will establish need for a standardized 12-18 month signal technician program at the college

Avellan Mid Florida Orlando Westside Winter Park

Orange Technical College
Cordially Invites
Program Advisory Members from all Campuses!
to the 2nd Annual
District-Wide Program Advisory Committee Kickoff

To be held on the
Mid Florida Campus
Building 1600
Monday, October 16, 2017

Breakfast will be served at 8:00 a.m. followed by a brief welcome from
CTE Associate Superintendent, Dr. Michael Armbruster

All campus programs are invited to hold their 1st program advisory committee meeting on the
Mid Florida Campus beginning at 9:00 a.m. immediately following the breakfast and welcome.



Directions:
2900 W. Oak Ridge Rd, Orlando, FL 32809
Mid Florida Campus is located at the corner of John Young Parkway and Oak Ridge Rd. Turn on Chancellor Drive and drive to the back of the campus. Look for the signs. Golf carts will be available if assistance is needed. Register for this event by clicking on the link:
<https://www.surveymonkey.com/s/4KTP2V>

OCTC Mission: To lead our student to success with the support and involvement of families and the community



TSM&O Strategy Guide

David Williams, VHB




Transportation Systems Management & Operations



TSM&O Strategy Guide

- **Purpose:** provide relevant TSM&O strategies for a given transportation issue



Welcome to the FDOT District 5



TSM&O Strategy Guide

What type of Facility is it?

Where is the issue located?

Please select a symptom.

Is the symptom Recurring or Non-Recurring?

GET TSM&O STRATEGIES

TSM&O Strategy Guide

- User Inputs → Potential Strategies
 - Description, Links to relevant webpages, Complementary Strategies, Conflicting Strategies, Generalized Benefit-Cost

FDOT District 5 TSM&O Strategy Guide					
TSM&O Strategy:	Description of Strategy:	Additional Information:	Complementary Strategies	Conflicting Strategies	Generalized Benefit Cost
Dynamic Message Signs	<p>DMAS is used to inform travelers of the presence of downstream stop-and-go traffic based on real-time traffic detection using existing signs and flashing lights. Drivers can anticipate an upcoming situation of congestion leading by slowing down ahead of time and avoid events before, ultimately reducing queuing and/or collisions. Dynamic message signs show a signal at work, along with flashing lights, to advise motorists of queues with significant slow-down ahead. Sensors in the highway detect traffic speed, location and these are passed to a specially developed algorithm that determines what messages should be displayed on various parts of the highway. This strategy might also be combined with the use of a variable speed limit system to reduce queue acceleration and deceleration on the approach to a bottleneck. Speed harmonization and lane control signals that provide incident management capabilities can also be combined with queue warning. The system can be automated or controlled by a traffic management center operator. Work zones also benefit from DMAS with portable dynamic message signs, which placed upstream of expected queue points.</p>	<p>https://www.flhsmv.gov/transportation/transportation-reports/2017/07/07/https://www.flhsmv.gov/transportation-reports/2017/07/07/https://www.flhsmv.gov/transportation-reports/2017/07/07/</p>	<p>Dynamic Message Signs work well with these other TSM&O strategies:</p> <ul style="list-style-type: none"> Variable Speed Limit Work Zone Management Event Management Integrated Corridor Management (ICM) Traffic Incident Management (TIM) Predictive Traveler Information Electronic Driver Information 	TO BE DETERMINED	TO BE DETERMINED
Integrated Corridor Management (ICM)	<p>An ICM transportation system is the ultimate objective when it comes to operating and maintaining a complex multi-modal traffic network. ICM involves an integrated approach to transportation along a specific designated corridor or corridor. Multiple agencies and multiple modes are coordinated through the use of shared back office systems and the adoption of compatible strategies. Through an ICM approach, transportation professionals manage the corridor as a multidisciplinary system and make operational decisions for the benefit of the corridor as a whole.</p> <p>Multiple roadway types within the corridor as well as transit and other types of transportation facilities are managed in a coordinated fashion to help optimize transportation service delivery and align agency strategies. This strategy provides the ability to treat transportation as a single system, increase the operational efficiency of the whole transportation network and reduce the effect of transportation bottlenecks.</p> <p>An important aspect of this strategy is the balancing of the system equitably between all possible roadway and, more importantly, the inclusion of all modes of transportation: the intricate network of aerial, transit, transit, freight and rail. This would support statewide TSM&O initiatives as well, where the use of technology is used to manage existing infrastructure, improving the transportation system with added investment and greater benefits to users. Through the ICM remains, the USDOT is providing guidance to state agencies in implementing ICM and creating response analysis tools, approaches, and technical standards. USDOT selected two corridors - US 95 in Idaho, TX and I-5 in San Diego, CA - to demonstrate the viability of ICM systems.</p>	<p>https://www.transportation.gov/transportation-reports/2017/07/07/https://www.transportation.gov/transportation-reports/2017/07/07/https://www.transportation.gov/transportation-reports/2017/07/07/</p>	<p>Integrated Corridor Management (ICM) incorporates a variety of TSM&O strategies, including:</p> <ul style="list-style-type: none"> Dynamic Message Signs Event Management Work Zone Management Variable Speed Limit Event Management Variable Speed Limit Express Bus Limited Stop Bus Bus Rapid Transit Park and Ride Lot Queue Jump Traffic Traveler Information Portable Transit Electronic Toll Collection Regional Payment System Freight Mobility 	TO BE DETERMINED	TO BE DETERMINED
Traffic Incident Management (TIM)	<p>Incident Management supports the detection, verification, clearance and traffic management associated with incidents on freeways, arterials and arterials. This strategy uses CCTV, traffic sensors, telecommunication and centralized command to control a regional traffic management center. Incident management has a significant effect on the operational efficiency of roadways. Continued evolution of this strategy will be critical to the management of both recurring and non-recurring congestion in the region. With the intent of TSM&O initiatives promoting active incident management and incident management on the network, this strategy has incorporated some of the technologies and strategies discussed throughout the document. Incident management strategies have co-shaped the operations of state roadways over the past few decades specifically, the freeway system.</p> <p>Incident management user operators stationed in a RTMC or local TMC that identify non-recurring active traffic incidents such as vehicle crashes, disabled vehicles and events further through the use of roadside detectors and camera surveillance. Upon detection of an incident,</p> <p>The operators are instructed to follow a pre-developed set of standard operating guidelines (SOG) to notify the appropriate law enforcement agency (i.e. Fla. Highway Patrol) in addition, use only use the emergency response network for the traveling public is also notified via the TSM&O incident management system (i.e. HAW, DMS, FL, etc.). The technologies and strategies utilized by these programs have drastically improved incident response practices and incident clearance times. Distractions, the average roadway</p>	<p>https://www.flhsmv.gov/transportation/transportation-reports/2017/07/07/https://www.flhsmv.gov/transportation-reports/2017/07/07/https://www.flhsmv.gov/transportation-reports/2017/07/07/</p>	<p>Incident Management works well with these other TSM&O strategies:</p> <ul style="list-style-type: none"> Integrated Corridor Management (ICM) Event Management Work Zone Management Traffic Signal Priority Adaptive Signal Control Traffic Signal Pre-emption Queue Warning Dynamic Message Signs Pre-Trip Traveler Information 	TO BE DETERMINED	<p>The Benefit-Cost Analysis of the George Washington Traffic Incident Management System, conducted using the TSM&O application, identified a BCI of 4.4. The methodology used inputs used for the BCA was provided in the Transportation System Management and Operations Benefit-Cost Analysis: Dependable (TRCA) 2016.</p>

TSM&O Strategy Guide

- **Goal:** Further integrate TSM&O into the FDOT planning process via the FDOT Corridor Planning / PD&E Study Scope of Services



Exhibit A
Scope of Services
Corridor Planning Study

SR ### (Common Name) From Southern/Western Limit to Northern/Eastern Limit

Contract No.	C-##@##
Contract Financial Project ID No.:	#####-###-##
Project Financial Project ID No.:	#####-#
State Road No:	SR ###
Road Name:	Common Name 1 / Common Name 2
County:	County Name
Project Location:	From S./W. Limit to N./E. Limit

CORRIDOR DESCRIPTION

This section should include basic language describing the characteristics of the corridor. Note: This should be basic information such as, 4-lane divided urban arterial with sidewalks on both side, grass median, closed drainage, etc. Include figure showing corridor limits.

PURPOSE

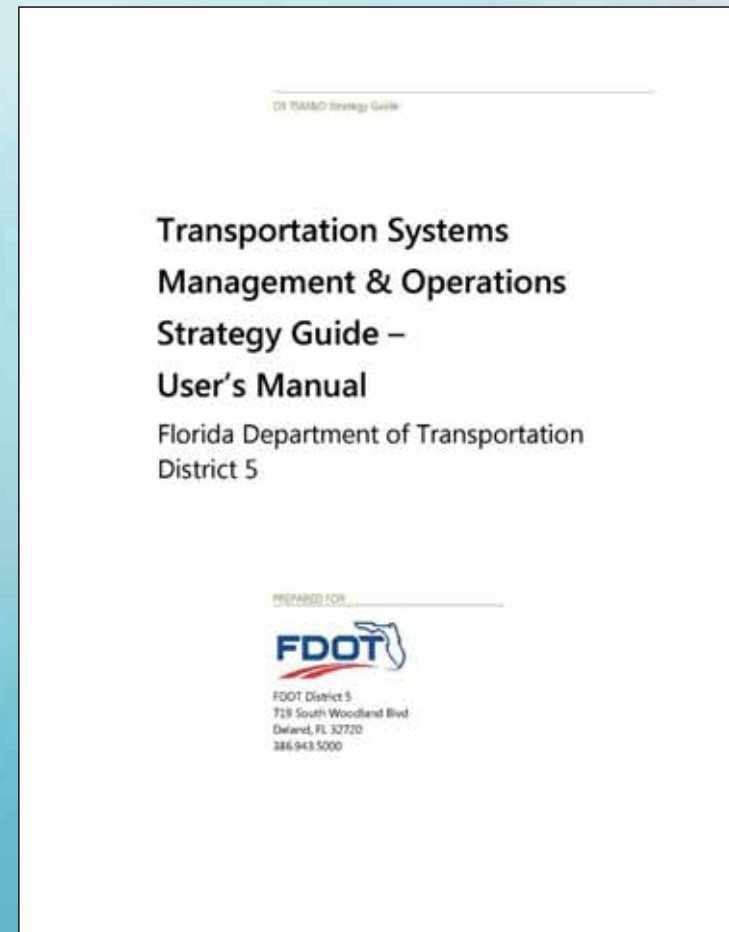
This scope of services is prepared for the purpose of providing the Florida Department of Transportation – District Five with a Corridor Planning Study to evaluate SR ### (Common Name) within County/County/City. This project will be coordinated with local and regional agency partners such as the Name Metropolitan Planning Organization (MPO) and Name County/the City of Name to develop potential solutions that establish a more walkable urban environment utilizing a context-sensitive approach. This project has been requested by the MPO, or City/County to coordinate the development of a future vision for the subject corridor that establishes a multi-modal approach to providing for future transportation needs. This study will involve a community-based evaluation to determine how best to meet the needs of current and future users, and to establish a long-term plan to guide evolution of the corridor that appropriately correlates the balance between land use and transportation planning.

The process will begin with engaging local agencies, community leaders and other stakeholders to provide the Department with a comprehensive understanding of the groundwork that has needs to be laid in determining the needs of current and future users, and establishing a long-term plan that appropriately balances land use and transportation planning. The collaboration between the Department and key stakeholders will include establishing a Project Visioning Team comprised of agency staff from (list of agencies), as well as local residents, businesses, and property owners. The Department will engage this group throughout the evaluation to seek input into the planning process and to promote a heightened awareness of context-sensitive design issues as part of the concept development process.

The purpose of this Corridor Planning Study will include the development of a *Corridor Alternatives and Strategies Report*, which will outline a series of guiding goals and objectives, which identifies a range of multi-modal solutions to address the mobility needs within a context that reflects the long term vision for the study corridor. The details of the plan will be developed in an environment that encourages input and collaboration from stakeholders, as well as from

TSM&O Strategy Guide

- **User's Manual:**
 - Explanation of each symptom
 - Explanation of each strategy
 - Instructions for using Strategy Guide



Proven TSM&O Strategies

Jorge Barrios, Kittelson & Associates

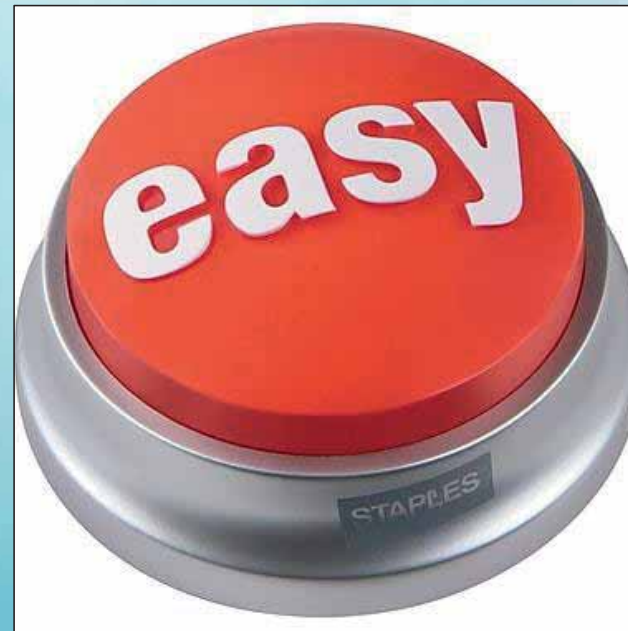


Transportation Systems Management & Operations



Proven TSM&O Strategies

- Highlighting the top strategies
- Mainstreaming TSM&O in planning studies
- Making it easier to implement TSM&O strategies



Proven TSM&O Strategies

Ramp Metering



Roundabouts



Proven TSM&O Strategies

Adaptive Signal Control



Transit Traveler Information



(and more)

Proven TSM&O Strategies

- Enhance or provide bicycle and pedestrian infrastructure
- Transit Traveler Information
- Transit Signal Priority
- Ramp Metering
- Freeway Work Zone Management
- Hard shoulder running
- Roundabouts
- Traffic signal re-timing
- Adaptive Signal Control Technologies
- Arterial access management
- Innovative intersection designs
- Active Arterial Management (AAM)
- Regional payment system
- Congestion Pricing



One Pagers

- General audience
- Basic cost/benefit information
- Success stories
- Tailored to our region



FDOT
DISTRICT 5

Proven Transportation Systems Management and Operations Strategies

Transit Signal Priority

Transit signal priority (TSP) refers to operational strategies that reduce delay for transit vehicles at signalized intersections by extending green lights or shortening red lights. TSP can be either conditional (e.g., for late-running buses only) or full-time.



Pre-requisites	Example Costs	Example Timeline
<ul style="list-style-type: none"> Actuated Traffic Signal Detector and signal timing maintenance Fixed route transit 	<ul style="list-style-type: none"> \$4,000-\$11,000 per intersection [2] [4] 	<ul style="list-style-type: none"> Several years [1]

Success Stories



Central Florida Regional Transportation Authority, Orlando, FL (implemented 1997) [1]



King County Metro, Seattle, WA (implemented in 1999) [1]



MTA, Los Angeles, CA [1]

Benefits to the Traveling Public

Well organized and structured TSP systems reduce transit delay resulting in shorter travel times and increased reliability for riders. [3]	When transit vehicles spend less time waiting at traffic signals, fewer vehicles are needed to provide the same level of service. [3]	A reduction in vehicle and operator costs can be passed on to the rider or can support future transit improvements/ investments. [3]
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[1] <http://www.gft.com/wp-content/uploads/Transit-signal-priority-A-planning-and-implementation-handbook.pdf>

[2] <http://www.flroads.fdot.gov/ITS/benefits.cfm?ID=32728&A=42788&ID27A8000695013>
OpenDocument@QueryHome

[3] <http://www.innovativehighways.net/Files/PortofLad.pdf>
hdv5376a3d6eaa32a2c101d343aee004y45N344075961221744640147469912492

[4] <http://www.itdinc.com/pressroom/its-dot-gov/ITS-benefits.cfm?ID=32728&A=42788&ID27A8000695013>
BCF6470perDocument@QueryHome

[5] <http://trcto.org/publication/truck-street-design-guide/intersections/signals-operations/active-travel-signal-priority/>

Proven TSM&O Strategies



Relevant research
and guidebooks



Different implementation
types and technologies



Procurement
examples



Questions?



Transportation Systems Management & Operations



Connecting TSM&O Projects to Organizational Goals

Jeremy Dilmore, District Five TSM&O

District Five Efforts

> Discussed Projects

- Multimodal
 - TSP – Getting Buses back on schedule
 - Route and Mode Choice – options for our users
 - Parking Management – parking availability
- Intersection Sensors
 - AAM – Bluetooth Readers and midblock vehicle counts
 - IMC – Real-time turning movement counts
 - ATSPM – Controller Log Data
- Data Cleaning
 - ITSIOA – Cleaning and combining Travel Timing and Counts

District Five Efforts

- ICMS – Software
 - Information Exchange Network – Sharing Info through common Interface
 - DSS
 - Signal Optimization Tools – Prioritized work and data for signal timing
 - Predictive Engine
 - Information Exchange Network – Sharing Info through common Interface
 - Data Fusion Environment – Bringing data together
 - Dashboards – Sharing data for insights
 - » Bottleneck ID
 - » Looking at impact of reoccurring and nonrecurring congestion
 - » Reliability of our corridors
 - Analytics
 - » Predicting impact on community, land value, and travel based on investments
 - Pulling Data
 - » Generating Scenarios for design for reoccur and nonrecurring congestion

Other Efforts

> Software Sharing

- MIMS
- ATSPM
- SolarWinds
- Sunguide

> Staffing

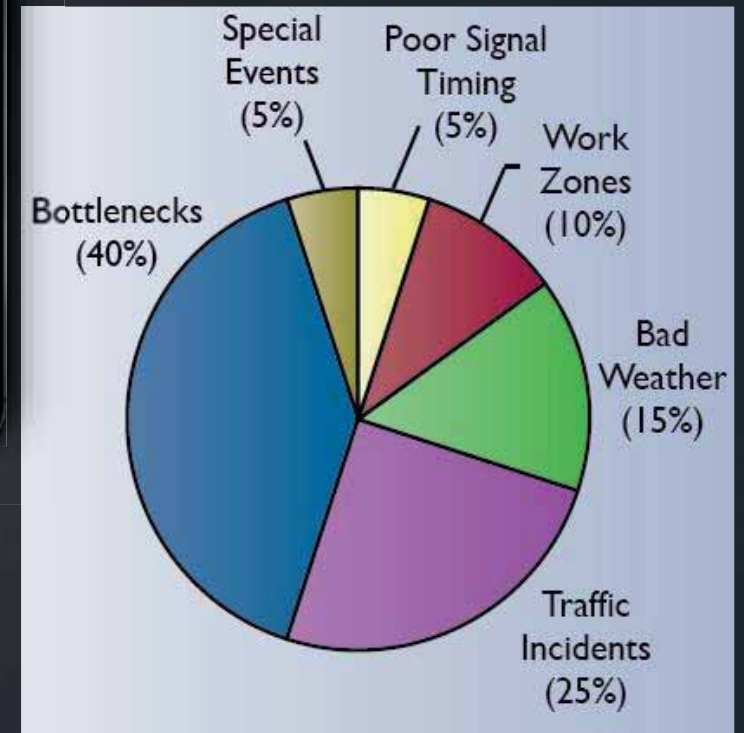
- Master Plan Analysis
- Agreement
- Working with Universities

> Security Standards

- Network Security
- Field Security
- CV security

What transportation challenges are we addressing?

- > Safety
 - Pedestrian and Bicycle Safety
 - Vehicular Safety
- > Knowing What Project to Build
 - Injecting More Data into the Planning Process
 - Reoccurring and Nonrecurring Congestion
 - Improving Analytics for decision making
- > Efficiency
 - Making Data Available to reduce duplicate collection
 - Giving Engineers right pieces of information to make decision
 - Reoccurring and Nonrecurring Congestion
- > Modal Choice
 - Letting data flow to the user so they can make decisions
- > Making things work
 - Information Technology, Security, Connecting Information
- > Inform the public



Future Transportation challenges

> Safety

- CV and AV technologies are key here; need to fit With security and signal deployments

> Knowing What Project to Build

- Get Data from operations
- Research Analytics

> Efficiency

- Information from roadside in real-time; converted to actionable Information; presented to right person
- Reduce data collection for all activities

> Modal Choice

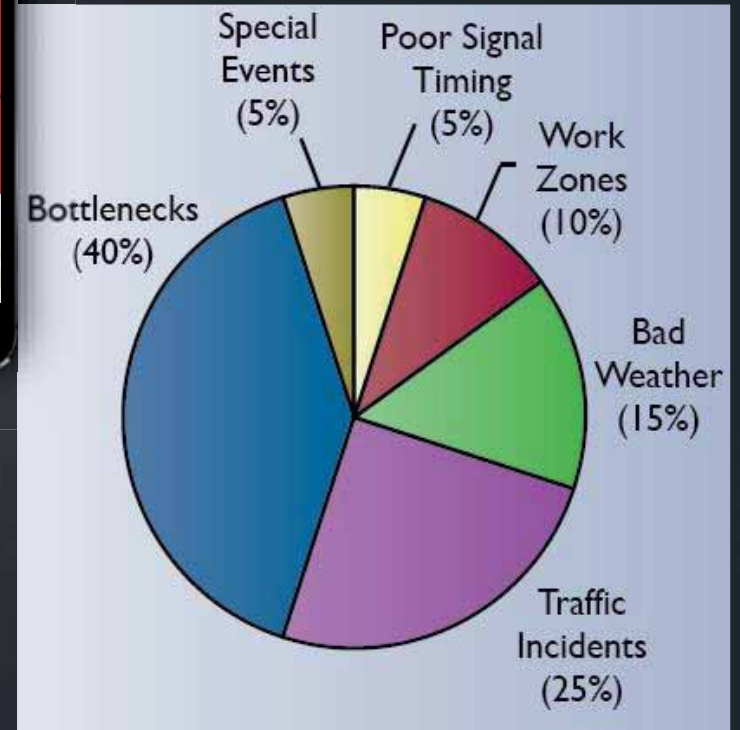
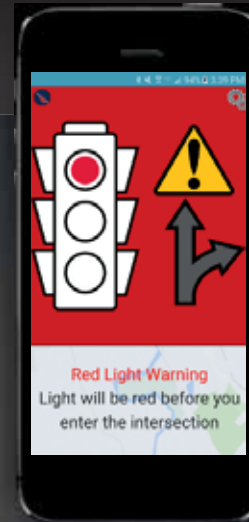
- Connecting data; optimization engine; application; kiosks

> Making things work

- Information Technology, Security, Connecting Information

> Inform the public

- Data Portals; Dashboards; Apps



What We will Need after Grant

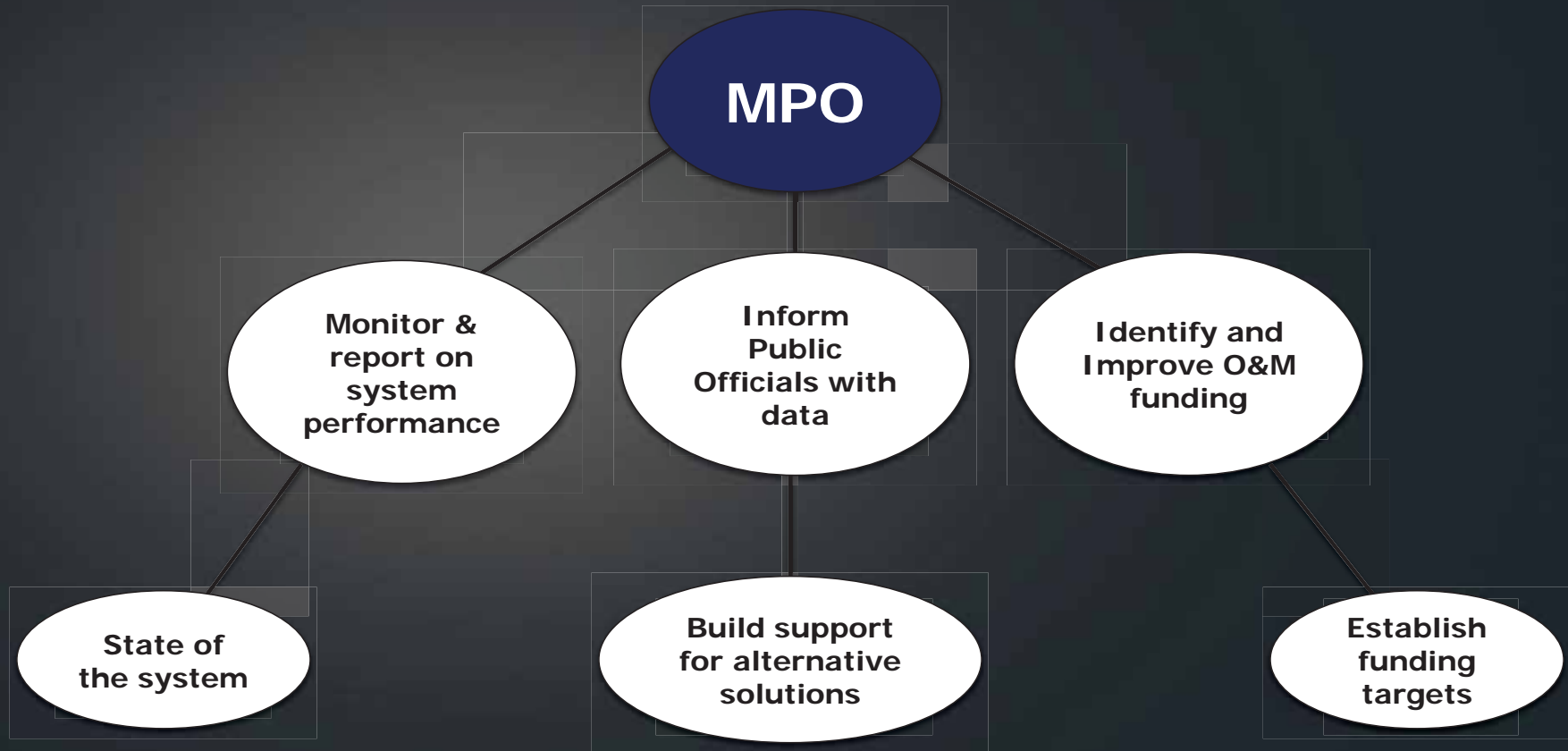
- Developing Smart Signal Template Deployment
 - Stopbar Detection – Intersection Movement Counts (Gridsmart, Myovision, Iteris, etc)
 - Method of Advance Detection – Cover all lanes
 - Controller and Cabinet Types – ATC controller, TS-2 type 1 (or modified); type 6 cabinet
 - RSU compatibility for all controller types
 - Allow for compatibility with adaptive
- Develop transit kiosk solution
 - CCTV for movement analytics, local Wifi, beacon, tablet, transmitted to fiber backhaul via wireless; solar
- Push for these new standards in all projects (FDOT, City, and County)

So what is this about

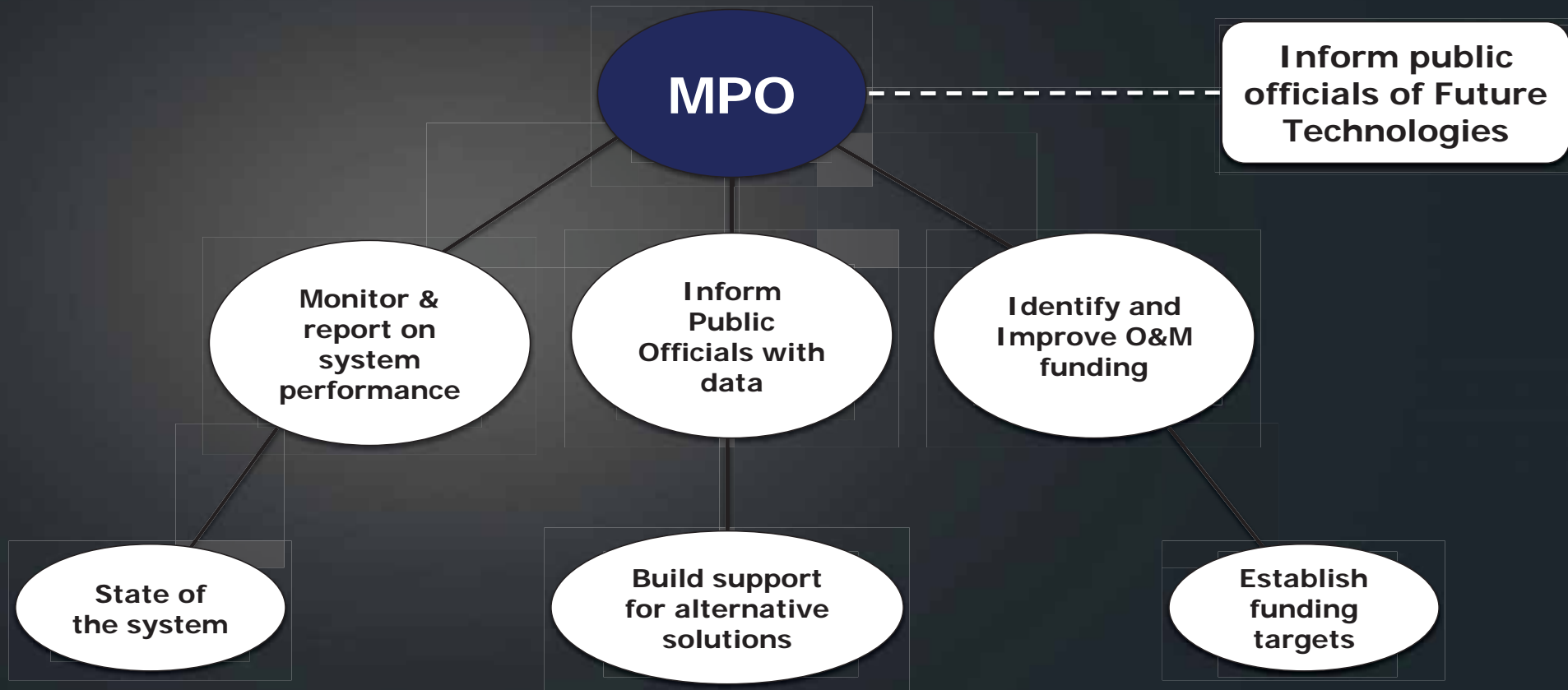
> What are our roles?

- We decide where to invest money
 - Safety, Mobility, Economic Investment, Community Building
- We inform people about their transportation system
 - Parking, Transit, Vehicle trips, Prices, etc.
- We provide transit service
- We control ATMS
 - Signals, Ramp Meters, Pricing
- We operate and maintain our systems for the good of the public

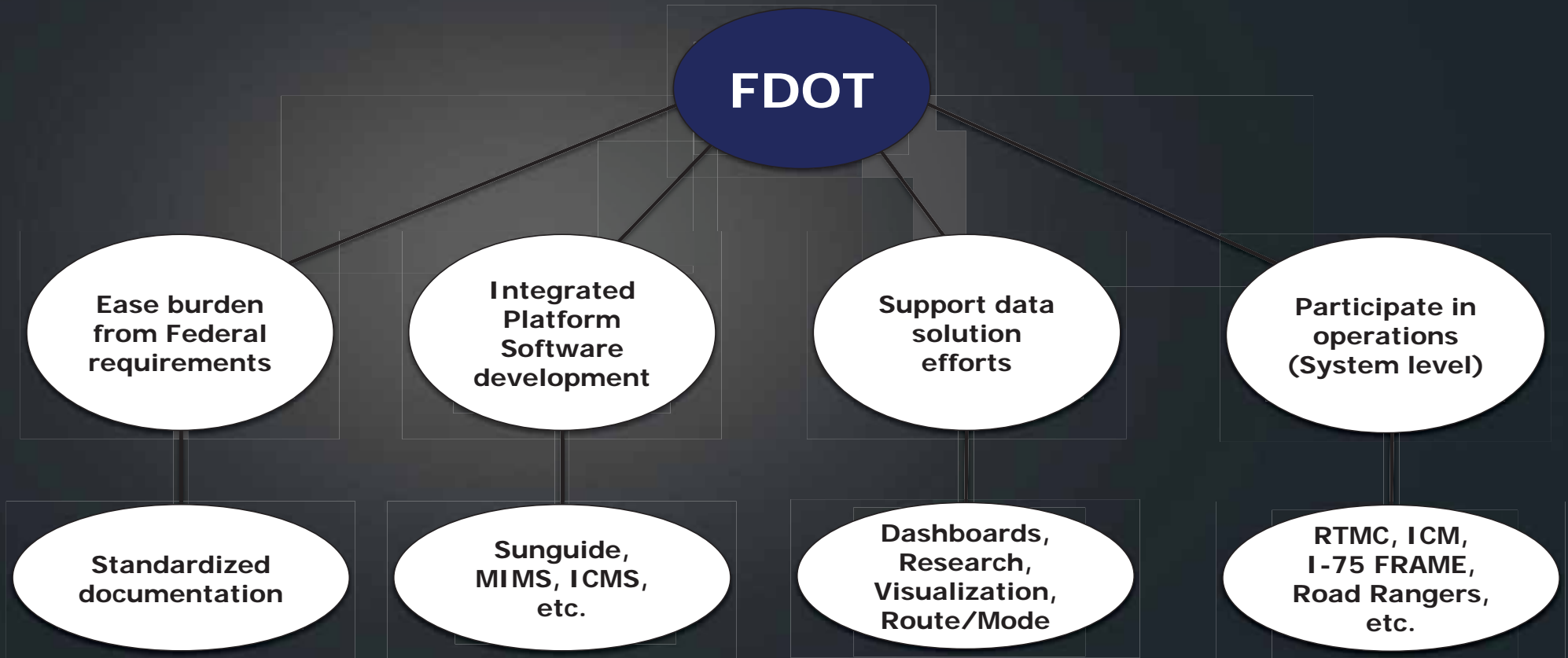
Roles – Metropolitan Planning Organization



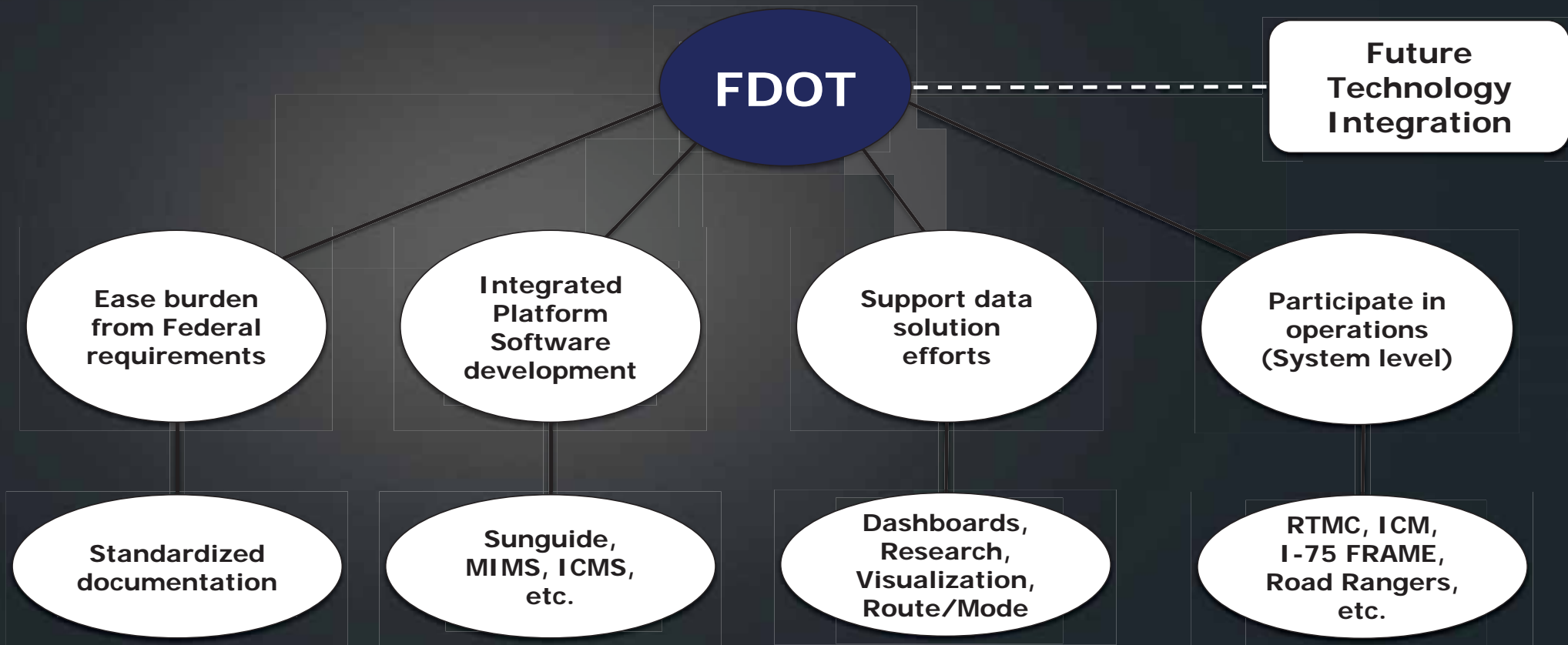
Roles – Metropolitan Planning Organization



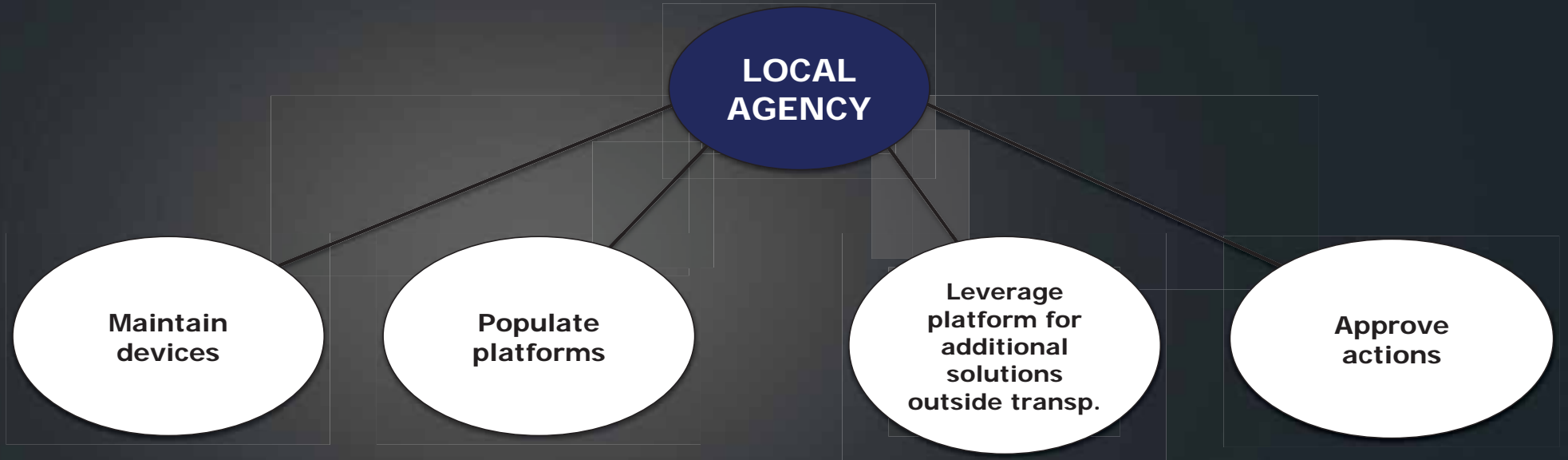
Roles – Florida Department of Transportation



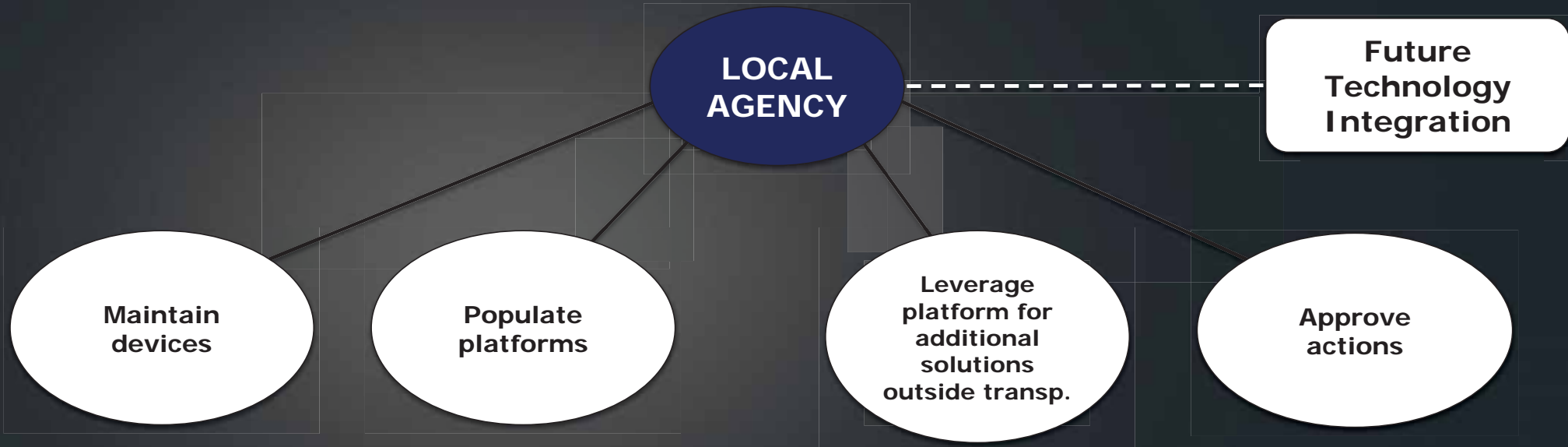
Roles – Florida Department of Transportation



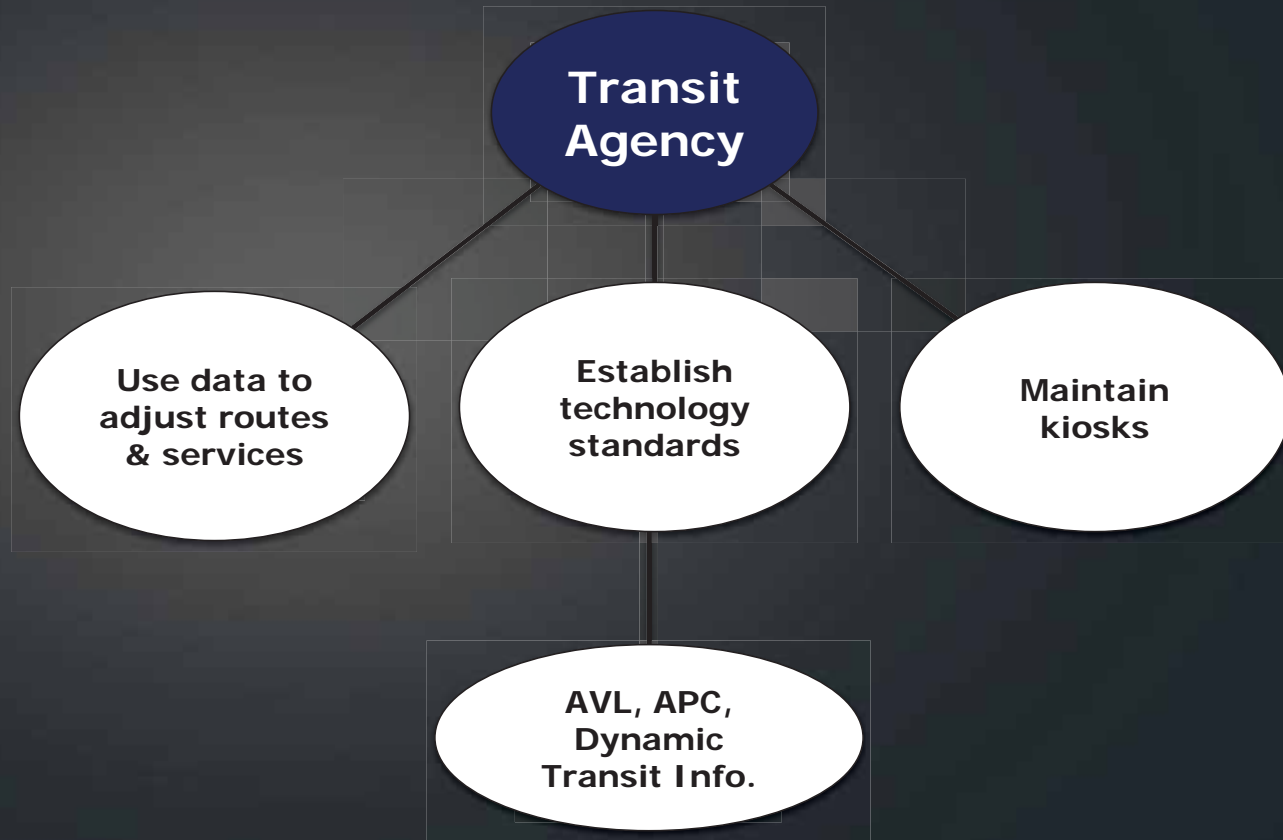
Roles – City / County



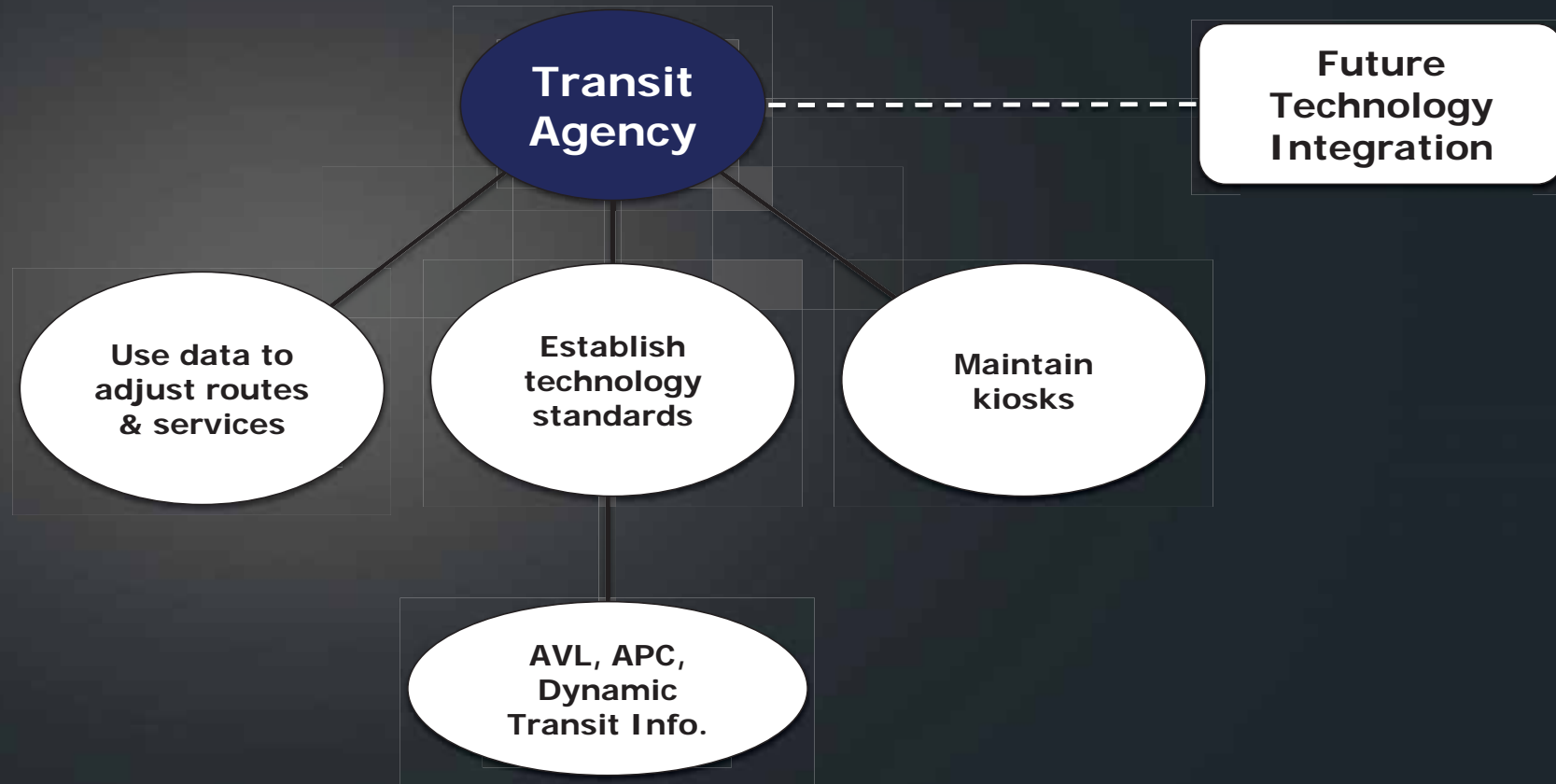
Roles – City / County



Roles – Transit Agency



Roles – Transit Agency



??

- > What did I get wrong?
- > What do you disagree with?

TSM&O and the Central Florida MPO Alliance (CFMPOA)

Jeremy Dilmore, District Five TSM&O

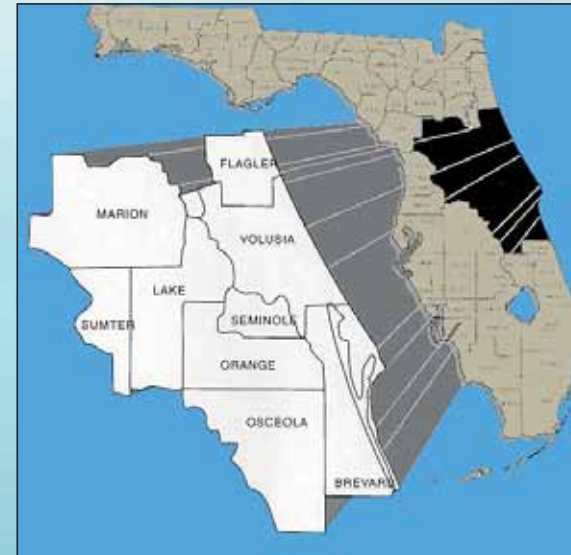


Transportation Systems Management & Operations



TSM&O and the Central Florida MPO Alliance

Agencies have had success implementing localized TSM&O projects



How do we leverage these successes into regional applications of TSM&O?



Transportation Systems Management & Operations



TSM&O and the Central Florida MPO Alliance

- How can TSM&O be presented to the Central Florida MPO Alliance?

Establish foundational knowledge of TSM&O with the Alliance

or

Present a regional TSM&O project to the Alliance for their consideration



Transportation Systems Management & Operations



TSM&O and the Central Florida MPO Alliance

- Foundational understanding of TSM&O
 - What we've accomplished
 - What we're doing now
 - Where we're going

★ We've all been practicing TSM&O ★



TSM&O and the Central Florida MPO Alliance

The next Central Florida MPO Alliance meeting is on January 19, 2018

What is everyone's thoughts? Is this a good approach?



Transportation Systems Management & Operations



Current Initiatives

Jeremy Dilmore, District Five TSM&O



Transportation Systems Management & Operations



ATCMTD Grant Award Update

Jeremy Dilmore, District Five TSM&O



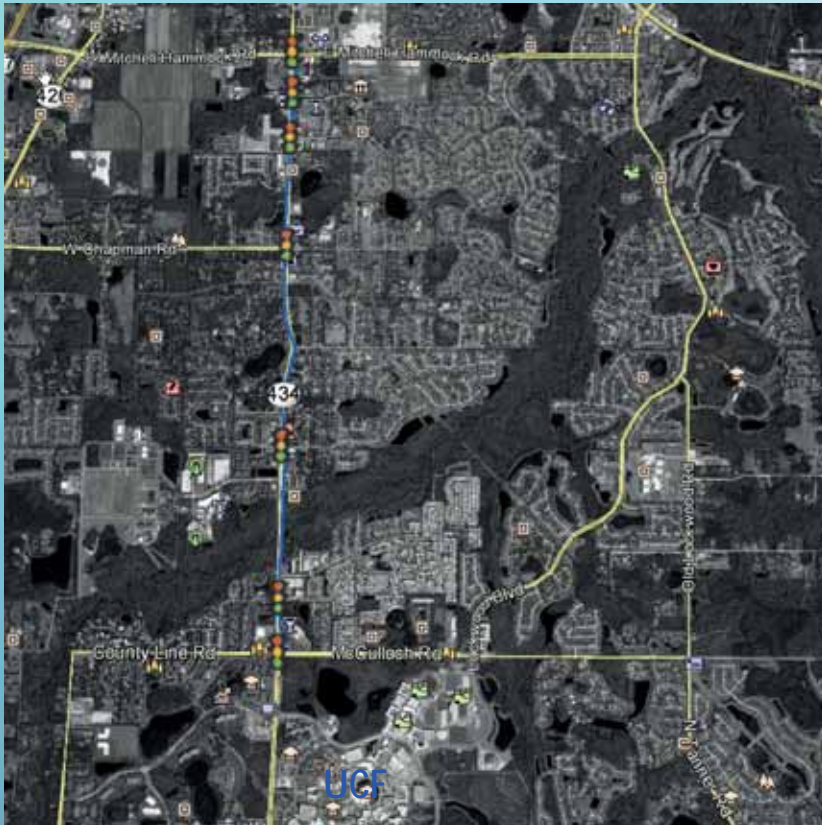
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District 5 Connected Vehicle Projects

Connected Vehicle Pilot on SR 434



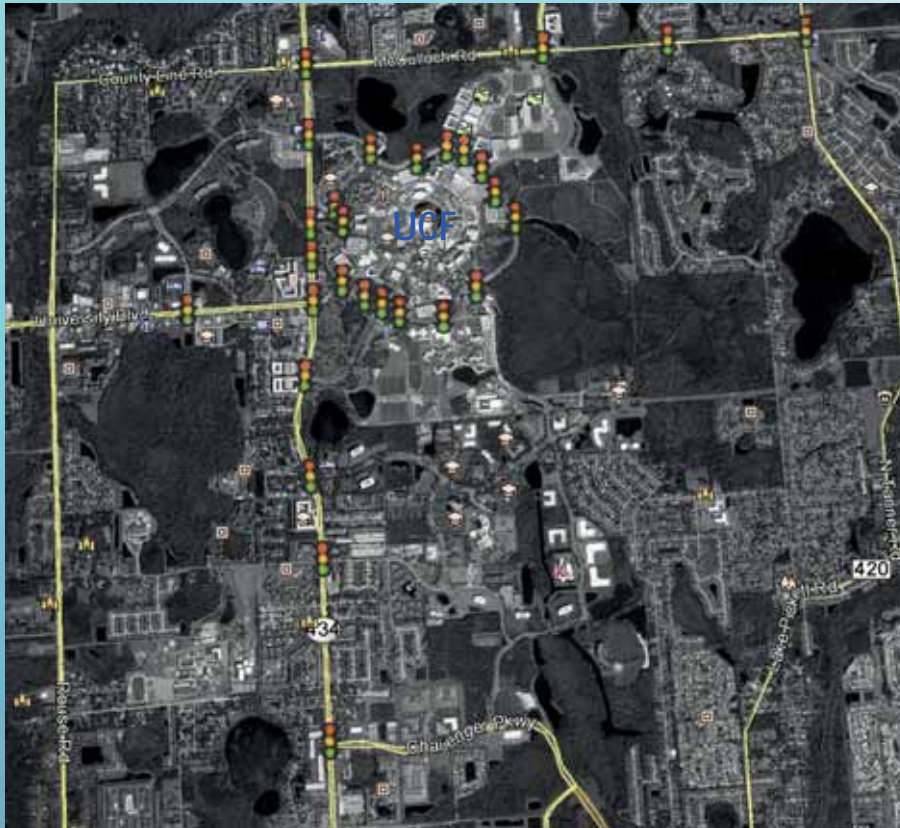
6 locations along SR 434:

- RSU
- ATSPM
- SPaT
- TSP
- Pre-emption

FDA - Nicholas J. Spatola NSpatola@fallerdavis.com

Letting: 04/2/2019

PedSafe and GreenWay Deployment



284 Locations:

- UCF
 - SR 434
 - McCulloch
 - University Blvd
 - Greek Park Dr.
 - Gemini Blvd
- SR 50
- District Wide Locations
 - IMC

ATKINS- Chris Schultz

Christopher.Schultz@atkinsglobal.com

Letting: 5/7/2019

I-75 FRAME



88 Locations:

- Main corridors
 - I-75
 - US 301
- Connecting Corridors:
 - SR 326
 - SR 492
 - SR 40
 - SR 200

METRIC — Dale Cody Dale.Cody@metriceng.com

Letting: 3/27/2019

Questions?



Transportation Systems Management & Operations



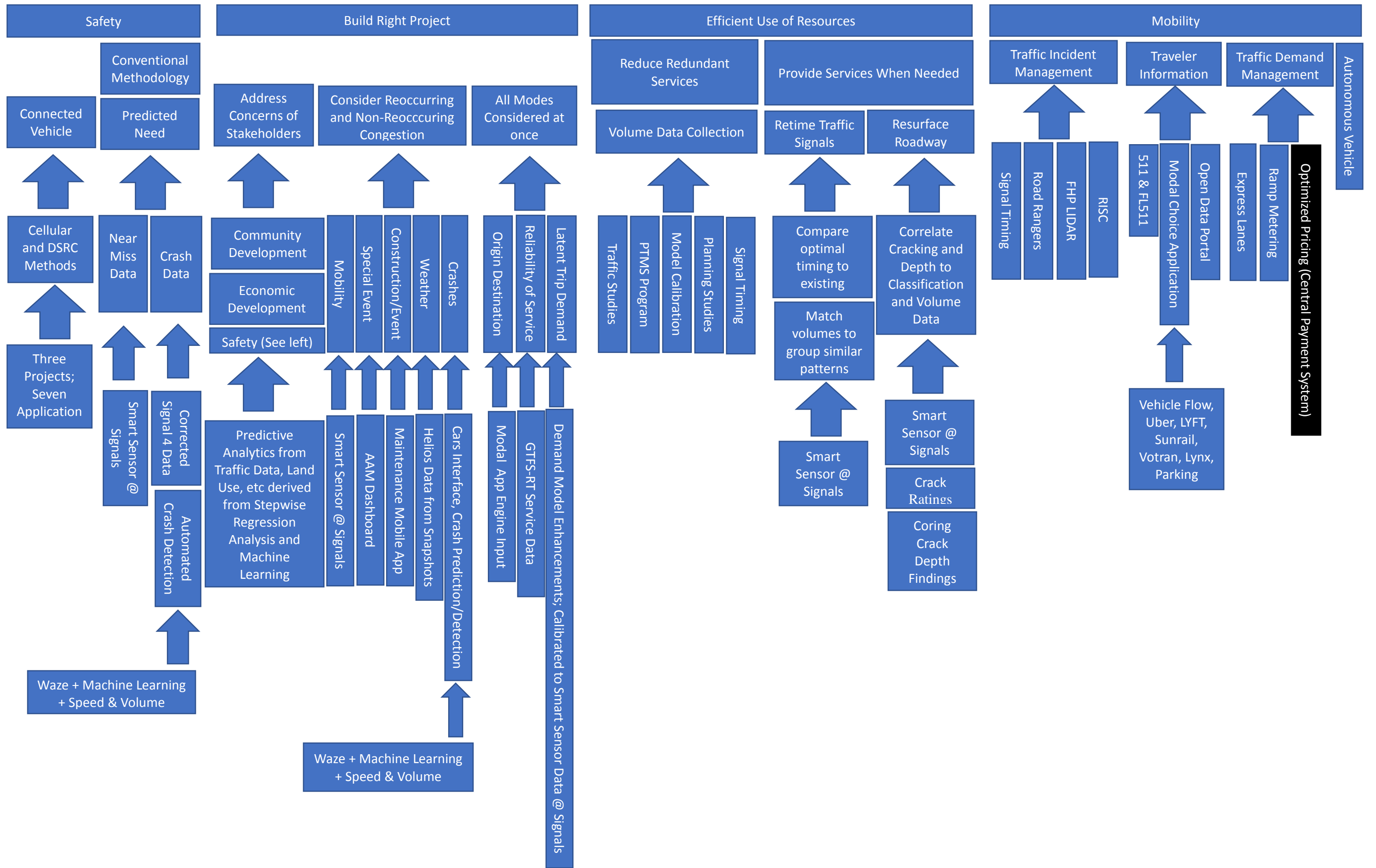
THANK YOU!

Next Consortium – February 8, 2018



Transportation Systems Management & Operations







Authorization for TTS Access to Agency Traffic Signal Data

This is an agreement between the State of Florida, Department of Transportation (herein DEPARTMENT) and Traffic Technology Services, Inc. (TTS). Both the DEPARTMENT and TTS are each sometimes referred in the agreement as “Party” and both the DEPARTMENT and TTS are sometimes referred in this Agreement together as “Parties”. This agreement sets forth the understanding between the above-named parties related to the authorization of TTS access to DEPARTMENT Data.

Whereas, TTS is in the business of developing technologies, strategies, and systems for use in maximizing the efficiency of transportation end users and thus the overall capacity of existing transportation networks;

Whereas, DEPARTMENT collects Real Time Traffic Signal Data and other related data;

Whereas, TTS has a significant business interest to access Real Time Traffic Signal Data as the input into its proprietary and patented processes;

Whereas, these DEPARTMENT Data may be made available to TTS at no cost to DEPARTMENT;

Whereas, these DEPARTMENT Data are not confidential, nor identify any transportation end user specifically in any manner;

Whereas, TTS desires permission to obtain access to the Real Time Traffic Signal Data for use in conjunction with its business;

Whereas, TTS agrees to provide related inventories, signal performance metrics, and other formatted data products in exchange for access to these Real Time Traffic Signal Data;

Whereas, the DEPARTMENT agrees to provide TTS with Real Time Traffic Data, subject to the terms and conditions in this Agreement;

Now therefore, TTS and the DEPARTMENT agree as follows:

Section 1. Definitions

“DEPARTMENT Data” means collectively, Real Time Traffic Signal Data, Traffic Signal Timing Plan, and any other data provided to TTS by DEPARTMENT under this Agreement.

“Real Time Traffic Signal Data” means signal status and states, demand status and states, and other information available from the traffic signal controller or DEPARTMENT’s central signal system or DEPARTMENT’s Advanced Traffic Management System (ATMS).

“Traffic Signal Timing Data” means signal timing plans, as-built intersection design, traffic signal plans, signal control plans, or other documents that identify the time-of-day plans.

“Product” means the data derived from the Real Time Traffic Signal data and Traffic Signal Timing Data, marketed, distributed, and sold as “Personal Signal Assistant” or related products.



Section 2. Authorized Representatives

DEPARTMENT State Traffic Operations Engineer is designated by DEPARTMENT as an authorized representative (DEPARTMENT Agent).

The Chief Executive Officer, Chief Marketing Officer, or Director of Government Accounts are designated by TTS as authorized representatives (TTS Agent).

Section 3. Purpose and Scope

TTS desires access to the Real Time Traffic Signal Data, to include signal status and states, demand status and states, and other information available from traffic signal controller or ATMS. In addition, TTS desires access to time of day signal timing parameters. TTS will use these data in patented, proprietary processes to produce Product for use by TTS customers and other interested parties. TTS sells this data to the automotive industry, commercial fleets, telematics integrators, insurance companies, and other transportation service providers.

The intended use of the Product is for connected vehicle applications to improve the vehicle performance or efficiency, improve ride comfort for driver or operator and passengers, provide information to the driver or operator, monitor driving behaviors, or apply to automated features. TTS shall limit its customers' applications of the derived Product for applications that do not violate local, state, or federal laws. TTS shall not violate any signal system or ATMS software agreements. The use of any DEPARTMENT data, or TTS derived Product that encourages driver behavior deemed undesirable by the DEPARTMENT, is strictly prohibited.

The Product is not permitted for insurance claims or traffic law enforcement.

Section 4. Access of Traffic Signal Timing Data

DEPARTMENT hereby grants TTS access to Traffic Signal Timing Data. TTS will work with DEPARTMENT Agent to obtain data in the most efficient and non-intrusive manner from the DEPARTMENT, which may include access to DEPARTMENT central system or ATMS.

Section 5. Access of Real Time Traffic Signal Data

DEPARTMENT hereby grants TTS non-exclusive, non-transferable, non-sublicensable, limited, and royalty free access to obtain and utilize its Real Time Traffic Signal Data. TTS will be provided with access to this Real Time Signal Data at no cost, except TTS will be responsible for any costs associated with making the data available. TTS will be responsible for all vendor costs associated with DEPARTMENT's ATMS vendor making system modifications to make the Real Time Signal Data available to TTS. TTS shall have the right to use the data in any manner it deems appropriate in furtherance of its business purposes, including without limitation providing the derivatives of the data and Product to third parties, subject to the terms of this Agreement. DEPARTMENT reserves the right to make available the same data for other parties that request access to DEPARTMENT Data.

The DEPARTMENT will allow TTS access to the signal system and/or ATMS system facilities for equipment maintenance and troubleshooting upon request during normal business hours. Coordination with the DEPARTMENT and the DEPARTMENT Signal Maintenance Contractor will be



required for access. The DEPARTMENT and the DEPARTMENT Signal Maintenance Contractor may require up to 5 business days' notice prior to allowing access to the facilities with security measures.

Section 6. Ownership of and Rights to Data

The DEPARTMENT retains all rights to the raw data, or Real Time Traffic Signal Data, being provided to TTS. TTS shall own all rights to Product and any formatted, predictive, or derivative data generated from the raw data.

Section 7. Reporting

TTS shall provide DEPARTMENT with reports of vehicle-based signal performance metrics, as data become available from TTS customer systems, at no charge to the DEPARTMENT. Vehicle-based data is currently under development, TTS intends for this data to be freely-available without restriction for use by the DEPARTMENT and local partners.

Section 8. Indemnification

The risk of use of the DEPARTMENT data is the sole responsibility of TTS and TTS shall indemnify, defend, save, and hold harmless the DEPARTMENT and its officials, employees, and agents from all claims, including but not limited to claims that arise from or relate to (i) a breach of TTS' representations and warranties, (ii) any personal injury, death or property damage caused by any alleged act, omission, error, fault, mistake or negligence of TTS, its employees, agents, or representatives in connection with or incident to TTS' performance under or related to this Agreement, and (iii) the infringement of any patent, copyright, trademark, trade secret or other proprietary right of any third party by TTS' use of the DEPARTMENT Data provided under this Agreement.

TTS agrees to hold the DEPARTMENT harmless for any loss in service or degradation in quality of services that may arise.

The DEPARTMENT assumes no responsibility for any equipment or property placed in the DEPARTMENT's signal system and/or ATMS system facility and TTS hereby expressly relieves and discharges DEPARTMENT from any and all liability for any loss, injury, or damage to persons and property that may be sustained by reason of the use or occupancy of the DEPARTMENT facility. TTS agrees to approval by the Department prior to placement of any equipment or property placed in the DEPARTMENT's signal system and/or ATMS system facility. TTS agrees to immediately remove or relocate, at its sole expense, any or all of the equipment, hardware, or software at the request of the DEPARTMENT. TTS shall provide a fully trained contact person who is solely responsible for the operation and maintenance of any TTS equipment and all activities associated with this AGREEMENT. The DEPARTMENT shall have no responsibility to provide any training or supervision of the TTS contact person associated with this AGREEMENT other than to allow the contact person to attend all briefings and/or training sessions provided by the DEPARTMENT which relate to the equipment, hardware, or software.

TTS agrees that it will not install or operate any equipment, hardware or software that may interfere with the DEPARTMENT's communications equipment or other DEPARTMENT electronic systems. In the event any such interference occurs, TTS shall immediately remedy all problems caused by such interference. TTS further authorizes the DEPARTMENT to disconnect or deactivate any equipment,



hardware or software causing such interference and waives any claim it might otherwise assert as a result of such disconnection or deactivation.

Section 9. Representations and Warranties

The DEPARTMENT will provide a good faith effort in maintaining the quality of service of the connection. DEPARTMENT makes no warranties concerning the quality or accuracy of the data provided under this Agreement. DEPARTMENT does not warrant it will be able to continuously provide the data without interruption and expressly reserves the right to discontinue the data stream at any time. Notwithstanding anything to the contrary herein, DEPARTMENT reserves the right to immediately discontinue the DEPARTMENT Data stream without notice and at DEPARTMENT discretion upon evidence of tampering or other unauthorized interference with the DEPARTMENT Data. Except as expressly provided for herein, DEPARTMENT makes no other representations or warranties.

Section 10. Term

Unless terminated earlier in accordance with Section 12, this Agreement will begin on the latest date of the authorized agent signature (the "Effective Date") and continue for three years (3) year (the "Initial Term"). This Agreement will automatically renew on the anniversary of the Effective Date for successive one (1) year periods unless either party provides written notice of non-renewal at least thirty (30) days before the end of the then-current term (collectively, "Renewal Terms"). The Agreement may be renewed for a maximum of two (2) successive one (1) year periods. The Term of this Agreement may not exceed five (5) years in any circumstance. The "Term" will consist of the Initial Term and all Renewal Terms, if any.

Section 11. Limitation of Liability

Nothing in this Agreement excludes or limits either Party's liability for: (a) fraud or fraudulent misrepresentation; (b) breach of confidentiality; (c) indemnification obligations under Section 8(ii) or Section 8(iii) above; (d) claims for personal injury, including death, or damage to real property or tangible personal property arising from the negligence, reckless conduct or intentional acts of a Party, its officers, employees or agents; or (e) matters that cannot be excluded or limited under applicable law. Notwithstanding anything to the contrary in this Agreement, the DEPARTMENT does not agree to indemnify TTS, TTS's agents, and TTS's contractors and the DEPARTMENT does not waive its sovereign immunity provided under Section 768.28, Florida Statutes.

Section 12. Termination

Each Party shall have the right to terminate this Agreement without cause by providing written notice to the other Party within thirty (30) days, unless identified otherwise in this Agreement.

Section 13. Notices

Absent notice to the contrary in writing, all communications to TTS shall be sent to:

Traffic Technology Services, Inc.
Attn: Contracts & Agreements
17933 NW Evergreen Pkwy, Suite 240
Beaverton, OR 97006



or email: suppliers@trafficechservices.com

Absent notice to the contrary in writing, all communications to the DEPARTMENT shall be sent to:

Florida Department of Transportation. Traffic Engineering and Operations Office.
Attn: Trey Tillander, Traffic Engineering and Operations Office Manager
605 Suwannee Street, Mail Station 36.
Tallahassee, FL 32399

or at any other address as any Party may, from time to time, designate by notice given in compliance with this Section.

Section 14. Assignment

Neither Party shall assign, transfer, subcontract, or delegate all or any part of this Agreement, or any interest therein, without the other Party's prior written consent, which shall not be unreasonably withheld.

Section 15. Agreement Binding

This Agreement shall be binding upon the successors of DEPARTMENT Agent, TTS Agent, TTS, or DEPARTMENT and assigns of the Parties hereto.

Section 16. Personal Liability

Nothing in this Agreement may be construed to create any personal liability on the part of any officer or agent of either Party to this Agreement.

Section 17. Choice of Law

This Agreement shall be governed by and construed in accordance with the laws of the State of Florida. In the event of a conflict between any portion of the Agreement and Florida law, the laws of Florida shall prevail.

Section 18. Choice of Forum

Venue for any and all actions arising out of or in any way related to the interpretation, validity, performance or breach of the Agreement that are not resolved to the mutual satisfaction of the parties shall lie exclusively in a state court of appropriate jurisdiction in Leon County, Florida. TTS hereby consents to the personal jurisdiction of these courts, waives any objection to venue in these courts, and waives any claim that either of these courts is an inconvenient forum. In no way may this section or any other term of this Agreement be construed as a waiver by the DEPARTMENT of any form of defense or immunity, whether it is sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States, or otherwise, from any Claim or from the jurisdiction of any court.

Section 19. Waiver

Any waiver of any breach of any condition or covenant herein contained to be kept and performed by either Party shall not be deemed or considered as a continuing waiver, and shall not operate to bar or prevent the non-breaching Party from declaring a default for any succeeding breach, either of the same condition or covenant or otherwise.



Section 20. Severability

If any term (or part of a term) of this Agreement is invalid, illegal, or unenforceable, the rest of the Agreement will remain in effect.

Section 21. Interpretation of the Agreement

The Parties acknowledge that each of the Parties have participated in the drafting of this agreement. No Party shall be considered to be the drafter of this Agreement for the purposes of interpretation.

Section 22. Parties in Interest

Nothing herein shall be construed to be to the benefit of any third party, nor is it intended that any provision shall be for the benefit of any third party.

Section 23. Force Majeure

Neither Party will be liable for failure or delay in performance to the extent caused by circumstances beyond reasonable control.

Section 24. Entire Agreement

This writing embodies the entire Agreement and understanding between the parties hereto and there are no other Agreements and understanding, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby. No modifications, alterations, changes, or waiver to this Agreement or any of its terms shall be valid or binding unless accomplished by a written amendment signed by both Parties.

Section 25. E-Verify

Vendor/Contractor:

(1) shall utilize the U.S. Department of Homeland Security's E Verify system to verify the employment eligibility of all new employees hired by the Vendor/Contractor during the term of the contract; and

(2) shall expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

(See Form #375-040-68, E-Verify)

Section 26. Inspector General Compliance

The Parties agree to comply with s.20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with s.20.055(5), Florida Statutes.

Section 27. Public Records

Florida has a very broad public records law and certain records of a contractor may be considered public records. Accordingly, , TTS shall comply with Chapter 119, Florida Statutes. Specifically, TTS shall:

1. Keep and maintain public records required by the DEPARTMENT to perform the service.



2. Upon request from the DEPARTMENT's custodian of public records, provide the DEPARTMENT with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirement are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if TTS does not transfer the records to the DEPARTMENT.
4. Upon termination or completion of the agreement, transfer, at no cost, to the DEPARTMENT all public records in possession of TTS. Once TTS transfers all public records to the DEPARTMENT upon termination or completion of the contract, TTS shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. TTS shall transfer all public records to the DEPARTMENT and destroy any duplicate public records that are exempt or confidential within thirty (30) days of the termination or completion of the agreement. All records stored electronically must be provided to the DEPARTMENT, upon request from the DEPARTMENT's custodian of public records, in a format that is compatible with the information technology systems of the DEPARTMENT.

Failure by TTS to comply with Chapter 119, Florida Statutes, shall be grounds for immediate unilateral termination of this Agreement by the DEPARTMENT.

IF TTS HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO TTS'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

Phone number

Email Address

Physical Address

The remainder of this page intentionally left blank.



IN WITNESS OF THIS, the Parties hereby execute this Agreement through their authorized representatives.

DEPARTMENT

TTS

Fred H. Heery 12-01-17
Authorized Signature Date

FRED H. HEERY
Printed Name

STATE TSM&O PROGRAM ENGINEER
Title

Kris Milster 11/9/17
Authorized Signature Date

KRIS MILSTER
Printed Name

DIRECTOR OF GOVERNMENT ACCOUNTS
Title

Approved as to Legal Sufficiency By:

Alvin M.
FDOT Office of General Counsel

EXHIBIT A

PUBLIC RECORDS CUSTODIAN

Central Office

850-414-5355

COPRCustodian@dot.state.fl.us

Central Office – Office of General Counsel

605 Suwannee St., MS-58

Tallahassee, FL 32399-0458



TSM&O Consortium Meeting

MEETING AGENDA

D5 Urban Office
133 S. Semoran Blvd.
Orlando, FL 32807
Lake Apopka B Conference Room

December 14, 2017; 10:00 AM-12:00 PM

- 1) WELCOME
- 2) TSM&O DOCUMENTATION - UPDATE
 - David Williams, VHB
- 3) SIGNAL TECHNICIAN PROGRAM AT ORANGE TECHNICAL COLLEGE – UPDATE
 - David Williams, VHB
- 4) TSM&O STRATEGY GUIDE / PROVEN TSM&O STRATEGIES – UPDATE
 - David Williams, VHB and Jorge Barrios, Kittelson & Associates
- 5) CONNECTING TSM&O PROJECTS TO ORGANIZATIONAL GOALS
 - Jeremy Dilmore, District Five TSM&O
- 6) TSM&O AND THE CENTRAL FLORIDA MPO ALLIANCE
 - Jeremy Dilmore, District Five TSM&O
- 7) CURRENT INITIATIVES
 - Jeremy Dilmore, District Five TSM&O