



## TSM&O CONSORTIUM MEETING SUMMARY

**Meeting Date:** November 17, 2016 (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

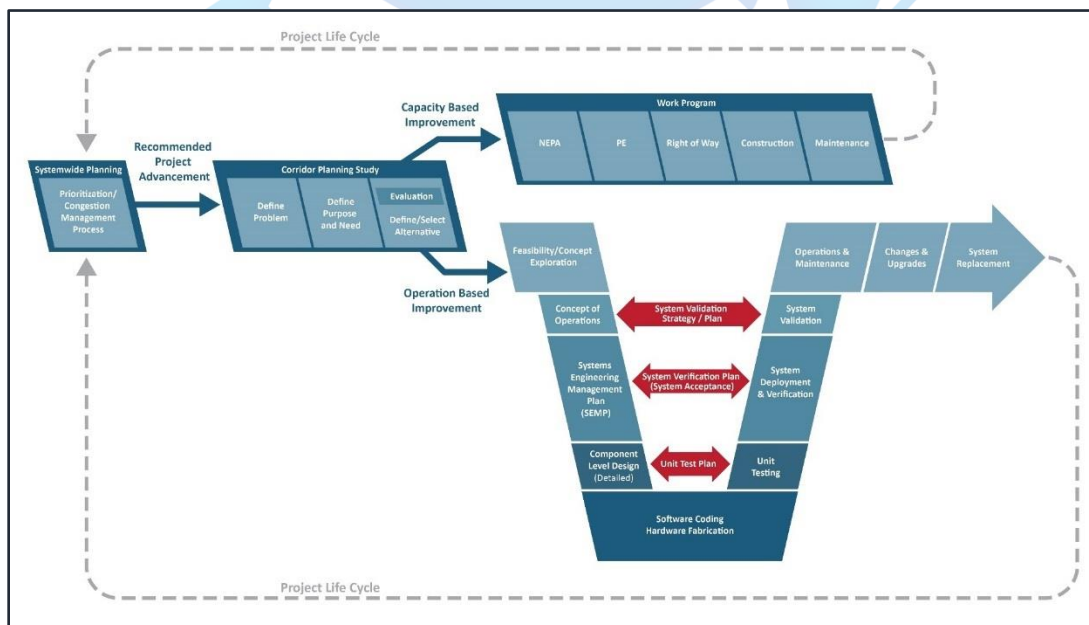
### I. OVERVIEW

The purpose of this recurring meeting summary is to provide an opportunity for District 5 FDOT staff and regional agency partners to collaborate on the state of the TSM&O Program in District 5 and ongoing efforts.

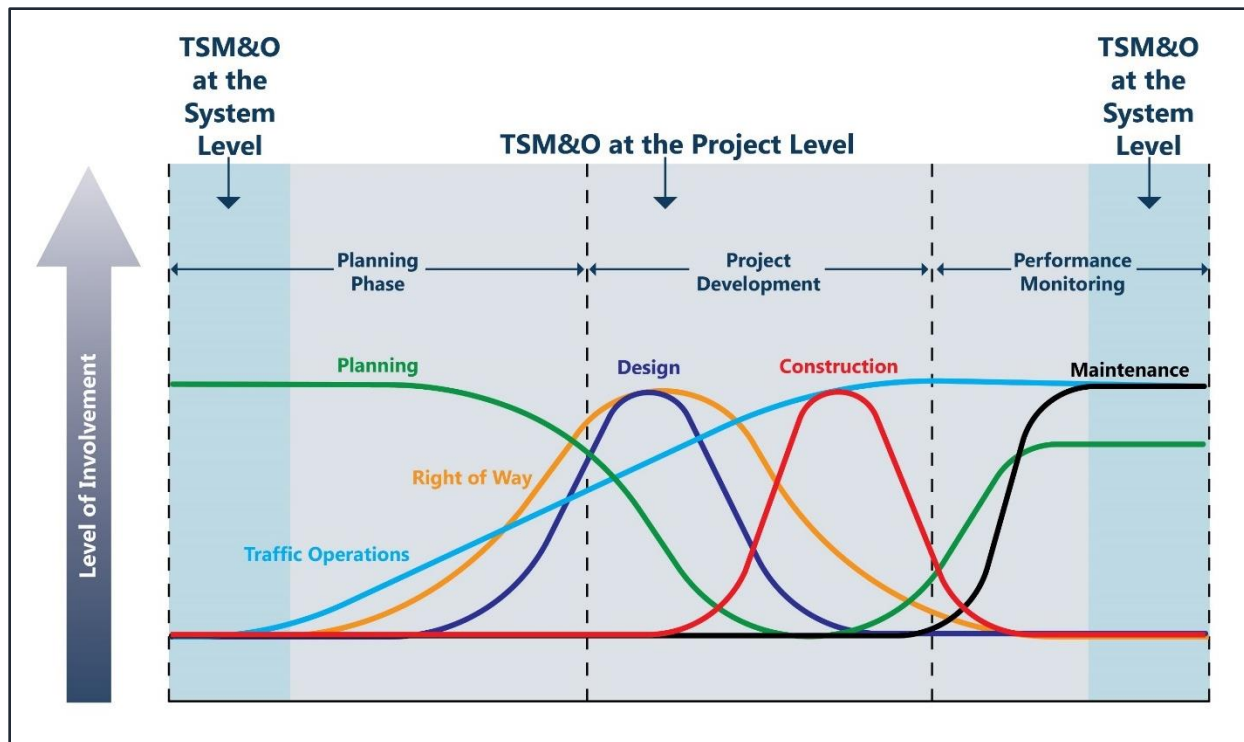
### II. TSM&O Guidebook – Roles and Responsibilities

Melissa Gross presented slides on the following topics outlined in the TSM&O Guidebook:

- What is TSM&O?
  - TSM&O Program Goals – A brief overview of the goals of the TSM&O program:
    - Improve Safety
    - Improve Reliability
    - Manage Congestion
    - Maximize Return on Investment
  - TSM&O Program Distinguishers – A brief explanation of the distinguishing characteristics of the TSM&O program. The transportation system must be managed as a SYSTEM, with continuous performance monitoring. The project development process is cyclical, with collaboration between all transportation practitioners at every stage of the project development process. The TSM&O program must approach the system from a multimodal perspective.



- Roles and Responsibilities
  - A brief overview describing the roles played by each group involved in the TSM&O Program: Planning, Traffic Operations, ITS, Right of Way, Design, Construction, and Maintenance. Melissa emphasized that all groups should be involved throughout the TSM&O program, which is split into three phases: Planning Phase, Project Development, and Performance Monitoring.



- The three primary phases are broken down into the following sub-phases:
  - Planning Phase
    - System-Wide Planning
    - Planning Study
  - Project Development
    - Concept Development
    - Design
    - Construction
    - Testing
  - Operations and Maintenance
    - Monitoring
    - Maintenance
- For the Guidebook, FDOT developed a framework identifying one of three functions for each group under the different sub-phases:
  - Lead – Produces deliverables
  - Support – Provides input and expertise
  - Engaged – Offers reference information; stays informed of the progress to some degree

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Planning	Lead	Lead	Lead	Engaged	Engaged	Engaged	Lead	Engaged
Traffic Operations	Support	Support	Support	Support	Engaged	Support	Support	Engaged
ITS	Support	Support	Support	Support	Engaged	Support	Support	Engaged
Right-of-Way	Engaged	Support	Support	Support	Engaged	Engaged	Engaged	Engaged
Design	Engaged	Support	Support	Lead	Support	Support	Engaged	Engaged
Construction	Engaged	Engaged	Engaged	Engaged	Lead	Lead	Engaged	Engaged
Maintenance	Engaged	Engaged	Engaged	Engaged	Engaged	Engaged	Support	Lead

- DISCUSSION / Q&A
  - Why aren't local maintaining agencies and traffic operations included in the *Roles & Responsibilities*? These agencies need to be brought on early in the process.
    - The TSM&O Guidebook is meant as a national document. In order to support efforts nationwide, the various groups outlined in the TSM&O Guidebook are representative of those groups at every level of government (i.e. the "Maintenance" group refers to all applicable jurisdictions, including the federal, state, regional, or local maintaining agency)
    - The Guidebook does outline the need for local maintaining agency coordination and engagement
    - While the Guidebook is generalized to best support TSM&O programs nationwide, the TSM&O Implementation Plan will be tailored specifically to the District Five TSM&O program
  - Traffic Operations and ITS should be taking more of a Lead role during the Monitoring sub-phase, considering the amount of data collection conducted by those two groups daily
    - In the past, data collection has been a planning function, as planners collect the data and use it to assess the system's status and potential needs; it is more commonplace for Traffic Operations and ITS to be involved in the daily data collection
  - It was proposed to the Consortium attendees that a third sub-phase, Data Collection, could be included as the first sub-phase under O&M. The Traffic Operations and ITS groups would be identified as the Lead role, while Planning would be an Engaged group under this sub-phase.
    - Attendees agreed this would help to clarify the roles for each group within the O&M phase

- FDOT will determine the appropriate functions for each group within the data collection sub-phase and provide to agency partners for their feedback
- Is it a function of the Right-of-Way division to identify valuable or low-cost real estate options within current or potential project areas?
  - It is not usually the responsibility of Right-of-Way to identify those valued real estate options

### III. CURRENT INITIATIVES

Jeremy Dilmore presented an overview of current initiatives within D5, including:

- Traffic Monitoring Center
  - Design is complete; moving into construction now
    - Expected to move into this facility in two years
- RCM Project
  - Finalizing RFP
  - Involves a lot of data management aspects
  - Local agency stakeholders may be advisors or observers for this project
- PedSafe
  - A GPS-enabled mobile device application
    - Using the GPS location on the user's phone, it will allow the user to do things such as activating the crosswalk (only within a certain distance of the user)
    - For the safety aspect of the application, it will alert the pedestrian user to a potential conflict with oncoming vehicles
      - When connected vehicles come online, this application will be able to communicate with those connected vehicles to enable assisted braking in the event the vehicle and application identify a potential conflict
- App Development
  - Exploration into creating engines for data, which will offer another source of revenue for the Department by interacting with private firms; will specifically look at route and mode choice based on inputs provided by the private entity
- Freight Study
  - Not programmed for funding within five years
  - Will analyze the relationship between Freight and ITS
- Design Build Operate Maintain (DBOM) in Ormond Beach along SR 40
  - Adaptive Signal Control project funded by Central Office
  - RFP will be advertised shortly
  - Who is going to be responsible for timing the system?
    - The consultant or a sub-consultant must time the system
    - Public complaints regarding the timing of the system will likely be sent to FDOT and the local jurisdiction first
      - The consultant will then be notified that the timing needs to be adjusted
  - How long will the contractor be responsible for the O&M?
    - The duration is still under consideration as FDOT needs to establish a length of time that will make the project "biddable" for the private sector

- FRAME Project along US 301 near Florida's Turnpike
  - FDOT will be identifying where it can distribute OBUs
  - Project received funding for Design and Construction
  - Jeremy will be meeting with agency partners in District Five to identify if/where OBUs can be installed
    - The project is in its initial stages, as Jeremy just recently received word of the project's funding
  - UCF is also in consideration as a pilot project for distribution of OBUs

#### IV. ATTACHMENTS

- A – Sign in sheets
- B – Presentation Slides
- C – TSM&O Phasing Handout
- D – Roles & Responsibilities Handout
- E – Meeting agenda

END OF SUMMARY

*This summary was prepared by David Williams and Melissa Gross, 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: [dwilliams@vhb.com](mailto:dwilliams@vhb.com) so they can be finalized for the files.*

# Welcome to the TSM&O Consortium Meeting November 17, 2016



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# Meeting Agenda

1. Introduction
  - **David Cooke**, D5 Planning
2. TSM&O Roles and Responsibilities
  - **Melissa Gross**, VHB
3. FDOT Current Projects Overview
  - **Jeremy Dilmore**, D5 ITS



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# TSM&O Roles and Responsibilities Overview

What is TSM&O?

What are the Roles and Responsibilities?



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# TSM&O Program Goals

Proactively managing the operations of the transportation system to:

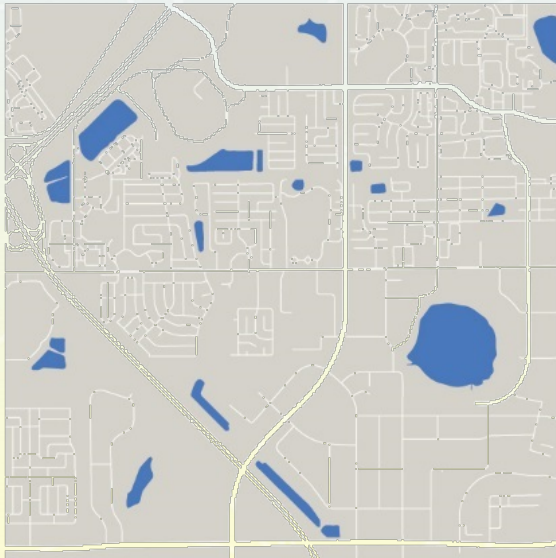
Improve Safety

Manage Congestion

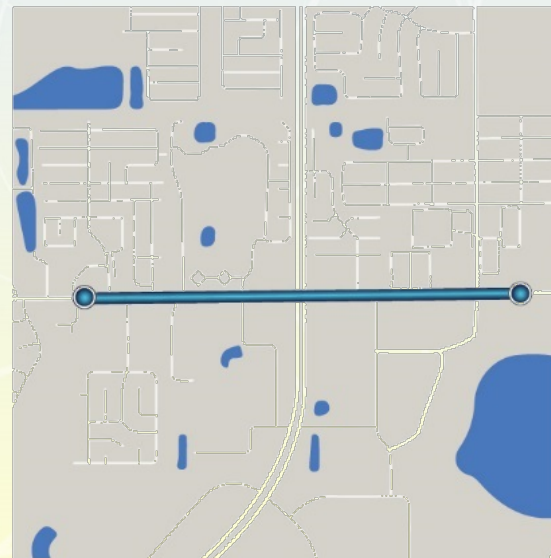
Improve Reliability

Maximize Return on Investment

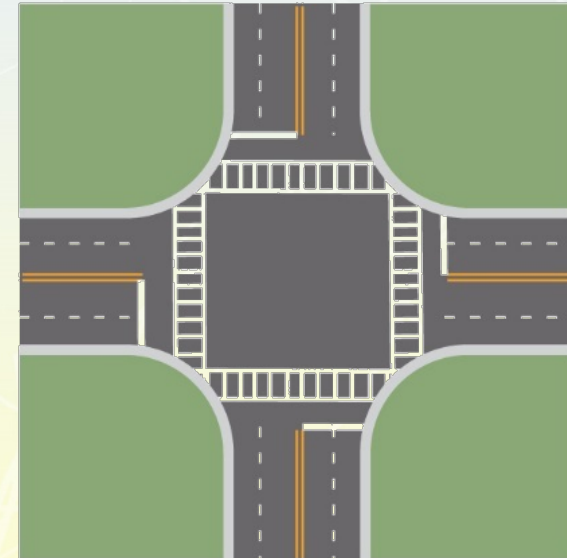
## System Level



## Corridor Level



## Intersection Level



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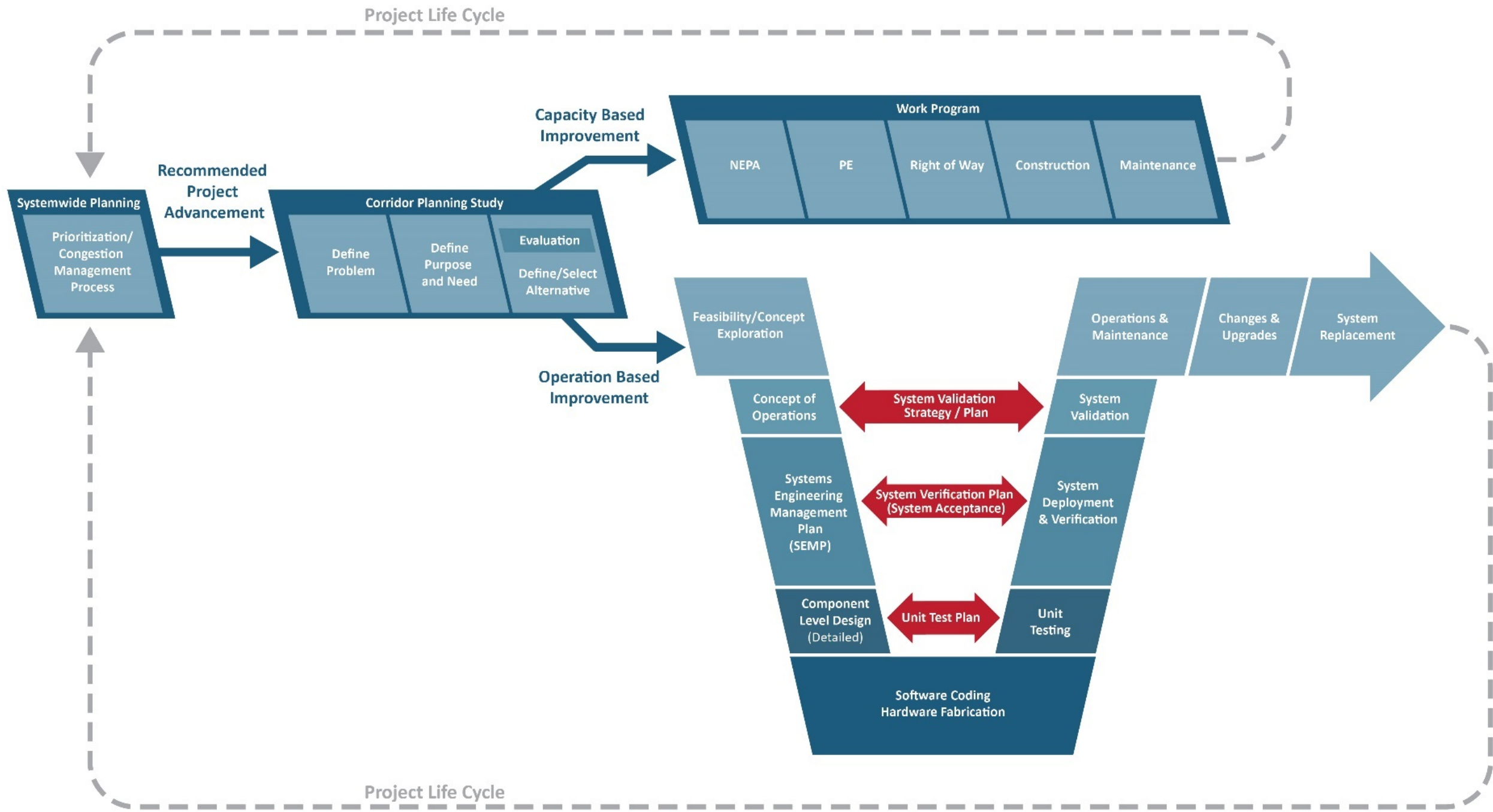
# TSM&O Program Distinguishers

- The transportation system must be managed as a SYSTEM.
- Transportation practitioners must collaborate and provide input at every stage of the project development process.
- The TSM&O program project development process is a cycle.
- Requires continued performance monitoring of the system.
- Is Multimodal.



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# Roles & Responsibilities

Departments involved in the TSM&O Process:

- Planning
- Traffic Operations
- ITS
- Right-of-Way
- Design
- Construction
- Maintenance

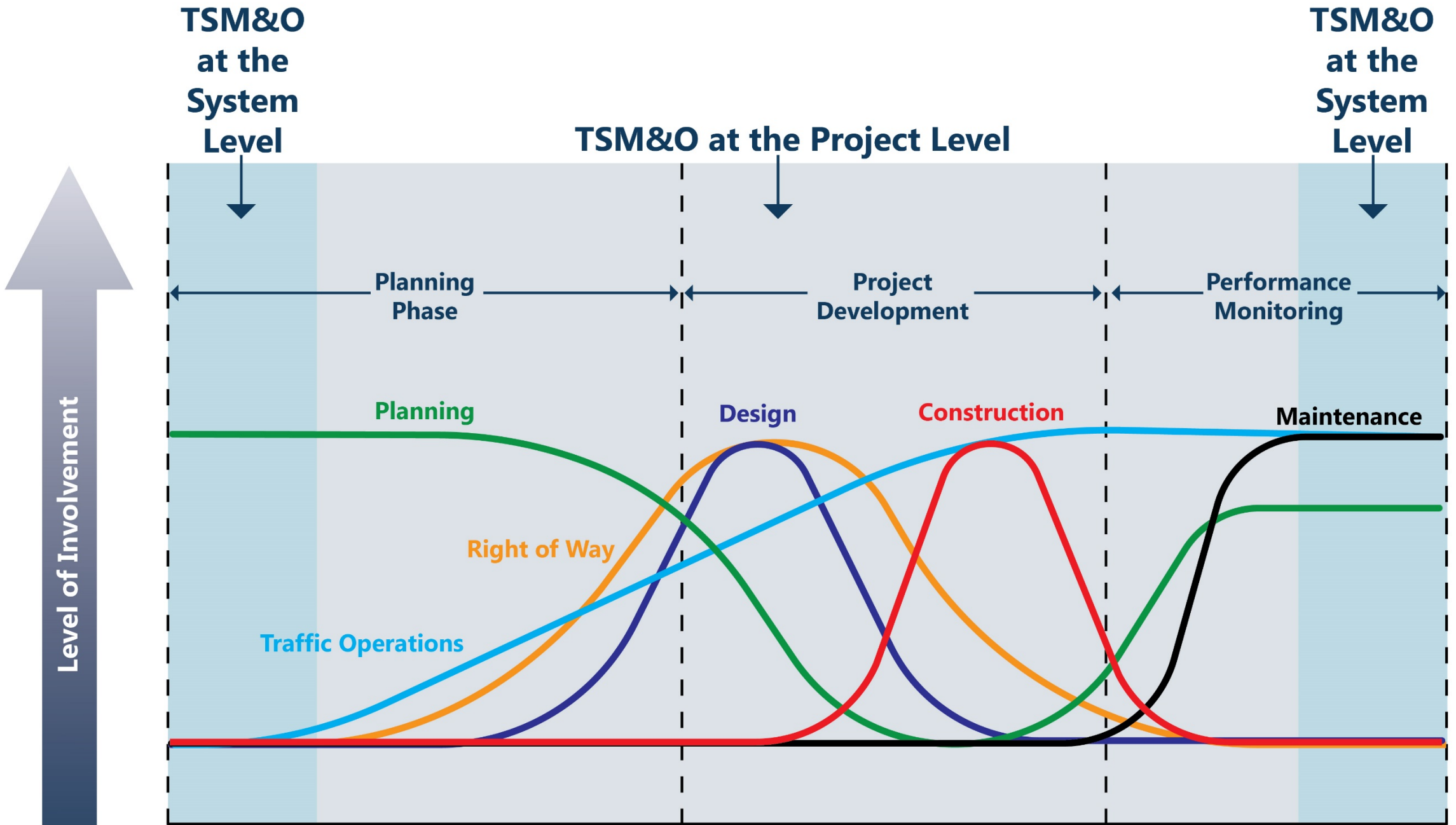
Components of the TSM&O Process:

- 1) Planning Phase
- 2) Project Development Phase
- 3) Performance Monitoring Phase



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# Roles & Responsibilities

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Planning	<b>Lead</b>	<b>Lead</b>	<b>Lead</b>	Engaged	Engaged	Engaged	<b>Lead</b>	Engaged
Traffic Operations	Support	Support	Support	Support	Engaged	Support	Support	Engaged
ITS	Support	Support	Support	Support	Engaged	Support	Support	Engaged
Right-of-Way	Engaged	Support	Support	Support	Engaged	Engaged	Engaged	Engaged
Design	Engaged	Support	Support	<b>Lead</b>	Support	Support	Engaged	Engaged
Construction	Engaged	Engaged	Engaged	Engaged	<b>Lead</b>	<b>Lead</b>	Engaged	Engaged
Maintenance	Engaged	Engaged	Engaged	Engaged	Engaged	Engaged	Support	<b>Lead</b>

# Roles & Responsibilities - Planning

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Planning	<b>Lead</b>	<b>Lead</b>	<b>Lead</b>	Engaged	Engaged	Engaged	<b>Lead</b>	Engaged
Typical Tasks	Define goals and objectives  Evaluate Options  Prioritize	Define the problem  Evaluate alternatives		Coordinate with experts  Maintain continuity			Evaluate Strategy effectiveness	



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# Roles & Responsibilities – Traffic Operations

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Traffic Operations	Support	Support	Support	Support	Engaged	Support	Support	Engaged
Typical Tasks	Participate in the planning process  Provide expert input	Collect and analyze data  Communicate expected outcomes for each alternative	Work with planners to develop a feasibility assessment or ConOps		Maintain awareness		Provide data and technical support for performance monitoring	



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# Roles & Responsibilities – ITS Engineering

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
ITS	Support	Support	Support	Support	Engaged	Support	Support	Engaged
Typical Tasks	Participate in the planning process  Provide expert input	Collect and analyze data  Communicate expected outcomes for each alternative	Provide additional detail on the operational performance of different concepts		Maintain awareness		Provide data and technical support for performance monitoring	



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# Roles & Responsibilities – Right-of-Way

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Right-of-Way	Engaged	Support	Support	Support	Engaged	Engaged	Engaged	Engaged
Typical Tasks	Maintain awareness of system-wide planning	Provide early input on R/W impacts of alternatives being evaluated	Perform detailed analysis of R/W impacts of the selected alternative		Maintain awareness			



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# Roles & Responsibilities – Design

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Design	Engaged	Support	Support	<b>Lead</b>	Support	Support	Engaged	Engaged
Typical Tasks	Maintain awareness of system-wide planning	Provide early input on R/W impacts of alternatives being evaluated	Perform detailed analysis of R/W impacts of the selected alternative		Maintain awareness			



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# Roles & Responsibilities – Construction

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
<b>Construction</b>	Engaged	Engaged	Engaged	Engaged	<b>Lead</b>	<b>Lead</b>	Engaged	Engaged
Typical Tasks	Maintain awareness of planning efforts		Aid planners and designers in gauging the constructability and cost of alternatives		Carry out the design plans  Implement the Systems Engineering Management Plan (if any)	Unit test to catch bugs and deficiencies  Verify that the work meets the intended purpose	Maintain awareness	



# Roles & Responsibilities – Maintenance

	Planning		Project Development				O&M	
Role	System Wide Planning	Planning Study	Concept Development	Design	Construction	Testing	Monitoring	Maintenance
Maintenance	Engaged	Engaged	Engaged	Engaged	Engaged	Engaged	Support	<b>Lead</b>
Typical Tasks	Maintain awareness of planning efforts Contribute asset management expertise Provide operational data			Maintain awareness			Provide operational data	Perform maintenance duties



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# TSM&O Consortium Meeting

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## MEETING AGENDA

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

*November 17, 2016; 10:00 AM-12:00 PM*

1) WELCOME

- David Cooke, FDOT D5 Planning Manager

2) TSM&O ROLES AND RESPONSIBILITY OVERVIEW AND DISCUSSION

- Melissa Gross, VHB

3) CURRENT INITIATIVE UPDATES

- Jeremy Dilmore, D5 ITS

