



**TDOT**  
Department of  
Transportation

# Planning for TSM&O in Tennessee



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# What is TSM&O?

Transportation Systems Management & Operations (TSM&O)

Is TSM&O just ITS renamed? Is it the same thing as “Operations”? Is it everything other than adding new lanes?

# Planning for Operations, Glossary (FHWA)

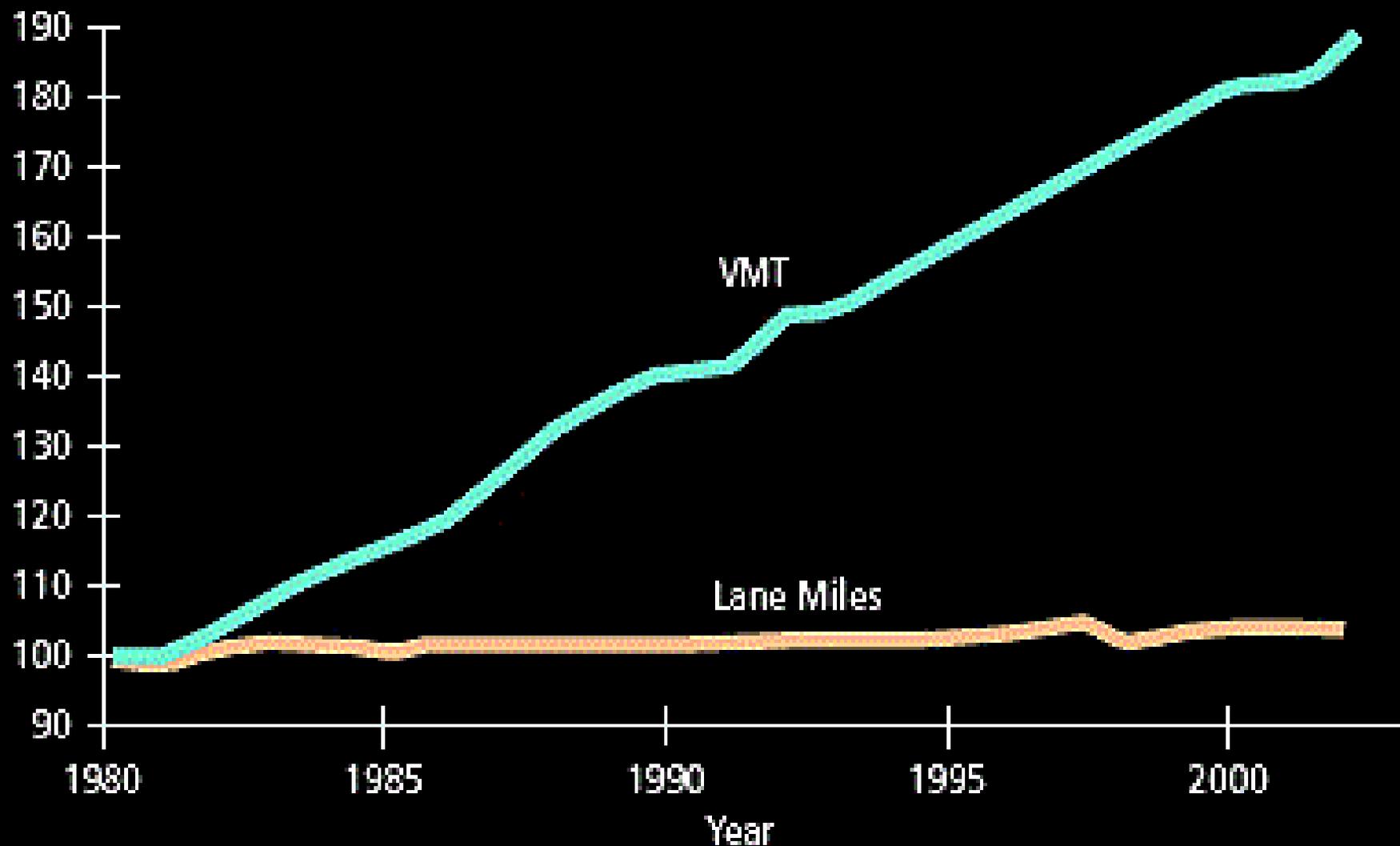
***Transportation Systems Management and Operations (TSM&O):*** An **integrated program** to optimize the performance of existing infrastructure through the implementation of systems, services, and projects designed to preserve capacity and improve security, safety, and reliability.

# Why should we care?

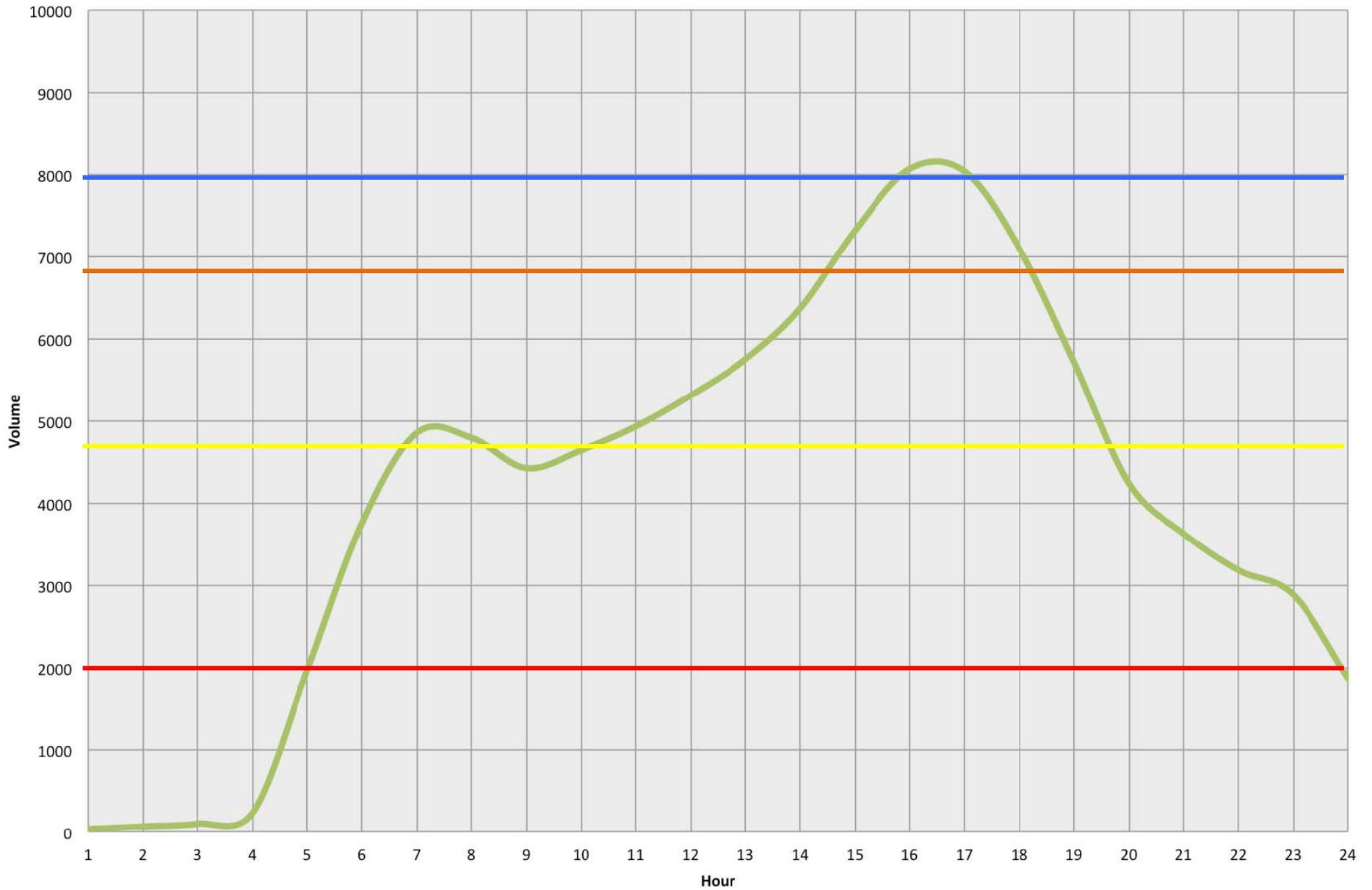
- 60% of congestion and delay is a direct result of “non-recurrent causes”. Will building more roads address this?
- A major road building project in Tennessee averages 10-12 years from planning to construction.
- According to the TTI 2015 Mobility Scorecard, Congestion cost Nashville Commuters 1 Billion Dollars in 2014.....

# Vehicle Miles Traveled and Roadway Lane Miles Growth Index, 1980 to 2002

VMT Index/Lane-Mile Index (1980 = 100)



## The Effects of Traffic Incidents on a 4-lane Interstate Section



System Demand    Max Capacity (2000 veh/hr/lane)    Capacity (1 Lane Blocked)    Capacity (2 Lanes Blocked)    Capacity (Shoulder Closure)

# SHRP2 L01/06 - TDOT CMM Workshop Results

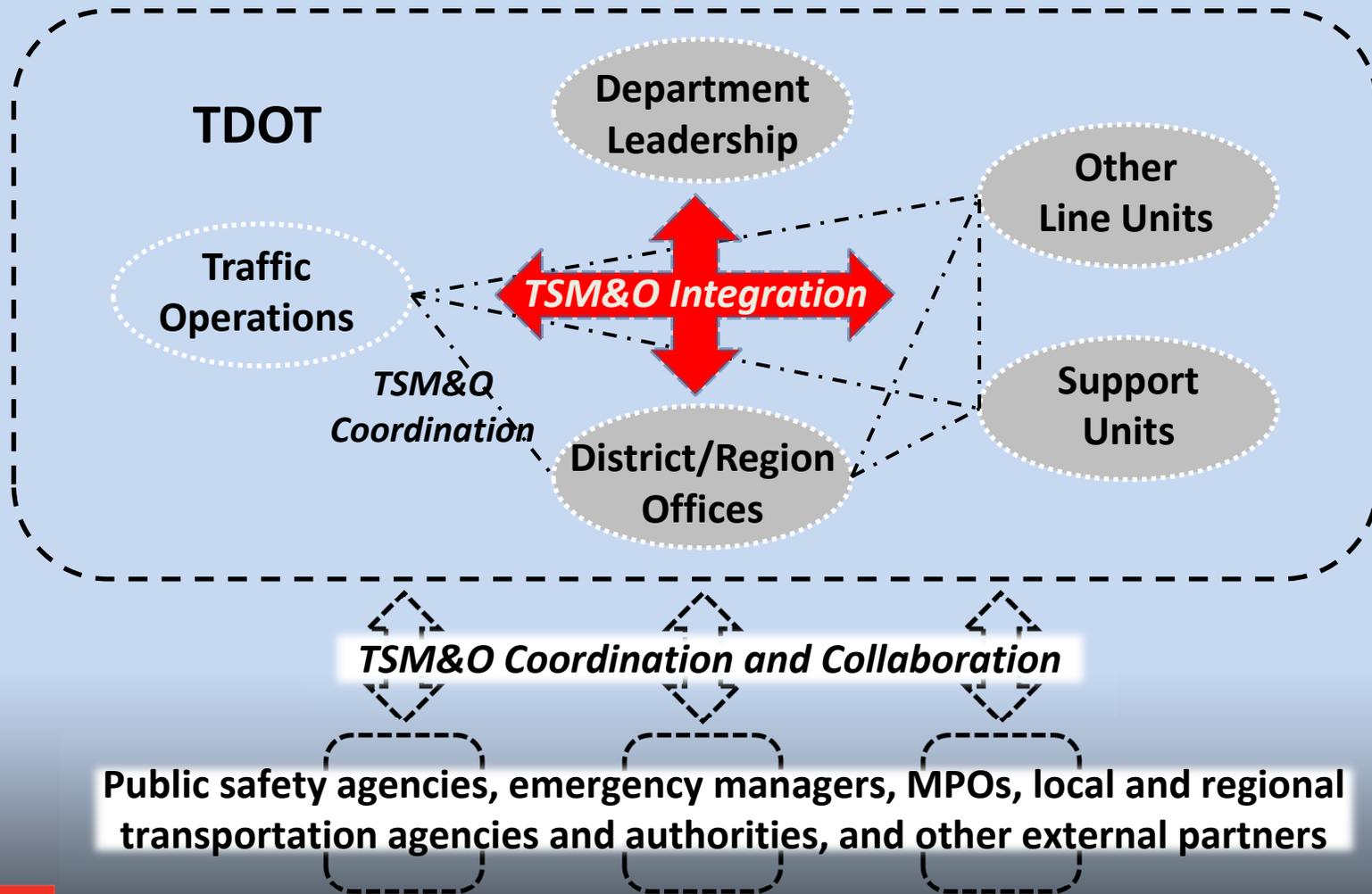
## Feb 24-25 2014

Dimension	Level	Priority Actions
Planning & Programming	1.5	Develop a TSM&O Program Plan
Systems & Technology	2.0	<ol style="list-style-type: none"> <li>1. Develop ITS Qualified Product Lists</li> <li>2. Develop a TSM&amp;O Asset Management System</li> </ol>
Performance	2.0	Develop a TSM&O Performance Measurement Plan
Culture	2.5	Publish an annual/quarterly report describing recent TSM&O success stories and outcomes
Organization/Staffing	3.0	Provide technical training for TDOT staff to ensure efficient delivery of systems and services
Collaboration	1.5	Establish methods for more effectively and efficiently capturing and sharing roadway incident information

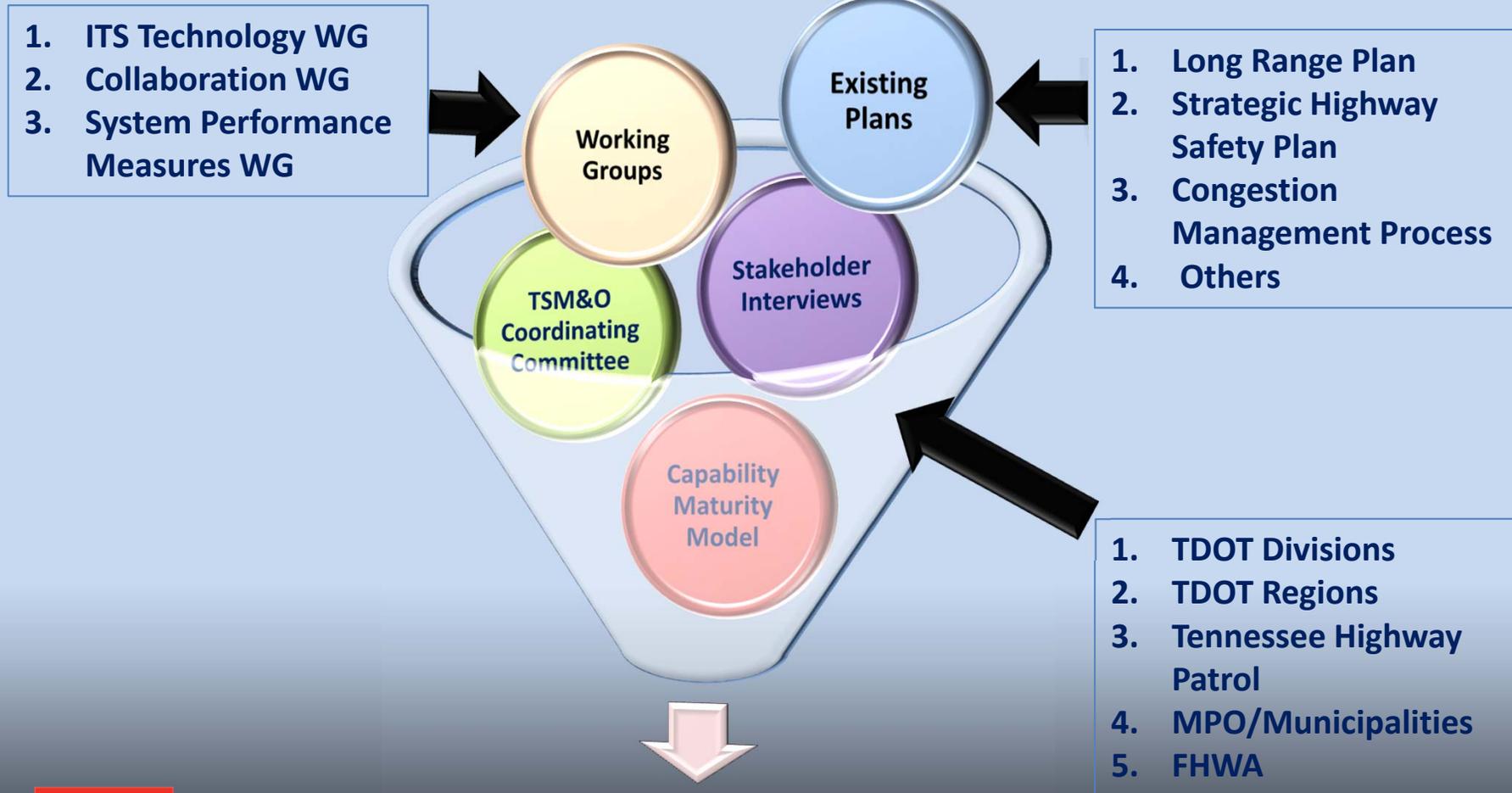
# Actions Taken

- ❑ Established TSM&O Coordinating Committee, May 2014. Committee Scope:
  - Coordinate efforts for utilizing existing transportation management assets to improve operating efficiency, safety, security and consistency
  - Provide strategic direction to Regions and functional areas of TDOT to increase TSM&O efforts
  - Evaluate TSM&O strategies for use by TDOT
  - Set priorities and initiatives and present recommendations to top management
  - Lead the creation & maintenance of TDOT's [TSM&O Program Plan](#)

# TSM&O Program Plan: Organizational Features and Critical Interfaces



# TSM&O Program Plan Inputs



# Stakeholder Input

- Consider renaming TSM&O Program Plan to something that is more easily understood...Traffic Operations Program Plan was suggested
- Share and promote success of the TSM&O Program with decisions makers and the public
- Develop a 3-year Strategic Plan that identifies projects and programs for implementation
- 3-Year Strategic Plan should addresses congestion, reliability, and safety and state the expected benefits...this is important to keep the TSM&O program from being pulled into other areas that don't address the long-term vision
- Focus on the basics
  - Be sure all TSM&O deployments are being fully utilized prior to expanding systems or incorporating new deployments and programs
  - Focus should be on incident management and real-time information including travel times
- Formalize integration of TSM&O into project design...concern that opportunities for TSM&O integration into projects may be missed

# TSM&O Program Plan Output



# TSM&O Draft Table of Contents

EXECUTIVE SUMMARY.....	V
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1 Purpose of Program Plan .....	1
1.2 Development of Program Plan.....	2
1.3 Plan Contents .....	4
<b>2. ASSESSMENT .....</b>	<b>5</b>
2.1 Agency Description and Organizational Structure .....	5
2.2 Mission and Vision .....	7
2.3 Capability Maturity Model Results .....	8
2.4 Critical Issues .....	12
<b>3. GOALS AND OBJECTIVES .....</b>	<b>13</b>
<b>4. STRATEGIC DIRECTION.....</b>	<b>15</b>
4.1 Strategies for Meeting Goals and Objectives.....	15
4.2 Priorities .....	17
4.3 Resource Requirements .....	20
4.4 Project Development and Selection Process.....	23
<b>5. THREE-YEAR STRATEGIC PLAN.....</b>	<b>26</b>
5.1 Traffic Operations Division Program.....	26
5.2 Region 1 Program.....	32
5.3 Region 2 Program.....	35
5.4 Region 3 Program.....	38
5.5 Region 4 Program.....	41
<b>6. PERFORMANCE MEASURES .....</b>	<b>44</b>
<b>7. RESULTS MANAGEMENT .....</b>	<b>45</b>
7.1 Monitoring and Tracking.....	45
7.2 Updates.....	47

# TSM&O Program Plan Goals and Objectives

## **Goal 1: Optimize existing operations infrastructure and capabilities**

Objective 1: Upgrade the Regional Traffic Management Center (TMC) operations platform

Objective 2: Fully staff the Regional TMCs and provide operations training as needed

Objective 3: Provide an advanced traffic incident management training program to TDOT and emergency responders that incorporates the Tennessee Traffic Incident Management Training Facility.

Objective 4: Maintain all components of the SmartWay system

Objective 5: Develop and implement a life-cycle replacement plan

Objective 6: Develop Intelligent Transportation System (ITS) Qualified Products List (QPL)

## **Goal 2: Strategically expand operations infrastructure and capabilities to meet future needs**

Objective 1: Develop a TSM&O Three-year Strategic Deployment Plan

Objective 2: Develop a data driven project evaluation and selection process

Objective 3: Expand partnerships and integration with local and regional transportation agencies

# TSM&O Program Plan Goals and Objectives

## **Goal 3: Identify and prepare for the next generation of operational strategies and technologies**

- Objective 1: Support the research and testing of new operational strategies and technologies to determine feasibility for implementation in Tennessee
- Objective 2: Prioritize new operational strategies and technologies in coordination with TDOT Regions to determine implementation strategy
- Objective 3: Identify existing and future sources of funding to support next generation deployments

## **Goal 4: Monitor performance of transportation system**

- Objective 1: Identify and implement TDOT TSM&O performance measures
- Objective 2: Use performance measures data to guide real-time operations as well as short and long-term planning for TSM&O
- Objective 3: Identify how each project in the Three-Year Strategic Deployment Plan will improve performance
- Objective 4: Develop a quarterly or annual performance measures plan

# TSM&O Program Plan Goals and Objectives

## **Goal 5: Integrate operations into TDOT culture and processes**

Objective 1: Integrate TSM&O related infrastructure into the project planning and design phases where applicable

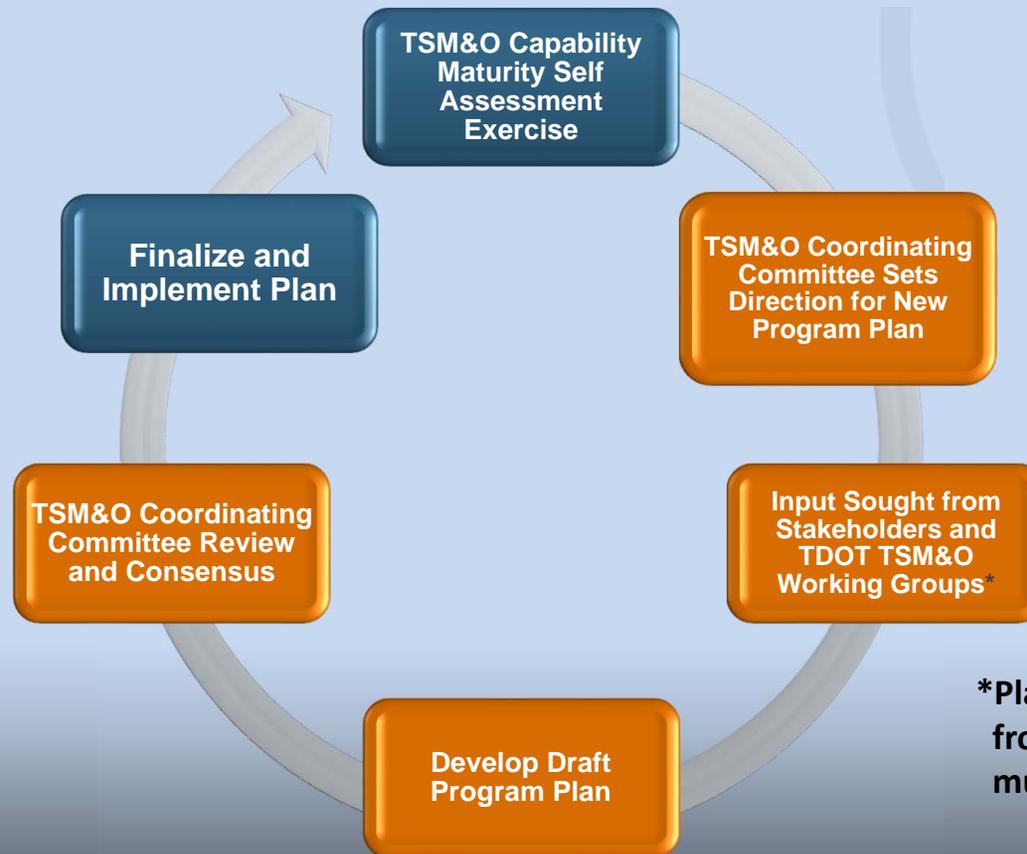
Objective 2: Create awareness throughout all of TDOT the TSM&O capabilities and benefits

## **Goal 6: Elevate public awareness of operations**

Objective 1: Provide consistent and visible branding of SmartWay

Objective 2: Develop a quarterly or annual report describing success stories of TSM&O activities

# TSM&O Program Plan Update Cycle



**\*Plans will include input from MPOs and municipalities**



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# Questions?



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