

# Pennsylvania DOT's focus on TSMO



TSMO Program Plan Roundtable  
June 25, 2018



**TSMO**

# Capability Maturity

## Pennsylvania Self-Assessment

Elements	Level 1 Performed	Level 2 Managed	Level 3 Integrated	Level 4 Optimizing
Planning & Programming	▼			
Systems & Technology	▼			
Performance	▼			
Culture		▼		
Organization & Staffing	▼			
Collaboration		▼		

# Capability Maturity

## Target

Elements	Level 1 Performed	Level 2 Managed	Level 3 Integrated	Level 4 Optimizing
Planning & Programming			▼	
Systems & Technology			▼	
Performance			▼	
Culture			▼	
Organization & Staffing			▼	
Collaboration			▼	

# TSMO Key Deliverables

## TSMO Strategic Framework



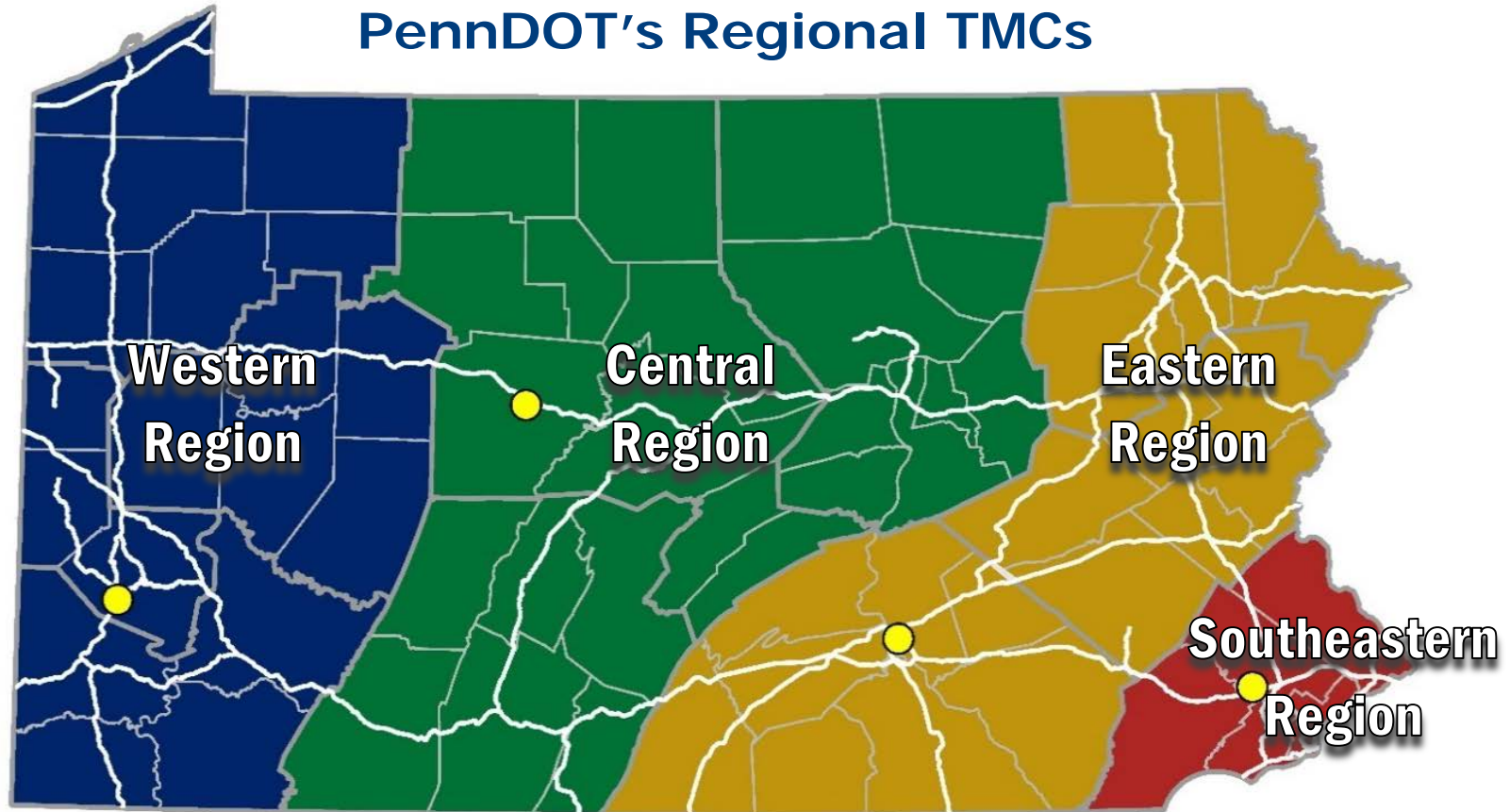
## TSMO Program Plan



## TSMO Guidebook Series



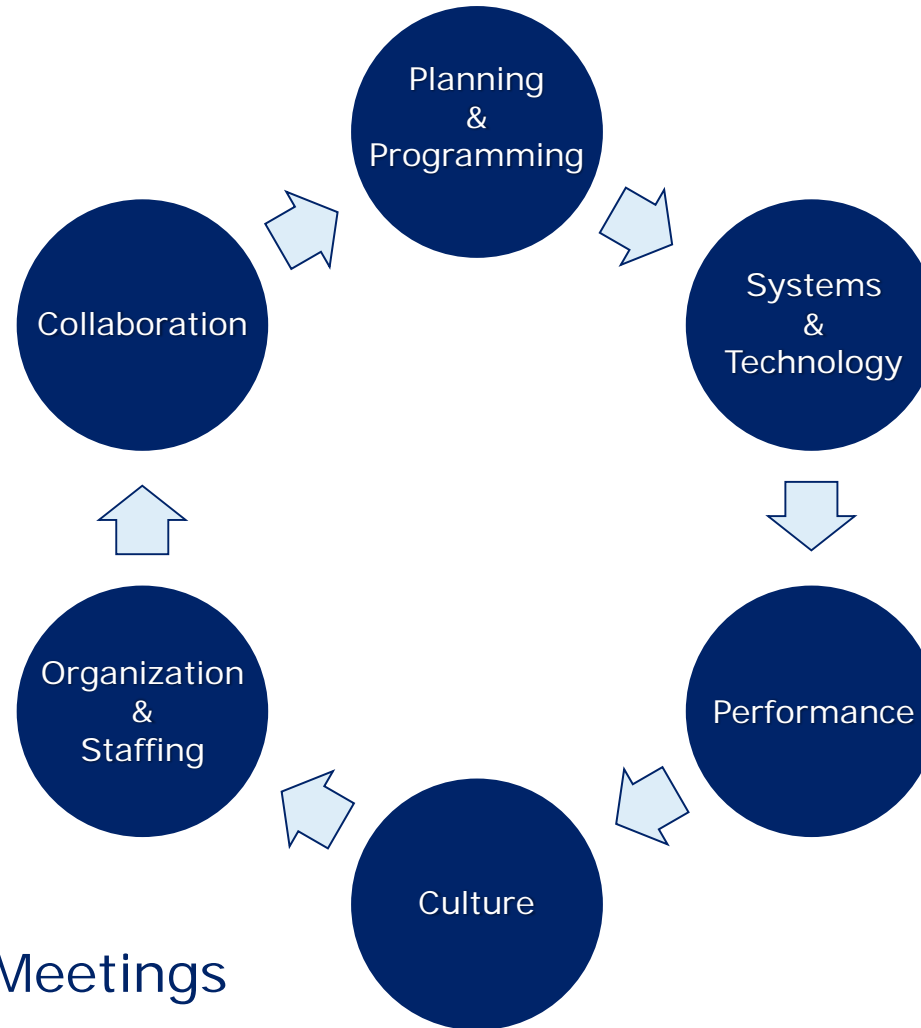
## PennDOT's Regional TMCs



➤ 11 PennDOT Districts

➤ 23 Planning Partners

# TSMO Speed Dating

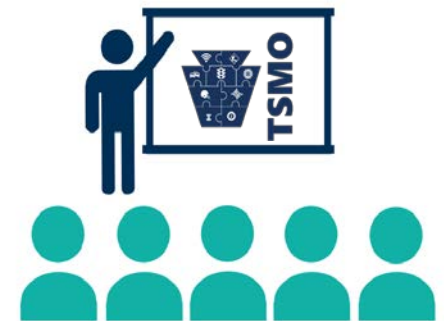


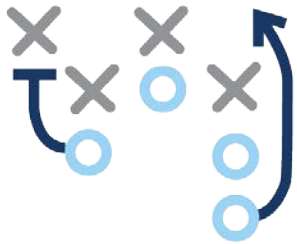
 4 Regional Meetings

 24 Discussions / Dimension

# TSMO Program Plan: Needs

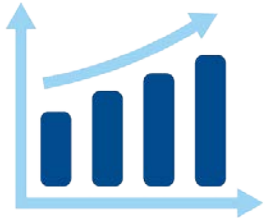
- Plan for Operations Earlier
- Provide Adequate Funding & Guidance
- Establish Performance Measures
- Foster Knowledge & Provide Training
- Improve Intra-Agency Coordination
- Improve Interagency Coordination
- Appropriate Staffing & Org Structure
- Proper Documentation & Tools





## TSMO PURPOSE

A way to address reliability, mobility, and congestion by utilizing strategies rather than just trying to build our way out.



## TSMO Vision

A less congested, more reliable network.



## TSMO Mission

Move people and goods, from Point A to Point B, as efficiently, safely, and reliably as possible.





# Importance of TSMO

## PENNSYLVANIA MOBILITY



**102B**  
VMT  
annually



Circle the  
world more  
than 4M times

## PENNSYLVANIA TRAFFIC



**264M+**  
annual hours  
of delay



31.5 hours per  
driver

## PENNSYLVANIA ENVIRONMENTAL



**133M+**  
gallons of  
wasted fuel



11.1 gallons  
per vehicle

## PENNSYLVANIA CONGESTION



**\$6T**  
annual cost of  
congestion



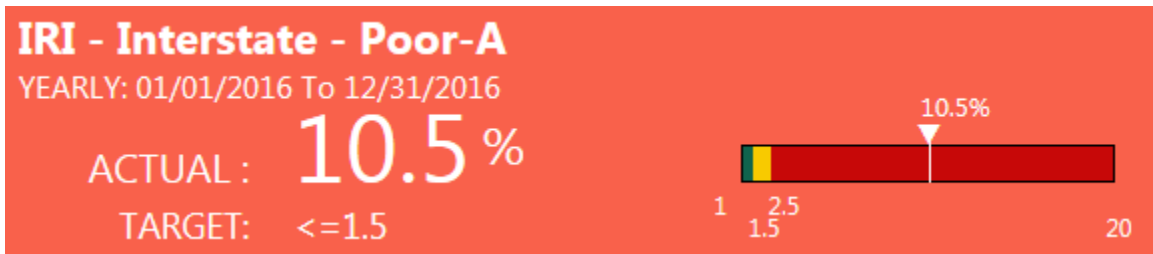
\$730 per  
driver

# PennDOT 20/20 Strategic Themes



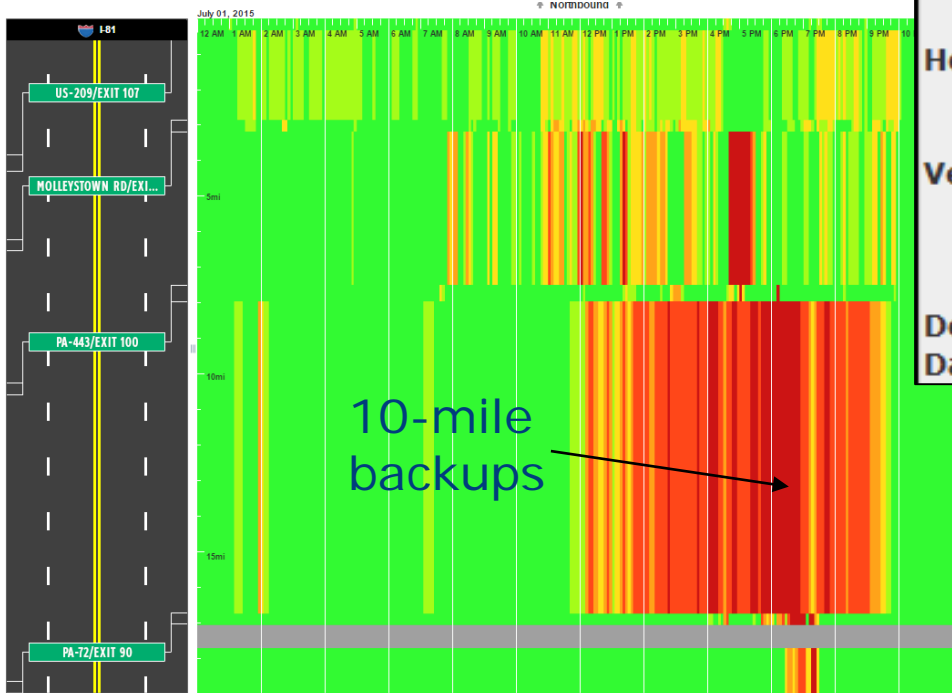
# Performance Scorecard

- Bridge (5)
- Contract Mgmt (7)
- Pavement (6)
- Permitting (1)
- Planning (2)
- QA/Testing (2)
- Safety (5)



# Self-Inflicted Delay

## Work Zone Delays



**Wednesday, July 1, 2015 6:00 PM**

### Delay cost:

Total: \$128,367.47

Per VMT: \$2.75

### Hours of delay:

Person-hours: 3,702h 49m 28s

Vehicle-hours: 3,151h 20m 24s

### Vehicle miles traveled (VMT):

Total: 43,329 miles

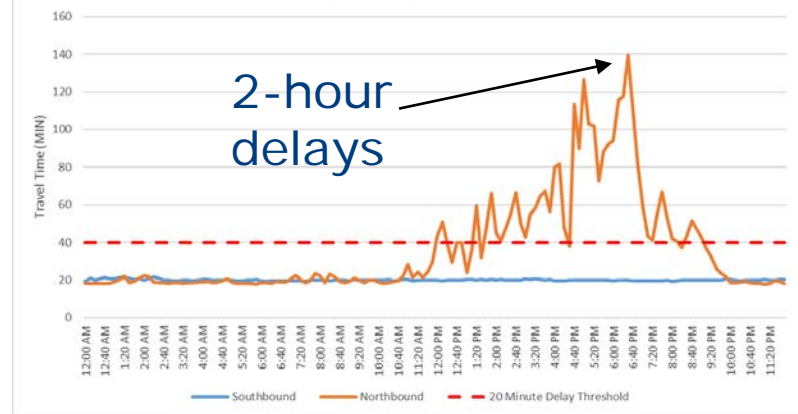
Passenger: 30,331 miles

Commercial: 12,999 miles

### Delay per VMT: 4.3638 mins / mile

Data validity: 100%

Millions  
in user  
delay  
costs



# Winter vs Work Zones

WZ – 7/10/15

Jonas – 1/23/16



User Delay Cost:

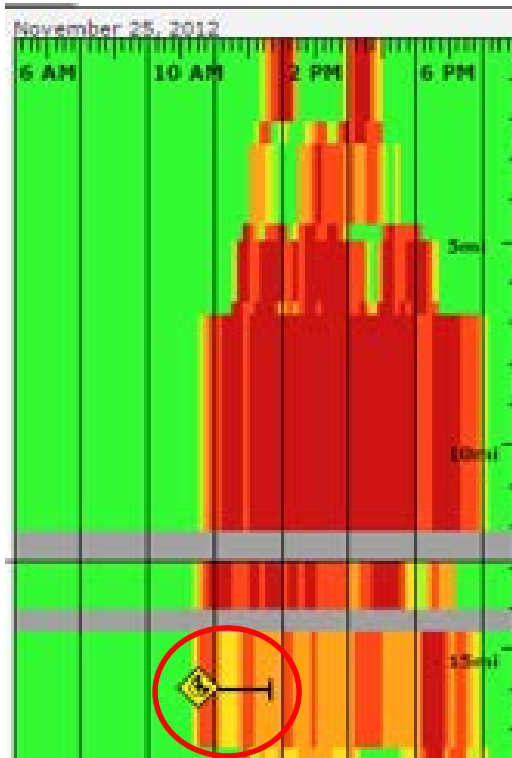
**\$491K**

**\$107K**

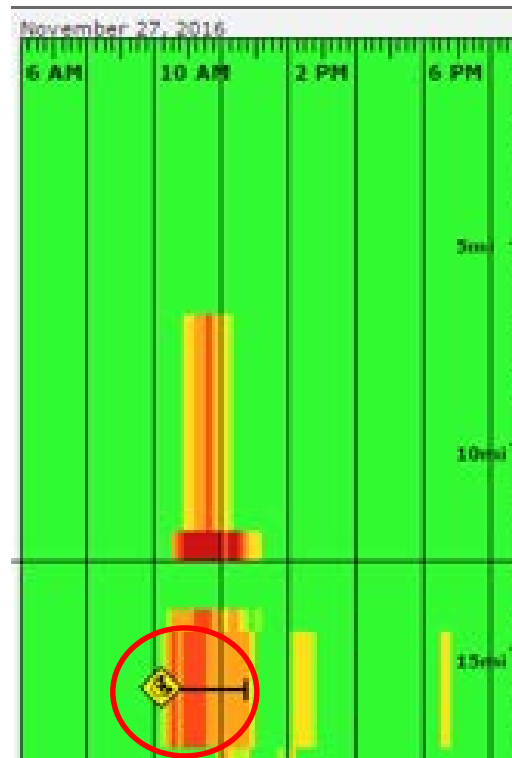
# Effective TSMO Efforts

## Thanksgiving Initiative

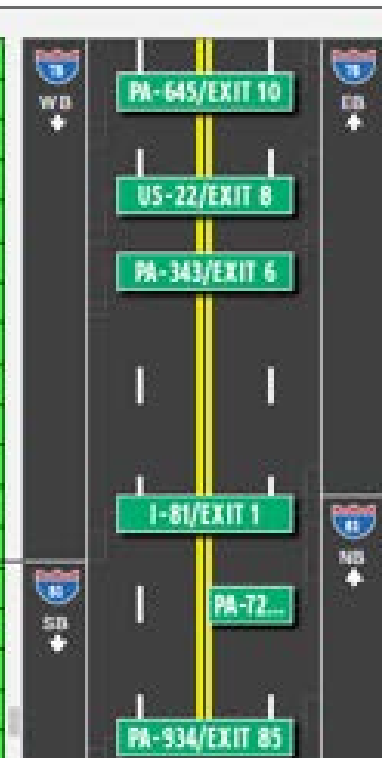
2012



2016



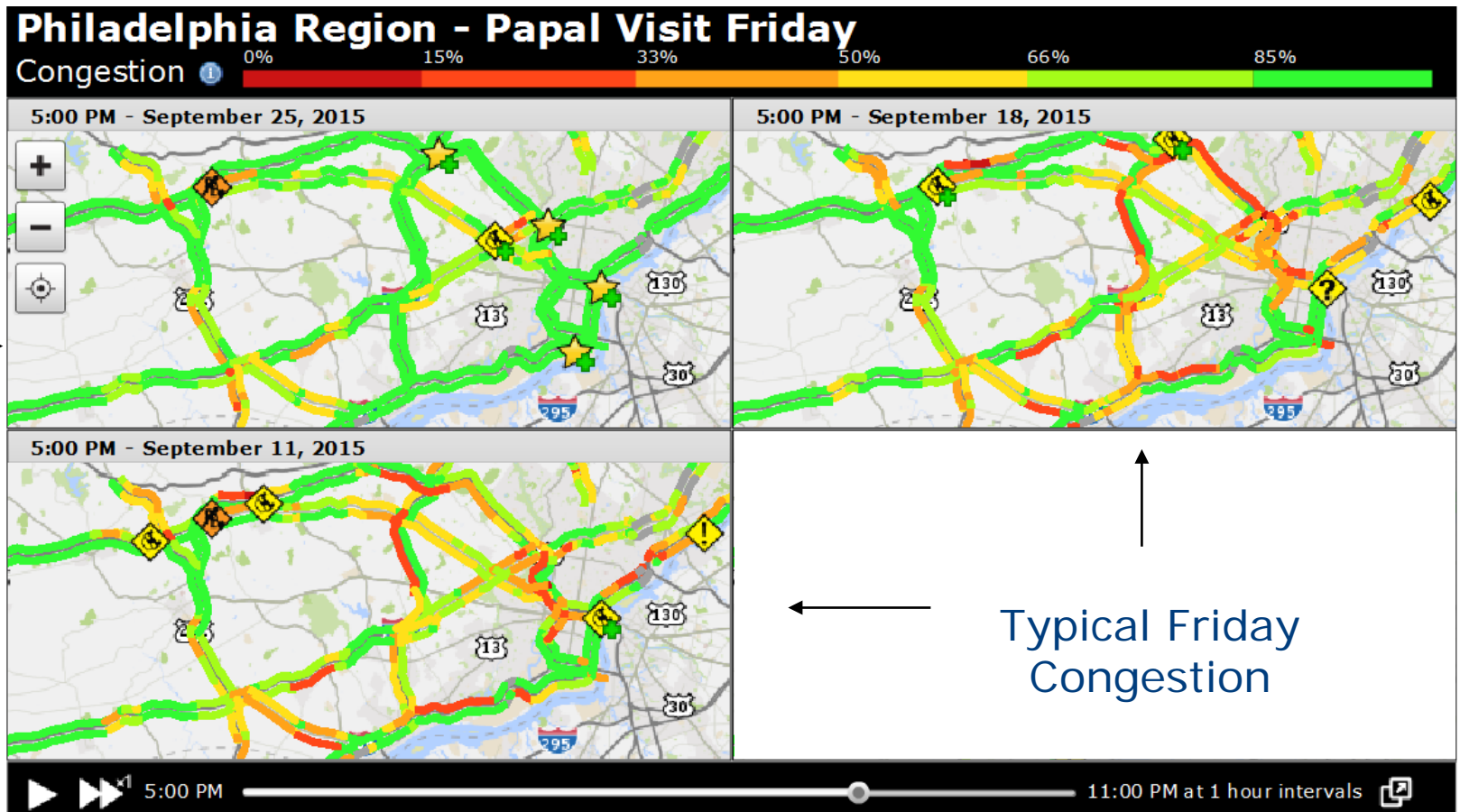
I-78/81



Incident during similar timeframe

## Papal Visit

Papal Visit Friday





## Robinson Town Center / Summary Park Drive – SPC



Reduced Vehicle  
hours of travel



Reduced Fuel  
Consumption



Reduced Total  
Pollutant Emissions



Reduced Number  
of Stops

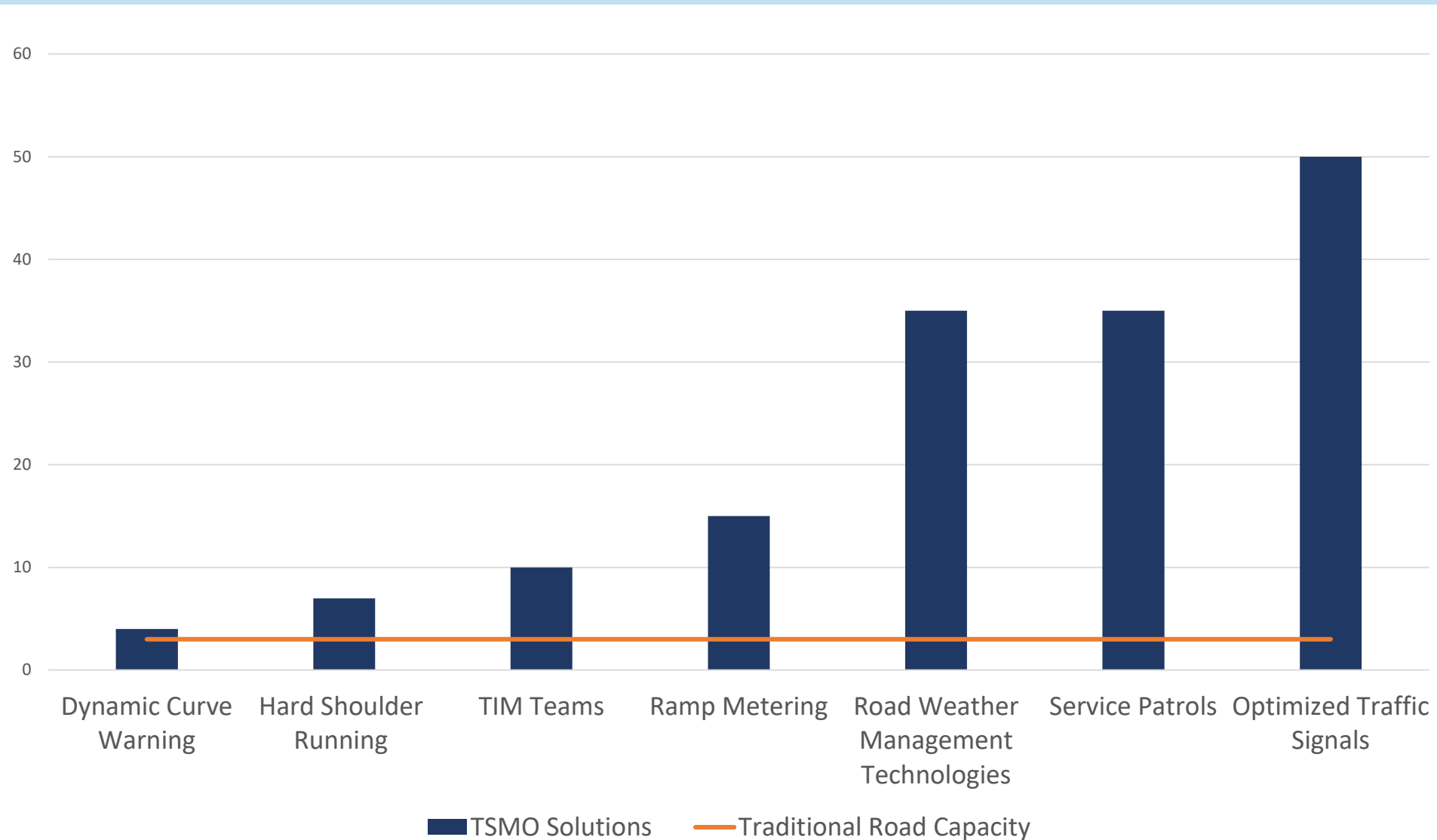
**First Year Benefits**

**\$1,736,139**

**Benefit Cost Ratio**

**57:1**

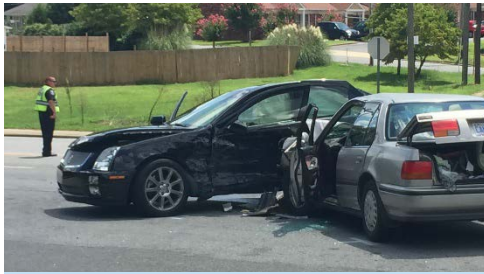
# Benefits of TSMO Strategies



# Value of TSMO



**SD%**



**Safety**



**IRI**



**Winter**

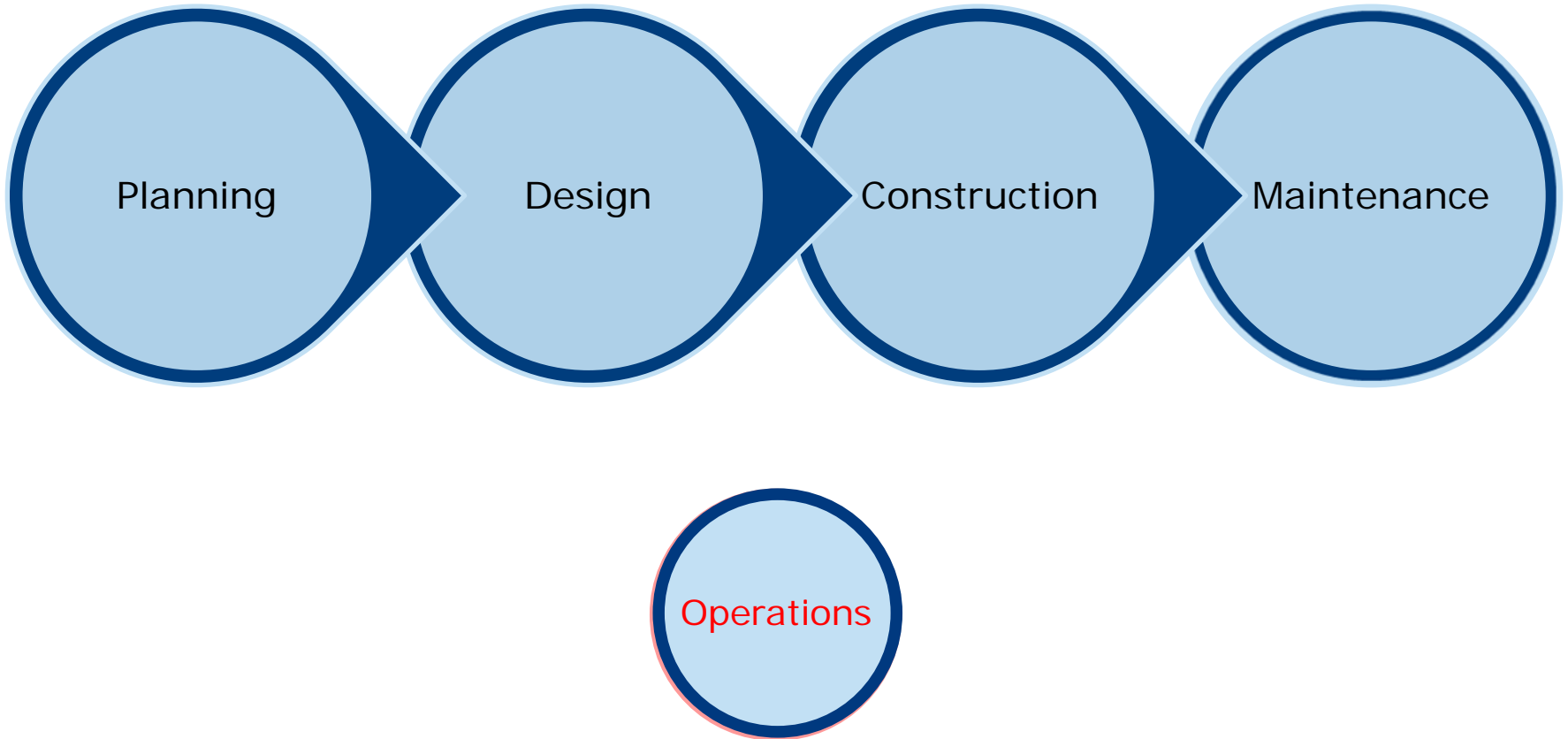
**Dedicated \$\$**



**Congestion**

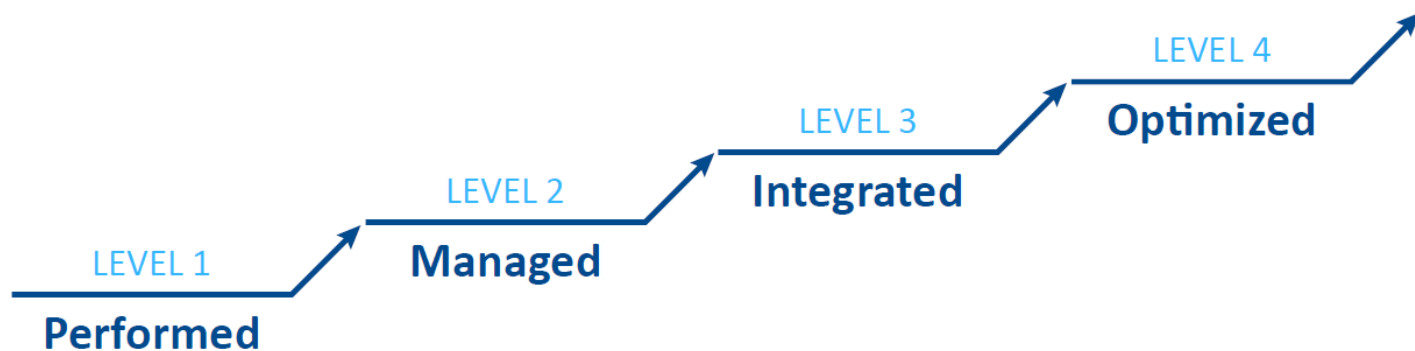
**Acceptable?**

# Project Life Cycle

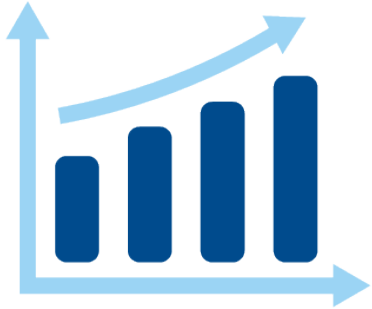


# Early TSMO Results

- Additional funding for antiquated ITS devices
- Consideration for TSMO/ITS as part of the Interstate TIP
- Leadership support for TSMO Guidebook series
- Developing plan for future fiber deployment
- Working to integrate TSMO into the planning process
- District and planning partner support for TSMO
- Interest in using performance data to make decisions
- Active role in CAV at all levels
- Secretary on ITS America Board



Thank You



## TSMO Vision

A less congested, more reliable network.

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[www.penndot.gov](http://www.penndot.gov) (  TSMO)

