

Vermont Agency of Transportation

# Performance Section

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HOUSE TRANSPORTATION COMMITTEE

JANUARY 18, 2018

SENATE TRANSPORTATION COMMITTEE

JANUARY 23, 2018



# Overview

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Current Role

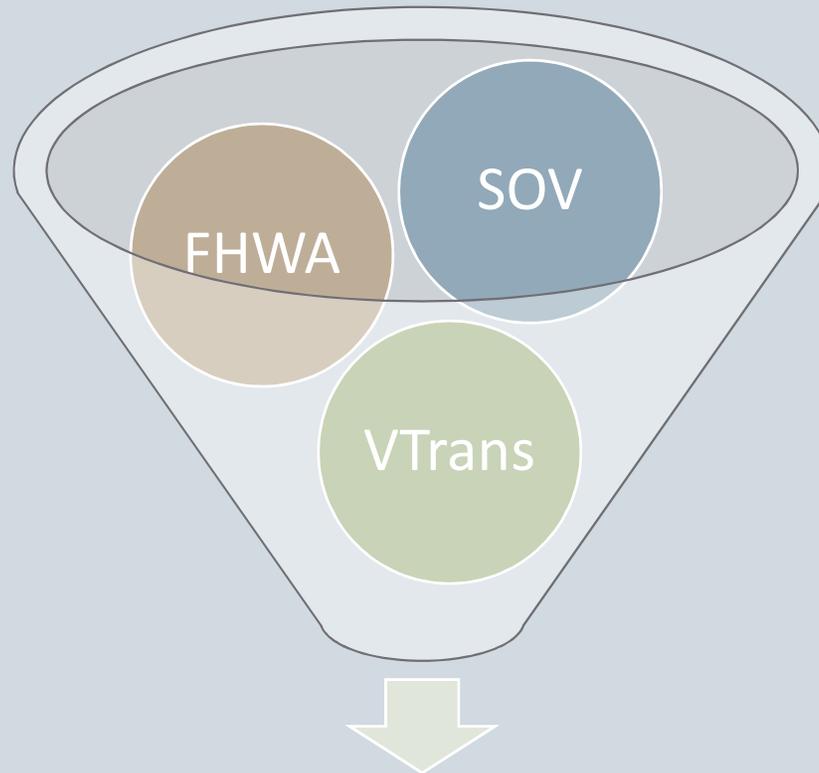
Future Direction

Performance Monitoring

Continuous Improvement



Environment



Performance Section

# Section Direction

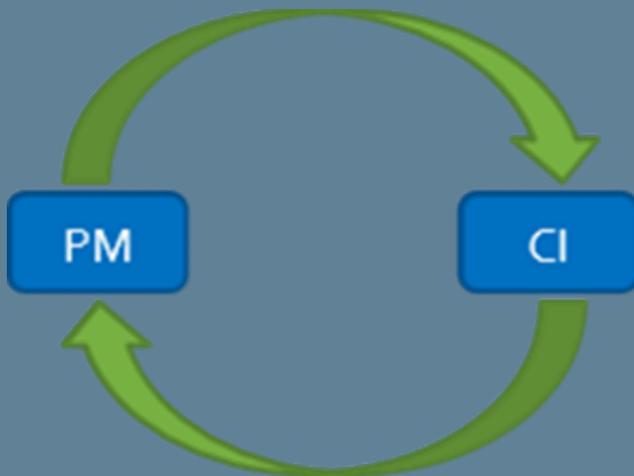
## Mission

Monitor the Agency's performance and strategically facilitate its improvements

## Vision

An environment in which we are continually analyzing our performance and applying improvements accordingly

Section  
Direction



## 2017 ACCOMPLISHMENTS

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Organized the team  
Developed a centralized reporting tool  
Tested tools with Asset Management Bureau.  
Created prototype dashboard tools  
Transition the Lean Program

## 2018 STRATEGIC GOALS

Further develop the centralized framework  
Engage the Highway Division leaders  
Continue Continuous Improvement transition

# Performance Monitoring

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# What is it?

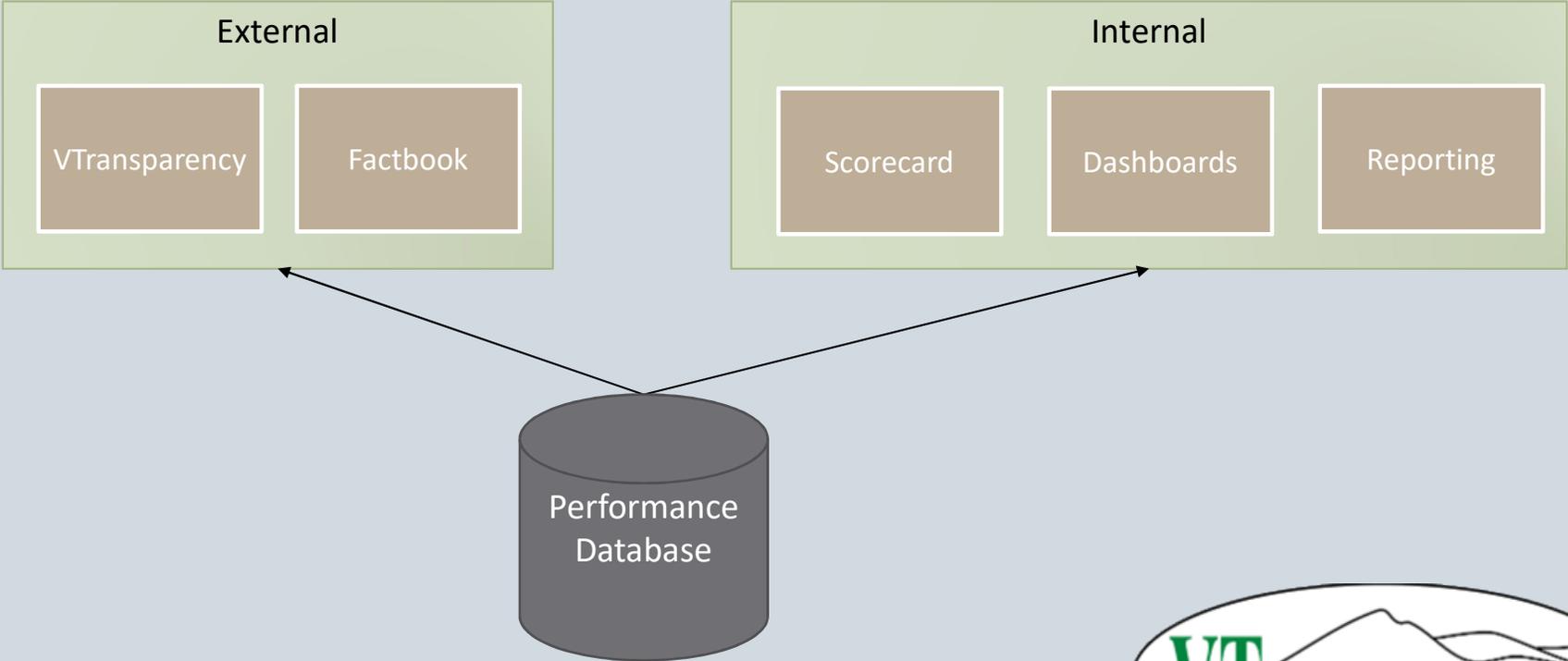
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Mission: Facilitate the performance documentation of Agency programs and processes

Vision: Management uses performance management tools to enhance the performance of prospective programs and processes



# Customers



STATE OF VERMONT

# Agency of Transportation

SEARCH

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#### Crash Query Tool App

#### Pavement Condition Map

#### Bridge Inspections Map

VERMONT AGENCY OF TRANSPORTATION

## 2017 FACT BOOK and Annual Report

Published January 15, 2017





### KPI Details and Trend (click Metric Name to see Fact Sheet)

Last Refresh On: 1/5/2018 3:42:47 AM

As of Date	Metric Name	Current Value	KPI Status	Target	Trend
10/1/2017	<a href="#">Schedule Milestones on Time</a>	41.00	▲ -48.75 %	80.00	
10/1/2017	<a href="#">Bid Advertisement on Time</a>	88.00	● +10.00 %	80.00	
12/1/2017	<a href="#">Estimating Accuracy</a>	36.00	▲ -28.00 %	50.00	
12/1/2017	<a href="#">Construction on Budget</a>	92.00	● +22.67 %	75.00	
12/1/2017	<a href="#">Construction On Time</a>	55.00	▲ -35.29 %	85.00	

**AOT Bureau**

Select Bureau

- AMP
- Construction
- Maintenance and Operations Bureau
- Municipal Assistance Bureau
- Office of Highway Safety
- Project Delivery Bureau

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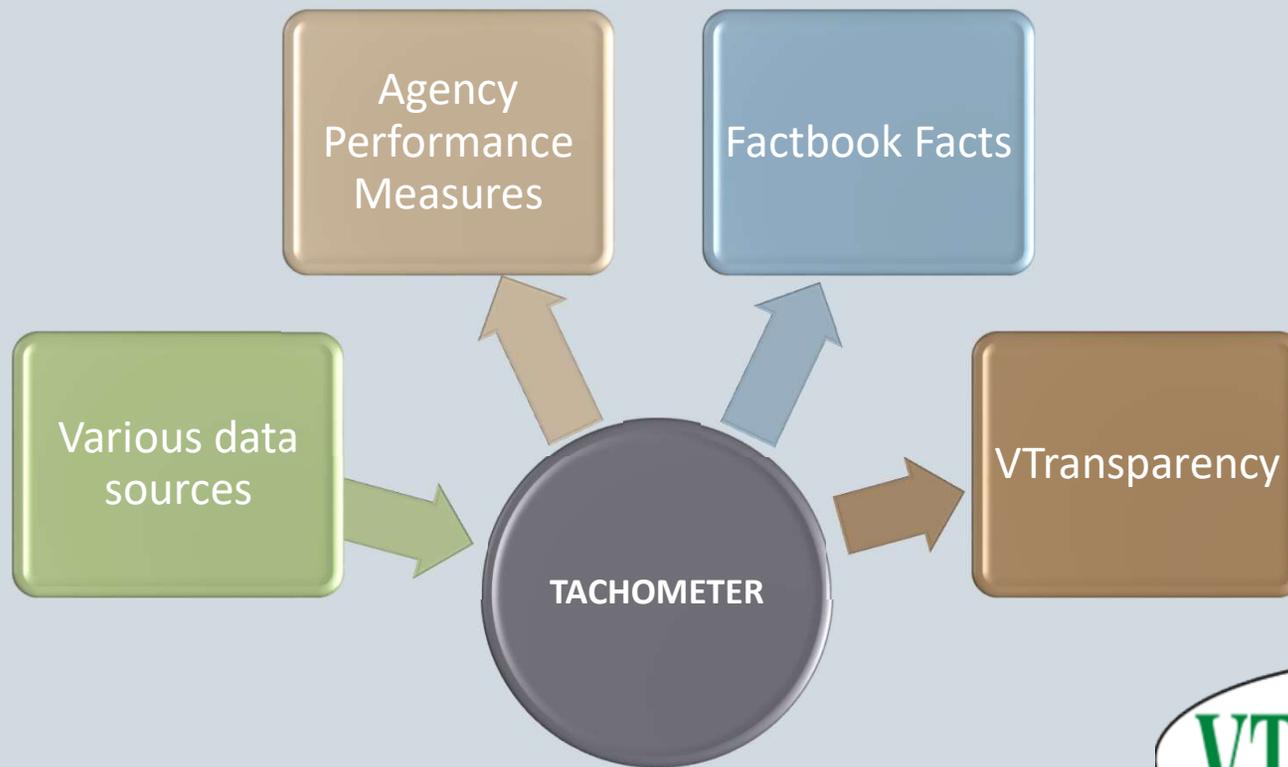
**Measure Name**

- Bid Advertisement on Time
- CE Cost estimate
- Construction cost estimate
- Construction on Budget
- Construction On Time
- Estimating Accuracy

Measure Name	Description	Update Frequency	last_update	Responsibility	Steward
Construction cost estimate	AVERAGE Construction Cost Estimate % Difference at each design phase from Bid Amount	Quarterly	10/17/2017 3:15:19 PM	ken.robie@vermont.gov	
CE Cost estimate	AVERAGE CE Cost Estimate % Difference at each design phase from Bid Amount	Quarterly	10/17/2017 3:15:11 PM	ken.robie@vermont.gov	
Schedule Milestones on Time	Schedule milestones are to be completed within 30 days of the Artemis Snapshot at least 80% of the time.	Monthly	1/4/2018 12:19:30 PM	ken.robie@vermont.gov	
PE Cost Estimate	AVERAGE PE Cost Estimate % Difference at each design phase from Bid Amount	Quarterly	10/17/2017 3:15:32 PM	ken.robie@vermont.gov	
Bid Advertisement on Time	On Time Bid Advertising schedule >80% of all projects advertised within 30 days of original anticipated advertising date	Monthly	1/4/2018 12:18:49 PM	ken.robie@vermont.gov	
Estimating Accuracy	The actual low bid for a Contract should be within 10% of the Estimate.	Monthly	1/3/2018 4:40:58 PM	ken.robie@vermont.gov	

# Performance database

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9/27/2017, 11:46:39 AM

Section  
AMP  
Reported  
Annually  
Last Report  
12/31/2016



## Performance Measure Factsheet

Pavement condition index experienced by the traveling public  
(weighted by traffic volume).



The average pavement condition index experienced by the traveling public (weighted by traffic volume) is a measure of actual experienced pavement condition.

**What** VTrans is responsible for maintaining more than 3,200 miles of pavement across the state. Pavement Condition is a measure of driver's experience while travelling down the road and is rated on a scale of 0 to 100 based on rutting, cracking, and roughness. The scale is called the composite pavement condition index.

### Pavement Condition Descriptions

- Good: Like new pavement with few defects perceived by drivers. Composite pavement condition index 80-100
- Fair: slight rutting and/or cracking and/or roughness become noticeable to drivers. Composite pavement condition index 65-79.
- Poor: Multiple cracks are apparent and or rutting may pull at the wheel and/or roughness causes drivers to make minor corrections. Composite pavement condition index 40-64.
- Very Poor: Significant cracks may cause potholes and/or rutting pulls at vehicle and/or roughness is uncomfortable to occupants. Composite Pavement Condition Index 0-39.

**Why** Pavement condition directly impacts driver experience, safety and efficiency.

**How** Automated surveys are conducted annually to determine pavement conditions across the state. We use this data to track two metrics, one based on travel volumes and one based on mileage. For Travel Weighted Annual Pavement Condition (TWAC) we take the composite index and weight each road segment based on traffic counts. This metric gives us a good overview of



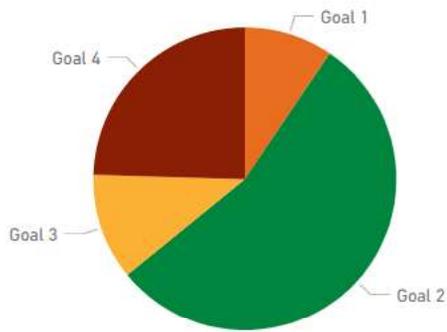
# Performance Measures

Right-click any of the slices and choose Drillthrough for more information.

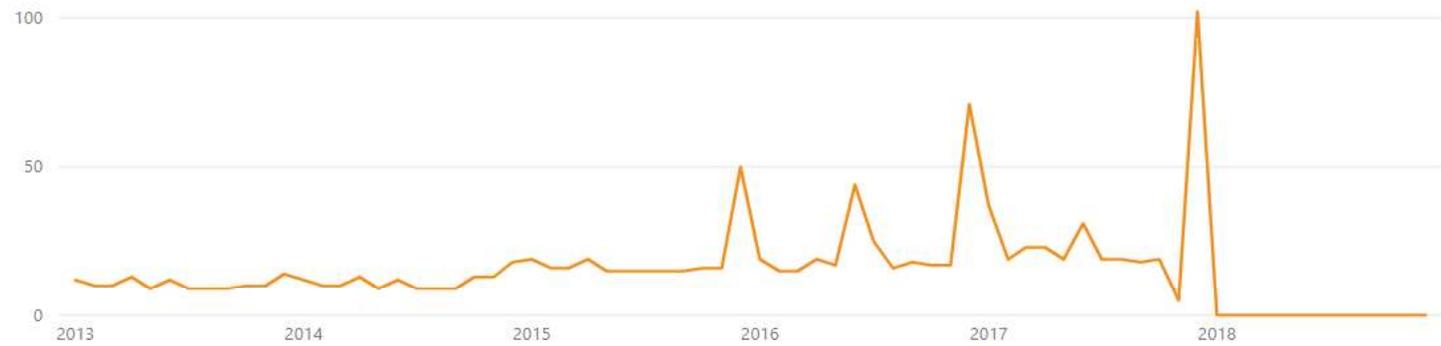
## 248

Number of Measures, Indicators, and Statistics Tracked

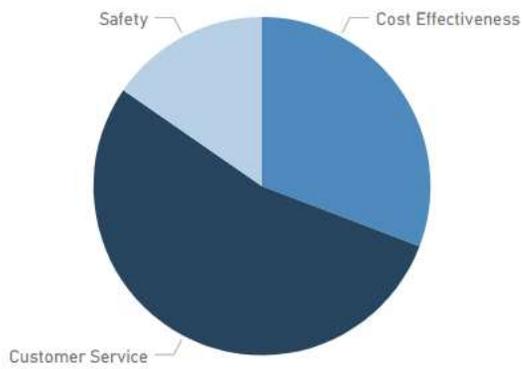
Goal



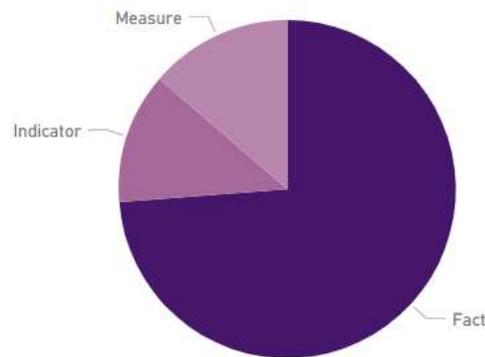
Data Reports



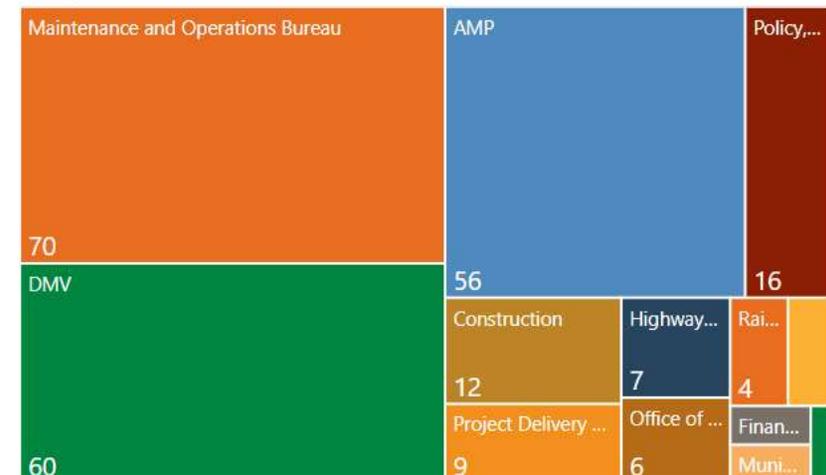
Perspective



Type



Section



# Continuous Improvement

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# What is it?

CI is an ongoing effort to make incremental improvements to products, services or processes over time. Processes are constantly monitored and modified based on their efficiency, effectiveness, and sustainability.

**Mission:** To contribute to, support, and promote continuous organizational improvement in a manner that aligns with specific goals of the VTrans Strategic Plan:

*Goal 4: Cultivate and continually pursue innovation, excellence and quality customer service.*

*Goal 5: Develop a workforce to meet the strategic needs of the Agency.*

**Vision:** An organizational culture of continuous improvement, innovation and collaboration, achieving the highest levels of product quality and customer service through a people-focused approach to work accomplishment.

# Overview of Dedicated Programs

## Electronic Signature

CI initiative for the effective utilization of the statewide enterprise eSignLive e-signature solution. E-Sign projects result in the establishment of a best-practice option for routing and signing high-volume VTrans business documents electronically, with a resultant increase in both staff productivity and customer service.

## Lean

CI process improvement initiative to engage VTrans staff in transforming the organization to operate with a focus on process efficiency and service excellence. The Lean approach focuses on value to the customer, through the elimination of wasteful, non-value added activities in arriving at a process improvement solution.

## Business Process Management (BPM)

CI process management initiative to align business processes and measurement systems with an organization's strategic goals, and to design and implement process architectures to allow managers to manage processes effectively. @ VTrans enabled through vendor-supported BPMS development platform.

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# Electronic Signature

Estimated Savings for Completed E-Sign Projects						
VTrans Document	Unit Savings		n (Annual)	Annual Savings		Comments
	Money (\$)	Time (min)		Money (\$)	Time (hours)	
Timesheet	2.19	4.75	470	26849	971	<i>Full utilization by all remaining VTrans staff would result in an approximate additional savings of \$34,164 and 1235 hours.</i>
	0.38	1.00	230			
Performance Evaluation	1.23	1.50	1300	1599	33	
Closure Memo	1.64	2.50	1000	1640	42	
Construction Project Bid Analysis	3.65	5.50	75	274	7	
Travel Request	10.02	16.25	300	3006	81	
Request for Authorization/New EA	2.01	4.00	250	503	17	
Request for Modification	1.65	2.50	100	165	4	
POV Form	5.22	7.60	100	522	13	
<b>Totals</b>				<b>34557</b>	<b>1167</b>	

# Transition in Lean Program

Fall 2015: Lean Program established; Implementation Plan executed

2016-2017: Culture build through training and projects

## **2018 and beyond:**

- Coordination with statewide CI effort
- Strategic deployment through overall Performance Section direction
- Diversification of service offerings
- Effective project management

# Lean Program Highlights

- **Completion of VTrans Lean Training Program**

  - White Belt: 168 Statewide - 147 VTrans

  - Yellow Belt: 101 Statewide - 79 VTrans

  - Green Belt: 59 Statewide - 48 VTrans

- **2017 Supplemental Classes/Workshops**

  - Green Belt Coaching and Mentoring: 25 Statewide - 19 VTrans

  - Leading Lean Cultural Change (Management and Supervisory staff): 32 Statewide - 30 VTrans

  - Aligning Strategic Lean (Executive Management): 18 VTrans

- **2018**

  - Full transition to statewide training program and support for trainees

  - Operational focus

# Lean Program Highlights

## 2017 Sample Lean Events

### **Business Office Consolidation** ([internal restructuring](#))

**Objective: Consolidate business office activity into more effective and efficient business processes**

Phase 1 – Pre-consolidation mapping of Future State (Spring 2017)

Phase 2 – Stabilization (On-going)

### **Section 1111 Commercial Permitting** ([internal efficiencies and effective customer relations for existing process](#))

**Objectives: Improve accuracy of submitted applications; reduce permit processing lead time; provide transparency for internal stakeholders and external customers**

Implementation on-going; consolidating technology solution with residential permitting

### **Construction Management System (CMS) Replacement** ([precursor to IT procurement and implementation](#))

**Objective: Document Current State business processes conducted within the Agency's AASHTOWare client/server suite of products that support construction management at VTrans, and related process "pain points" and improvement "bright ideas".**

Under RFP for vendor selection

Working on achievable improvements to existing system

# Lean Program Highlights

## **A WORD FROM OUR SPONSOR – CMS Replacement Project**

*“This is outstanding! I want to thank the entire team that participated in the Lean events to support the Construction Management System upgrade. Your work is literally the foundation that the new system will be built on and defining the Future State. I look forward to seeing improvements in the “pain points” and implementation of the “bright ideas” not only in the future system but also looking for opportunities within the existing AASHTOWare system.”* **Wayne Symonds – Director and Chief Engineer, Highway Division**

# BPMS Right-of-Way Project

2015: Phase 1 Development and Deployment (Survey, Plot Existing, Legal Docs, PE Cost Estimate)

2016: Phases 2 & 3 Development and Deployment (Legal Docs, Appraisal, Appraisal Review, Appraisal Cost Estimate, Plans & Titles)

2017: Phase 2 Post Deployment Enhancements (ROW Cost Estimate, Early Acquisition Appraisal, Review Appraisal)

2018: Phase 3 Post Deployment Enhancements (Acquisition, Negotiations, Acquisition Administration)

***Mission critical process management framework to support Capital Program project delivery***

Questions?

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