

TRB Annual Meeting 2020

**Maryland DOT Support for Locally Operated  
Transit Systems (LOTS): Incorporating Safety  
Risk Management in Agency Safety Plans**

JAN. 13, 2020

# Agenda

- Who is OLTS? What are LOTS?
- Preparing For and Supporting Federal Transit Safety Requirements
- Challenges
- Schedule and Process
- Next Steps

# Who is OLTS? What are LOTS?

# The MDOT MTA

- The Maryland Transit Administration (MDOT MTA) is a division of the Maryland Department of Transportation
- MDOT MTA is one of the largest multimodal transit systems in the U.S., providing public transportation services to more than 2 million residents of the Baltimore region and throughout Maryland
- MDOT MTA is the designated recipient of federal transit funds for all Locally Operated Transit Systems (LOTS) in the State
- The MDOT MTA Office of Local Transit Support (OLTS) administers grant funds and ensures that LOTS comply with federal and state requirements

# The LOTS Agencies



# Different Sizes/Levels of Complexity

§5307 Recipients – Full Reporters	§5307 Recipients – Reduced Reporters	§5311 Recipients – RURAL Reporters
Anne Arundel County	Allegany County Transit	Baltimore County Department of Aging
Baltimore City DOT	Annapolis Department of Transportation	Delmarva Community Transit
Charles County	Calvert County	Garrett County Community Action Committee
Howard Transit	Carroll County Department of Citizen Services	Town of Ocean City
Prince George’s County Transit	Cecil County Government - SSCT	
Ride-On Montgomery County Transit	Harford Transit	
Transit Services of Frederick County	Queen Anne’s County Department of Aging	
Tri-County Council for the Lower Eastern Shore	St. Mary’s Transit System	
	Washington County Transit	

# Preparing For and Supporting Federal Transit Safety Requirements

# OLTS Role in Safety & Asset Management

- OLTS has a long history of providing training and technical assistance to the LOTS
- We use the annual Transportation Association of Maryland conference as a platform for three days of training on various topics
- Additional training is provided through webinars
- In the area of Asset Management, OLTS has provided a total of 15 LOTS workshops to the LOTS since September 2015
- In the area of Safety, OLTS has provided 10 LOTS workshops since November 2016



# Safety Training Topics

**Transit System Hazard and Risk  
Management 101**

**Using Existing Safety Documents in  
the SMS Component Framework**

**How Safety Management & Transit  
Asset Management Work Together**

**Safety Risk Management**

**Safety Assurance and Safety  
Promotion**

**FTA Agency Safety Plan Final Rule  
Requirements**

**FTA Bus Agency Safety Plan Template  
Work Session**

**Safety Performance Measures and Setting  
Safety Performance Targets**

**Employee Safety Reporting**

**After the Plan is Done – Implementing  
SMS**

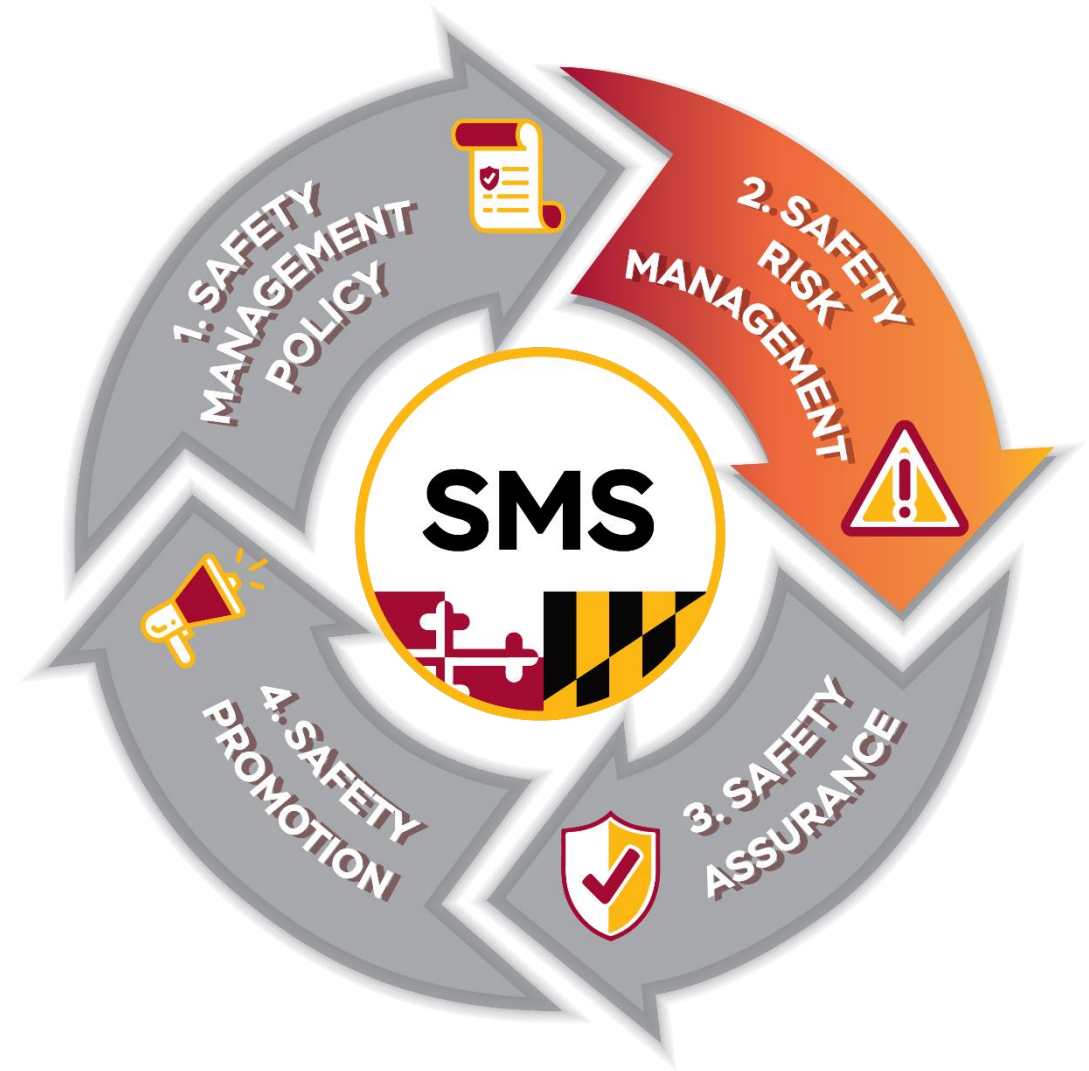
# Challenges

# Challenges to Effective PTASP Development

- There is a difference between doing the right thing and **documenting how you do it**
- Formal safety risk assessment process using both Severity and Probability **is new**
- Some lack of clarity with smaller agencies about **NTD definitions for safety reporting**
- The System Reliability safety performance measure requires Reduced Reporters to start tracking major mechanical failures, **which is new**
- Emphasis on being proactive **is new** – most agencies are more used to responding

# Safety Risk Management Challenges

Among the four SMS Components, the most challenging was Safety Risk Management



# Potentials Reasons for Difficulty

There are many possible reasons that the Maryland LOTS found Safety Risk Management processes challenging:

- Unfamiliar with MIL-STD 882 system safety standard practices
- Previous LOTS safety plans were based on 2002 FTA-CTAA-APTA Memorandum; was more prescriptive and did not include risk assessment processes
- Small agencies have smaller staffs and are usually strapped for resources – can lack personnel or technology to document their processes
- More used to “going with their gut” than with using a consistent methodology

# Adapting SRM for Smaller System





OLTS provided training/technical assistance to LOTS to scale Safety Risk Management processes to their smaller operations

Probability	Severity
<ul style="list-style-type: none"> <li>Recommended adjusted categories for Hazard Probability to reflect lower-than-industry average rates of occurrence.</li> </ul>	<ul style="list-style-type: none"> <li>Recommended adjusted thresholds in cost category for Hazard Severity to reflect the greater impact of a smaller loss</li> <li>For example, the loss of a single bus (\$500,000) could be catastrophic to a small system.</li> </ul>

# Risk Matrix is Scalable

OLTS provided training/technical assistance to LOTS to show how a risk matrix can be as detailed or as simple as the agency determines is appropriate

HAZARD RISK INDEX – 25 Ratings					
Probability of Occurrence	Hazard Severity				
	1 Catastrophic	2 Critical	3 Major	4 Marginal	5 Insignificant
(A) Frequent	1A	2A	3A	4A	5A
(B) Probable	1B	2B	3B	4B	5B
(C) Occasional	1C	2C	3C	4C	5C
(D) Remote	1D	2D	3D	4D	5D
(E) Improbable	1E	2E	3E	4E	5E

<u>Hazard Risk Index</u>	<u>Risk Decision Criteria</u>
1A, 1B, 1C, 2A, 2B, 3A	 Unacceptable (Un)
1D, 2C, 2D, 3B, 3C, 4A, 4B, 5A	 Undesirable (Ud) . Executive Management concurrence required
1E, 2E, 3D, 3E, 4C, 4D, VB, VC	 Acceptable with Technical review (Ar)
4E, 5D, 5E	 Acceptable without further review (Ac)

# Simplified Risk Matrix

HAZARD RISK INDEX - Simplified			
Probability of Occurrence	Hazard Severity		
	1 Catastrophic - Serious	2 Moderate	3 Marginal- Insignificant
(A) Frequent- Probable	1A	2A	3A
(B) Occasional	1B	2B	3B
(C) Remote- Improbable	1C	2C	3C

Hazard Risk Index Rating	Risk Decision Criteria
1A, 1B, 2A	Unacceptable - Must be mitigated
1C, 2B, 3A	Tolerable - May be accepted with Exec Mgt concurrence, should mitigate
2C, 3B, 3C	Acceptable without further review

Example of a  
simplified Risk  
Matrix with only 8  
risk ratings



# Schedule and Process

# Plan Development & Approval Schedule

- Deadline for PTASP development and approval: **July 20, 2020**
- OLTS will incorporate reviewing LOTS PTASPs in its review of the FY 2021 Annual Transportation Plan grant applications
- All Maryland bus transit agencies who receive §5307 and/or §5311 funds will have PTASPs finalized, signed, and approved by January 2020



# State and MPO Coordination

## Under 49 CFR Part 673.15:

- Transit agency's performance targets must be **made available** to State and MPO to aid in the planning process
- Each transit agency must **coordinate** with State and its MPO in the selection of **State and MPO safety performance targets**
- The Transit agency safety performance targets may aid the State and MPO in selecting their own performance targets

LOTS develop safety targets

LOTS share safety targets with State (submit PTASP)

LOTS share safety targets with MPOs

LOTS coordinate with MPOs to set State/MPO safety targets

# How LOTS Agencies will Meet Coordination Requirements

- LOTS agencies' Safety Performance Measures and Targets will be made available **to the State** when they submit PTASP to OLTS as part of Annual Transportation Program application
- LOTS agencies will make Safety Performance Measures and Targets available **to MPOs** after PTASP submission
- OLTS will facilitate and assist in setting up meetings between LOTS and their MPOs to communicate safety targets



# Next Steps: SMS Implementation

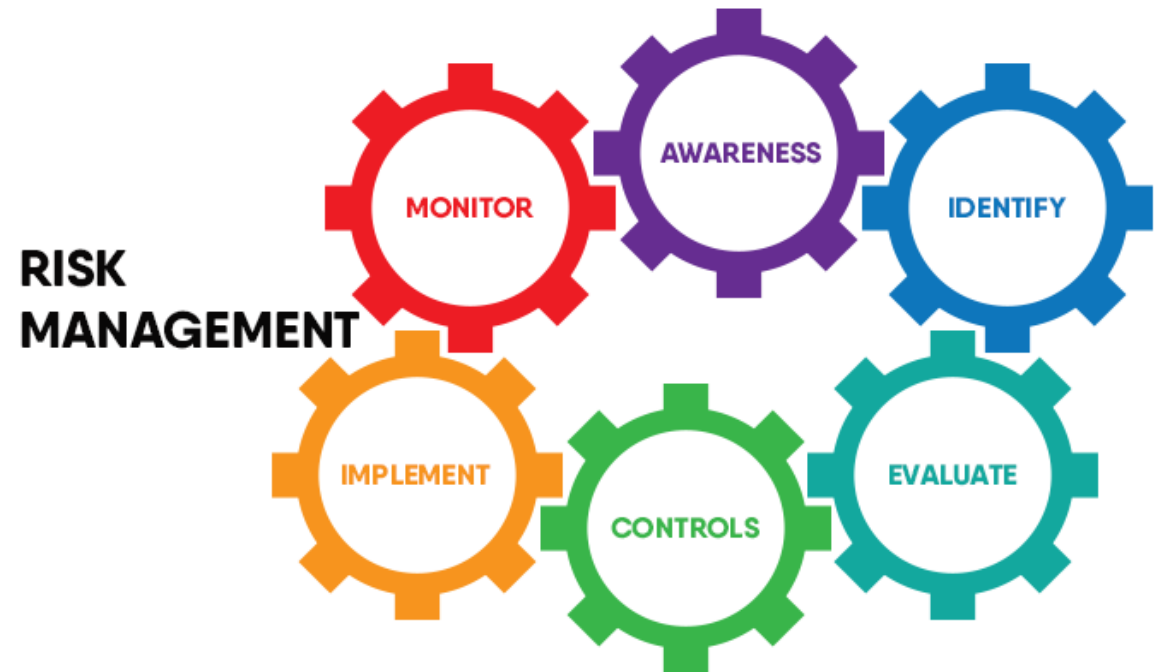
# Please – not a Plan on the Shelf!

- The Plan is a tool – not a bookend!
- Feed the Plan:
  - Keep a running revision – correcting or updating things that work or don't work
  - Update the system description, if it changes
- Involve staff: – invite input, solicit updates



# Living Risk Management

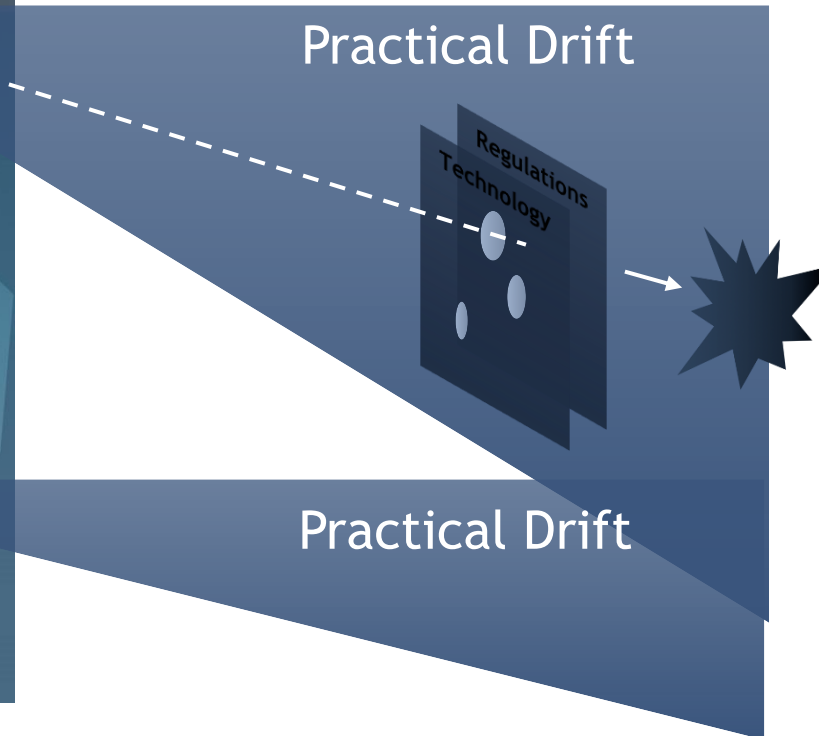
- Embedded in your agency
  - Like breathing
- What questions should you and your staff be asking?
  - How do you identify the small things that can add up to big events?
  - What can happen, how, where, what to watch for?



# Hazard Identification & Assessment



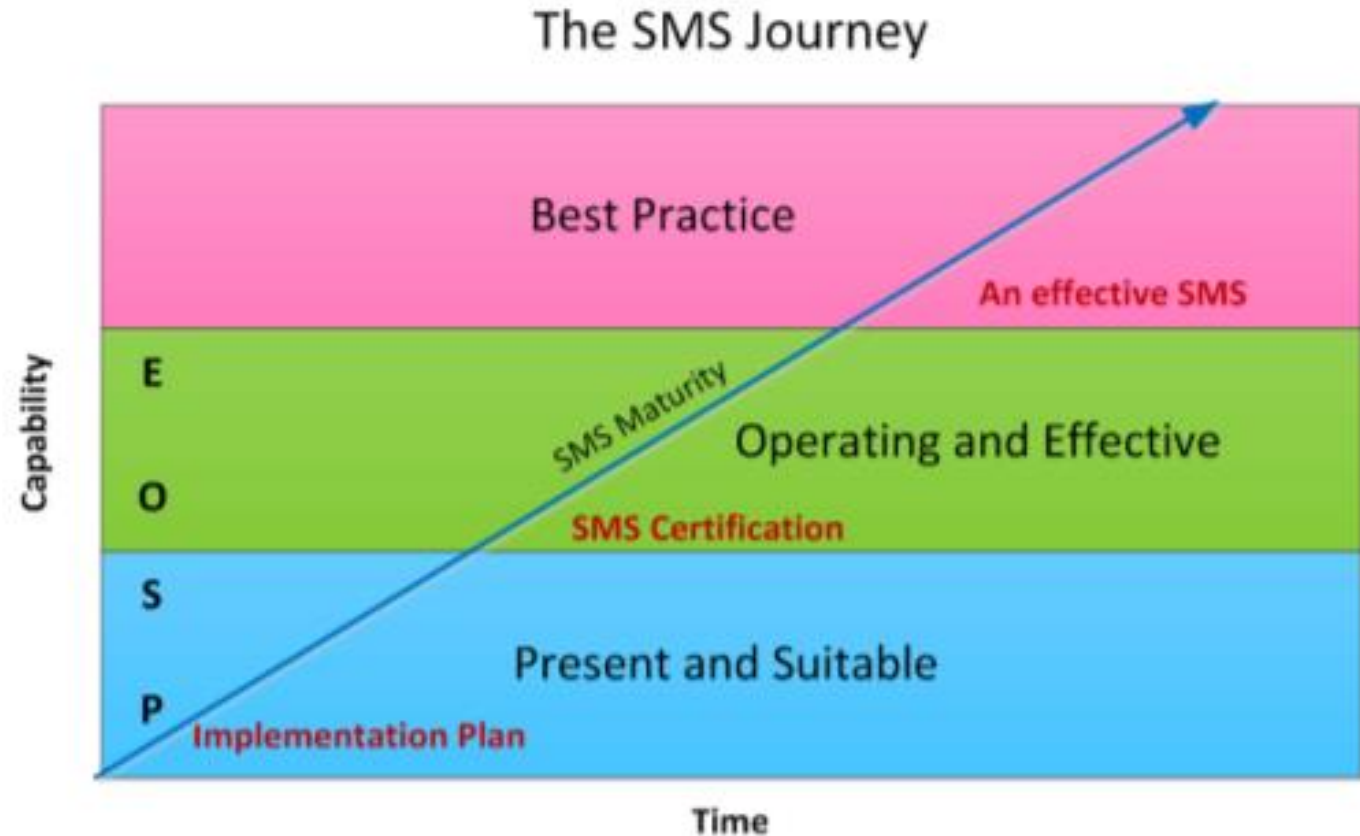
Hazard identification & Assessment is a wasted effort if restricted to the aftermath of damaging occurrences – needs to be Proactive





# Continuous Improvement

- Assess your progress in implementing SMS
- Audit your progress
- Watch for slippage and gaps
- SMS is a Journey – Not a Destination



# Thank You

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