FTA

FEDERAL TRANSIT ADMINISTRATION

2019 Joint SSO and RTA Workshop

Transit Asset Management and Safety Management Systems

Paulina Orchard
Office of Transit Safety and Oversight

Dr. Mshadoni Smith
Office of Budget and Policy

U.S. Department of Transportation
Federal Transit Administration

September 25, 2019

Overview

- TAM and SMS – What are they and how are they related?
- Nexus points

Executive Leadership | Condition Assessment | Decision Support Tools | Investment Prioritization | Identification of Resources

What is Transit Asset Management?

Transit Asset Management (TAM) is a business model that uses the condition of assets to guide the optimal prioritization of funding at transit properties in order to keep our transit networks in a **State of Good Repair (SGR).**

The TAM regulation (49 C.F.R. Part 625) provides a foundation for addressing the SGR backlog.

The TAM regulation focuses on measuring and monitoring performance and condition.

Major requirements of the regulation include:

- TAM Plan,
- Performance measure targets,
- Self-certification of compliance, and
- Coordination with planning

Two Types of TAM Deliverables

Process

- Compliant with TAM Plan
- Recordkeeping & Coordination with Planning
- Certification

Reports

- Data Report
  - Performance targets
  - Performance status
    - Condition Assessments
    - Inventory
- Narrative Report

Public Transportation Agency Safety Plan Requirements at 49 C.F.R. Part 673

Agency Safety Plan (ASP)

Develop and certify an Agency Safety Plan

Safety Management System (SMS) (*Subpart C*)

Implement and operate a Safety Management System

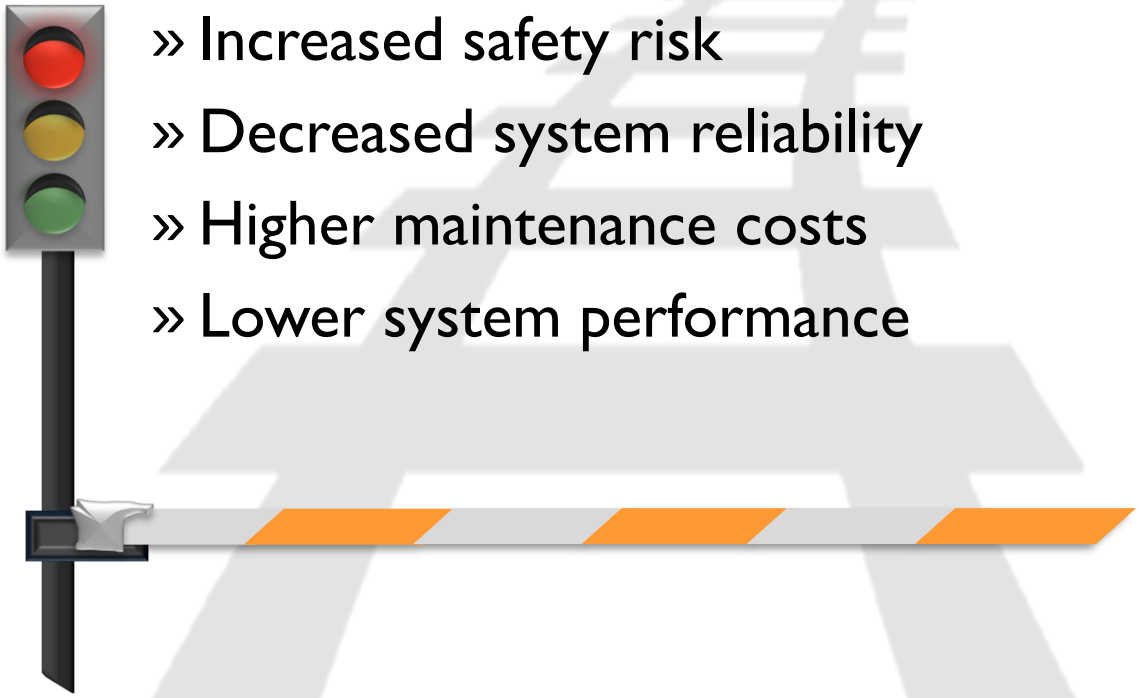
PTASP Documentation (*Subpart D*)

Maintain documentation related to the ASP, SMS implementation, and results from SMS processes and activities

Safety Management System (SMS) Components

How are TAM and SMS related?

- The safety and performance of the system depend, in part, on the condition of its assets.
- When transit assets are not in a state of good repair, the consequences include:
  - » Increased safety risk
  - » Decreased system reliability
  - » Higher maintenance costs
  - » Lower system performance



How do TAM and SMS inform each other?

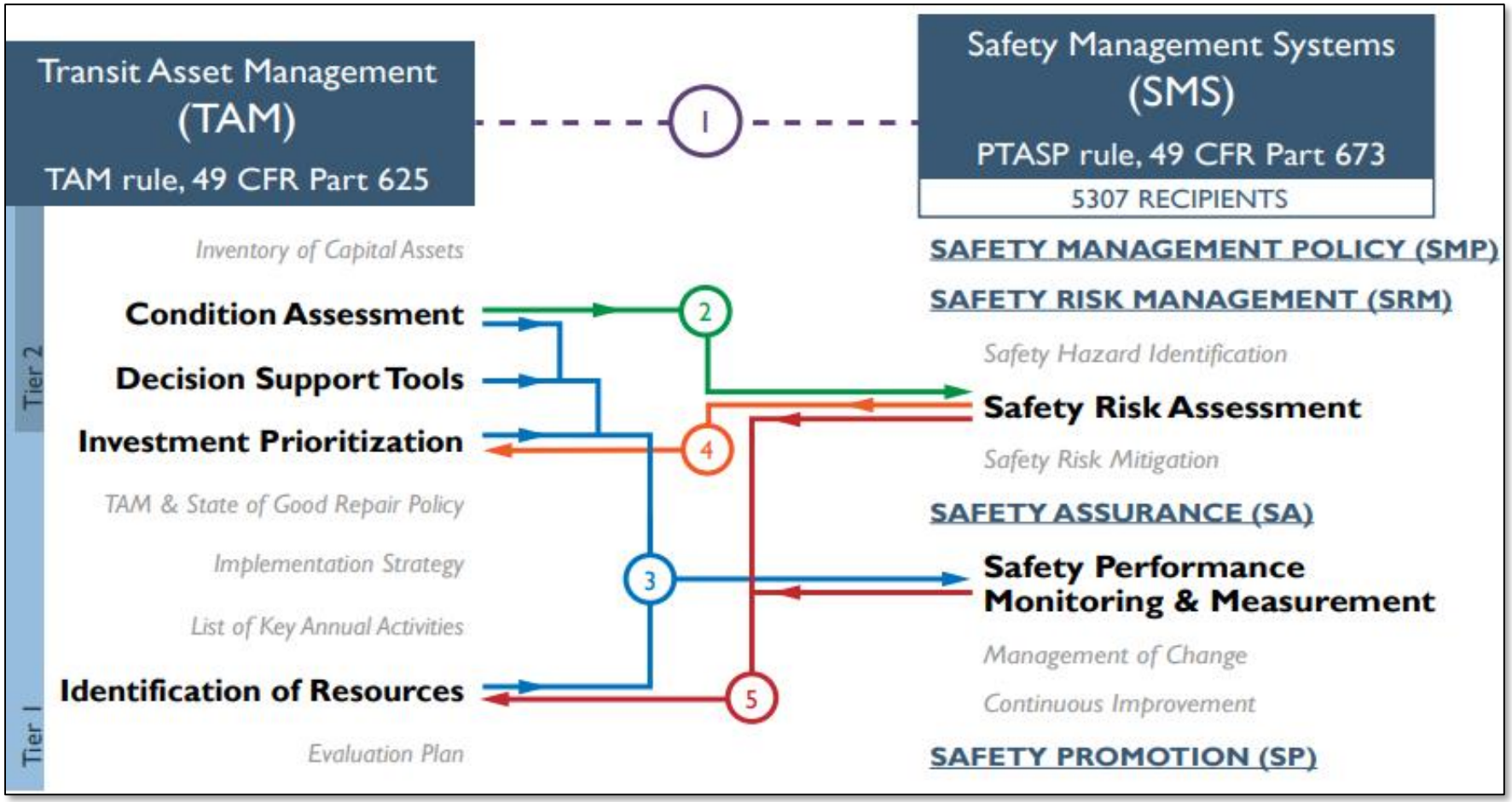
Information learned through TAM analysis could direct and inform a transit agency's SMS.

A transit agency's SMS could direct and inform its TAM Plan priorities.

Common Understanding

- Safety performance improvements depend on:
  - Information exchanges between TAM and safety,
  - Dedicated implementation of both a TAM Plan and an Agency Safety Plan,
  - Consistent condition inspection and assessment, and
  - Targeted safety oversight and monitoring program.
- The performance measures and targets for both safety and TAM help agencies and FTA quantify progress in enhancing safety and improving the condition of assets.

Nexus between TAM and SMS



Nexus between TAM and SMS

Executive Leadership

Condition Assessment

Decision Support Tools

Investment Prioritization

Identification of Resources

Nexus 1: Executive Leadership

Accountable Executive	State Safety Oversight Agency
➢ Reviews and approves the TAM plan and Agency Safety Plan ➢ Involved in decision-making about risk and investment	➢ Ensures that the rail transit agency defines and carries out the appropriate safety management authorities and accountabilities, and processes ➢ Opportunities for awareness and engagement

Nexus 2: Condition Assessment

- Condition assessments can help identify potential safety issues
- A source of hazards to be assessed through SRM
- Data: TAM ›››› SMS

SSOA Role

- Some SSOAs require updates on condition assessments
- A rail transit agency's SRM process will likely involve information from condition assessments, with potential implications for SSOA oversight

Example: Condition Assessment

Rail fasteners are vital in mitigating the potential for train derailment

Straightline Transit has a robust inspection program to ensure all rail fasteners are in a state of good repair

Inspections note that the number of fasteners failing per feet of track is outside the agency's standard for safe operations. Inspections also find instances of wide gage due to the condition of the deteriorating fasteners

Straightline Transit takes the safety concern identified during the asset inspections (wide gage) and enters it into the Safety Risk Management process to determine how to best mitigate the newly identified issue

In the SSOA triennial audit, Straightline Transit's SSOA will review how hazards and consequences were identified and addressed through the SRM process

Nexus 3: Decision Support Tools

- TAM data and analysis can be used for performance monitoring and measurement in Safety Assurance
- Data: TAM »»» SMS

SSOA Role

Through audits, inspections, and reviews, SSOAs will verify SMS processes to ensure the inclusion of appropriate information and data

Example: Decision Support Tools

As a result of Straightline Transit's safety risk assessment of the wide gage, the agency replaces the failing fasteners with a new product.

Asset inspections of the new fasteners are used to determine if the new product is performing better than the replaced fasteners.

In the SSOA triennial audit, investigations and inspections, the SSOA may review how applicable data is accessed and used to support decision making.

Nexus 4: Investment Prioritization

- Safety risk assessments and safety performance monitoring and measurement activities can inform the prioritization of an asset for repair or replacement
- Data: SMS »»» TAM

SSOA Role

Verify that mitigations developed to address asset conditions are appropriately monitored

Example: Investment Prioritization

Safety Assurance

The Safety Department provides data from its safety performance monitoring and measurement activities that shows the new fasteners are performing better than the replaced equipment, and additional resources do not need to be allocated to mitigate the issue

Investment Prioritization

The Accountable Executive uses this information to make planning decisions about whether to prioritize this equipment for repair or replacement in the TAM plan

Nexus 5: Identification of Resources

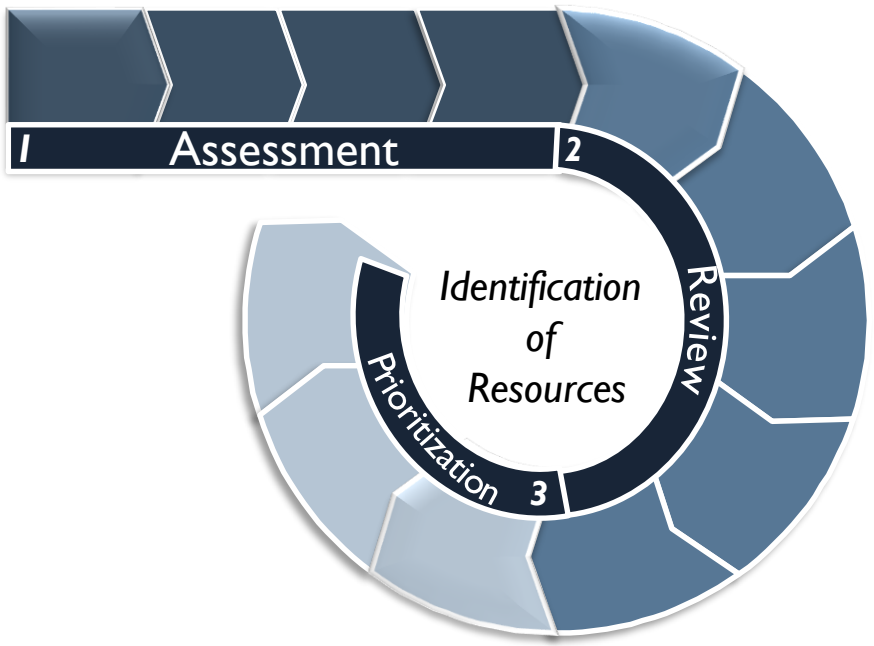
- Outcomes from safety risk assessments or safety performance monitoring and measurement can inform resources for TAM
- Data: SMS »»» TAM

SSOA Role

Verify that the transit agency has implemented mitigations based on prioritization and whether they are "necessary"

Example: Identification of Resources

- A dry tunnel environment is essential to preventing the premature failure of track, traction power, and signal components due to corrosion
- Wet conditions in the tunnel are a hazard that can lead to arcing insulators, stray current, or bobbing track circuits
- Following the identification of new mitigations during a safety risk assessment of this hazard, Straightline Transit includes resources to protect assets in tunnels from water intrusion in its TAM plan



TAM Online Resources

- Infrastructure and Facility Guidebooks
- Group Plan Workbook
- Online Video
- TAMNews Newsletters (quarterly)

TAM Webinar Series

Federal Transit Administration

GO

About Funding Regulations & Guidance

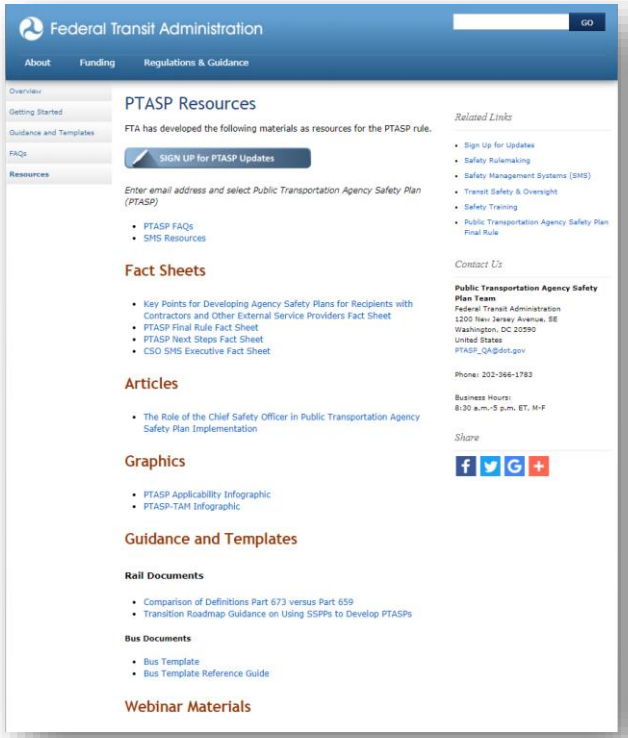
- Overview
- Getting Started
- FAQs
- TAM Plans
- Performance Management
- Peer Library
- **FTA Outreach Materials**
- Resources
- TERM-Lite
- State of Good Repair Programs

Webinar Materials

Title	Date	Presenter(s)	Resources
Using TAM to Support Decision-Making	5.29.19	Sharon Okoye, CT DOT Terry Boylan, GCRTA	Recording
Performance Based Planning, TAM, and PTASP	4.30.19	Dwayne Weeks, FTA Mshadoni Smith, FTA Morvarid Zolghadr, FTA	Recording Presentation
Communicating TAM Compliance and Programs	4.25.19	Mshadoni Smith, FTA Laura Zale, SEPTA Luke Westlund, Denver RTD	Presentation
Putting TAM Data to Use	3.19.19	Daniel Hofer, UTA Alexi Miller, Houston METRO	Recording Transcript
MPO Coordination	11.28.18	Dwayne Weeks, FTA Shayna Pollock, Atlanta Regional Commission Karen Winger, Gwinnett County	Recording Transcript

Preparing for July 20, 2020 - PTASP Resources

- Resources available include:
  - Fact Sheets
  - Articles
  - Infographics
  - Guidance and Templates
  - Past Webinar Materials (Recordings and Presentations)
- Questions? Email PTASP_QA@dot.gov or call the TSO Main Number at 202-366-1783



Resources page: https://www.transit.dot.gov/PTASPResources

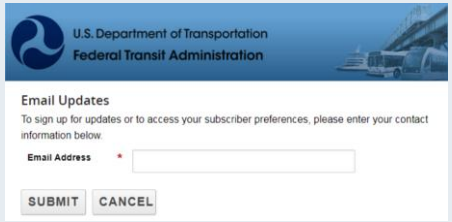
Preparing for July 20, 2020 - PTASP Resources

Read, watch, and participate

- Review the PTASP FAQs
- Visit the PTASP Resources page to view previous webinars and documents
- Participate in webinars explaining PTASP-regulations and guidance
- Read our newsletter, *TSO Spotlight* for PTASP-related articles

Sign up to receive updates

Sign up for GovDelivery:



- FTA announcements and new PTASP documents
- https://public.govdelivery.com/accounts/USDOTFTA/subscriber/new