

# FTA

FEDERAL TRANSIT ADMINISTRATION

## Implementing Safety Management Systems (SMS)

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Oversight  
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U.S. Department of Transportation  
Federal Transit Administration

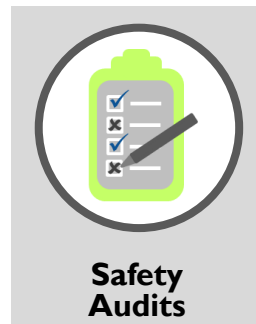
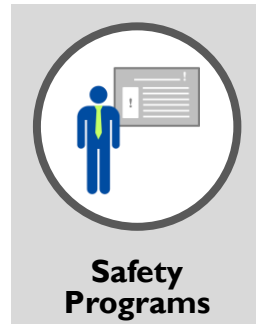
# Overview

- Review of SMS (safety management systems)
- The SMS implementation process
- Resources to support SMS implementation

# Review of SMS (Safety Management Systems)

# What is a safety management system?

Transit agencies already perform many activities to stay safe.



A safety management system (SMS) makes sure the *right* safety activities are performed *correctly* and *routinely*, and that they are having the *impact* transit agencies expect.

# An SMS engages all components and levels of a transit agency in answering these key questions:

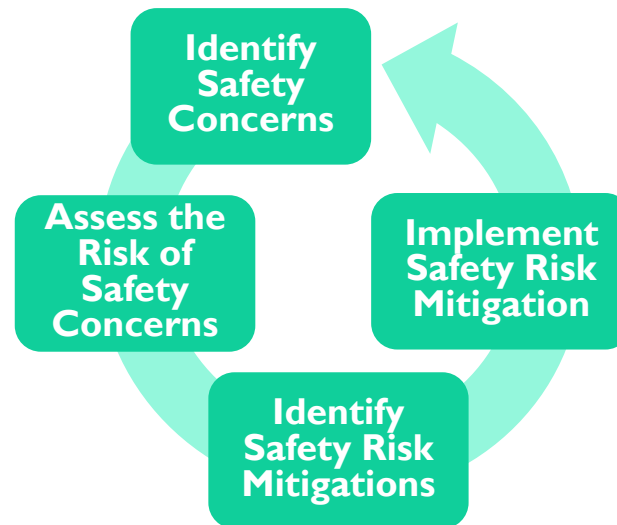
1. What are our **most serious** safety concerns?
2. How do we **know** this?
3. What are we **doing** about it?
4. Is what we are doing **working**?
5. How do we **know** what we are doing is working?

# An SMS helps a transit agency answer key questions by linking different safety activities through formal processes.

## Key Questions

1. What are our **most serious** safety concerns?
2. How do we **know** this?
3. What are we **doing** about it?
  - Specifically, what **should** we do about it?

## The Safety Risk Management Process



## Why focus on managing risk?

- Understand how bad consequences of a safety concern could be.
- Understand how likely these consequences are.
- Apply limited resources wisely.

# An SMS helps a transit agency answer key questions by linking different safety activities through formal processes.

## Key Questions

3. What are we **doing** about it?
  - Specifically, what are we **actually** doing?
4. Is what we are doing **working**?
5. How do we **know** what we are doing is working?

## Safety Assurance Processes

Safety Performance  
Monitoring &  
Measurement

Safety Mitigation  
Verification &  
Evaluation

Incident & Accident  
Investigation

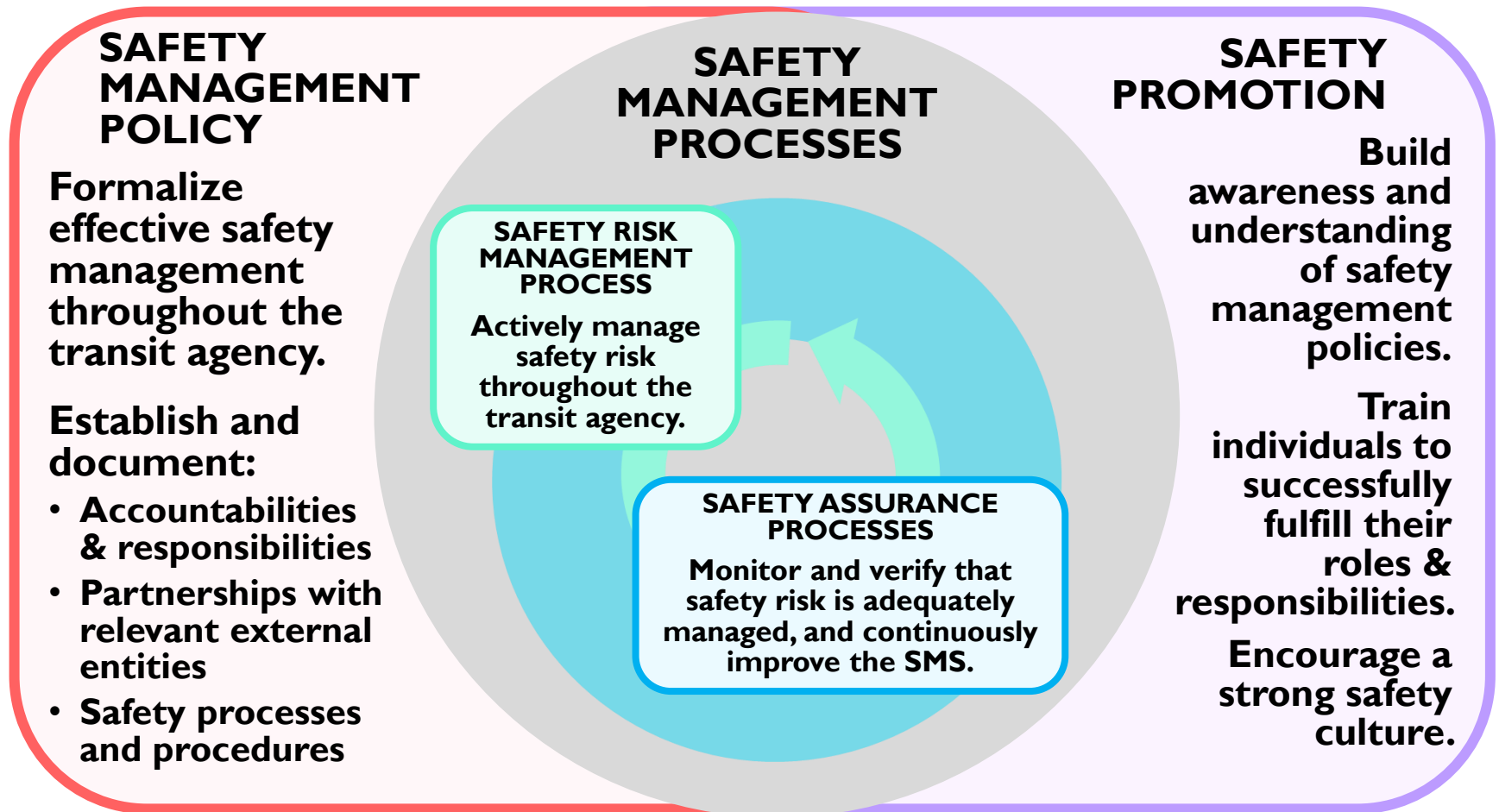
Management of Change

Continuous  
Improvement of the  
SMS

## What is safety assurance?

- Monitor progress to achieving safety goals.
- Through investigations and change management, identify safety concerns that need to be evaluated for risk.
- Verify that solutions were implemented.
- Test whether solutions are actually working and not causing unintended consequences.
- Regularly review and update the SMS.

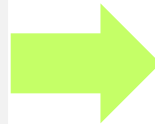
# To support these processes, transit agencies need formal policies and promotion activities.



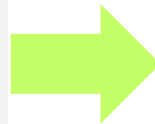


## Compliance Approach

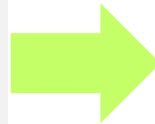
Document current procedures and practices



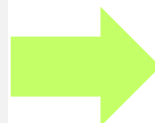
Safety regulators are primary users of safety data



Focus on compliance with prescriptive regulations



Reactive – address safety concerns after accidents occur



## Safety Management Systems Approach

Document strategies to address priority safety risks

Safety regulators, and agency leadership, employees and stakeholders are *all* primary users of safety data

Focus on measuring the effectiveness of risk control strategies and achieving safety outcomes

Proactive – learn from close calls and address accident precursors to prevent events

# The SMS implementation process

# Key Points on SMS Implementation

- Can take months to years, depending on agency.
- Certain activities are more appropriate for some agencies than others.
- Not a “check the box” exercise; the SMS must be realistic and practical for the agency.
- Not just a safety department effort; those responsible for managing and operating the SMS should be involved in developing it.
- Critical success factor – CEO/executive leadership commitment.

# The SMS Implementation Process

## Phase 1 Prepare

- Engage key individuals and build a team.
- Get familiar with SMS implementation.
- Identify gaps—the SMS policies, processes, and activities the agency still needs to develop.
- Make a plan for how to fill the gaps.

### Key Outputs

- SMS gap analysis
- SMS development plan
- Safety Management Policy Statement (recommended for large, complex agencies)

## Phase 2 Develop

- Design the safety risk management process.
- Build the safety assurance function.
- Determine SMS-related training and communication.
- Draft safety management policies to formally establish SMS processes and activities throughout the agency.

### Key Outputs

- *Public Transportation Agency Safety Plan* (awaiting final rule)
- SMS policy documents

## Phase 3 Operationalize

- Put SMS policies, processes, and activities into practice as they're approved by the agency.

### Key Outputs

- A functioning SMS
- Safety Management Policy Statement (recommended at this point for smaller, less complex agencies)

# Resources to support SMS implementation

# Resources to help you prepare now

## Check out the website

- SMS information
- Training
- Events
- Emails to registered users



## Get trained

Through FTA's safety website:

- Take the *SMS Awareness* online course
- Sign up for classroom courses
- Request an Individual Training Profile for a list of courses based on your role at your agency

## Read, watch, and participate

- Review SMS resources, including the *SMS Framework*
- Participate in webinars explaining new regulations and guidance
- Visit FTA's YouTube page to view previous webinars
- Read our newsletter *TSO Spotlight*



# Resources to help you implement an SMS and develop an Agency Safety Plan

## SMS Implementation Pilot Program

FTA is working hand-in-hand with a few transit agencies across the country, including:

- a large multi-modal agency;
- a mid-size bus agency; and
- small bus agencies;

to develop and test guidance materials and technical assistance tools for the entire transit industry.



Practical guidance and tools to help you transition your agency to an SMS and develop an Agency Safety Plan



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# Back-up

# PHASE 1 – PREPARE

# Phase 1 – Prepare

## Engage key individuals and build a team.

- Appoint the Accountable Executive.
- Designate the SMS Lead.
  - Must have backing of Accountable Executive
  - Needs direct access to Accountable Executive
  - Should be formally appointed and trained
  - For smaller agencies, may be current safety or training manager
  - For larger agencies, may be head of safety dept. or senior member of safety dept.

# Phase 1 – Prepare

## Engage key individuals and build a team.

- Establish the SMS Implementation Team.
  - Will need to be multi-disciplinary team, with availability to support implementation
  - Roles and responsibilities clearly defined
  - Supports the SMS Lead
  - Will vary based on agency size, complexity, and operating characteristics
- Identify key partners.
  - Union leaders are key partners in building an effective employee safety reporting program.
  - External partners that will be involved in developing and operating the SMS include public safety and emergency response entities.

# Phase 1 – Prepare

## **Get familiar with SMS implementation.**

- Agency leadership should receive a briefing on SMS principles and SMS implementation.
- SMS Lead and SMS Implementation Team members should receive training on how to implement and operate an SMS.

# Phase 1 – Prepare

**Identify gaps—the SMS policies, processes, and activities the agency still needs to develop.**

- Perform an SMS gap analysis.
  - Identifies SMS elements that already exist in the agency
  - Identifies SMS elements the agency still needs to develop for a functioning SMS
  - Provides a baseline for SMS development activities
  - Technical assistance and materials to guide agencies through a gap analysis, including sample checklists, are forthcoming from FTA.
- Conduct a safety culture survey.

# SMS gap analysis checklist excerpt

Component / Sub-component	Statement	Guidance	Response
SMP – Safety Accountabilities and Responsibilities	1. The agency has appointed an Accountable Executive – a unique and identifiable person – with ultimate accountability for the effective implementation and operation of the agency’s SMS	The Accountable Executive carries the title of President, Chief Executive Officer (CEO), General Manager, or Executive Director. Regardless of the title, the notion of Accountable Executive means a single, identifiable person who has ultimate responsibility and accountability for the implementation and maintenance of the agency’s SMS.	<input type="checkbox"/> Yes <input type="checkbox"/> Partial <input type="checkbox"/> No
Notes for Implementation	•		
SMP – Safety Accountabilities and Responsibilities	2. The Accountable Executive has final authority on all matters regarding the transit agency's operations and maintenance activities	This authority is related to the decision making responsibility the Accountable Executive has to allocate resources for transit agency service delivery operations and supporting activities. This authority is also related to the ability to control resource allocation, recognizing that overall budgets may include discussions with the agency’s Board of Directors or equivalent authority. The Accountable Executive informs the Board or equivalent authority regarding the need for prioritization of resource needs.	<input type="checkbox"/> Yes <input type="checkbox"/> Partial <input type="checkbox"/> No
Notes for Implementation	•		

# Phase 1 – Prepare

## **Make a plan for how to fill the gaps.**

- Create an SMS development plan; get executive leadership's approval and support to execute the plan.
  - Outlines how the agency will fill SMS gaps, including the milestones, decision points, processes, and required resources to complete development and implementation of the SMS.
  - Provides a roadmap (i.e., Gantt chart)
  - Must be approved, along with associated budget, by executive leadership before development activities can begin.
  - May be an informal plan for smaller agencies or if SMS development will be minimal.



# Gantt Chart Excerpt

<b>SMP - Integration with Public Safety &amp; Emergency Management</b>									
The transit agency maintains documentation of how its SMS integrates with public safety and emergency preparedness programs									SMS Lead
The transit agency has Memoranda of Understanding (MOU) or agreements with other organizations for the provision of public safety support to the transit agency and for transit agency support in the provision of community emergency services									SMS Lead
The transit agency has developed plans for emergency preparedness and response that also address the delegation of authorities and responsibilities during an emergency									SMS Lead
The transit agency's emergency preparedness and response plans are periodically reviewed									SMS Lead
The transit agency's emergency response plan includes, or references, procedures for the safe transition between normal and abnormal or emergency operations									SMS Lead
The transit agency conducts internal exercises and/or drills using established emergency response procedures									SMS Lead
The transit agency participates in or solicits participation in future external community emergency response drills, simulations, and/or exercises									SMS Lead
The transit agency evaluates outputs from public safety and emergency response activities for possible inclusion into SRM activities									SMS Lead
<b>SRM - Hazard Identification and Analysis</b>									
The agency has established and documented an overview of its process for implementing SRM									SRM Sub-group
The agency has established and documented how it defines safety deficiency									SRM Sub-group
The agency has established and documented how it defines hazard									SRM Sub-group
The agency has established and documented how it defines consequences									SRM Sub-group
The agency has established the hierarchy and relationship between safety deficiency, hazard, and consequence									SRM Sub-group

# Phase 1 – Prepare

## **Make a plan for how to fill the gaps.**

- Draft and distribute a Safety Management Policy Statement.
  - Charter of the SMS
  - Documents executive management’s commitment to the SMS
  - Must be approved by Accountable Executive
  - FTA guidance for development of the statement is available in the SMS Framework
  - Larger agencies benefit from distributing in Phase I to get the entire agency engaged in SMS development, while smaller agencies may prefer to distribute once the SMS is developed and ready to be operationalized.

# PHASE 2 – DEVELOP

# Phase 2 – Develop

## **Design the safety risk management process.**

- Develop criteria and guidance on:
  - Identifying safety concerns;
    - Establish an employee safety reporting program
  - Assessing risk associated with safety concerns and mitigating the risk.
    - Develop and adopt safety risk matrices for probability and severity
    - Establish criteria for elevation of safety concerns to executive management, as necessary
- Develop hazard identification, analysis, safety risk evaluation, and mitigation documentation.

# Phase 2 – Develop

## Build the safety assurance function.

- Develop criteria and guidance on:
  - Safety performance monitoring & measurement, including monitoring of employee safety reporting program, mitigation verification & evaluation, and event investigation;
    - Establish safety performance indicators and safety performance targets.
  - Management of change; and
    - Define trigger thresholds for engaging management of change activities (i.e., hazard identification, analysis, and safety risk evaluation).
    - Develop criteria for operations under changed operational conditions and demands.

# Phase 2 – Develop

## **Build the safety assurance function.**

- Develop criteria and guidance on:
  - Continuous improvement of the SMS.
    - Develop criteria for SMS continuous improvement
    - Establish SMS audits
    - Define internal SMS audit activities
    - Identify safety assurance and oversight activities carried out by external agencies.
- Document all safety performance and monitoring, management of change, and continuous improvement activities.

# Phase 2 – Develop

## **Determine SMS-related training and communication.**

- Identify key competencies and develop appropriate training.
  - Develop training for relevant personnel on hazard identification and analysis, safety risk evaluation, and mitigation.
  - Develop training on safety performance and monitoring, management of change, and continuous improvement of the SMS.
  - Include training material in relevant transit agency documentation.

# Phase 2 – Develop

## **Determine SMS-related training and communication.**

- Develop tools and processes to communicate safety information up, down, and across the agency.
  - Communicate start of employee safety reporting program
  - Communicate completion of SMS implementation tasks to relevant personnel
  - Safety management policies must be communicated and reinforced in ways that are appropriate for different audiences



# Phase 2 – Develop

## **Draft safety management policies to formally establish SMS processes and activities throughout the agency.**

- Draft a *Public Transportation Agency Safety Plan* (awaiting final rule) and related policy documents.
  - Propose safety management accountabilities and responsibilities for the organization
    - Must be defined for all key SMS participant groups and activities
    - Everyone must understand and be held accountable for their unique role
    - Will vary by roles (e.g., management vs. frontline personnel)
    - Will vary by phase of SMS – implementation vs. operation

# PHASE 3 – OPERATIONALIZE

# Phase 3 – Operationalize

**Put SMS policies, processes, and activities into practice as they're approved by the agency.**

- Example activities: adopt safety management policies, execute the safety risk management process, perform safety assurance functions, deliver SMS-related training, and enable SMS-related communication.
- Draft and distribute a Safety Management Policy Statement signed by the Accountable Executive introducing the agency to the SMS.
  - Recommended for smaller, less complex agencies.