



FEDERAL TRANSIT ADMINISTRATION

PTASP and SMS- The Role of the Transit Agency's CSO/SMS Executive and Key Staff

Attendee Presentation Guide



U.S. Department
of Transportation

**Federal Transit
Administration**

PTASP and SMS-
The Role of the Transit Agency's CSO/SMS Executive and Key Staff

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Welcome

Implementing an SMS requires planning and resources. As an executive, Chief Safety Officer, SMS Executive, and key staff member, it is critical that you understand your role, within the transit agency, to emphasize SMS as an agency priority, communicate support for, and contribute your leadership to identify and dedicate resources to SMS implementation. Your commitment to the SMS is vital for its success!

Presentation Goal

An SMS has many benefits for a transit agency, including establishing safety decision-making processes and improving safety performance. Each transit agency must develop and certify a Public Transportation Agency Safety Plan (PTASP) by July 20, 2020. The PTASP is the document that describes an agency's SMS.

The goal of this presentation is to provide transit agency executives and staff with basic knowledge of the key components of SMS and to identify their role in planning and implementing an agency SMS.

Additional Training Opportunities

- SMS Principles for Transit (FT00564)
- SMS Awareness (FT00568)
- SMS Safety Assurance (FT00561)
- Rail Nomenclature (FT00569)

More information about course pre-requisites may be found at the Transportation Safety Institute (TSI) website at <https://www.transportation.gov/transportation-safety-institute>

Agenda Topics

Introduction

What is Safety Management System (SMS)?

The Role of the Chief Safety Officer (CSO)/SMS Executive and Key Staff

Public Transportation Agency Safety Plan (PTASP)

Comparing System Safety Program Plans (SSPP) and the PTASP

Next Steps and Wrap-Up

What is SMS?

What is Safety Management System (SMS)?

SMS is a comprehensive, collaborative approach that brings management and employees together to build on the transit industry’s existing safety foundation to:

- Control safety risk better
- Detect and correct safety problems earlier
- Share and analyze safety data more effectively
- Measure safety performance more carefully.

Safety Management System (SMS) means the formal, top-down, organization-wide, data-driven approach to managing safety risk and assuring the effectiveness of safety risk mitigations. It includes systematic policies, procedures, and practices for the management of safety risk.

The ultimate goal of an SMS is to ensure that the agency has an inclusive and effective process to direct resources to optimally manage safety.

Why SMS?

- Adopting SMS principles will further deepen the industry’s commitment to the safety of passengers and employees.
- It will strengthen transit agencies’ core competencies in accident investigation, hazard management, safety data acquisition and analysis, and internal auditing.
- SMS offers a stronger culture for employees and managers to work together to solve safety problems.
- SMS will help public transportation agencies, the States, and industry associations better prepare for and manage conditions that lead to negative events.
- SMS has worked well in other transportation industries facing challenges similar to our own including aviation, maritime and railroads, around the world, and at large and small agencies alike.
- SMS is scalable and effective across a broad range of organizations and applications.

Notes:

Benefits of SMS

- **Leadership commitment and accountability**
Increased accountability for management of safety at the highest level of the transit agency. Clear and demonstrable senior management commitment to safety, including the resources necessary to implement all elements of the SMS.
- **Employee engagement and empowerment**
Supports safety communication and reporting. Employees are encouraged to raise safety concerns and are provided an easy-to-use tool for reporting concerns. Safety decisions and priorities are communicated back to employees, keeping them in the loop. Employees are provided consistent and ongoing training and encouraged to learn from mistakes.
- **Safety decision-making and resource allocation**
Structured and strategic decision making for safety resource allocation. A transit agency's decision-making process demonstrates that safety priorities and investments are a core element in decision-making and always considered when balancing safety and productivity.
- **Collaboration between management and front-line staff**
An SMS is a collaborative approach that will help management and front-line staff work together to mitigate risk better, detect and correct safety problems earlier, share and analyze safety data more effectively, and measure safety performance more clearly.
- **Confidence in safety mitigations**
Increased confidence that the mitigations developed and implemented by transit agencies are achieving their intended purpose. Safety assurance activities assess safety risk mitigations against safety performance measures. Mitigations that do not achieve their intended purposes are sent back to safety risk management to be reevaluated.
- **Partnership and knowledge sharing (agencies, states, and FTA)**
Partnership and knowledge sharing between transit agencies, state agencies, and FTA. The data-driven nature of SMS allows transit agencies and SSOAs to have more detailed conversations about safety risk and the actions taken to reduce safety risk. This information gives an SSOA better information about the challenges faced by its transit agencies and provides information to FTA on the safety challenges and risks within the transit industry as a whole.
- **Continuous learning**
The transit agency fosters an environment of learning from events that do and do not result in negative consequences. There is increased organizational accountability (senior level management and decision makers) for conditions that create safety concerns and contribute to safety events.

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Notes:

A series of horizontal dashed lines for taking notes.

Case Study Question #1:

Based on your agency's current safety investigation processes, would your staff arrive at the same conclusion and take the same actions? If not, what other action(s) would be required to meet your agency's requirements?

Case Study Question #2:

What training and awareness activities would be needed at your agency, in order to improve management's knowledge and understanding of "effective" hazard identification and safety risk mitigation?

Case Study Question #3:

In the event that wheels did not separate from the vehicle, what policies and procedures are in place at your agency which would have led to a near-miss/close call investigation of the circumstances?

Case Study “Challenge” Question # 1:

Regarding your agency's written policies and procedures for the work place, how do you know if they are valid and being followed by your employees?

Case Study “Challenge” Question # 2:

What are some ways that your agency staff can build trust and communication to enable your employees to share their safety concerns before negative events occur?

Case Study “Challenge” Question # 3:

At your agency, how much time (per week) should be scheduled to allow front-line supervisors and managers to “walk-and-talk” with their front-line employees to identify work place safety concerns?

Four Components of SMS

- § 673.21 *Each transit agency must establish and implement a Safety Management System (SMS) under this part. A transit agency SMS must be appropriately scaled to the size, scope and complexity of the transit agency and include the following elements:*
 - a) *Safety Management Policy (§673.23)*
 - b) *Safety Risk Management (§673.25)*
 - c) *Safety Assurance (§673.27)*
 - d) *Safety Promotion (§673.29)*

Safety Management Policy

- Safety Management Policy Statement
- Safety Accountabilities and Responsibilities
- SMS Documentation and Records

Safety Risk Management

- Safety Hazard Identification
- Safety Risk Assessment and Mitigation

Safety Assurance

- Safety Performance Monitoring and Measurement
- Management of Change
- Continuous Safety Improvement

Safety Promotion

- Safety Communication
- Competencies and Training

Notes:



SMS is a management system with four interactive components.

SMS is:

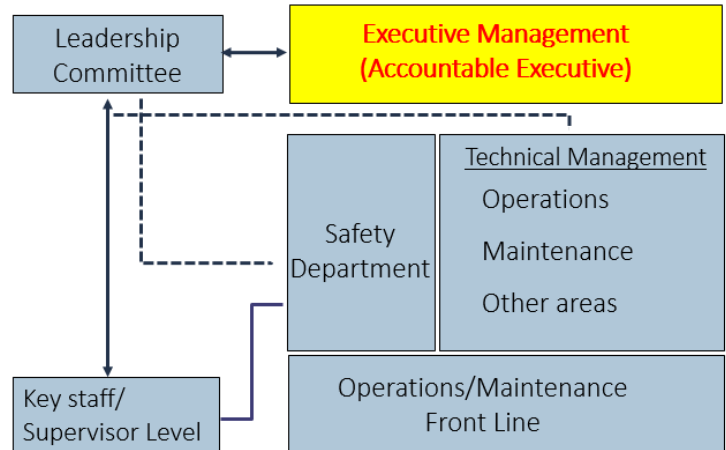
- A management system;
- Focused on the collection and analysis of safety data to support strategic decision making in the allocation of resources to mitigate safety risk; and
- Builds on the existing System Safety Program Plan (SSPP) framework.

SMS-Component 1, Safety Management Policy

- *The transit agency must establish the necessary authorities, accountabilities, and responsibilities for the management of safety amongst the following individuals within its organization, as they relate to the development and management of the transit agency's Safety Management System (SMS):*
 - 1) *Accountable Executive*
 - 2) *Chief Safety Officer or SMS Executive*
 - 3) *Agency leadership and executive management*
 - 4) *Key staff. § 673.23*

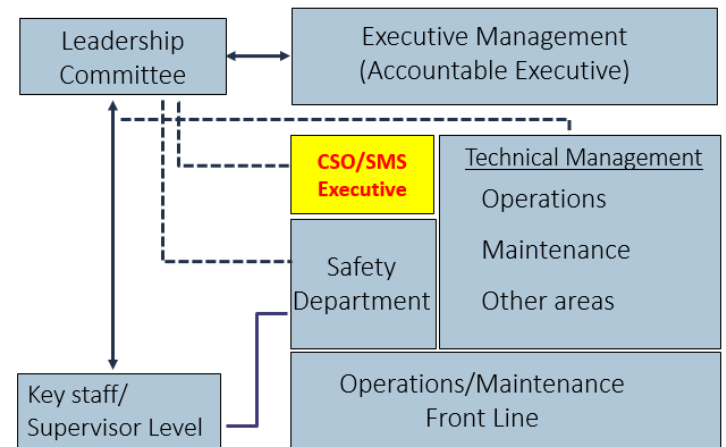
1) Accountable Executive

- *Accountable Executive means a single, identifiable person who has ultimate responsibility for:*
 - *Carrying out the agency safety plan of a public transportation agency (PTASP)*
 - *Carrying out the agency's Transit Asset Management (TAM) Plan*
 - *Control or direction over the human and capital resources needed to develop and maintain both the agency's PTASP and TAM Plan. § 673.5*



2) Chief Safety Officer-SMS Executive

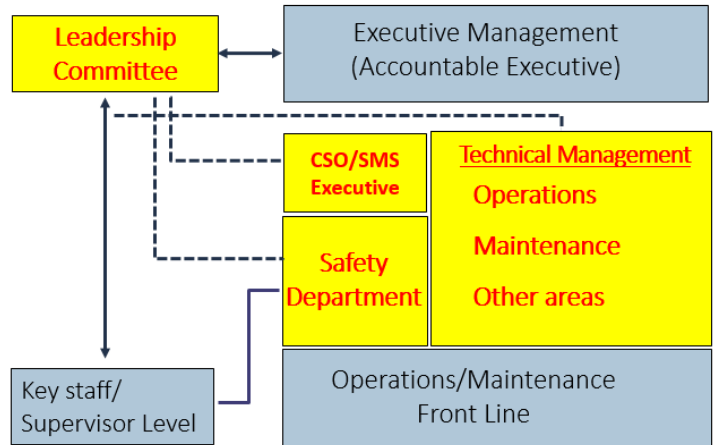
- *Chief Safety Officer (CSO) means an adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer. § 673.5*



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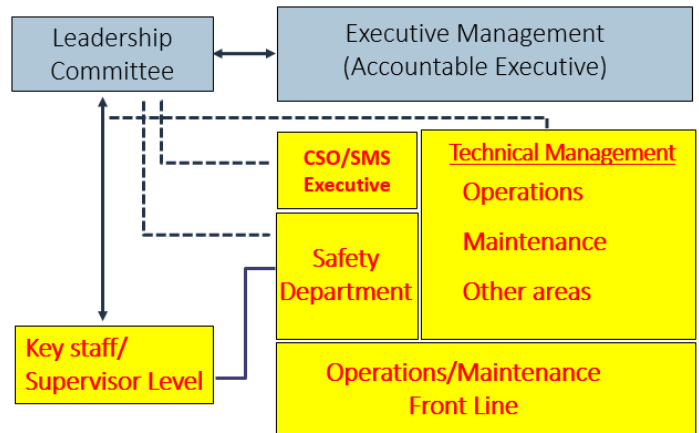
3) Agency Leadership Team

- *A transit agency must identify those members of its leadership or executive management, other than an Accountable Executive, Chief Safety Officer, or SMS Executive, who have authorities or responsibilities for day-to-day implementation and operation of an agency's SMS. § 673.23 (d)(3)*



4) Key Staff

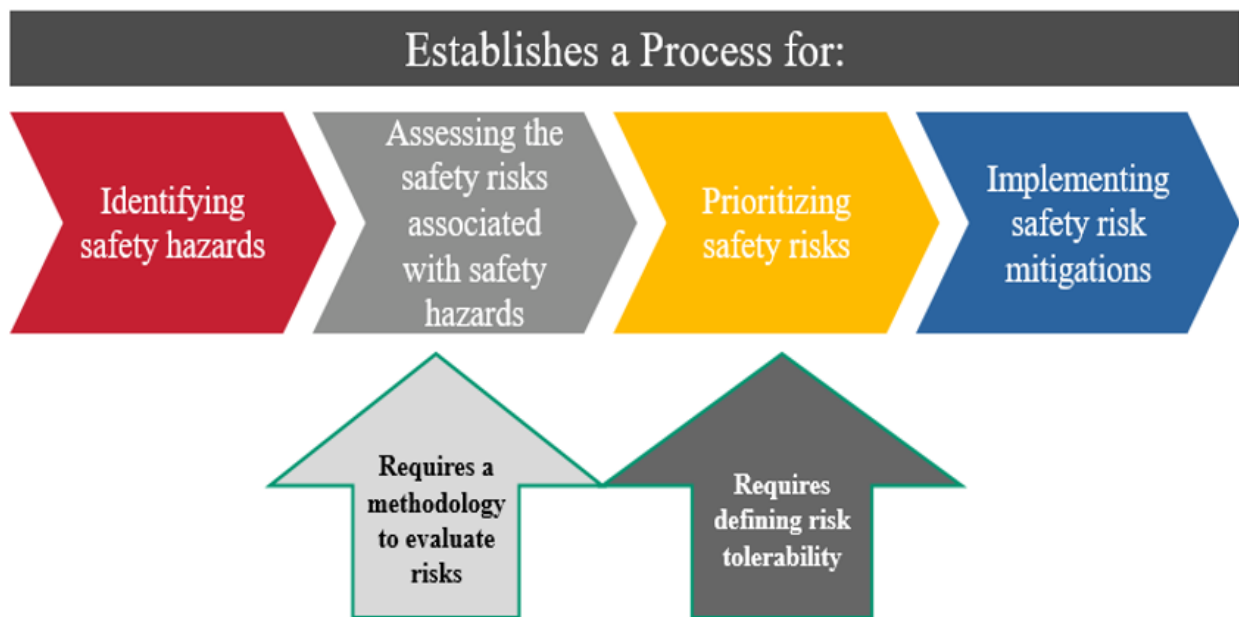
- *A transit agency may designate key staff, groups of staff, or committees to support the Accountable Executive, Chief Safety Officer, or SMS Executive in developing, implementing, and operating the agency's SMS. § 673.23 (d)(4)*



Notes:

SMS-Component 2, Safety Risk Management (SRM)

- a) *Safety Risk Management process. A transit agency must develop and implement a Safety Risk Management process for all elements of its public transportation system. The Safety Risk Management process must be comprised of the following activities:*
- b) *safety hazard identification,*
 - c) *safety risk assessment, and*
 - d) *safety risk mitigation.*
- § 673.25(a) - § 673.25(d)



- b) *Safety hazard identification.*
- 1) *A transit agency must establish methods or processes to identify hazards and consequences of the hazards.*
 - 2) *A transit agency must consider, as a source for hazard identification, data and information provided by an oversight authority and the FTA.*
- § 673.25(b)
- c) *Safety risk assessment.*
- 1) *A transit agency must establish methods or processes to assess the safety risks associated with identified safety hazards.*
 - 2) *A safety risk assessment includes an assessment of the likelihood and severity of the consequences of the hazards, including existing mitigations, and prioritization of the hazards based on the safety risk.*
- § 673.25(c)
- d) *Safety risk mitigation.*
- A transit agency must establish methods or processes to identify mitigations or strategies necessary as a result of the agency's safety risk assessment to reduce the likelihood and severity of the consequences.*
- § 673.25(d)

Safety Risk Assessment



The key for any agency is to establish exactly what is meant by acceptable or tolerable risk.

The expression “acceptable risk” usually, but not always, refers to the level at which further risk reduction measures or additional expenditure of resources will not result in significant reduction of risk” – ANSI B1.0 - 2010

Risk acceptance is a policy decision that must be owned & embraced the Accountable Executive, staff, and employees, as an agency, not individuals

Risk acceptance is defined by the agency's Safety Risk Management Process

KEY
POINT

- “Accepting” a level of risk does not mean the risk is eliminated
- ▶ “Residual risk” still remains
- ▶ Remaining risk is sufficiently low to be outweighed by the benefits of the existing operation

Notes:

SMS-Component 3, Safety Assurance

Safety Assurance means processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation, and to ensure that the transit agency meets or exceeds its safety objectives through the collection, analysis, and assessment of information. § 673.5

- a) Safety assurance process. A transit agency must develop and implement a safety assurance process which includes § 673.27(a):*
- b) Safety performance monitoring and measurement. A transit agency must establish activities to:
 - 1) Monitor its system for compliance with, and sufficiency of, the agency's procedures for operations and maintenance;*
 - 2) Monitor its operations to identify any safety risk mitigations that may be ineffective, inappropriate, or were not implemented as intended*
 - 3) Conduct investigations of safety events to identify causal factors; and*
 - 4) Monitor information reported through any internal safety reporting programs.**§ 673.27(b)**

A rail fixed guideway public transportation system, and a recipient or sub-recipient of Federal financial assistance under 49 U.S.C. Chapter 53 that operates more than one 100 vehicles in peak revenue service, must also include in its safety assurance process:

- c) Management of change § 673.27(c)*
- d) Continuous Improvement § 673.27(d)*

Notes:

SRM/Safety Assurance Process

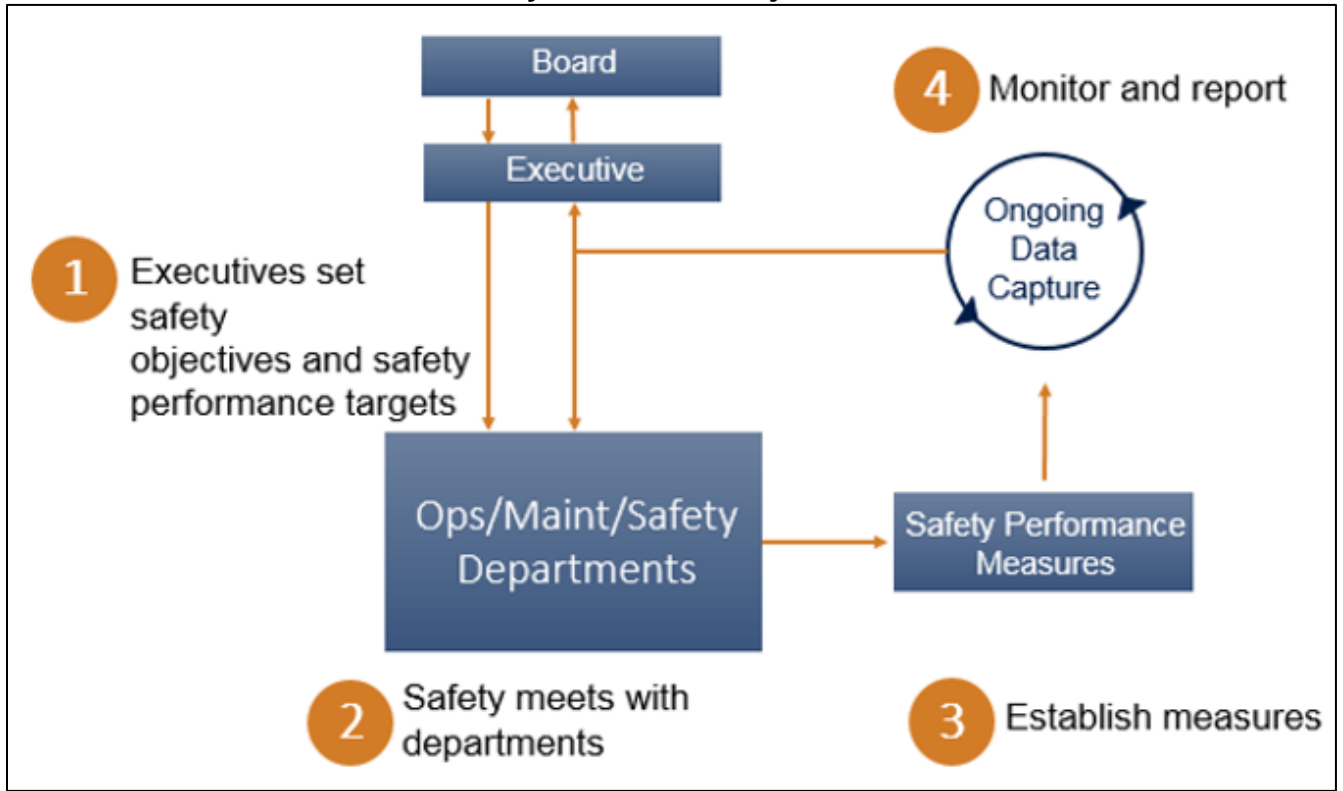


SRM/Safety Assurance Objectives

- What are our most serious safety concerns? (SRM)
- How do we know this? (SRM)
- What are we doing about it? (SRM)
- Is what we are doing working? (SA)
- How do we know what we are doing is working? (SA)
 - Have we verified with front-line? (SA)
 - Do the data/trends verify it's working? (SA)

Notes:

SRM/Safety Assurance Objectives



Notes:

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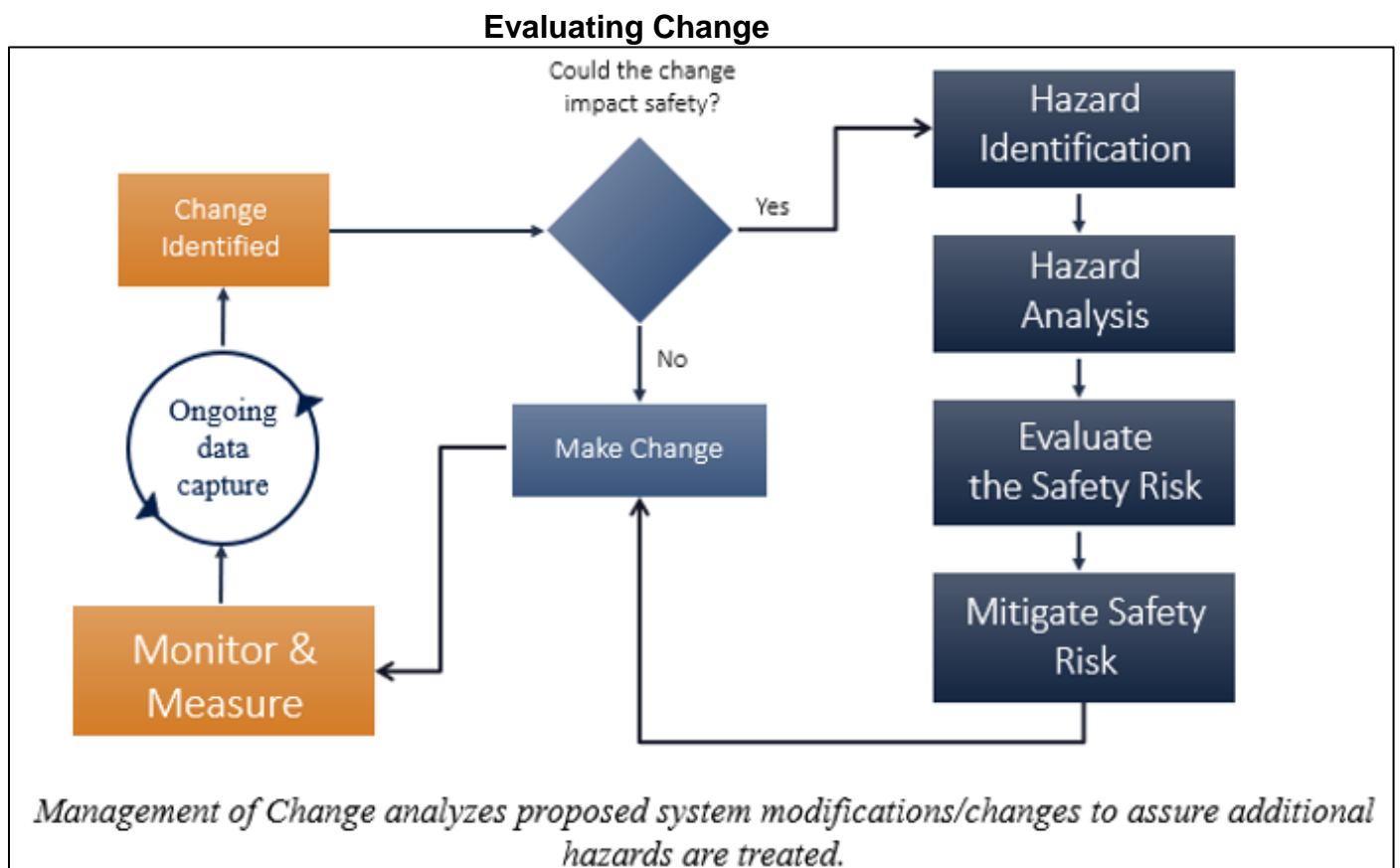
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Management of Change

Management of Change means a process for identifying and assessing changes that may introduce new hazards or impact the transit agency's safety performance. If a transit agency determines that a change may impact its safety performance, then the transit agency must evaluate the proposed change through its Safety Risk Management process

- c) *Management of change.*
- 1) *A transit agency must establish a process for identifying and assessing changes that may introduce new hazards or impact the transit agency's safety performance, before the changes are allowed.*
 - 2) *If a transit agency determines that a change may impact its safety performance, then the transit agency must evaluate the proposed change through its Safety Risk Management process. § 673.27(c)*



Management of Change Criteria

- No operations should take place in the changed environment until:
 - The change is evaluated to determine *if* it will impact safety
 - If it might, then safety risk evaluation must be completed
- Criteria must be ***unquestionably supported*** by all levels of management

Continuous Improvement

Continuous Improvement means a process by which a transit agency examines safety performance to identify safety deficiencies and carry out a plan to address the identified safety deficiencies.

- d) *Continuous improvement.*
 - 1) *A transit agency must establish a process to assess its safety performance.*
 - 2) *If a transit agency identifies any deficiencies as part of its safety performance assessment, then the transit agency must develop and carry out, under the direction of the Accountable Executive, a plan to address the identified safety deficiencies. § 673.27(d)*

SRM/SA Gap Analysis

- All transit agencies implement safety risk mitigations, however, we do not always:
 - **Ensure** safety risk mitigations are being implemented (SA)
 - **Verify** that safety risk mitigations are appropriate and effective
 - **Assess** safety risk mitigation to identify potential new hazards, safety deficiencies, or latent conditions (SA)
 - **Establish** performance and monitoring activities to ensure safety risk mitigation objectives are reached

Notes:

SMS-Component 4, Safety Promotion

- *Safety Promotion means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system. § 673.5*

Competencies and Training

- a) *Competencies and training. A transit agency must establish and implement a comprehensive safety training program for all agency employees and contractors directly responsible for safety in the agency's public transportation system. The training program must include refresher training, as necessary. § 673.29(a)*

****ALL training should include expectations, explain why policies/procedures are in place, and how to report safety concerns.**

- Executive leadership's responsibilities include, but are not limited to:
 - Selection of qualified individuals for key agency positions in support of the PTASP and SMS
 - Effective planning and budgeting for the utilization of available Federal, State, and local training opportunities (for all levels of employees)
 - Compliance with FTA's training guidance rule: 49 CFR Part 672

Notes:

Competencies and Training

All Employees	Managers and Supervisors	Senior Management
<ul style="list-style-type: none">• Understanding of performing tasks safely• Demonstrating competency in completing tasks correctly• Reporting of:<ul style="list-style-type: none">➤ Unsafe work conditions➤ Safety vs. service➤ Inconsistent management support	<ul style="list-style-type: none">• Analyze safety data• Extract information from safety data• Encourage safety reporting• Document concerns and follow-up with <u>consistency</u>• "GO LOOK":<ul style="list-style-type: none">➤ Verify risk mitigations are implemented/effective➤ Conduct field observations➤ Conduct walk-and-talks with employees• Foster a positive "learning" safety culture	<ul style="list-style-type: none">• Strategic SMS goals• Commitment of necessary resources to address safety risk• Leadership Styles<ul style="list-style-type: none">➤ Understand failure is a starting point➤ Staff speaks openly on safety concerns➤ Gives consideration to ideas for change• Foster a positive "learning" safety culture

Notes:

Safety Communication

- b) *Safety communication. A transit agency must communicate safety and safety performance information throughout the agency's organization that, at a minimum:*
- *conveys information on hazards and safety risks relevant to employees' roles and responsibilities*
 - *informs employees of safety actions taken in response to reports submitted through an employee safety reporting program. § 673.29(b)*

Sets the tone for your agency's safety culture:

- Provides ongoing communication – up, down and across
- Communicates lessons learned and safety information
- Demonstrates management commitment
- Develops safety management skills to support safety performance improvements



Effective Communication

- SMS is dependent upon ongoing management commitment to communication
- One of management's most important responsibilities under SMS is to encourage and motivate others to want to communicate openly, authentically and without concern for reprisal

Notes:

Safety Management Process Steps

In practice, an SMS uses a four-step Safety Management Process:

- **Step 1: Identify safety concerns** – Safety concern identification is critical to ensuring that the information your agency needs to make risk-based decisions is accessible to decision-makers. While this activity falls under Safety Risk Management, it relies heavily on information derived from Safety Assurance activities.
- **Step 2: Assess safety risk** – Safety risk assessment is the heart of Safety Risk Management. It involves whittling down your list of safety concerns to those that require safety risk mitigation, based on their level of safety risk.
- **Step 3: Mitigate safety risk** – Safety risk mitigation is necessary when the assessed safety risk is unacceptable, but managers may choose to apply or change mitigations to reduce safety risk, as resources allow.
- **Step 4: Monitor safety performance** – Safety performance monitoring and measurement is critical to understanding whether the assumptions you made in day-to-day management decisions and analysis you conducted in Safety Risk Management are keeping your agency safe real-world conditions.

Safety management process steps help answer questions like:

- Are current resources enough?
- Are additional resources necessary?
- Do we need to move current resources to focus on other safety concerns?

To help you understand what these safety management process steps can look like, in practice at your agency, the following sections will present **implementation examples** for each.

These are the types of activities and outputs that your agency will need to implement and manage in order to have an effective SMS in place.

The tables on the following page contain implementation examples of an SMS in practice, organized by the Safety Management Process Steps. Note that these examples do not represent explicit requirements defined by FTA.

No transit agency is expected to have completed SMS implementation at this point.

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Step 1: Identify Safety Concerns - In Practice

Data is collected from internal and external sources.

Employees are encouraged by their supervisors and management to report safety concerns and things that “just don't feel right.”

The reporting system is easy to use, and front-line managers always get back to employees on how the reported issue was resolved.

Employees receive ongoing training on how to report, what to report, and when to report.

Investigations consider human performance, the operational context, and organizational deficiencies.

The investigations also review the safety risk mitigations the agency already had in place, if any, to prevent the accident or incident from happening.

Safety data collection and review activities result in the identification of safety concerns or hazards.

When the transit agency identifies hazards, the safety and operations personnel involved follow three basic steps:

- (1) Name the generic hazard
- (2) Break the generic hazard into specific components, and
- (3) Identify potential consequences for each specific component

Step 2: Assess Safety Risk - In Practice

Operations and maintenance personnel related to the identified hazard participate in the assessment and provide data and expertise to assess the hazard's potential consequences in terms of probability and severity.

The assessment results in a safety risk rating that is acceptable with mitigation, or unacceptable.

The GM for Operations is called in, as per elevation protocol, and briefed on the assessment result in order to support discussions on proposed resource allocation to mitigate the safety risk.

Step 3: Mitigate Safety Risk - In Practice

Operations and maintenance SMEs are involved in identifying mitigations.

The transit agency defines the criteria they will use to evaluate effectiveness of the mitigations, how they will be implemented, who will be responsible for implementation, and who will be responsible for monitoring the effectiveness of the mitigations. These are called safety performance indicators (SPIs) and safety performance targets (SPTs).

Step 4: Monitor Safety Performance - In Practice

The owners of the mitigations (the operating department that will implement) work with safety personnel to identify the following for each mitigation:

- The sources for data that will support monitoring of mitigation(s)
- The frequency the safety performance indicator data will be reported to the individual responsible for monitoring progress toward SPTs
- The monitoring activities that will be used to monitor progress and mitigation effectiveness
- An estimated length of time the mitigation will be monitored
- The group responsible for conducting monitoring activities
- The safety performance reporting frequency and format, including reporting to the SSOA

Exercise: Turning SMS Theory into Practice

The table on the following pages contain **implementation examples** of an SMS in practice, organized by the Safety Management Process Steps. Note that these examples do not represent explicit requirements defined by FTA.

No transit agency is expected to have completed SMS implementation at this point.

Exercise Instructions:

1. Review the implementation examples for each of the following Safety Management Process Steps, as they relate to your agency.

2. Use the righthand column to mark your responses.
 - a. Mark “**3**” if the example is fully documented and implemented.
 - b. Mark “**2**” if the example is partially implemented.
 - c. Mark “**1**” if the example is not fully documented and implemented or if you are unsure.

3. Add up the scores and complete the summary table

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Step 1: Identify Safety Concerns - "What are our safety concerns?"	
Implementation Examples – At your transit agency, what is the status of these activities?	
Scoring: Yes = 3 points Partial = 2 points No/unsure = 0 points.	Score
Do your employees tell you that the employee reporting system is easy to use and managers always gets back to them on how the reported issue was resolved?	
Do your safety analysts regularly identify safety concerns by reviewing operations and maintenance data such as: <ul style="list-style-type: none"> • Controller/dispatch logs • Maintenance and inspection records • Vehicle performance and reliability reports • On time performance • Operator relief time and • Hours of service records? 	
Can you identify and confirm that hazard identification procedures are supported by your agency structure (systems and tools) that provides coordinated, system-wide data management across each operating and maintenance department?	
When you walk through your agency departments, are you able to observe and confirm that safety concern identification is practiced among every department, including the involvement of front-line employees?	
When your agency identifies safety concerns, do the safety and operations personnel involved follow three basic steps: (1) name the generic hazard, (2) break the generic hazard in specific components, and (3) identify potential consequences for each specific component?	
Does your safety director routinely verify that the outcome of hazard identifications are communicated to appropriate operations and maintenance managers and there are criteria that define when an identified hazard needs to be assessed for safety risk?	
Identify Score:	Total Score: _____ Needs considerable development: 6 - 10 points Development progress underway: 11-14 points Strong foundation in place: 15 - 18 points

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Step 2: Assess Safety Risk - "How bad could it be and do we need to take action?"	
Implementation Examples – At your transit agency, what is the status of these activities?	
Scoring: Yes = 3 points Partial = 2 points No/unsure = 0 points.	Score
Can you verify that your agency's operations and maintenance personnel, related to the identified safety concern, are providing data and expertise to assess the safety concern's potential consequences in terms of likelihood and severity?	
Do your agency's safety risk assessments include a review of how well the current mitigations, related to the safety concern, are working?	
Do your agency's safety risk assessments result in a safety risk rating?	
Can you verify that the entire process is well documented and your agency team members understand that, due to the safety risk level, they would notify you and your SSO, according to defined procedures?	
Can your agency's safety director demonstrate how a working file which includes historical assessments and how the results from the assessment will be maintained in the system; allowing them to search similar risks, existing mitigations, and a history of decisions made by the agency?	
Does your agency have a documented process that allows appropriate decision-makers to be briefed on the status of hazards - in order to support discussions on the proposed allocations of resources to mitigate the safety risk?	
Assess Score:	Total Score: _____ Needs considerable development: 6 - 10 points Development progress underway: 11-14 points Strong foundation in place: 15 - 18 points

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Step 3: Mitigate Safety Risk - "What are we doing about it?"	
Implementation Examples – At your transit agency, what is the status of these activities?	
Scoring: Yes = 3 points Partial = 2 points No/unsure = 0 points.	Score
Can you verify that your agency's operations and maintenance SMEs are involved in discussing and developing mitigations and the operational owners of the mitigations are in attendance as they will be responsible for implementation?	
Can you verify that your agency's operational and maintenance SMEs discuss how mitigations will be implemented, who will be responsible for implementation, and who will be responsible for monitoring the effectiveness of the mitigation(s)?	
Has your agency developed and documented risk mitigation schedules?	
Can your agency demonstrate, through documentation, that mitigations and responsible parties are recorded and related mitigation activities are tracked?	
Does your agency staff routinely discuss establishing safety performance indicators and targets to support monitoring and measurement of mitigations?	
Does your agency communicate mitigations (corrective action plans-CAPS) to the SSOA at a regular frequency and upon request by the SSOA?	
Mitigate Score:	Total Score: _____ Needs considerable development: 6 - 10 points Development progress underway: 11-14 points Strong foundation in place: 15 - 18 points

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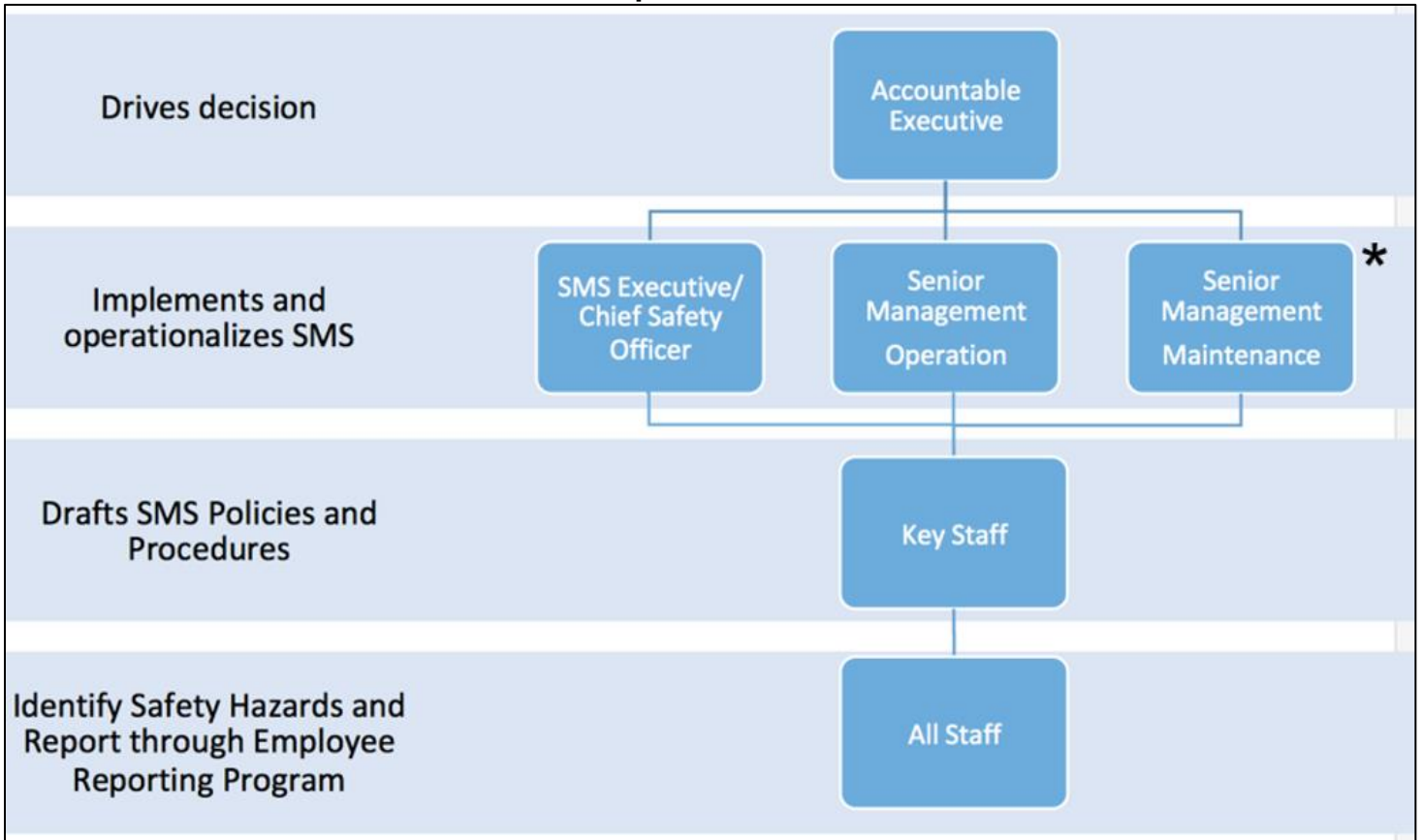
Step 4: Monitor Safety Performance - "Is it working and how do we know?"	
Implementation Examples – At your transit agency, what is the status of these activities?	
Scoring: Yes = 3 points Partial = 2 points No/unsure = 0 points.	Score
Does your agency have a documented and verified process to conduct meetings, where safety performance indicators and targets are set and the owners of the mitigations (the operating department that will implement) work with safety personnel to identify sources for data that will support monitoring of mitigation(s)?	
Does your agency base your monitoring activities on safety performance indicators and targets established to support monitoring and measurement.	
Do your agency departments, involved in mitigation monitoring, establish a frequency for the safety performance indicator data which will be reported to the individual(s) responsible for monitoring progress toward safety performance targets?	
Does your agency safety department carry out monitoring activities with assistance in data access from operating and maintenance departments?	
Does your agency staff members, involved in safety performance monitoring activities, determine estimated timeframes to monitor mitigation(s)?	
Does your agency have a documented process and is staff able to produce records associated with the collection and analysis of safety data which validates or invalidates assumptions of the effectiveness of safety risk mitigations made during safety risk assessments?	
Monitor Score:	Total Score: _____ Needs considerable development: 6 - 10 points Development progress underway: 11-14 points Strong foundation in place: 15 - 18 points

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SMS In Practice Assessment - Summary Table	
Totals: Enter your score into the column for each step. Add the total scores at the bottom.	Score
Step 1: Identify Safety Concerns	
Step 2: Assess Safety Risk	
Step 3: Mitigate Safety Risk	
Step 4: Monitor Safety Performance	
Total Score:	Total Score: _____ Needs considerable development: 24 - 40 points Development progress underway: 44 - 56 points Strong foundation in place: 60 - 72 points

PTASP and SMS-
The Role of the Transit Agency's CSO/SMS Executive and Key Staff

Role and Responsibilities Overview



*Includes Executive leaders, from all agency functions or departments, that support revenue service operations.

Notes:

Accountable Executive – Champion for Safety

- Role – Serves as the Champion for Safety with ultimate accountability for SMS implementation Responsibilities:
- Designate a Chief Safety Officer/SMS Executive
- Allocate resources to develop and maintain the Agency Safety Plan and TAM plan
- Approve the SMS implementation strategy
- Support communication of SMS information
- Present the Agency Safety Plan for Board approval

Why is the Accountable Executive the Champion for Safety?

- SMS implementation will require resources
- The Accountable Executive has the authority to make policy decisions, establish priorities, and direct and allocate resources
- SMS roles and responsibilities must be established
- Resistance to change within the agency should be expected

Chief Safety Officer (CSO) / SMS Executive

Why is the CSO/SMS Executive accountable for SMS Implementation?

- SMS implementation is an interdisciplinary management system
- Communicates directly with the Accountable Executive and agency leadership on SMS implementation needs
- As an executive level position, the CSO/SMS Executive has the power to procure technical and staffing resources

Notes:

Accountable Executive & CSO/SMS Executive-Creating the Right Culture

- Verifies the agency has effective and documented processes for managing safety risk
- Promotes open discussions regarding limitations (at the department level) to address safety risk
- Creates a management environment willing to “learn” how it is that hazards and risk levels exist
- Requires and verifies that the management team is engaging the front-line to identify and solve safety risk conditions
- Regardless of agency size and structure, key attributes of a SMS includes:
 - Clear lines for safety communication
 - Accountability for safety performance at the highest level and throughout the agency
 - Formal definitions for the management levels that have authority to make decisions regarding safety risk tolerability
 - Acknowledgment that front-line employees are critical to SMS success through their role in reporting safety hazards.

Agency Leadership and Executive Management
(CEO, senior leaders, etc.)

- Role – Ensure incorporation of safety management practices in the agency’s operational areas
- Responsibilities:
 - Designate representatives from operations, maintenance, and other revenue service support functions to serve as Key Staff
 - Encourage SMS training for staff
 - Take ownership of safety management processes and activities as they are implemented

Why is Agency Leadership and Executive Management involved with SMS implementation?

- Agency departments are the direct beneficiaries of SMS
- Staff have the opportunity to document and manage safety concerns
- Concerns are examined and risk levels are evaluated
- Staff drive and support the level of safety culture within the agency

Notes:

Key Staff - Subject Matter Experts

- Role – Serve as subject matter experts representing their departments during SMS implementation
- Responsibilities:
 - Provide expertise on how to adapt existing departmental practices to work in concert with SMS
 - Identify departmental data and information resources to support SMS decision making
 - Meets and updates the CSO/SMS Executive

Why are Key Staff important for SMS implementation?

- SMS is a multi-disciplinary endeavor
- Key Staff may be organized into an SMS Implementation Team with regular meetings and work sessions
- These individuals are familiar with their department's processes and practices and can voice ideas, concerns, and solutions for SMS implementation that works in concert with their practices and duties

How will this change what we currently do?

- Agency leadership (at all levels) needs to further examine emerging safety concepts, to include:
- The role of the organization
 - ❖ *Remember "Veronica"??*
- Practical Drift

Notes:

The Organizational Accident and Practical Drift

Organizational Accident

“Organizational accidents have multiple causes involving many people operating at different levels of their respective companies.”

--James Reason, “Managing the Risks of Organizational Accidents.”

“When causal chains are limited to technical flaws and individual failures, the ensuing responses aimed at preventing a similar event in the future are equally limited: they aim to fix the technical problem and replace or retrain the individual responsible. Such corrections lead to a misguided and potentially disastrous belief that the underlying problem has been solved.”

--NASA Columbia Accident
Investigation Review Board

The Organizational Accident Approach:

- Broaden our scope in understanding the causes of accidents
- Focusing investigation solely on human errors will not provide significant safety improvement
- Need to understand organization's role to correct system-wide safety deficiencies
- Safety is not the *absence* of accidents
- Safety is the *presence* of defenses (mitigations) in processes, procedures, technology, and methods

Looking at Human Performance and Safety

“Safety is never the only goal. People do their best to balance the different goals. As we know, systems are not automatically safe. Production pressures influence people's trade-offs.”

-Dr. Sydney Dekker

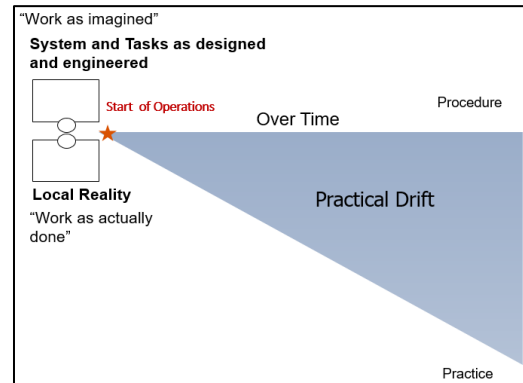
Practical Drift

“Practical Drift” means the slow and inconspicuous, yet steady, uncoupling between written procedures and actual practices during provision of services.

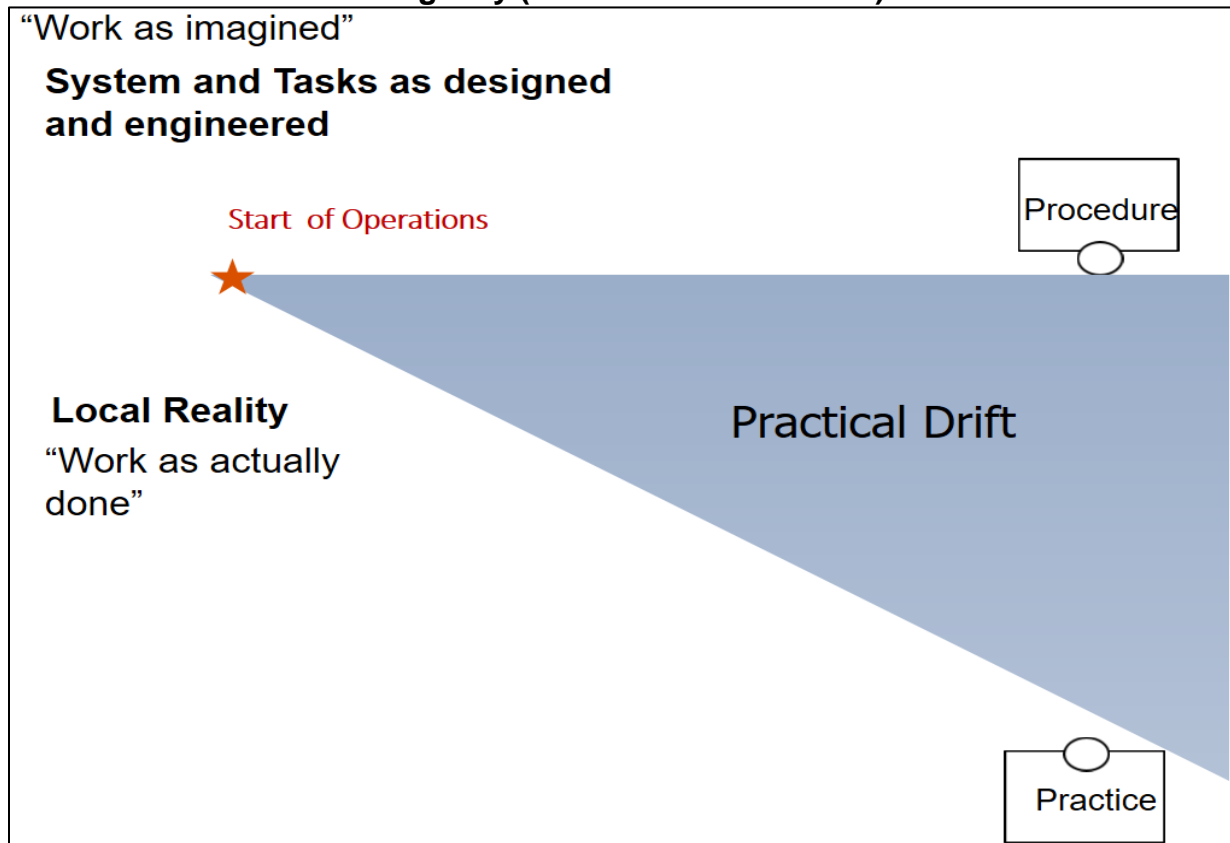
Imperfect Systems – The Practical Drift

Why Does Practical Drift Exist?

- Service delivery pressures
- Procedure no longer practical
- Short-cuts are more efficient
- Supervisor allows it
- Informal processes
- Training inadequately conveyed safety risk
- Employees who will be using the process or procedure had no input into its development

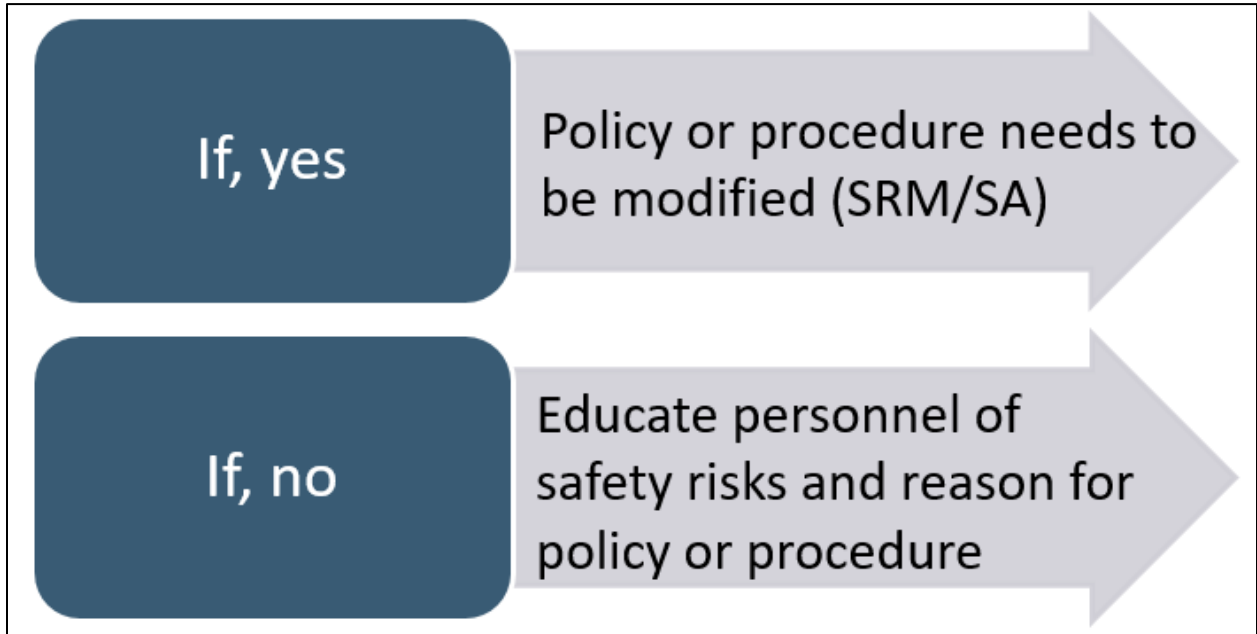


REALITY: Where is Your Agency (Procedure vs. Practice)?



Managing Practical Drift

- Determine if the policy or procedure has been modified in operations and if the “actual” use is safer or better than the written intent.



Notes:

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Public Transportation Agency Safety Plan (PTASP)

49 CFR Part 673-PTASP Rule

Date	Action
July 19, 2018	The PTASP rule is published and final.
July 19, 2019	Effective date—this is the date the rule takes effect. The PTASP does not have to be developed by this date.
July 20, 2020	Compliance deadline—this is the final deadline for the PTASP certification. The RTA's PTASP must be reviewed and approved by the SSOA and certified by the RTA by this day.

The rule is made of four subparts, including: **General; Safety Plans; Safety Management Systems; and Safety Plan Documentation and Recordkeeping**

Subpart	PTASP Rule Outline
Subpart A	673.1 Applicability 673.3 Policy 673.5 Definitions
Subpart B	673.11 General requirements 673.13 Certification of compliance 673.15 Coordination with metropolitan, statewide, and non-metropolitan planning processes
Subpart C	673.21 General requirements 673.23 Safety management policy 673.25 Safety risk management 673.27 Safety assurance 673.29 Safety promotion
Subpart D	673.31 Safety plan documentation 673.33 Safety plan records

Comparing the PTASP and the System Safety Program Plan (SSPP)

SSPP vs. PTASP

SSPP	Agency Safety Plan
Establishes system safety 21 fixed program elements	Establishes the Safety Management System Four SMS components; a flexible and scalable system
Safety is generally confined to the safety department and distinct safety processes	Safety is broadened to a core organizational function that focuses on management of safety risk through all aspects of a transit agency's operations
Focuses on compliance and documentation of safety programs Assumes technical compliance with engineered solutions will result in safe operations	Describes the interactions between safety programs and adds safety processes that support SSPP elements Safety priorities and investments are a key part of decision-making and always considered when balancing safety and productivity

Notes:

What is Different?

- The SSPP documented a number of required safety programs and activities. The PTASP will document how the transit agency manages risk, using many of those programs and activities to identify safety concerns, assess risk, mitigate risk, and monitor performance.
- The PTASP documents how these programs and activities support the agency's safety management process.
- 49 CFR Part 673 proposes a more comprehensive process for identifying and managing safety risks through the life cycle of a rail transit system. This includes:
 - New safety analysis tools used by adequately-staffed and trained safety personnel
 - Involvement with RTA departments, groups, and committees
 - Participation of subject matter experts in safety risk assessments and mitigation development
 - Documentation of how safety risk management feeds into the safety assurance process, to ensure that safety risk mitigations are **evaluated for effectiveness over time**.
 - In addressing these new requirements, the RTA will need to develop new processes to address the safety risk management requirements and develop language in its PTASP to document the new/modified activity.

Notes:
