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Safety Management

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Today’s Presentation

• FTA policy & regulations
• What does an SMS look like?
• Introduction to SMS implementation
FTA policy & regulations
The Public Transportation Agency Safety Plan rule (49 CFR Part 673)

- Requires transit agency to implement an SMS through an Agency Safety Plan
- Larger transit agencies certify they have established and implemented a Plan
- Smaller transit agencies may have State DOT draft and certified a Plan
- Final rule may be published by December 2016
Related Regulations and Guidance
Why a new approach?

- High-profile transit accidents
- Emerging technology
- Growing, aging ridership
- $85.9B state of good repair backlog
- Need for smarter resource allocation
- Successes in other industries
FTA’s Goals for the Transit Industry

• Improved safety performance - make a safe industry even safer
• Increased accountability for safety decisions at highest levels of a transit agency
• Greater consistency in identifying hazards and evaluating safety risk
• Increased use of data to monitor effectiveness of safety risk mitigations
• Strong safety culture within every transit system
What does an SMS look like?
What factors help make service delivery safe?
Why SMS?

• Human and organizational factors are a major cause of and contributor to transit accidents.
  – Written procedures vs. practice
  – Prioritization, decision-making

• Addressing these factors requires a new approach.
Why SMS?

- Safety risk cannot be eliminated, but it can be managed.
  - Learn from past events
  - Adopt a proactive approach; understand and mitigate safety risk
  - Allocate resources effectively and efficiently
Safety Management Policy

- Safety Management Policy Statement
- Safety Accountabilities & Responsibilities
- Integration with Public Safety & Emergency Management
- SMS Documentation & Records
Safety Risk Management

- Hazard Identification & Analysis
- Safety Risk Evaluation & Mitigation
Safety Assurance

- Safety Performance Monitoring & Measurement
- Management of Change
- Continuous Improvement
SMS is a management system.

- **Executive Management** (Accountable Executive)
- **Safety** (Chief Safety Officer)
- **Technical Management Operations, Maintenance, etc.**
- **Frontline Operations, Maintenance, etc.**
With an effective SMS, a transit agency can answer these five 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?
What are our most serious safety concerns? How do we know this?

I almost hit a vehicle turning right in front of me at the corner of 8th and Maple this morning!
What are our most serious safety concerns? How do we know this?

Identify Safety Concerns

Reactive
• Investigations

Proactive
• Audits & evaluations
• Data recorders
• Management of change
• Employee reporting

Learn from past experience.

Identify potential safety concerns before an event occurs.

Listen to the experts!
What are our most serious safety concerns? How do we know this?

**Identify Safety Concerns**
- **Reactive**
  - Investigations
- **Proactive**
  - Audits & evaluations
  - Management of change
  - Data recorders
  - Employee reporting

**Define Hazards & Consequences**
- What’s really the problem?
- What could happen?
What are our most serious safety concerns? How do we know this?

**Identify Safety Concerns**

*Reactive*
- Investigations

*Proactive*
- Audits & evaluations
- Management of change
- Data recorders
- Employee reporting

**Define Hazards & Consequences**

- What’s really the problem?
- What could happen?
- Document it!

**Assess Safety Risk & Prioritize Hazards**

- How bad can it get?
- How often could it happen?
## Risk Matrix

<table>
<thead>
<tr>
<th>Probability</th>
<th>Severity</th>
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</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Frequent</td>
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</tr>
<tr>
<td>Probable</td>
<td>2A</td>
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<td>3A</td>
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<tr>
<td>Remote</td>
<td>4A</td>
</tr>
<tr>
<td>Improbable</td>
<td>5A</td>
</tr>
</tbody>
</table>
What are our most serious safety concerns? How do we know this?

**Identify Safety Concerns**

- **Reactive**
  - Investigations
- **Proactive**
  - Audits & evaluations
  - Management of change
  - Data recorders
  - Employee reporting

**Define Hazards & Consequences**

- What’s really the problem?
- What could happen?
- Document it!

**Assess Safety Risk & Prioritize Hazards**

- How bad can it get?
- How often could it happen?
- Prioritize hazards by safety risk.
- Document it!
What are we doing about our most serious safety concerns?

Identify Safety Risk Mitigations

• Reduce **likelihood** that consequence will happen

• Reduce **severity** of the consequence

Hazard: Nearside Bus Stop
What are we doing about our most serious safety concerns?

- Identify Safety Risk Mitigations
  - Reduce likelihood
  - Reduce severity

- Implement Mitigations

- Verify that Mitigations are in Place

Document it!
Is what we are doing working? How do we know?

Evaluate Whether Mitigations are Effective

- Assess the impact
  - Clarify expectations
  - Monitor the mitigation
  - Monitor safety performance
  - Watch for unintended consequences
Is what we are doing working? How do we know?

Evaluate Whether Mitigations are Effective

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Continuously Improve the SMS and Safety Performance

- Make changes based on what you learn
- Build on successful processes
How can a transit agency answer these questions routinely, effectively, and efficiently?

- **Document** safety management processes, responsibilities
How can a transit agency answer these questions routinely, effectively, and efficiently?

- **Set** safety objectives & safety performance targets
How can a transit agency answer these questions routinely, effectively, and efficiently?

- **Record** and **track** safety risk management and safety assurance efforts
How can a transit agency answer these questions routinely, effectively, and efficiently?

- Communicate and **train** personnel to perform their roles
Introduction to SMS implementation
Key Questions

• Requirements
• Deadlines
• Resource commitment – money, staff, time
The SMS Implementation Process

**Phase 1: Prepare**
- People
- Training
- Gaps
- Plan

**Phase 2: Develop**
- Execute the Plan to build components of SMS

**Phase 3: Operationalize**
- Put SMS components into action
Indicators of successful SMS implementation

Leadership is committed and the right people are engaged.

• The Accountable Executive and SMS Lead are identified and leading the effort.

• An SMS Implementation Team is established.

• Key partners are engaged, as appropriate.

Phase 1
Prepare

• People
  • Training
  • Gaps
  • Plan
Indicators of successful SMS implementation

Individuals participating in SMS implementation are knowledgeable and confident.

Everyone involved in SMS implementation:

- Received briefings or completed SMS training
- Understands how SMS is different
- Buys into SMS

Phase 1
Prepare

- People
- Training
  - Gaps
  - Plan
Indicators of successful SMS implementation

The SMS Implementation Team is evaluating existing processes before building new ones.

• Conduct a gap analysis, identifying:
  – What elements of SMS are in place
  – What still needs to be developed

• Examine current safety culture

Phase 1
Prepare
• People
• Training
• Gaps
• Plan
Indicators of successful SMS implementation

The SMS Implementation Team is looking ahead and has a realistic plan.

Consider and document, as appropriate:

- Key steps, a realistic timeline, and resources
- Roles and responsibilities
- How to communicate and engage personnel and partners
Indicators of successful SMS implementation

SMS policies, procedures, and processes are well-documented and communicated.

• Adequately document SMS activities and processes to meet all requirements

• Draft a Safety Management Policy Statement

• SMS policies and procedures are:
  – Appropriately written, communicated, and incorporated into training
  – Well understood by the intended audience
  – Maintained as records
Indicators of successful SMS implementation

Once developed, SMS policies, procedures, and processes are actually put into practice.

SMS processes and activities are:

• observable
• used as expected, based on written guidance
• having a positive impact on safety performance
How does a transit agency increase voluntary employee safety reporting?

**Challenge** – Employees will not voluntarily share information if they feel it could lead to a negative outcome.

**Solution** – Reduce incentives not to report and increase incentives to report.
How does a transit agency increase voluntary employee safety reporting?

Why don’t employees report?
• Not that important

Change Incentives to Report
• Demonstrate that reporting is valued
• Clarify what’s important
• Empower employees
How does a transit agency increase voluntary employee safety reporting?

Why don’t employees report?
• Not that important
• Affects team’s safety record

Change Incentives to Report
• Prioritize an accurate safety risk picture
• Emphasize benefits for safety, not safety record
How does a transit agency increase voluntary employee safety reporting?

Why don’t employees report?
• Not that important
• Affects team’s safety record
• Nothing would be done to fix it

Change Incentives to Report
• Evaluate each report
• Follow up and show what was done as a result of reporting
How does a transit agency increase voluntary employee safety reporting?

Why don’t employees report?

- Not that important
- Affects team’s safety record
- Nothing would be done to fix it
- Blame for incident
- Treated or disciplined unfairly

Change Incentives to Report

- Balance learning and accountability
- Be consistent – set & follow clear guidelines for unacceptable behavior
FTA’s New Safety and Training Resource Website

http://safety.fta.dot.gov/

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

Read, watch, and participate

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

Questions? Comments? Email us at **FTASafetyStakeholder@dot.gov**

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Sign up for **GovDelivery**

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- Tailored to specific interests
Additional Questions?

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