

Data-Driven Safety: Implementing SMS

Joe DeLorenzo

**Chief Safety Officer, Associate Administrator for Safety &
Oversight**

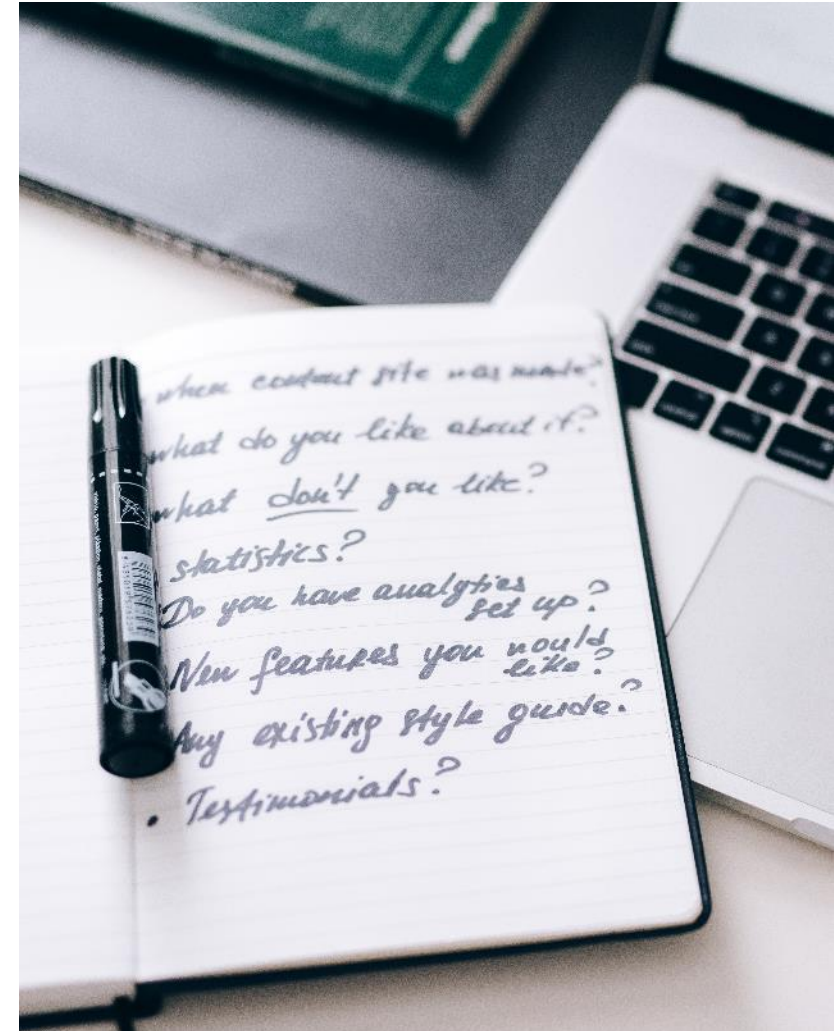
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U.S. Department of Transportation
Federal Transit Administration

Agenda

1. Safety Management Systems (SMS) & Safety Data Foundations
2. How to Think About Your Data
3. How to Use Your Data for SMS
4. Key Takeaways



Safety Management Systems



Safety Data & Safety Management Systems

- SMS is not a linear process with an obvious starting point
- Think of safety data as foundational to SMS and implicit in each pillar
- Safety data provides an on-ramp to SMS components
- No advanced degrees or special tools required: safety data is for everyone



Safety Data Governance & Management

- **Governance** is the process of using safety data as a strategic asset in your agency
- **Management** is how you create, collect, organize, store, document and use safety data
 - Chain of custody in creation
 - Consistency in terminology
 - Change in what you collect (physical and non-physical assaults)
- Safety data governance and management influence SMS implementation



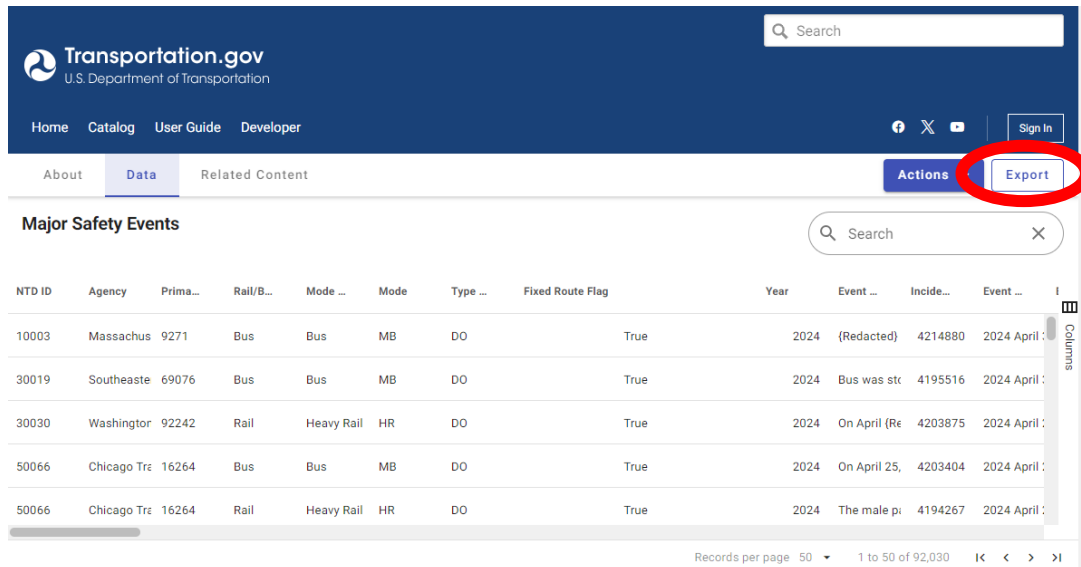
From Safety Data Management to Safety Management Systems



Know Your Data

What safety data do we have and what can it tell us?

- [NTD Data | FTA \(dot.gov\)](#)
- [Major Safety Events | Department of Transportation - Data Portal](#)



High-level look is achievable with a spreadsheet

	2020	2021	2022	2023
Heavy Rail	252	274	311	337
Main Line Derailment	50	53	56	52
Rail Collision	202	221	255	285
Light Rail	449	491	589	616
Main Line Derailment	54	32	53	42
Rail Collision	395	459	536	574
Street Car Rail	169	198	207	249
Main Line Derailment	15	19	32	34
Rail Collision	154	179	175	215
Grand Total	870	963	1107	1202

Ask Questions

Who?

What?

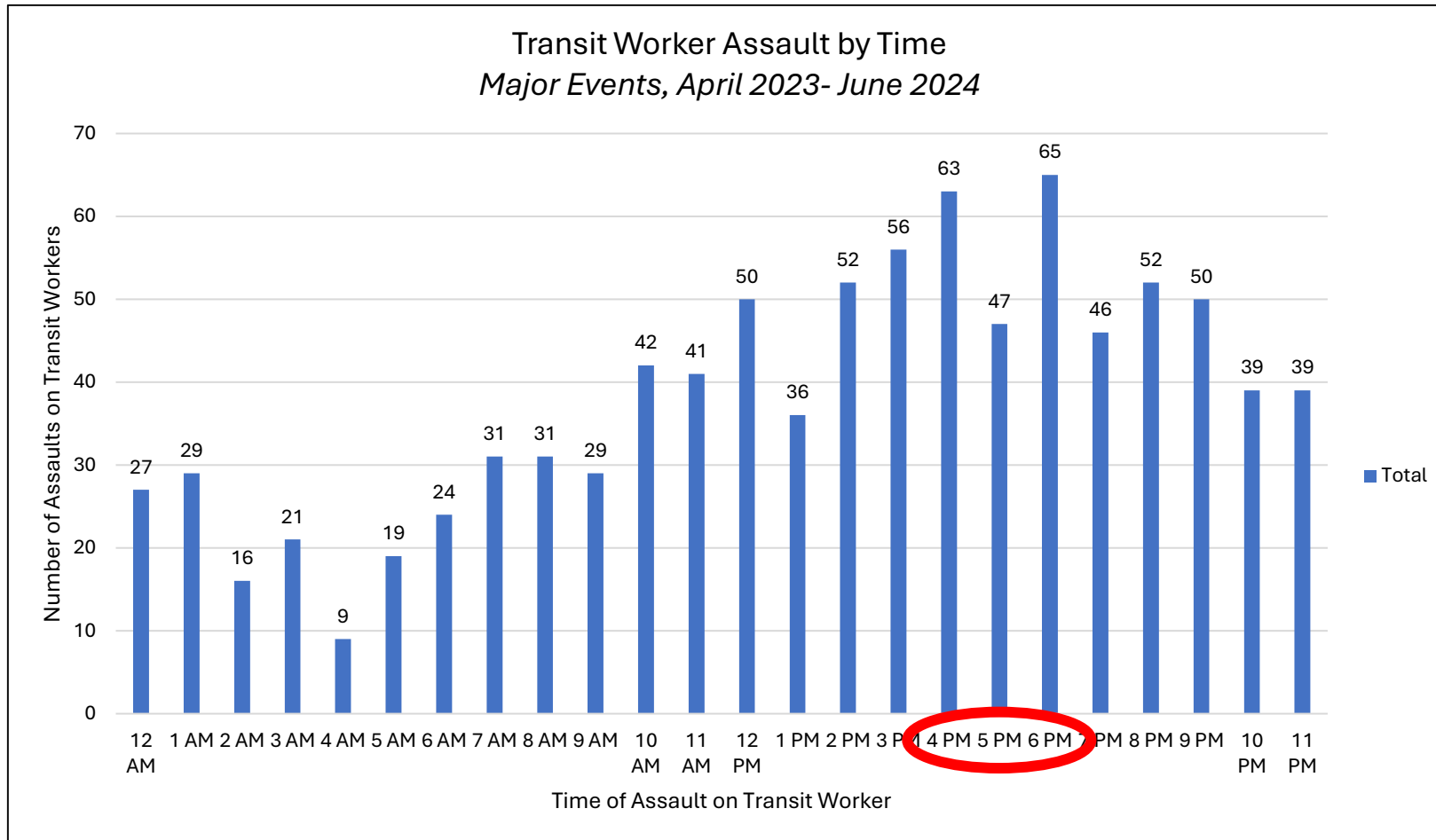
When?

Where?

About		Data	Related Content		Actions	Export
Major Safety Events						
Event Date	Event Time	Event Type	Event ...	Transit Worker Type	Trans...	Tr
2024 June 30	9:06:00 PM	Physical Assault	Assault	Other Transit Worker	Physical	
2024 June 29	8:57:00 PM	Physical Assault	Assault	Transit Operator	Physical	
2024 June 28	5:52:00 PM	Rail Collision	Collision	Not Applicable	Not Applica	
2024 June 27	7:04:00 PM	Non-Rail Collisio	Collision	Not Applicable	Not Applica	
2024 June 27	3:36:00 PM	Physical Assault	Assault	Transit Operator	Physical	
2024 June 25	2:11:00 PM	Homicide not agi	Security	Not a Transit Worker	Not Specific	

Identify Patterns and Trends

Major assaults on transit workers peak at 4pm and 6pm



Data-Informed Safety Risk Inventory

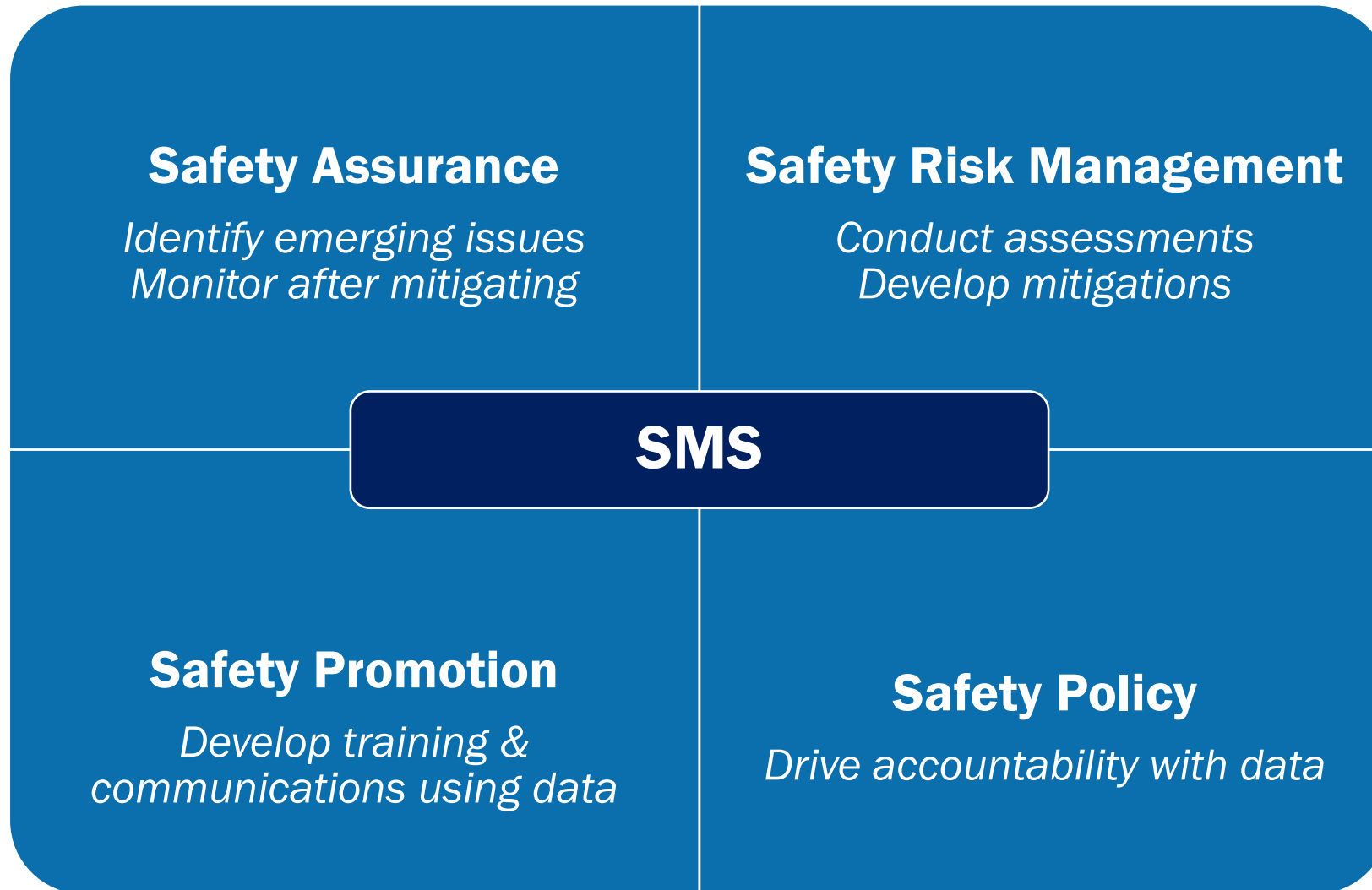
Identify High Level Trends

- Increasing numbers of derailments and collisions
- When events happen
 - Month (seasonal trends)
 - Time of day

Use Those Trends to Drill Down

- Who / what / when / where of safety data events
- Engage operators and workers to get additional insight on safety event trends
 - Major assaults between 4pm and 6pm

Use Data and Practice Safety Management Systems



Data-Informed Safety Management Systems: Key Takeaways

- Understand safety data as a strategic asset in your agency
- Take a broad view and drill down
- Keep it simple, and don't reinvent the wheel
- Utilizing data is a more efficient and effective way of addressing safety issues



For Discussion



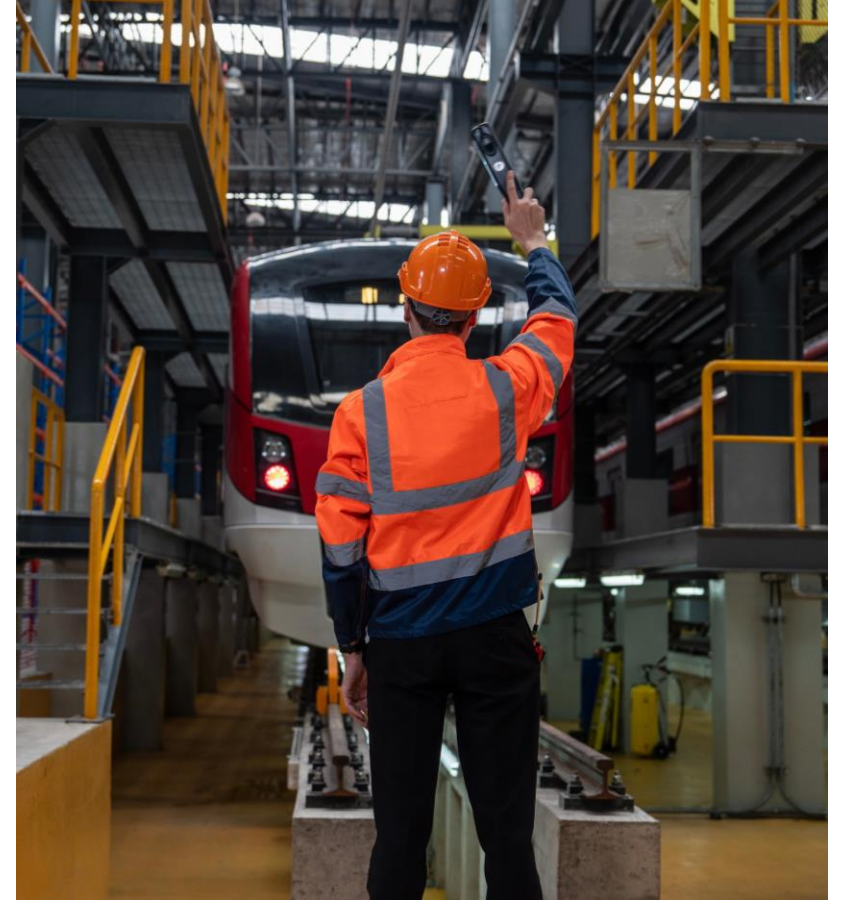
What are the challenges and opportunities you notice about data governance and management for transit agencies?



What staffing or training needs do you have in this area?



Are there best practices, problems solved, or lessons learned you can share about data governance and management in your agencies?



Thank you!

Joe DeLorenzo

Joseph.DeLorenzo@dot.gov



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