

# Virginia DRPT SSO

#### **RBI** Database & Prioritization

Andrew Ennis – SSO Program Manager May 6, 2025





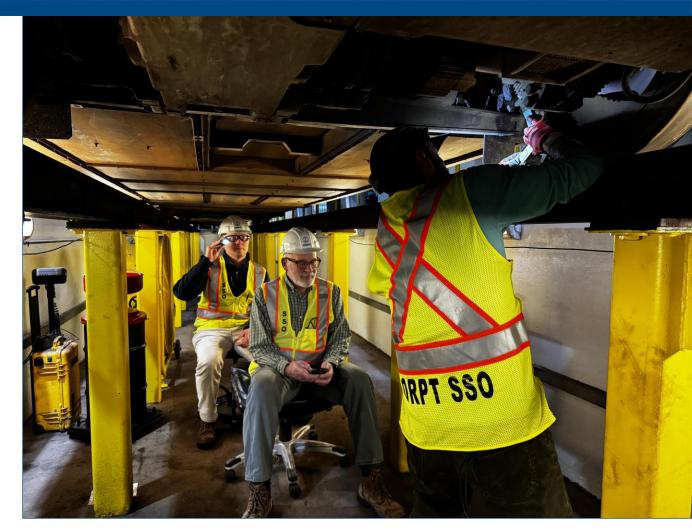
## DRPT Oversight of Hampton Roads Transit Tide

#### **DRPT** Oversight

- Collaborative Work Sessions
- Audits/Special Assessments
- Plan Review/Approval
- Investigation Review/Approval/Adoption
- Tracking/Verification of Mitigations

#### HRT Tide

- 7.4-mile light rail service
- 11 stations
- Approx. 2400 daily riders
- Service debut in 2011



## Database History & Context



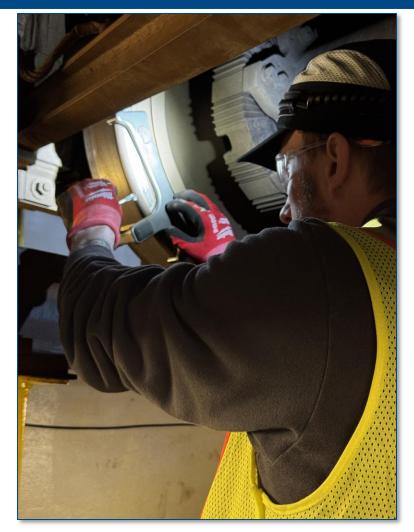
Developed in 2019, predating the RBI Special Directive



On-site inspections of all safety-related activities at HRT began in 2019



Safety events, hazards, CAPs, and audit findings...and then RBI



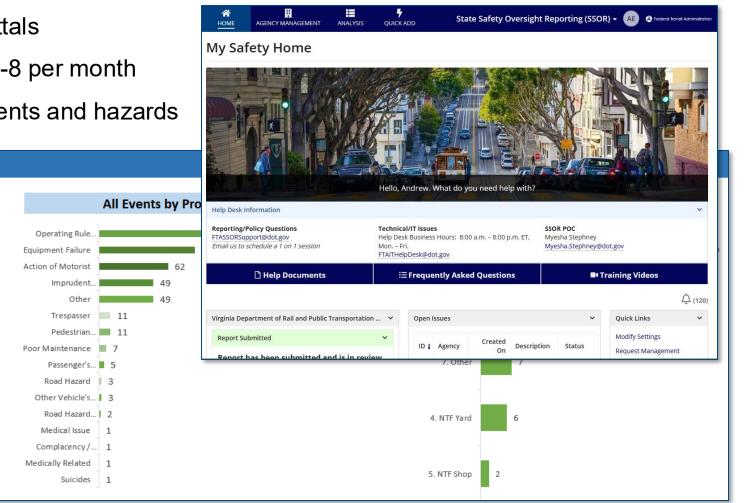
## Database LEVEL OF EFFORT

Updated monthly based on HRT data submittals

All Events by Location Category

6. Traction Power

- Standard hours for maintenance = approx. 5-8 per month
- Continuously updated based on reported events and hazards



Substation or Signal House, 5, 1% 5. NTF Shop, 11, 2% 4. NTF Yard, 53, 12% 3. Station, 186, 42% 7. Other, 18, 4% 1. Central Business District, 70, 16% 2. Operating Right of Way, 101, 23% 7. Other Velicle's... 3. Station, 186, 42% 7. Operating Right of Way, 101, 23% 7. Other Velicle's... 1. Central Business District, 70, 16% 7. Passenger's... 5. Road Hazard 1. Complacency/... 1. Medically Related 1. Suicides 1. Central Business District, 70, 16% 7. Passenger's... 5. Road Hazard 1. Complacency/... 1. Medically Related 1. Suicides 1. Central Business District, 70, 16% 7. Passenger's... 7. Passenger's..

#### VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

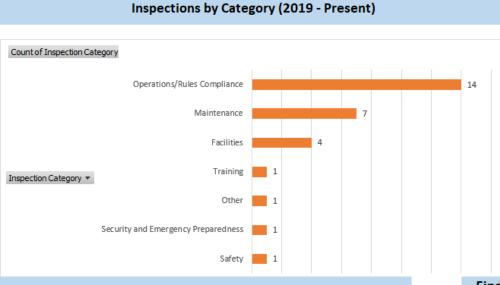
**Events** 

				/								
	Hazards a	nd Events		Inspectio		CAPs						
	Lagging In	ndicators	Leading Indicators		Total Open CAPs by Source							
Open Hazards	Open Event Investigations	All LR Events Over Life of System	Total Hazards Over Life of System	Days Since Last Inspection	Next Triennial Audit Category	Inspection	s Events	Audits	Hazards	Drills	Other	Total
28	1	444	538	14	Emergency Preparedness	0	4	15	0	4	4	27
Hazards												
4. Acceptabl 50, 25% 3. Accep with Re 90, 4	ptable	able,	Trust? • <b>Y</b> Count of Number	No Change, 24, num 11% nent, 5,	Major Improvement, 83, 39%		1. Cent Business D 28% 7. Other 13% 5. NTf	ral District	eable Hazar	2.	Operating ght of Way 31%	

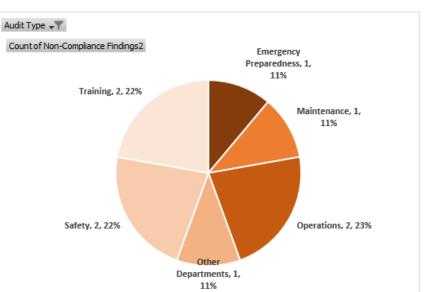
Events



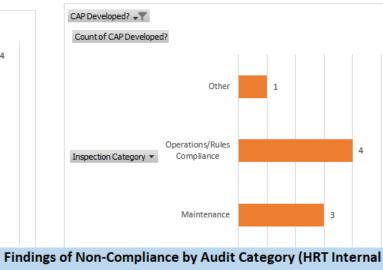
#### Inspections, Audits, and Drills



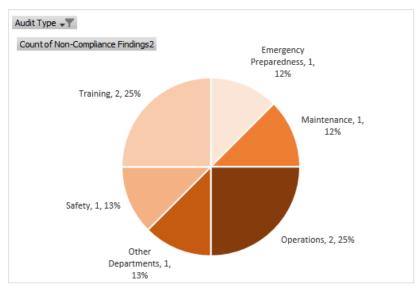
Findings of Non-Compliance by Audit Category (DRPT Triennial)



#### Inspections Resulting in CAPs by Category



Triennial)



#### Total Observations by Inspection Category (2024 - Present)

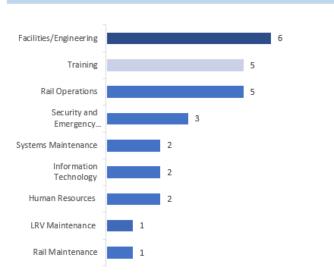


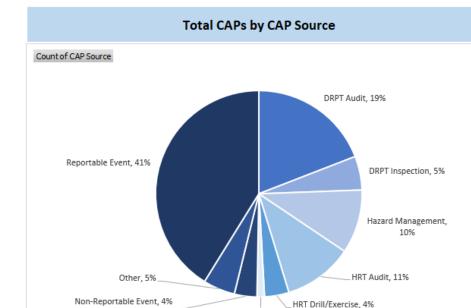
#### CAPs

**Top 10 Longest Open CAPs** 

CAP ID	Ор	en For	Approval Date
LR261g	1212	Days	11/24/2021
LR261j	1212	Days	11/24/2021
SAF22-017	1133	Days	2/11/2022
SAF22-010	1133	Days	2/11/2022
SAF23-015	752	Days	2/27/2023
SAF23-005b	752	Days	2/27/2023
7b (merged with SAI	752	Days	2/27/2023
SEC23-003	719	Days	4/1/2023
SEC24-008	330	Days	4/24/2024
SEC24-007	330	Days	4/24/2024

#### **Open CAPs by Responsible Department**





Internal Audit, 1%

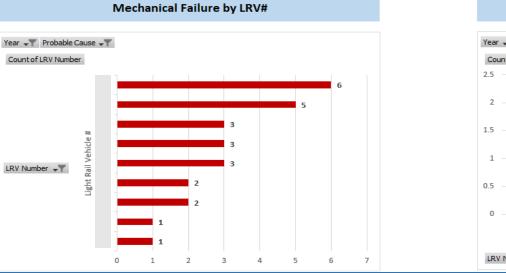
#### **Open CAPs with Upcoming Proposed Implementation Dates**

CAP ID	Days Until	Proposed Date
SEC23-003	11 Days	3/31/2025
LR398A	11 Days	3/31/2025
SAF23-005b (merge	41 Days	4/30/2025
SAF23-017b (merge	41 Days	4/30/2025
SAF23-015	41 Days	4/30/2025
SAF25-001	73 Days	6/1/2025
SAF24-008	102 Days	6/30/2025
LR398C	102 Days	6/30/2025
SAF25-005	102 Days	6/30/2025
SAF24-005 (merged	102 Days	6/30/2025

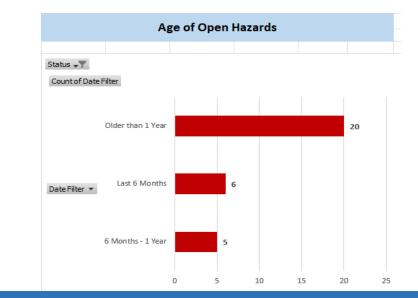
#### Closed CAPs By Implementation Timeline



Risk-Based Inspection Data - Vehicle Maintenance (2024 - Present)

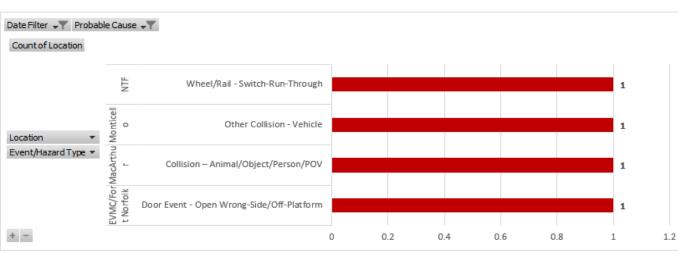


# Year Probable Cause Count of LRV Number 2.5 2 1 1 1 0 Light Rail Vehicle #

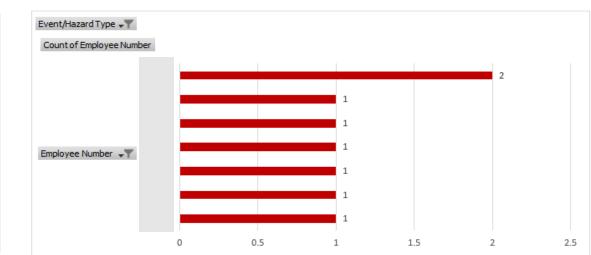


#### **Risk-Based Inspection Data - Operations (2024 - Present)**

#### Operating Rule Violations or Complacency Events within Last 6 Months by Location and Type



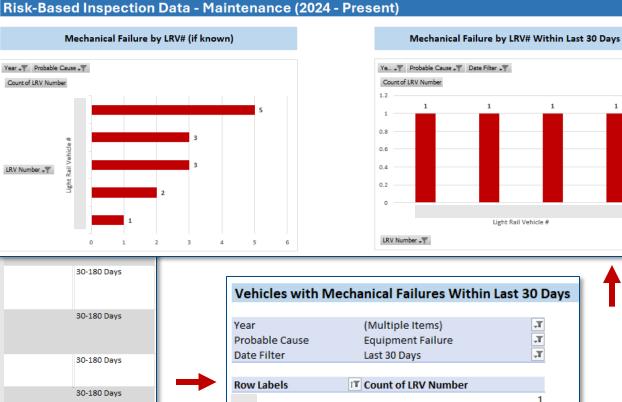
Employees Involved in Signal Violations, Work Zone Violations, or Station Over/Under Shoots



## Database Functionality – Pivot Tables

- Summarize Large Datasets
- Identify Trends
- Dynamic Filtering
- Calculate Statistics

						LRV Number -	
Probable Cause	CAP Develope	CAP ID	Date Investigation Report	Year 🗸	Adoption Status	.RN	2
Equipment Failure	No	N/A	N/A	2025	Approved/No Action Required		
Equipment Failure	No	N/A	N/A	2025	Approved/No Action Required		30-180 Days
Equipment Failure	No	N/A	N/A	2025	Approved/No Action Required		30-180 Days
Other	No	N/A	N/A	2025	Approved/No Action Required		30-180 Days
Other Vehicle's Actions Responsible for Event	No	N/A	N/A	2025	Approved/No Action Required		30-180 Days
Action of Motorist	No	N/A	45711	2025	DRPT Action Required		30-180 Days



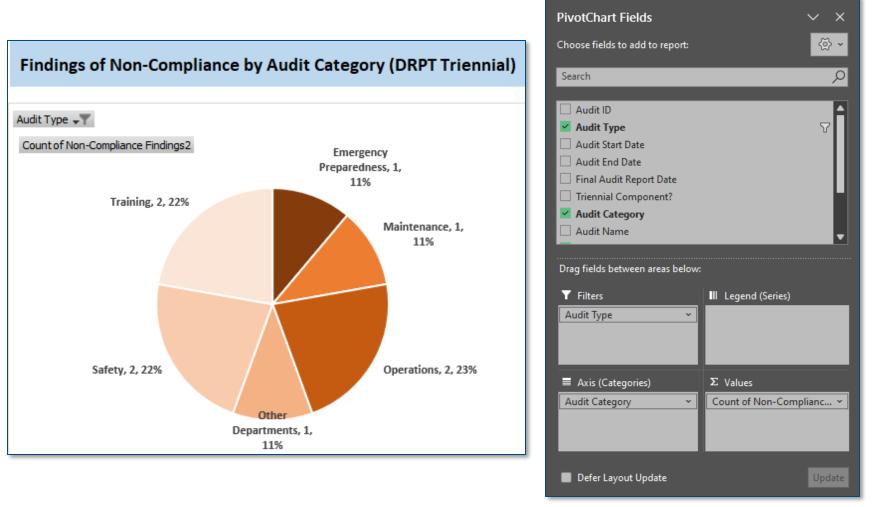
Grand Total

1 1 4

## Database Functionality: Pivot Charts

- Seamless Dashboard
- Easily Updated
- Interactive Analysis

DRPT FNC by Audit Cate	gory	
Audit Type	DRPT	Ţ
Row Labels	Count of Non-Compliance Findings2	
Emergency Preparedness		1
Maintenance		1
Operations		2
Other Departments		1
Safety		2
Training		2
Grand Total		9



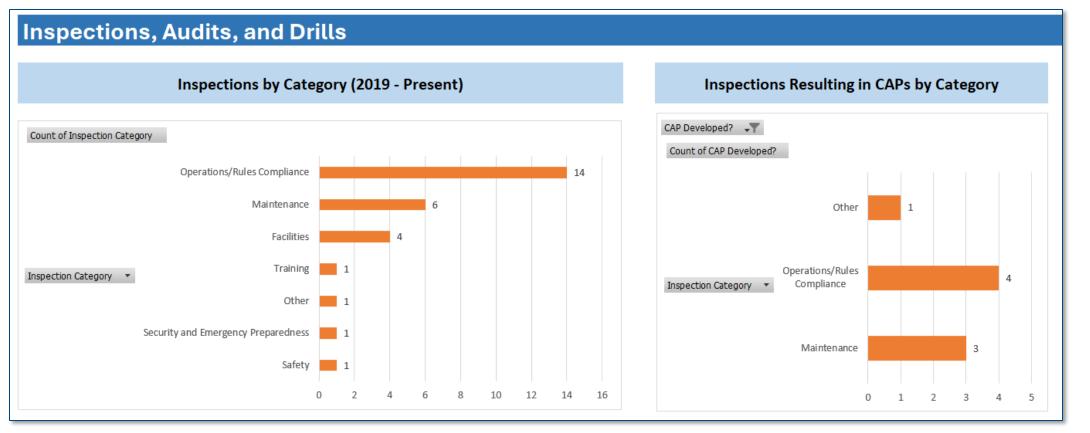
VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

## **Challenges and Considerations**

- Small System
- Cost-Effective

- Data Limitations
- Data Standardization

Regular Evaluation



## **Comments/Questions?**

