



▶ Quarterly Service Performance Review 2nd Quarter, FY23 (October- December 2022)

Engineering & Operations Committee
March 23, 2023





Service Performance

Service Delivery

Capacity

- Weekday - Average Ridership
- **Dispatches Operated**
- **Passenger Loading**

Punctuality

- On-time – Customer
 - Daily / Peak
- On-time – Train
 - Daily / Peak
 - **Timed Train Meets - K-Line**

Railway Asset Availability

Revenue Fleet

- Revenue Fleet - Fleet Reliability
 - 4 AM - Car Availability
 - Vehicle MTBSD - (Hours)

Wayside

- Wayside - Train Control Systems
 - Wayside Train Control System
 - Computer Control System
- Wayside - Railway Systems
 - Track
 - Traction Power

Operations

- Transportation Staffing

Stations

- Availability – Elevators
- Availability – Escalators
- Availability – Fare Collection

Customer Experience

Customer Service

- Customer Service
 - **Overall Customer Satisfaction**
 - Station Agent Customer Service
 - Complaints

Environment

- Environment – Stations
 - Outside
 - Inside
- Environment – Trains
 - Cleanliness
 - Temperature
- Environment – Code of Conduct
 - **Gender Based Harassment**
 - Fare Evasion

Safety and Security

Safety

- Safety – Passenger
 - Station Incidents
 - Vehicle Incidents
- Safety – Employee
 - Lost Time Injuries
 - OSHA Recordable Injuries
- Safety – Violations
 - Unscheduled Door Openings
 - OSHA Recordable Injuries

Security

- Police Coverage
 - BPD Presence
 - BPD Response Time
- Crime – Against Person
- Crime – Burglary
 - Bike Thefts
 - Auto Burglaries
 - Auto Thefts
- **Progressive Policing**

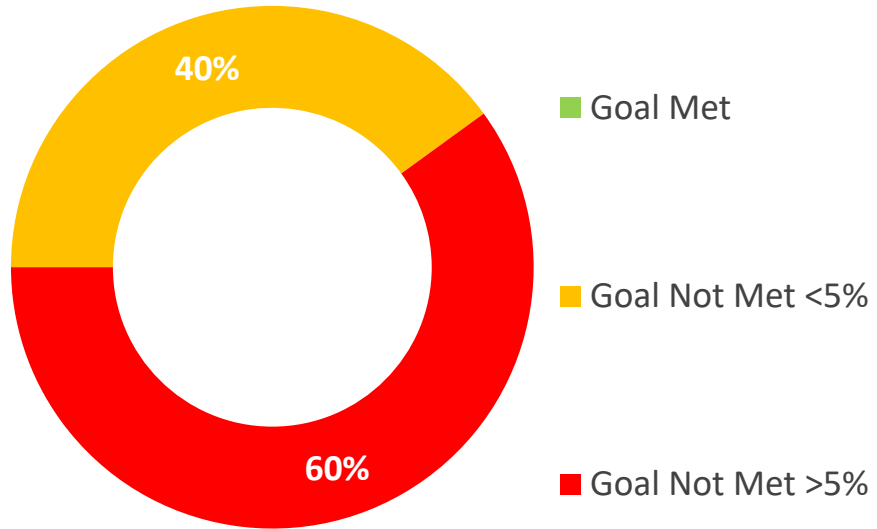
New this quarter

Category

Class

Slide

Summary – Service Delivery

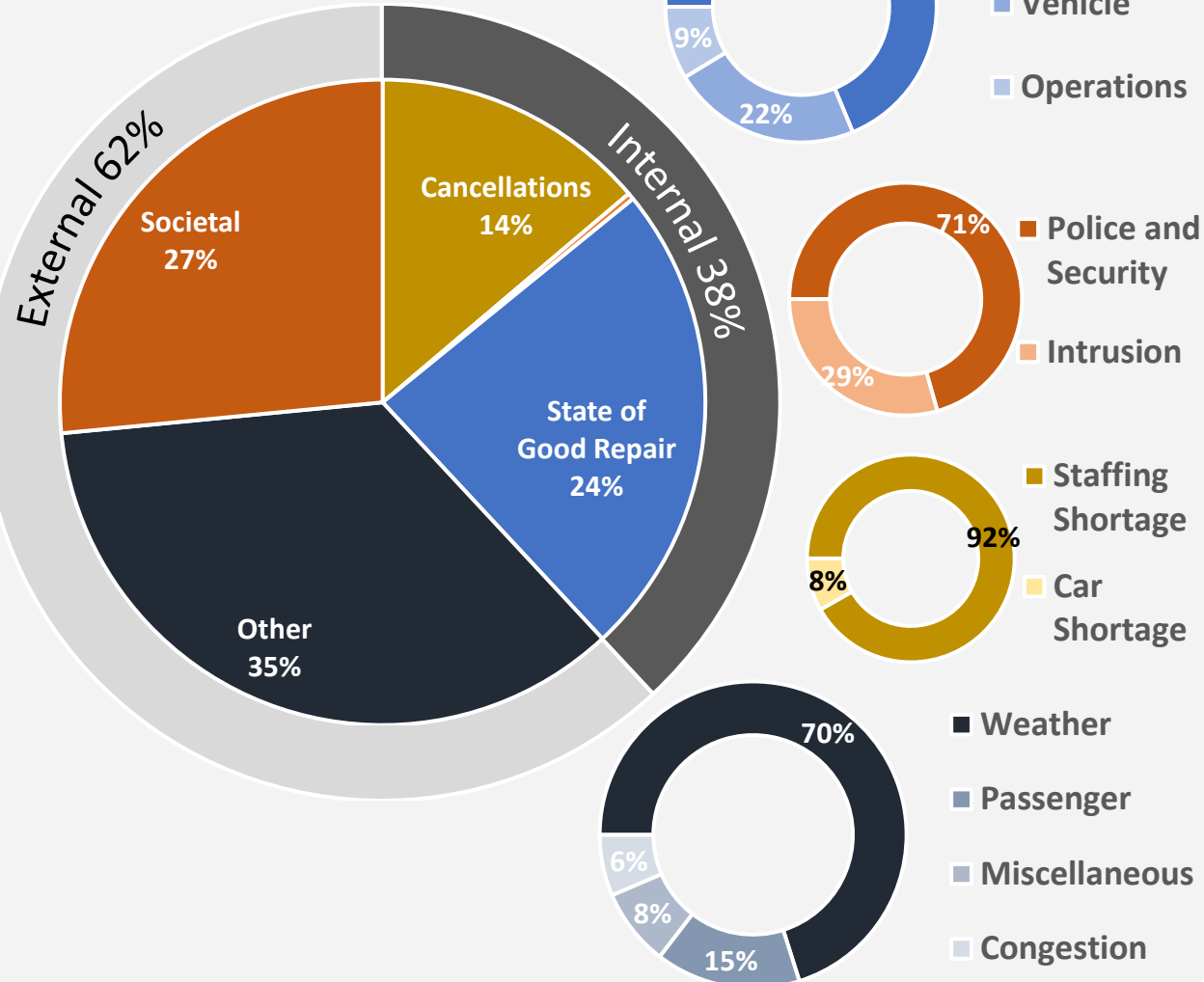


Metric	FY23 Q2	Goal	Change from FY23 Q1	
<i>All-Day</i>				
Weekday - Average Ridership	146209	167715	0.3%	▲
Daily - Trains On-Time	71.0%	91.0%	(4.3%)	▼
Daily - Customers On-Time	83.5%	94.0%	0.8%	▲
<i>Peak</i>				
Peak - Trains On-Time	69.1%		(4.2%)	▼
Peak - Customers On-Time	84.6%		(1.4%)	▼

▼ Gray arrows represent change from the previous quarter for metrics which do not have an established goal

Service Delivery – Delay Incident Detail

13001 Delayed Trains Caused by Incidents



Trains Delayed - Top Ten Single Incidents

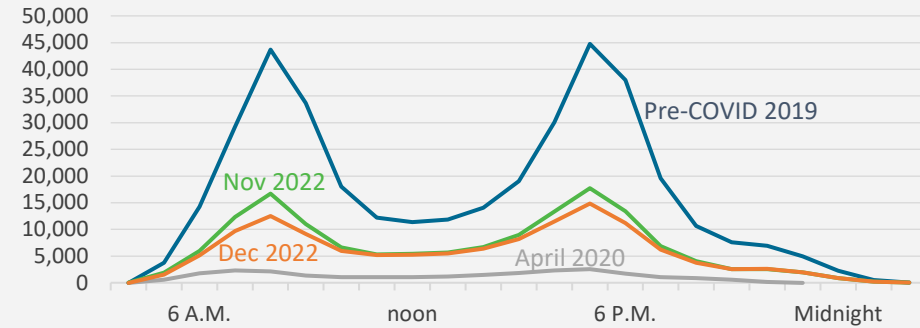
12/01	Rain, 552
11/08	Rain, 260
12/29	Rain, 235
12/30	Rain, 229
12/27	Rain, 205
12/10	Rain, 200
11/01	Rain, 200
12/16	Smoke Under Vehicle, 176
12/08	Rain, 162
12/31	Rain, 157

*Top ten incidents = 18.3%
of delayed trains*

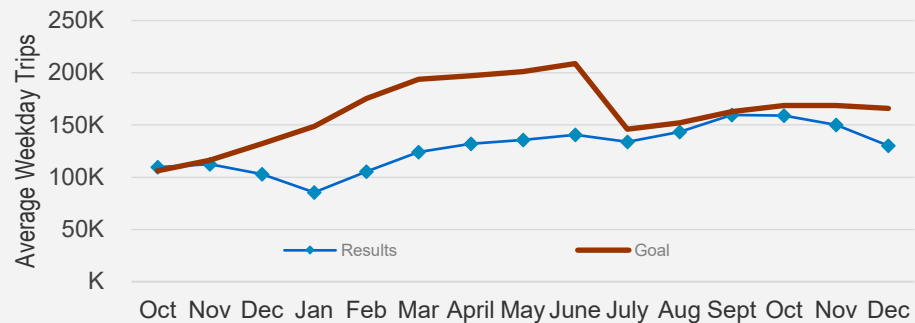
Capacity – Ridership

- Ridership below budgeted goal

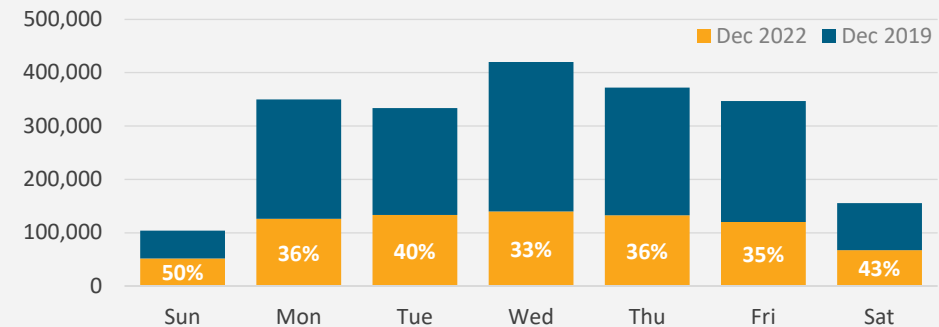
Weekday Hourly System Activity



● Average Ridership - Weekday



Comparison of December Ridership by Day of Week

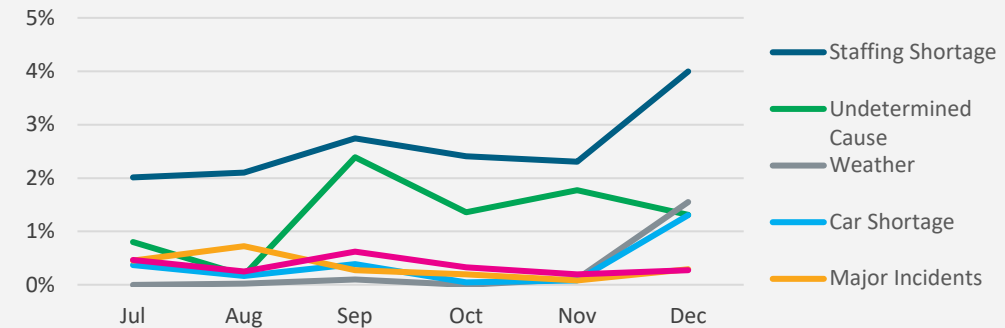


Capacity – Dispatches Operated

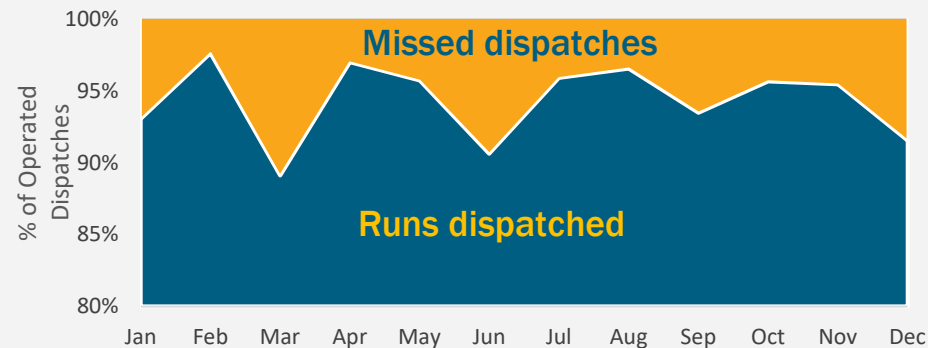


- Missed Dispatches are scheduled trains that did not run OR partial runs that were not able to dispatch from origin
- Majority of missed dispatches around PM peak
- Staffing shortage was the primary cause
- Weather was the second highest factor, and will likely continue into the beginning of Q3 based on January's storms

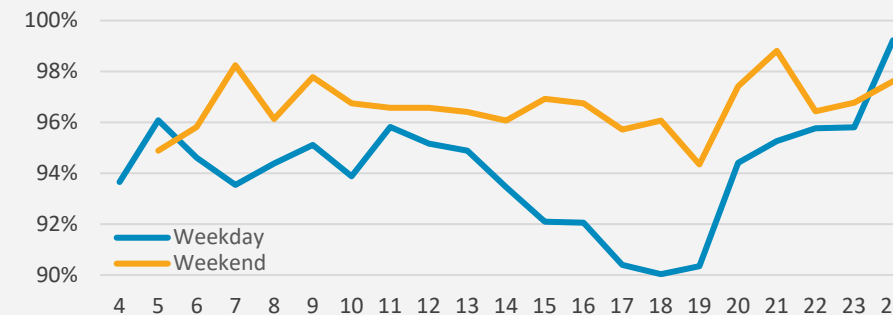
% of Scheduled Dispatches Missed by Cause



Scheduled Runs Dispatched from Origin



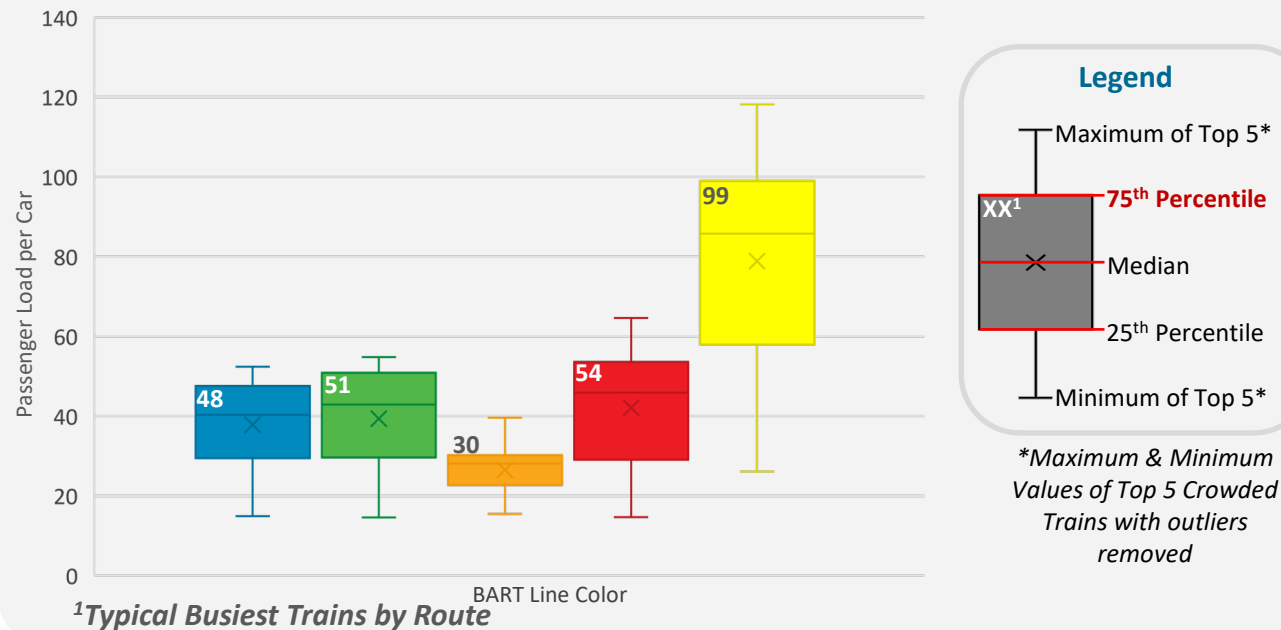
Hourly Scheduled Runs Dispatched from Origin



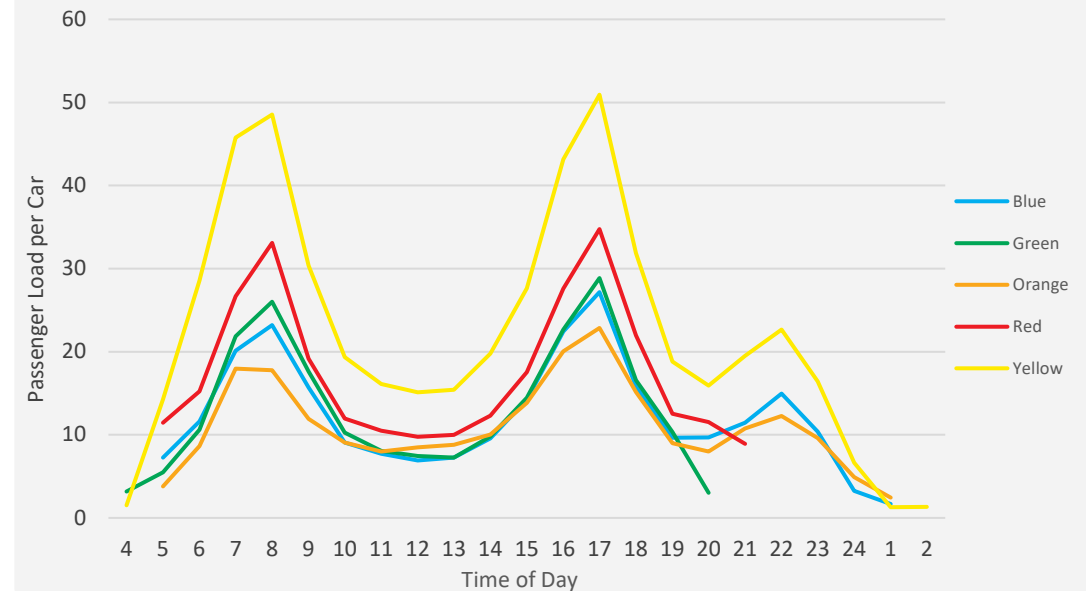
Capacity – Passenger Loading



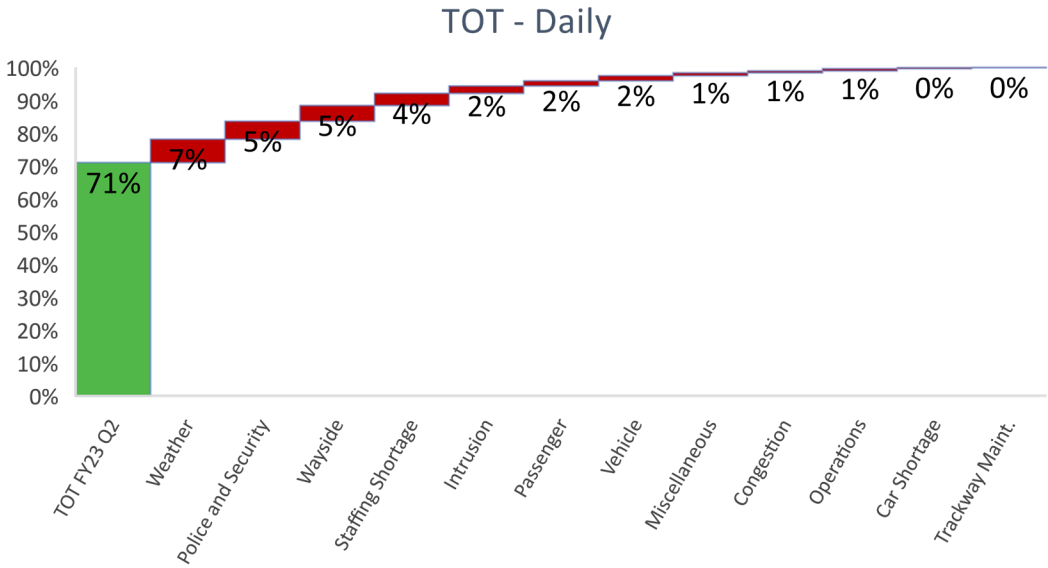
Passenger Load per Car for Top 5 Crowded Weekday Trains



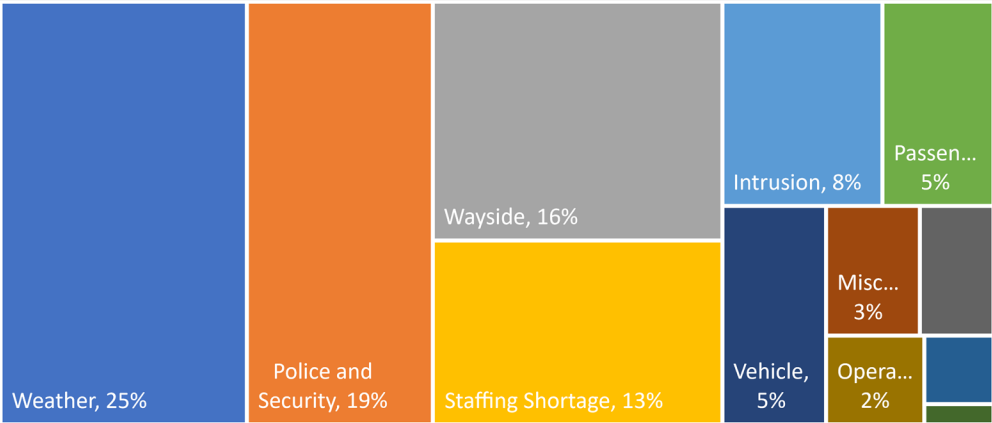
Average Hourly Weekday Passenger Load per Car by Line



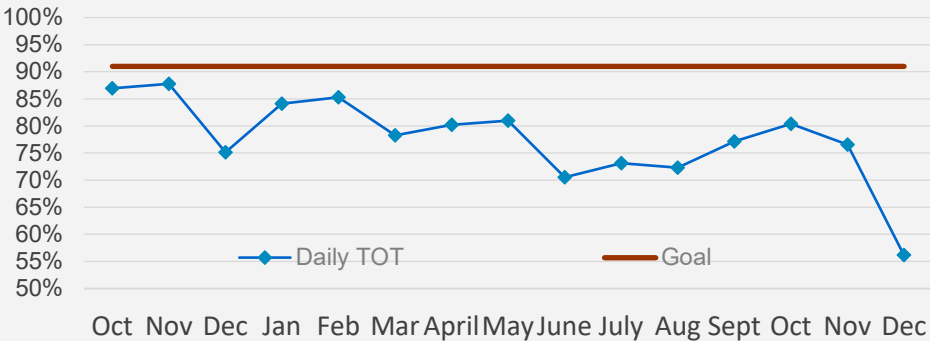
Punctuality – Trains On-Time



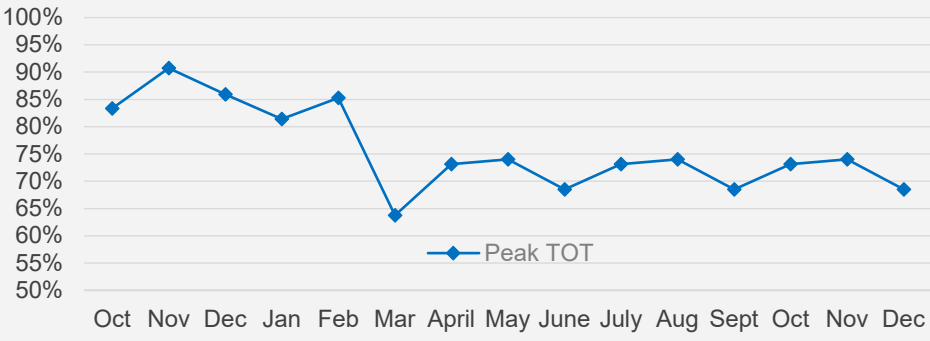
Estimate of EOL Late Trains by Incident Cause



● Daily On-Time



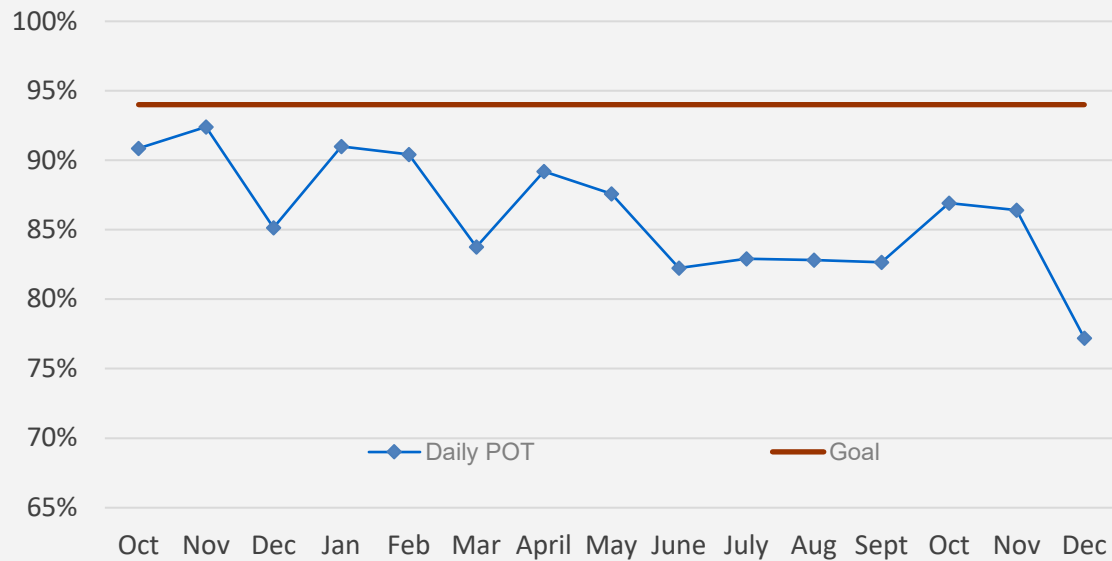
Peak Period On-Time



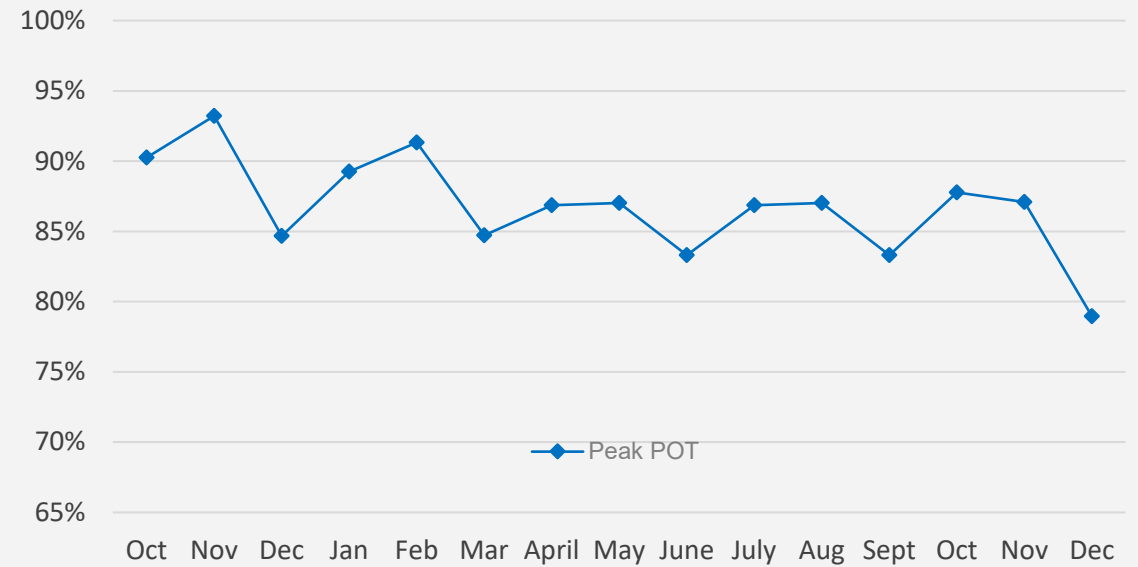
Punctuality – Customer On-Time

- Customer on-time performance was impacted by the increased number of canceled trains and speed reductions due to weather

● Daily Customer On-Time



Peak Customer On-Time

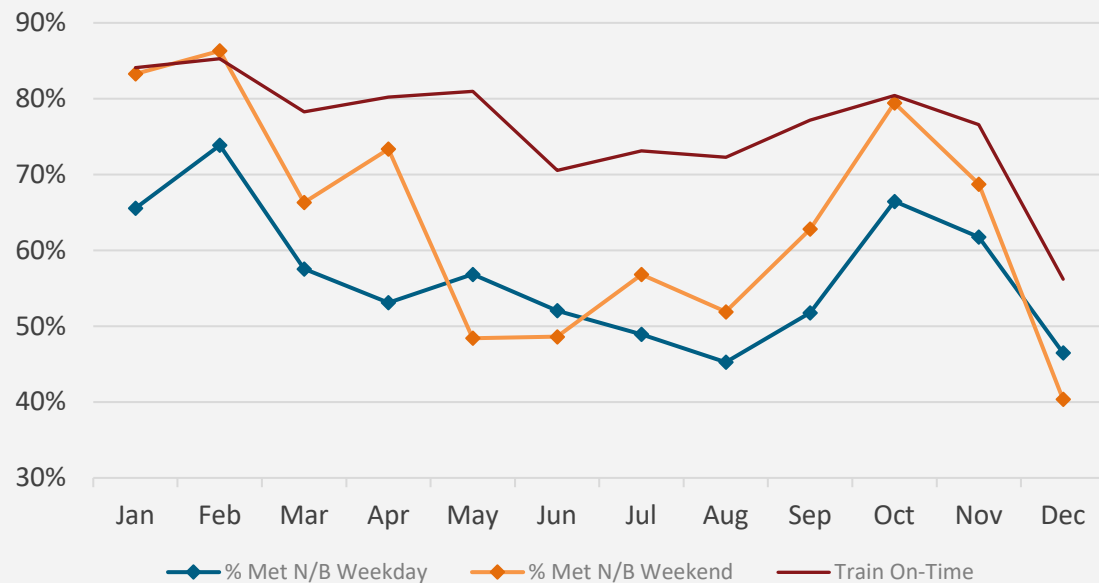


Punctuality – Timed Train Meets

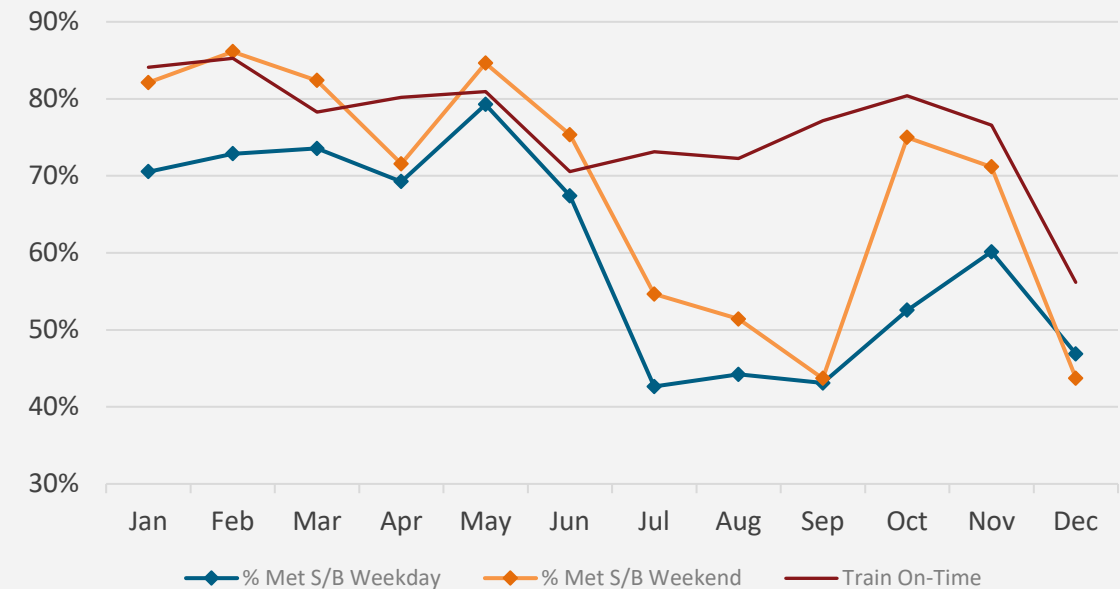


- A meet is considered successful when there is at least 20 seconds of overlap time for both trains at the timed transfer point
- Timed Train Meets on the K-Line between the Yellow and Orange lines occur as follows
 - Northbound trains meet at 19th Street
 - Southbound trains meet at MacArthur

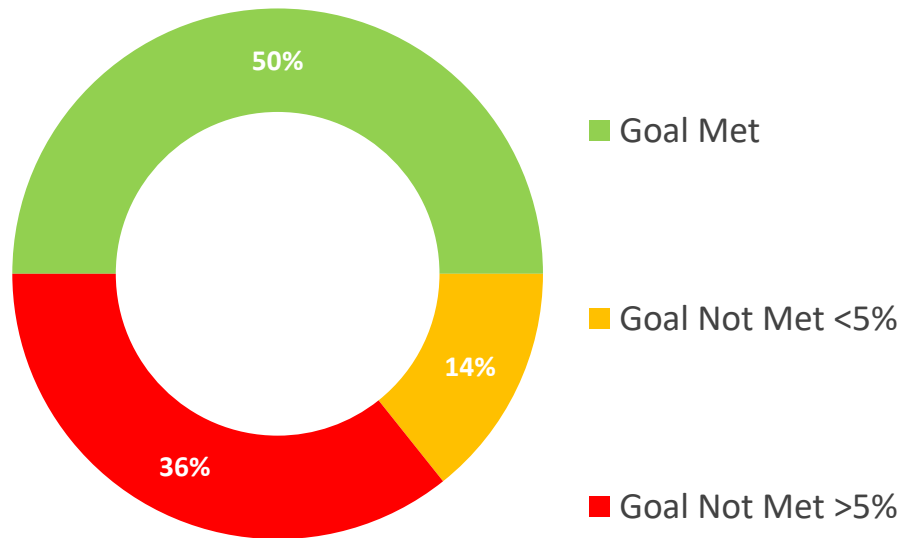
Northbound Meets at 19th Street



Southbound Meets at MacArthur



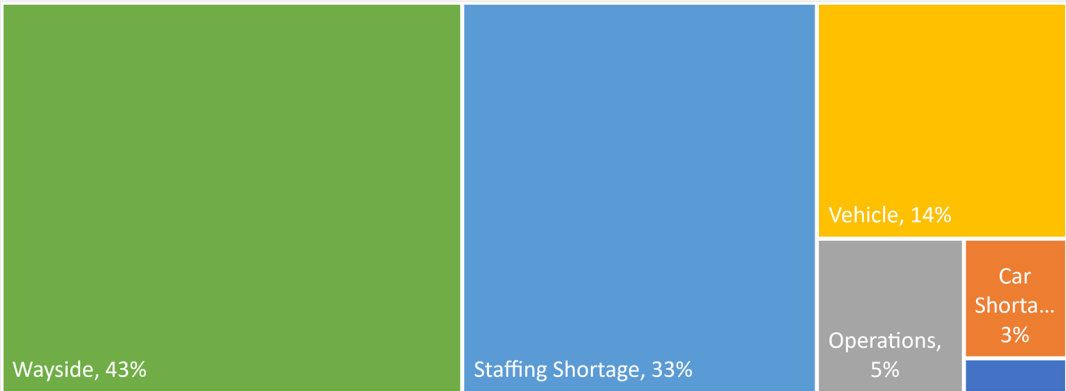
Summary – Railway Asset Availability



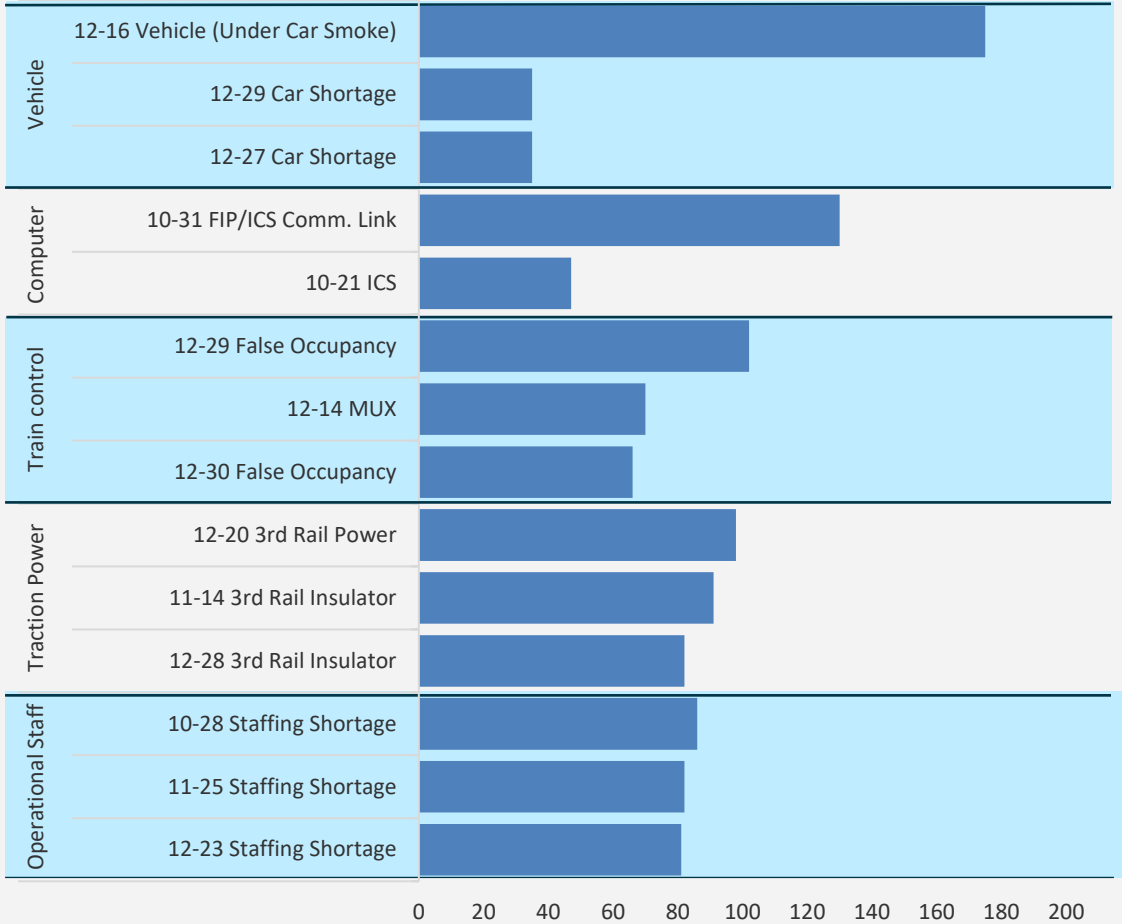
Metric	FY23 Q2	Goal	Change from FY23 Q1	
<i>Station Equipment</i>				
Elevators in Service - Station	99.1%	98.0%	(0.3%)	▼
Elevators in Service - Garage	99.8%	97.0%	(0.06%)	▼
Escalators in Service - Street	96.5%	93.0%	(0.9%)	▼
Escalators in Service - Platform	98.4%	96.0%	1.5%	▲
Automatic Fare Collection - Gates	98.8%	99.0%	(0.3%)	▼
Automatic Fare Collection - Vendors	98.2%	95.0%	0.9%	▲
<i>Revenue Vehicle</i>				
Vehicle MTBSD - (Hours)	5845	6500	(17.0%)	▼
4 AM - Car Availability	679	636	(0.4%)	▼
DMU - MDBF (Miles)	19384	20000	22.5%	▲
<i>Wayside Equipment</i>				
Track	0.09	0.30	50.0%	▲
Transportation	3.64	0.50	(33.6%)	▼
Traction Power	1.14	1.00	8.5%	▲
Wayside Train Control System	1.80	1.30	(16.4%)	▼
Computer Control System	0.48	0.30	(410.7%)	▼

Railway Asset Availability – Detail

Breakdown of 4,950 Trains Delayed by Incidents due to Railway Asset Unavailability

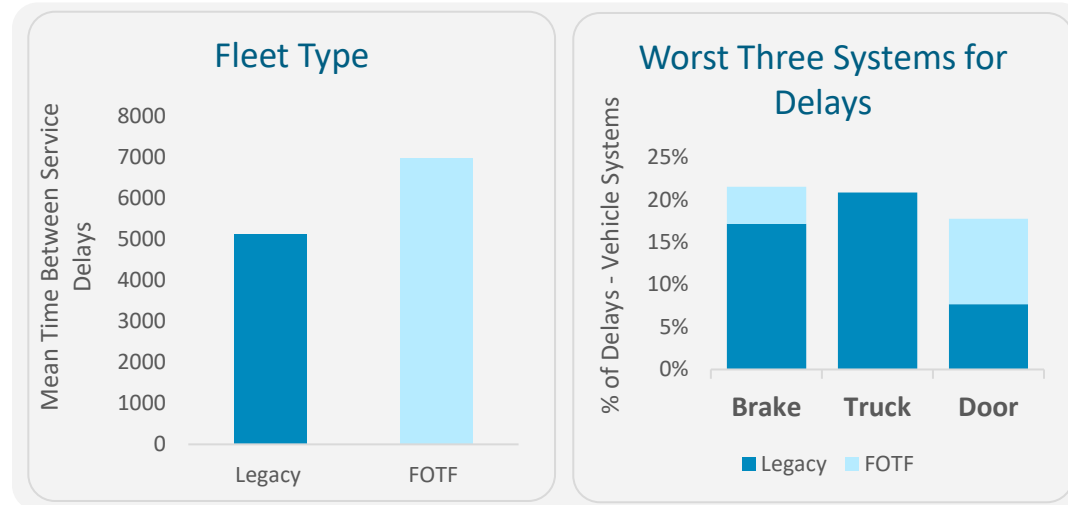


Trains Delayed – Three Worst Asset-Related Incidents by Department

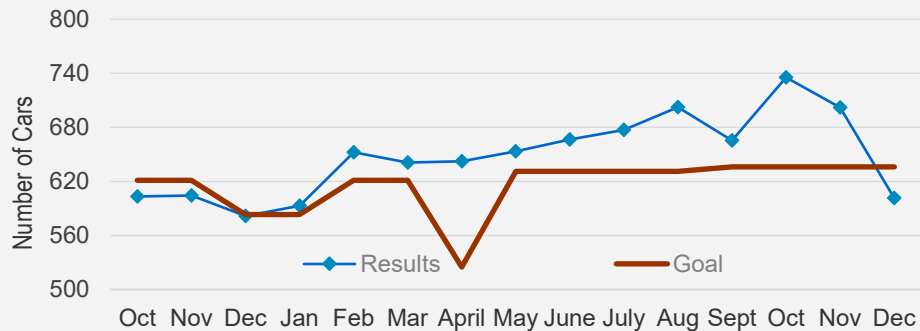


Revenue Fleet – Reliability

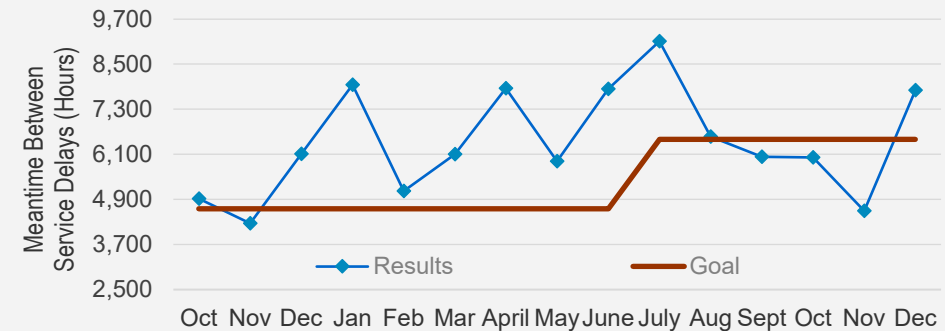
- Fleet of the Future continues to outperform the legacy fleet
- Aging legacy fleet driving down reliability
- December car availability impacted by wet weather and wheel flats



● Car Availability at 4 AM



● Mean Time Between Service Delays



415

LEGACY

FOTF

451

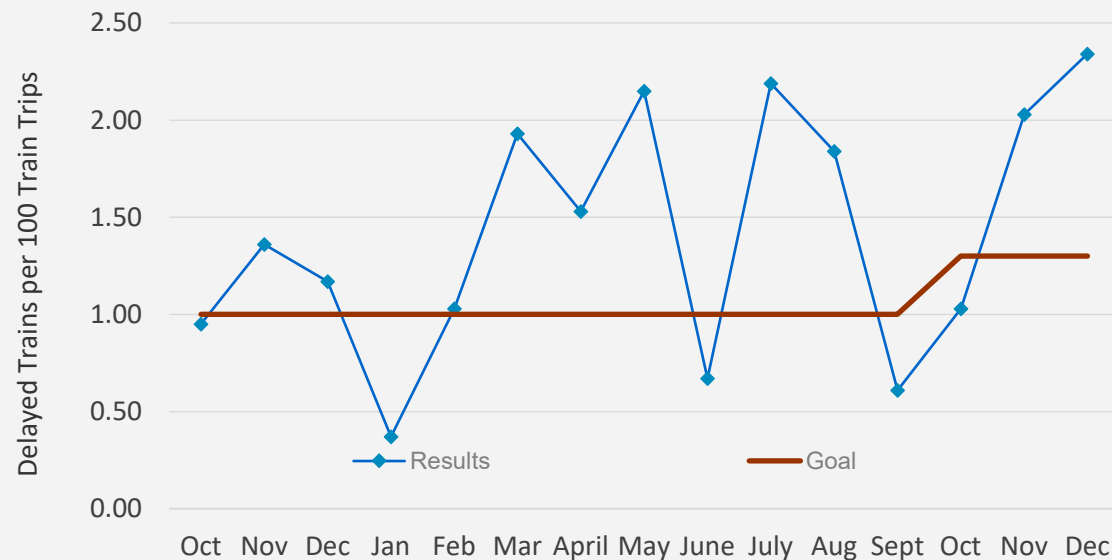
Car count as of 02/01/2023

Wayside Equipment – Train Control Systems

Wayside Train Control System

- Several False Occupancies due to a track switch failure between San Leandro and Bay Fair
- Most delays were due to multiple routing equipment failures in November and December

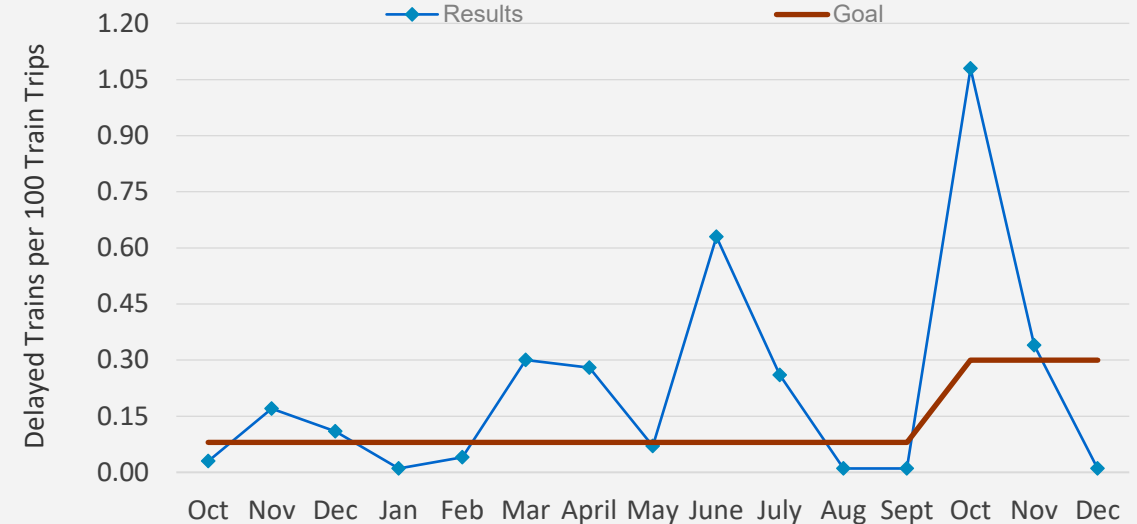
Wayside Train Control System



Wayside Computer Control System

- The Switch Failure on Oct. 31st was the primary source of delays this quarter, which impacted 130 trains

Wayside Computer Control System

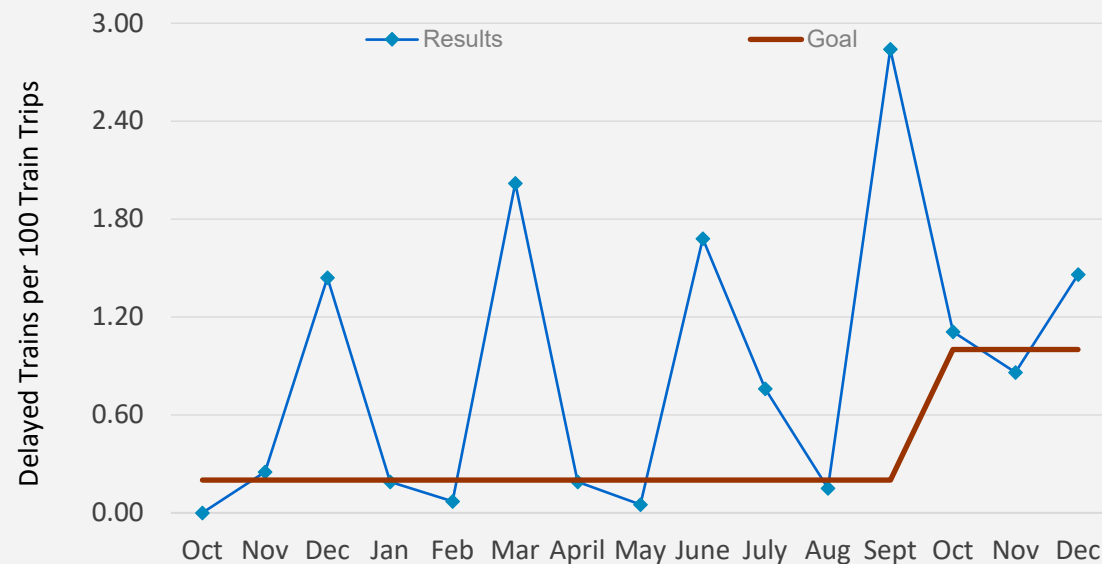


Wayside Equipment – Railway

Traction Power System

- 3rd Rail power issues on the M-Line and at Lake Merritt generated multiple delays
- Coverboard failures at Balboa Park also contributed to delays this quarter

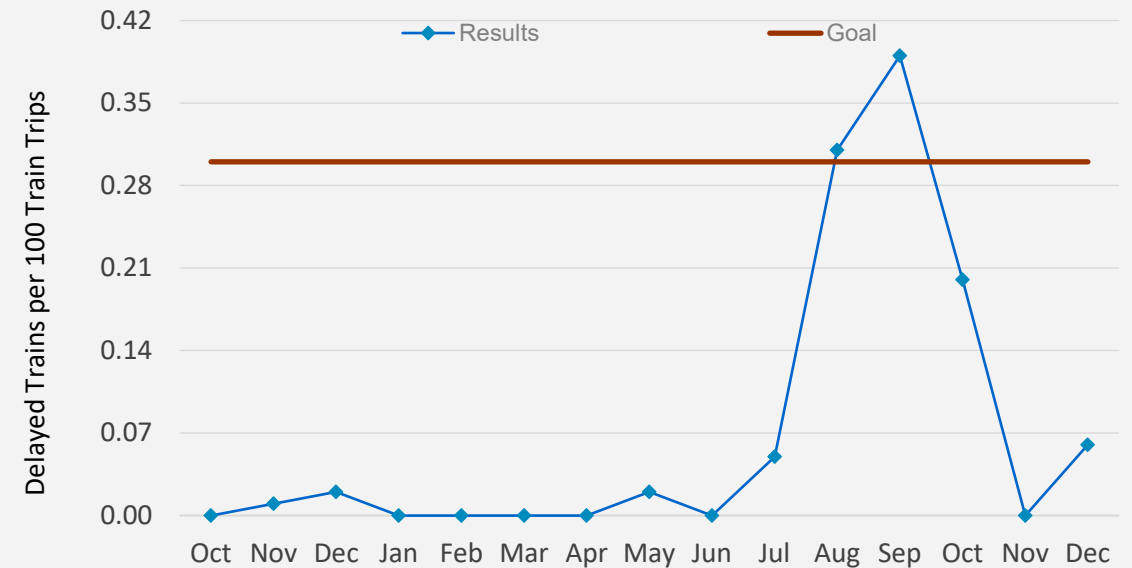
● Traction Power System



Track System

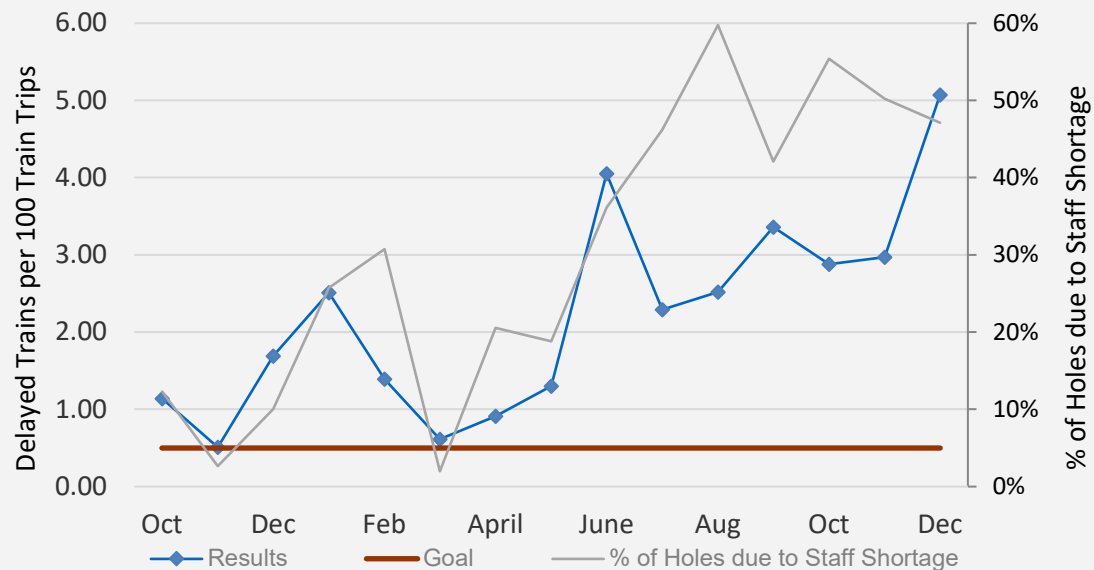
- Met goal

● Track System



- Staff shortages make up the vast majority of Operations-related train delays
- Recruiting of Train Operators, Rail Controllers, and Foreworkers remains the highest priority

Operations



Breakdown of 1,829 trains Delayed due to Operations Unavailability



Outlook – Transportation Staffing

- Train Operators
 - On pace to reach full-staffing in late 2023
 - Will address train cancellations due to staffing shortage
 - Three classes underway – on-going
 - Full bench of qualified applicants
- Station Agents
 - On pace to reach full-staffing this Summer
 - Continued recruiting to keep pace with retirements and promotions
- Rail Controllers
 - A record seven rail controller trainees in process
- Foreworkers
 - Hiring will become a priority for 2023/2024 as Train Operators and Station Agents reach full-staffing

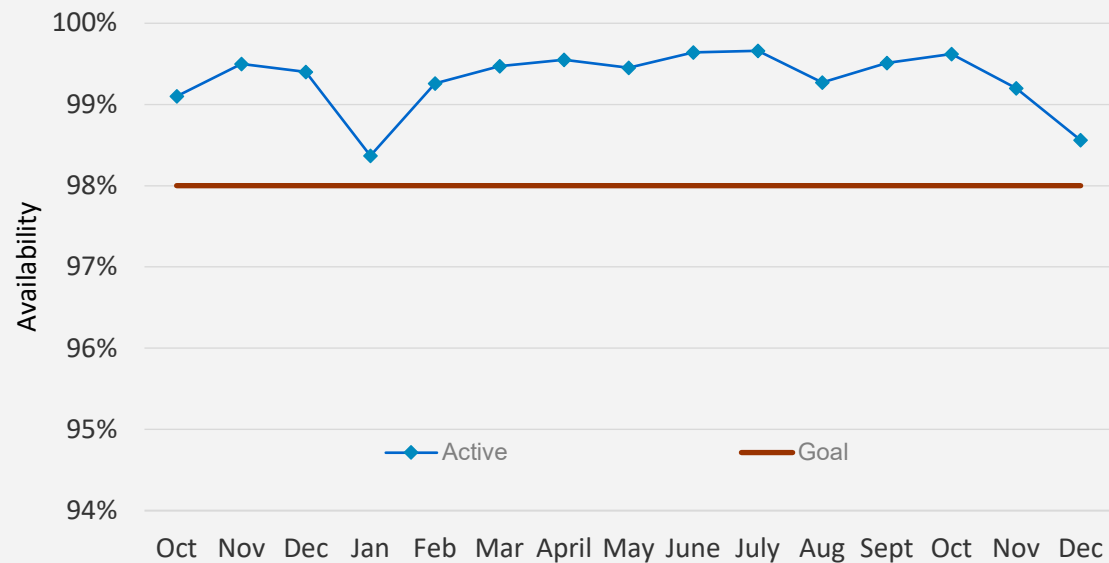


Station Equipment – Elevator Availability

Station Elevator

- Goal met

Station Elevator

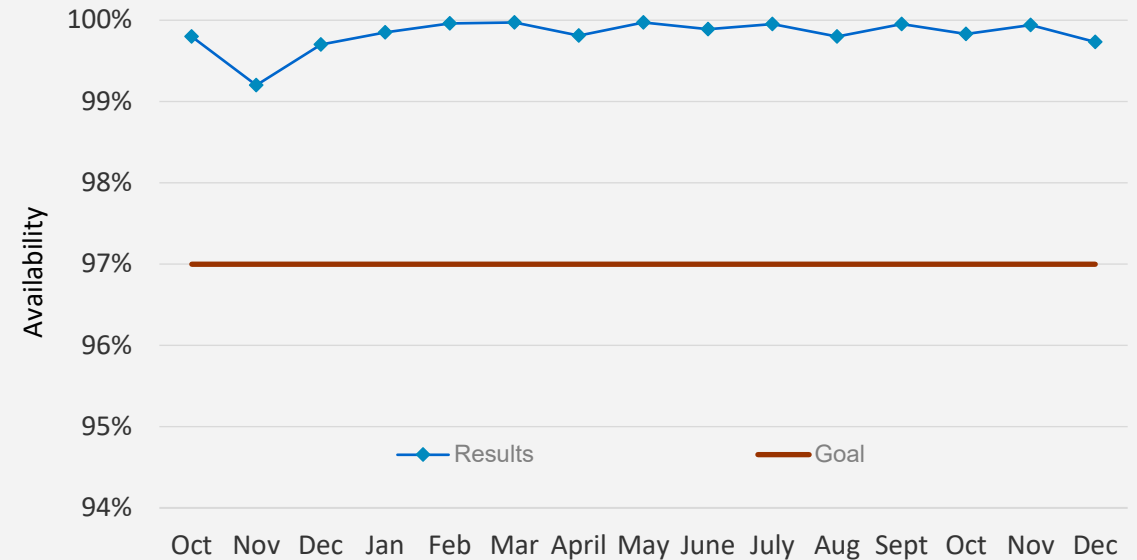


Garage Elevator

- Goal met



Garage Elevator

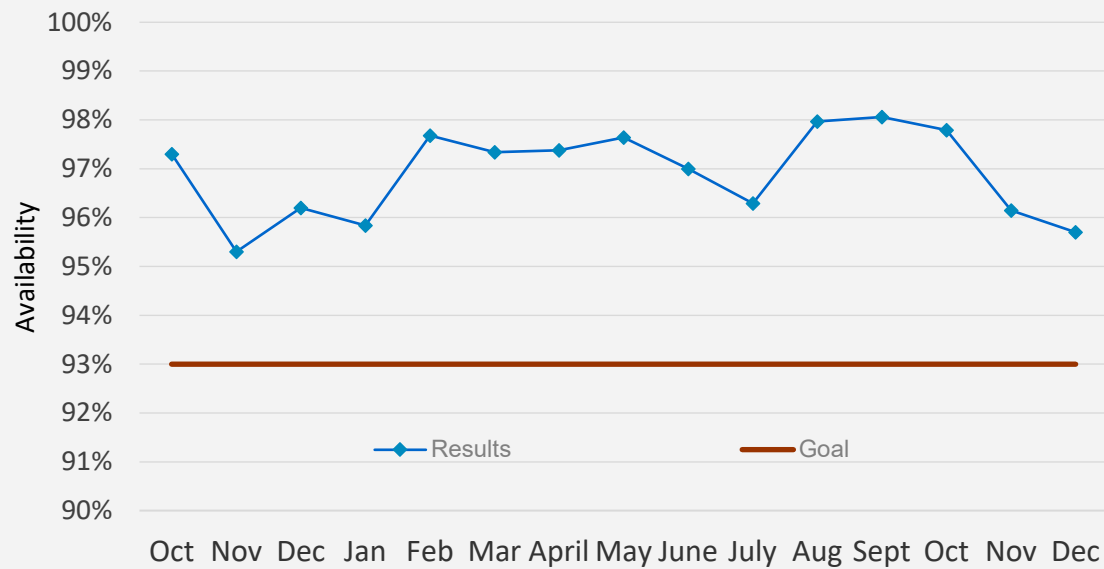


Station Equipment – Escalator Availability

Street Escalator

- Goal met

Street Escalator

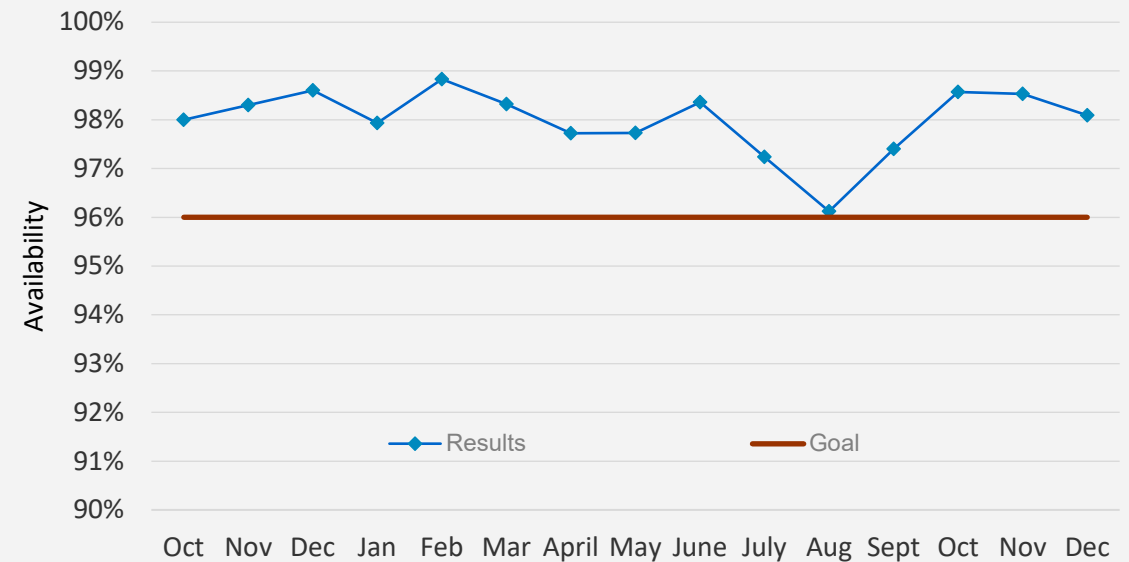


Platform Escalator

- Goal met



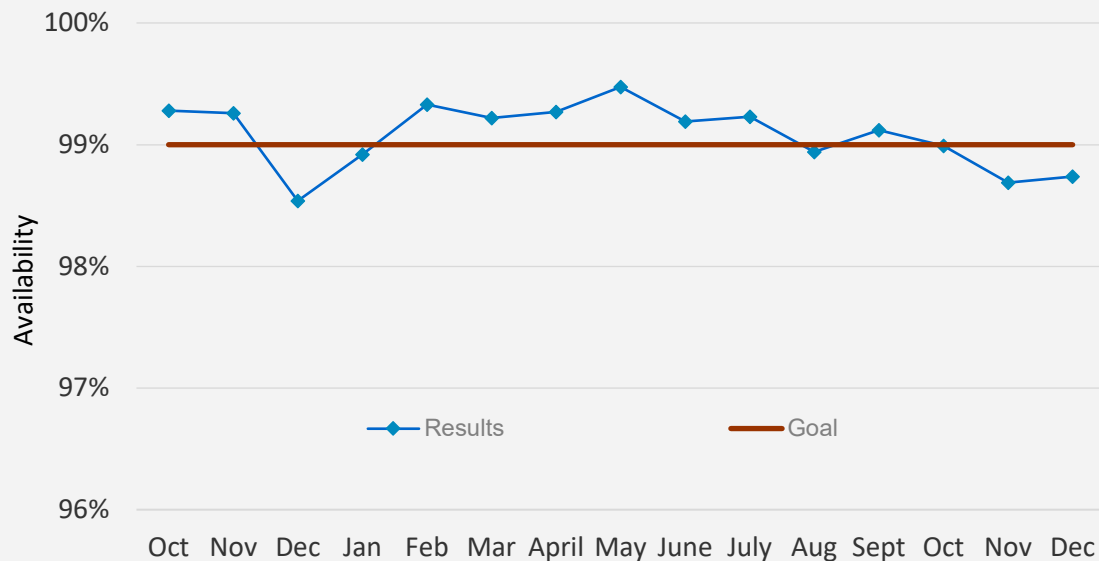
Platform Escalator



Gate Availability

- Damaged electrical conduits resulted in power loss to fare gates at Civic Center, Walnut Creek, and Downtown Berkeley

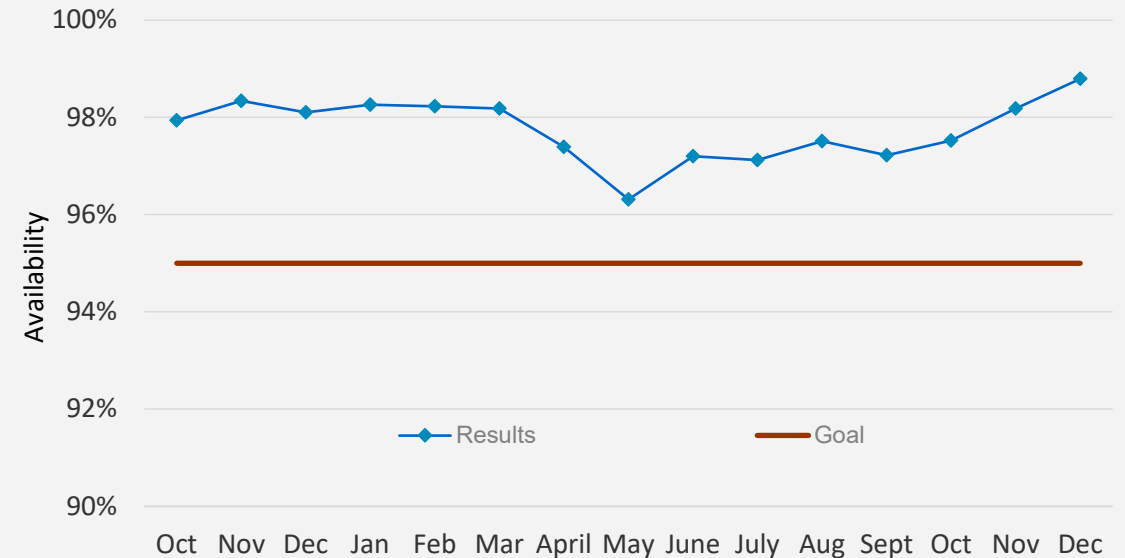
Gate Availability



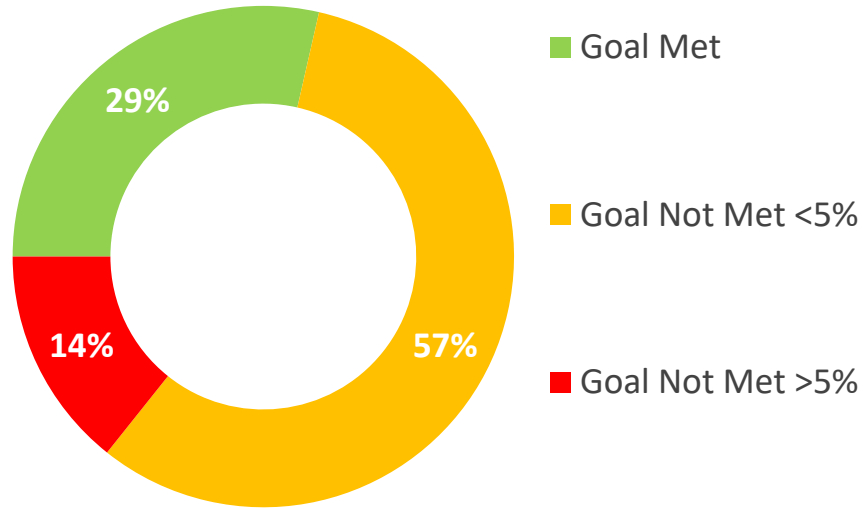
Vendor Availability

- Goal met

Vendor Availability



Summary – Customer Experience

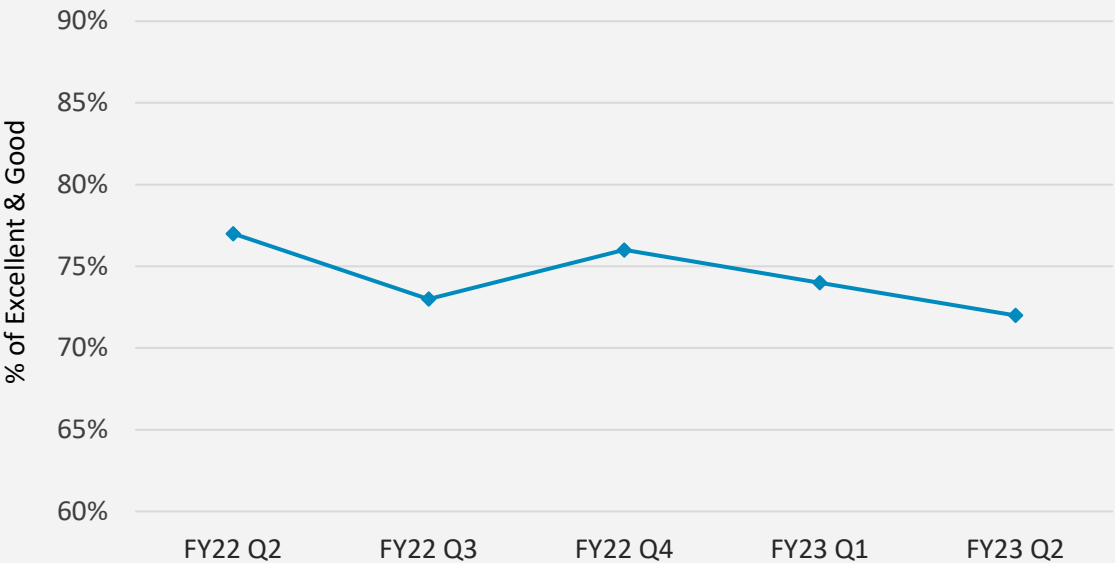


Metric	FY23 Q2	Goal	Change from FY23 Q1	
<i>Service</i>				
Overall Customer Satisfaction	72.0%		2.0%	▲
Station Agent Customer Service	72.8%	75.0%	(1.0%)	▼
Complaints per 100,000 Passenger Trips	23.4	5.1	12.3%	▲
<i>Train Environment</i>				
Train Temperature	85.0%	82.0%	1.7%	▲
Train Interior Cleanliness	68.5%	70.0%	(1.8%)	▼
<i>Station Environment</i>				
Environment Outside Stations	68.2%	66.0%	3.1%	▲
Environment Inside Stations	67.2%	64.0%	6.5%	▲
<i>Code of Conduct</i>				
Gender Based Harassment	9%			
Fare Evasion	21.8%		(1.6%)	▼

▼ Gray arrows represent change from the previous quarter for metrics which do not have an established goal

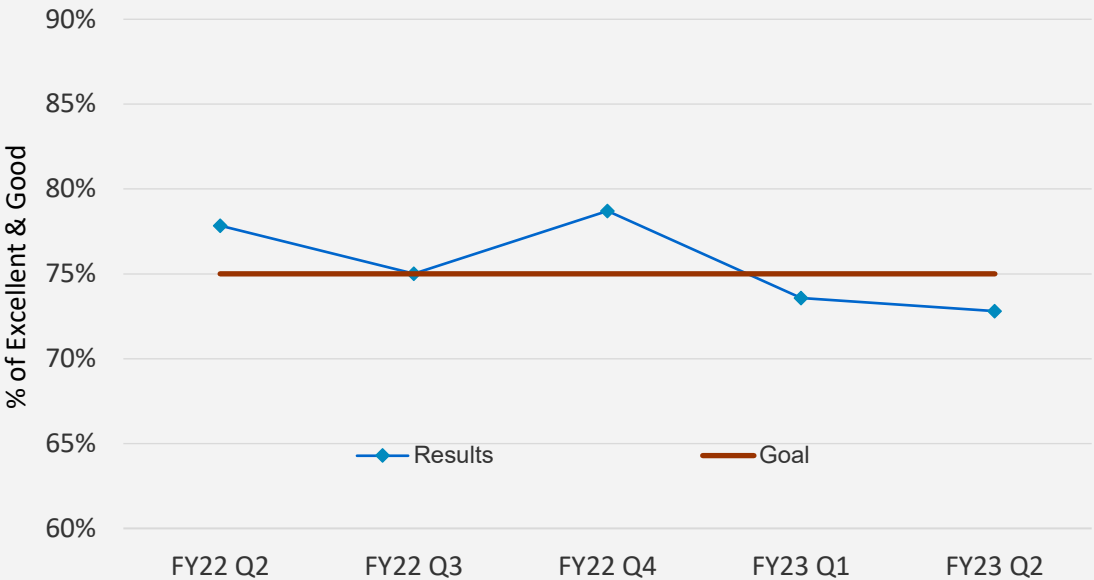
Overall, how satisfied are you with the services provided by BART?

Overall Customer Satisfaction

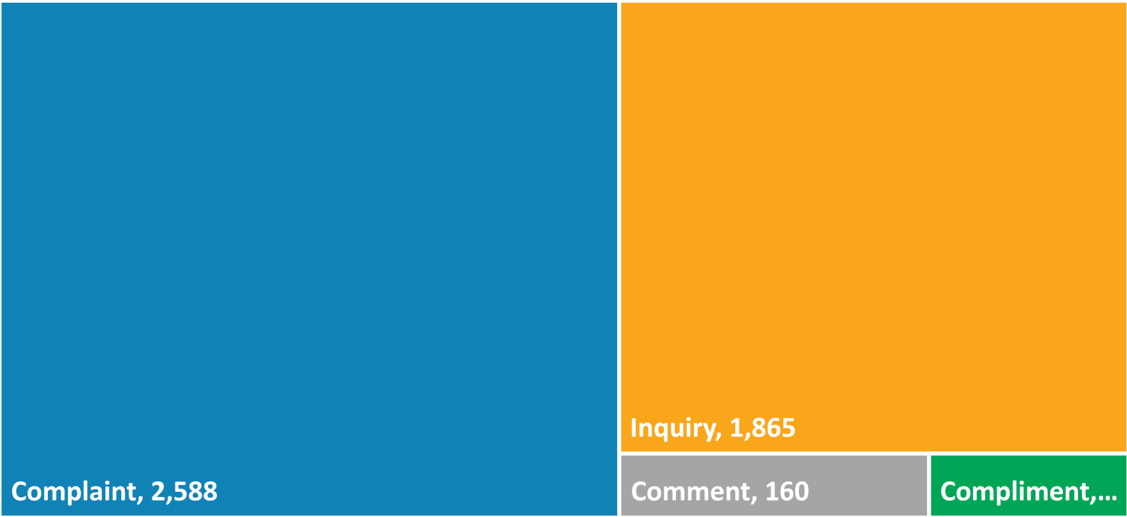


Customer service from Station Agent (if used today)

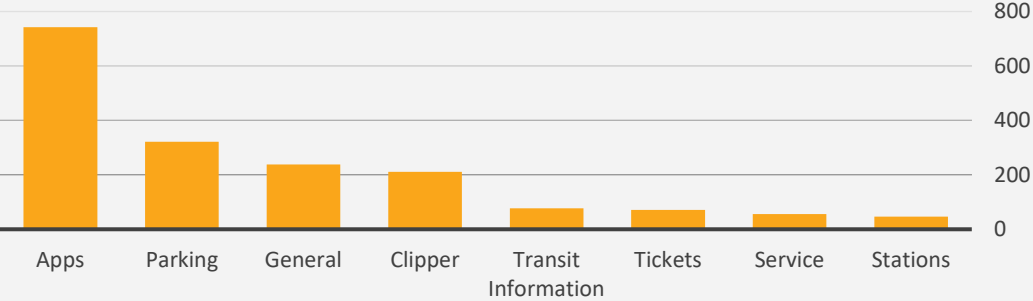
Station Agent Customer Service



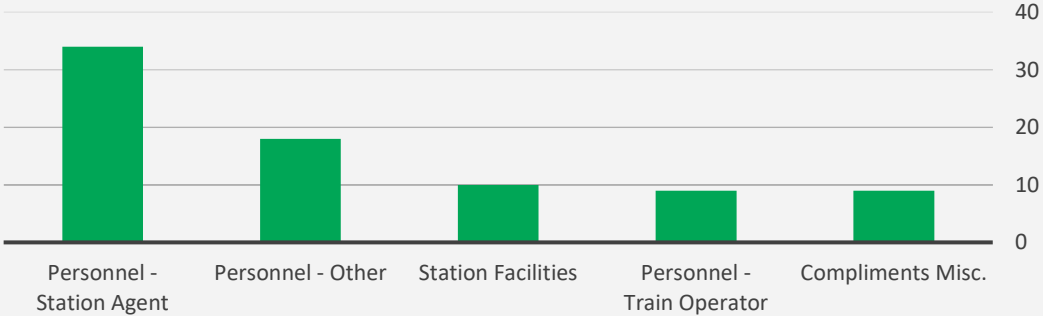
Customer Service – Cases by Type



Inquiry Cases – FY23 Q2



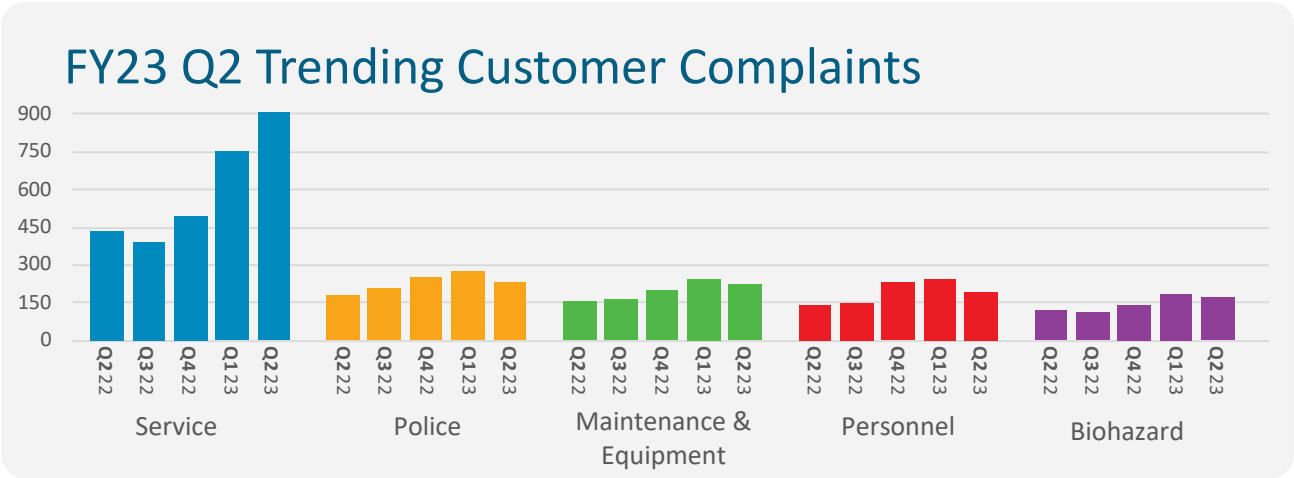
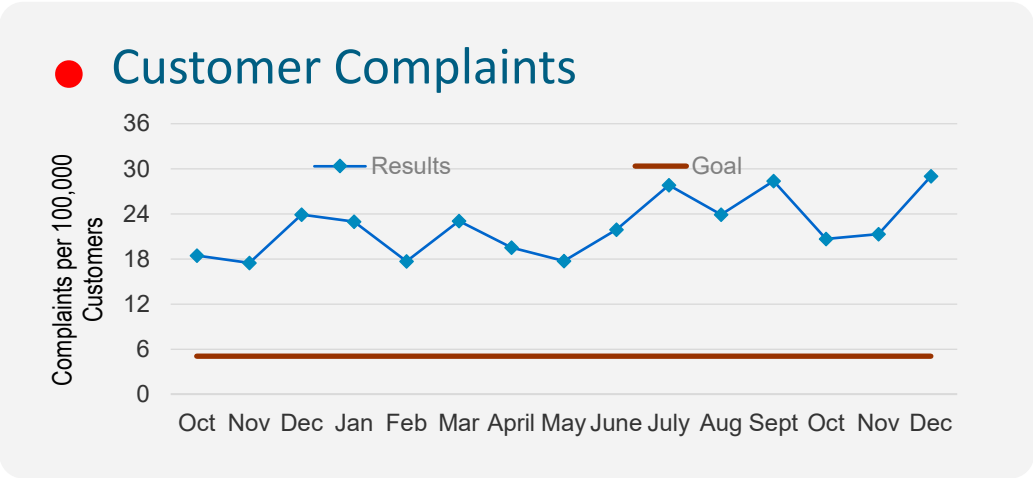
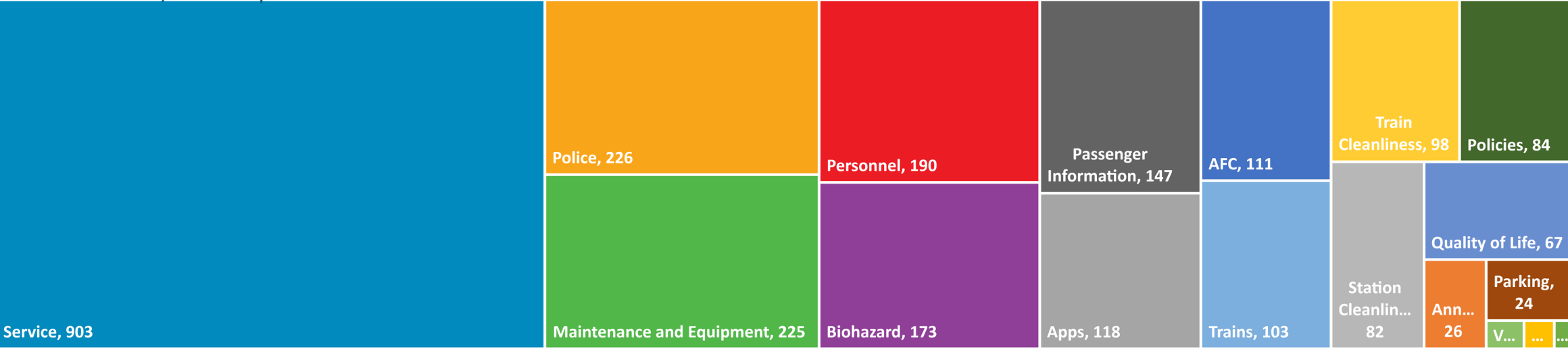
Compliment Cases – FY23 Q2



Customer Service – Complaint Cases



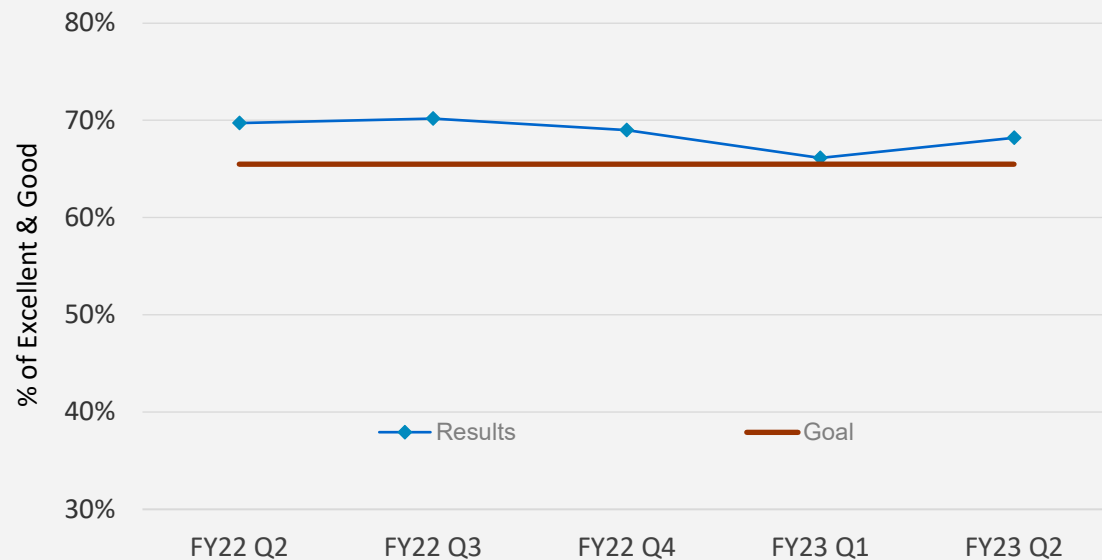
Breakdown of 2,588 Complaint Cases



Environment Outside Station

- Goal met

Customer Rating - Outside Station

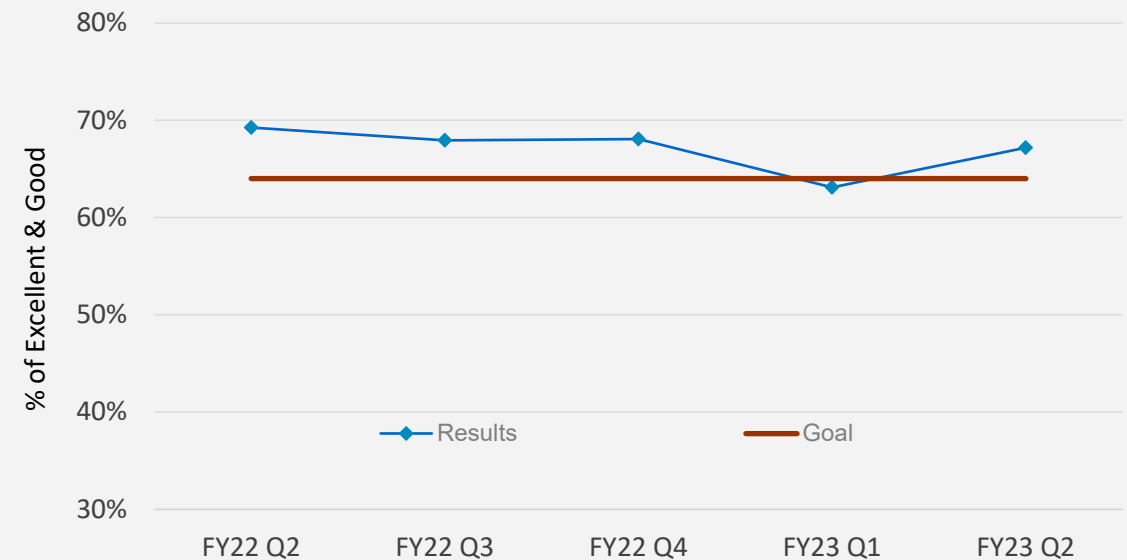


Environment Inside Station

- Goal met



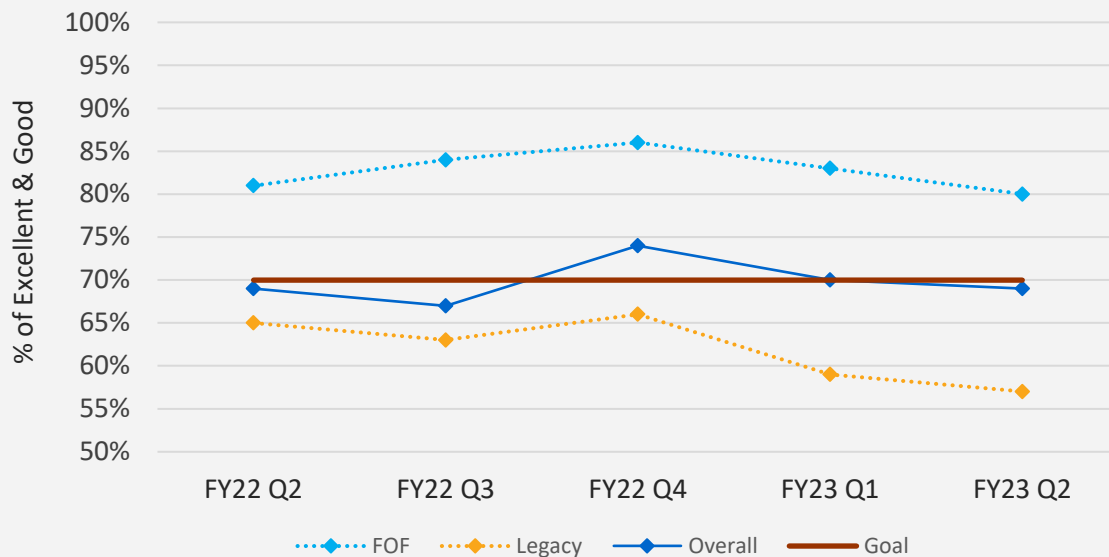
Customer Rating - Inside Station



Train Interior Cleanliness

- Rating decreased by 1.8% from Q1 FY23
- FOTF Intermediate Thorough Interior Cleaning started on November 22

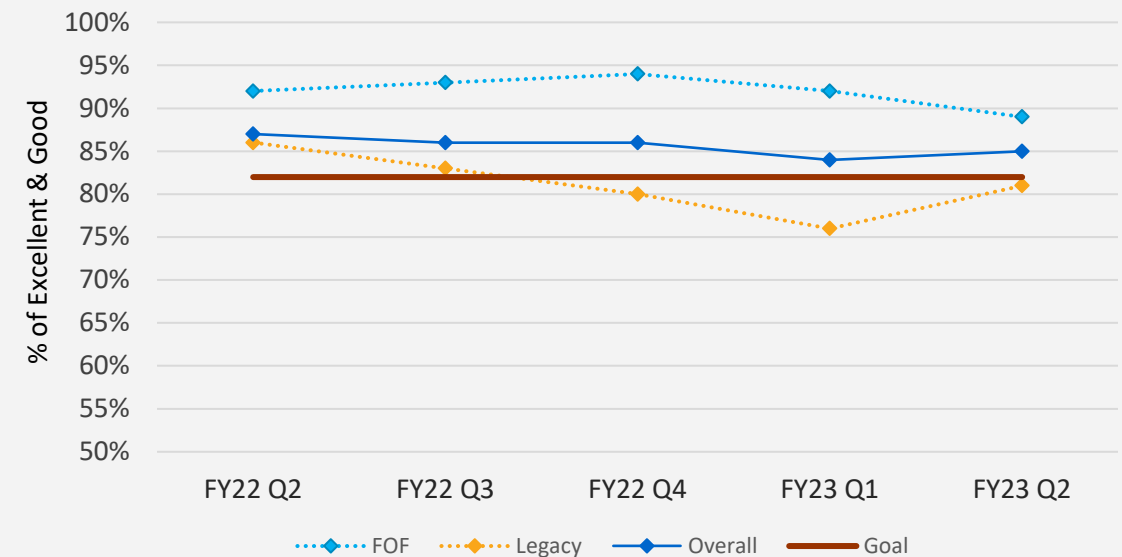
Customer Rating – Interior Cleanliness



Train Temperature

- Goal met

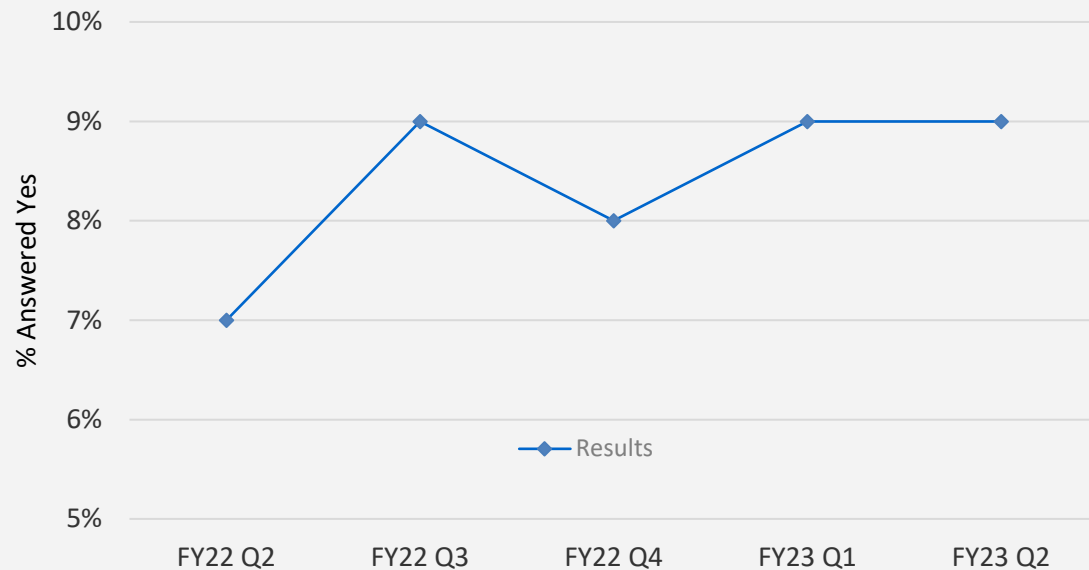
Customer Rating - Temperature



Gender Based Harassment

Have you experienced gender-based sexual harassment at BART in the last six months?

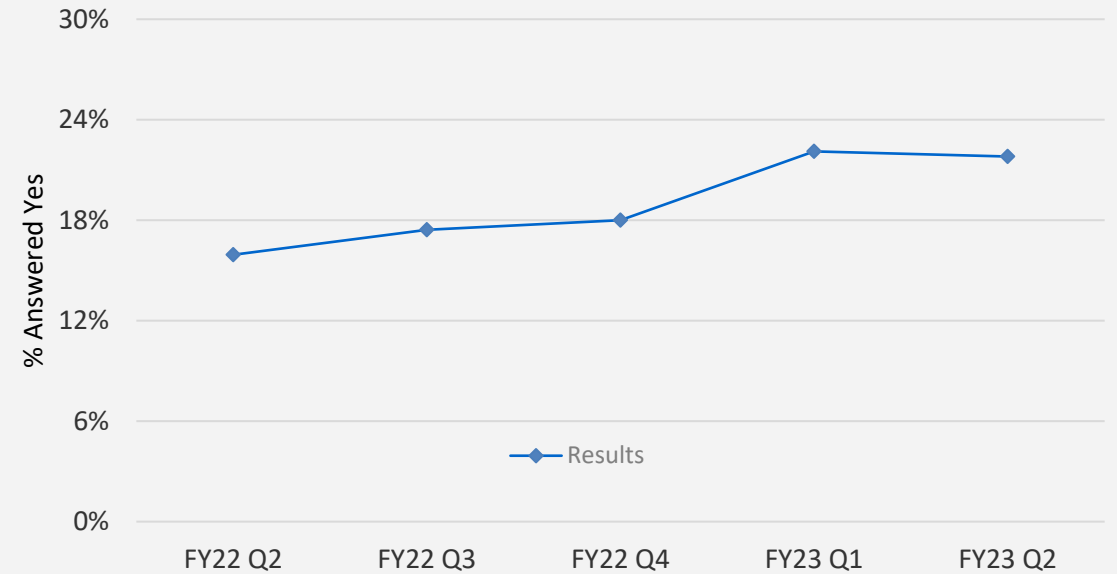
Gender Based Harassment



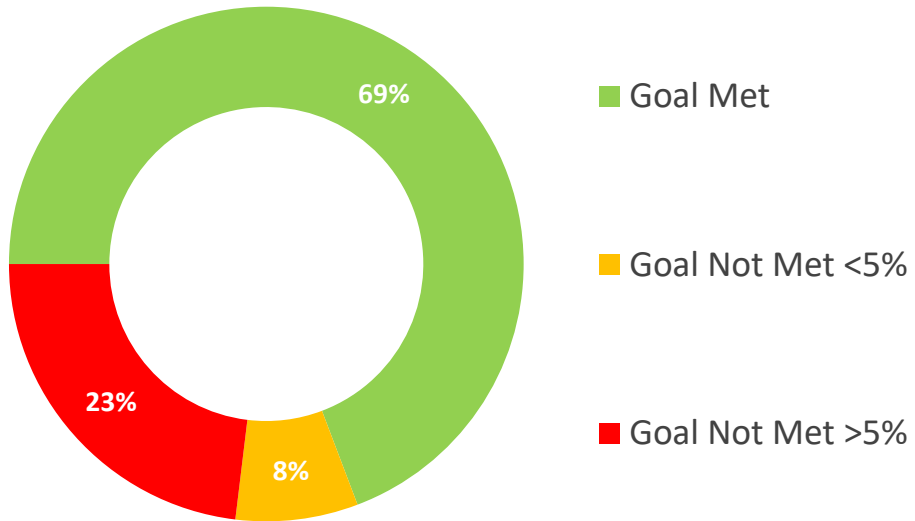
Fare Evasion

Did you see anyone enter or exit the Station without paying their fare today?

Fare Evasion



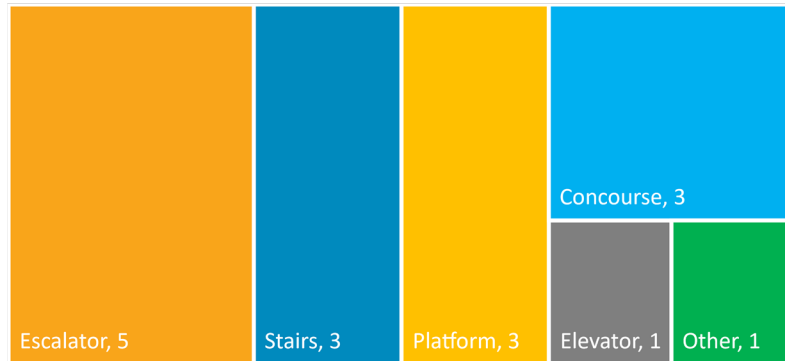
Summary – Safety and Security



Metric	FY23 Q2	Goal	Change from FY23 Q1	
<i>Safety</i>				
Vehicle Incidents/Million Patrons	0.90	0.6	(157.1%)	▼
Unscheduled Door Openings/Million Car Miles	0.18	0.2	5.3%	▲
Rule Violations Summary/Million Car Miles	0.18	0.25	(28.6%)	▼
Station Incidents/Million Patrons	1.44	2	17.7%	▲
OSHA-Recordable Injuries/Illnesses/Per OSHA	11.46	12	17.9%	▲
Lost Time Injuries/Illnesses/Per OSHA	6.77	6.5	14.5%	▲
<i>Security</i>				
Police Response Time/Emergency Incident (Minutes)	4.63	5	(15.82%)	▼
Bike Thefts	28	50	41.66%	▲
Auto Thefts/1,000 Parking Spaces	1.97	2.0	(93.87%)	▼
Auto Burglaries/1,000 Parking Spaces	2.08	3.5	(6.38%)	▼
BART Police Presence	9.0%	12%	(6.51%)	▼
Crimes Against Persons/Million Riders	9.52	2	(13.27%)	▼

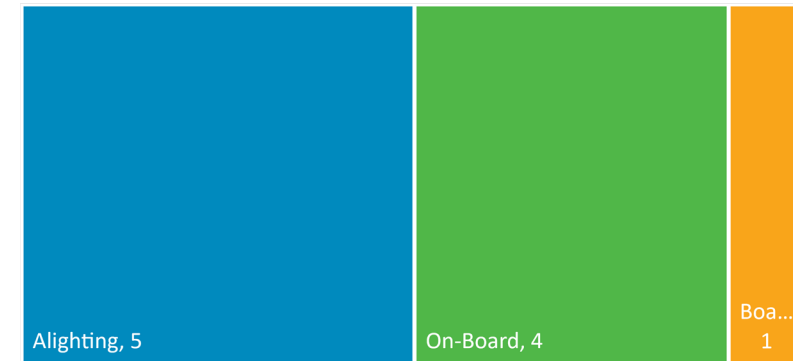
Station Incidents

Breakdown of 16 Station Incidents

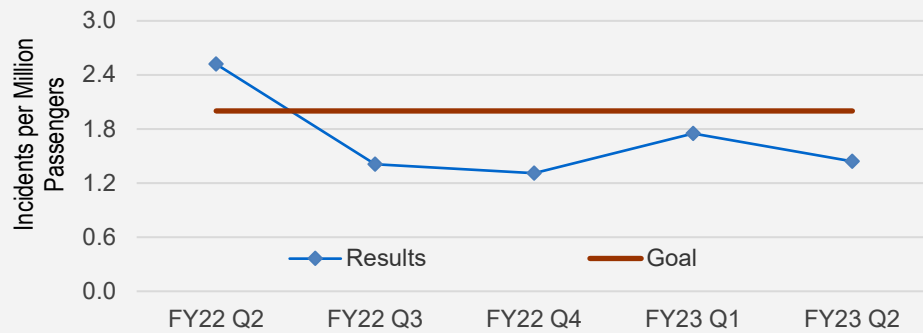


Vehicle Incidents

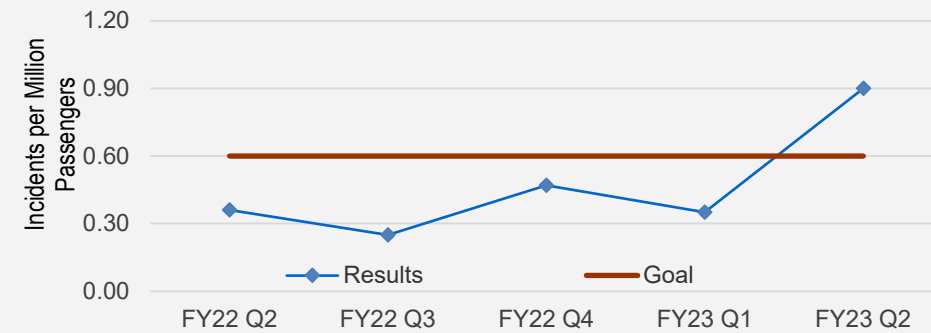
Breakdown of 10 Vehicle Incidents



Station Incidents

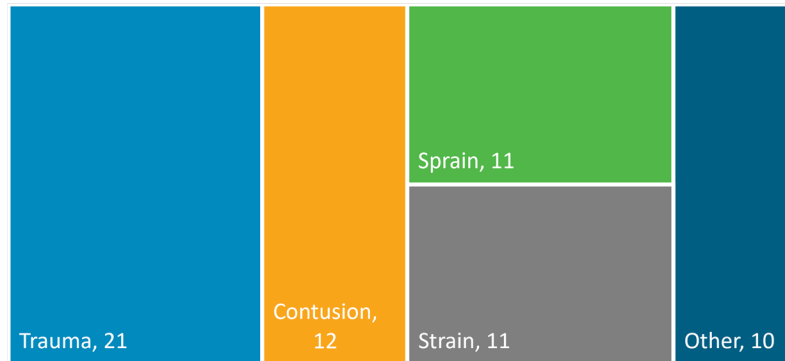


Vehicle Incidents



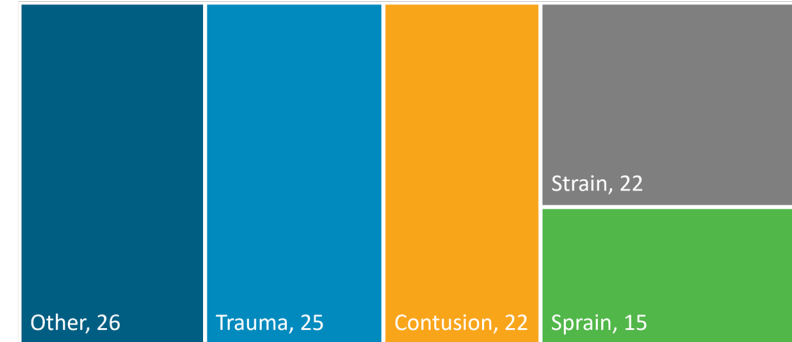
Lost Time due to Injuries

Breakdown of 65 Lost Time Cases

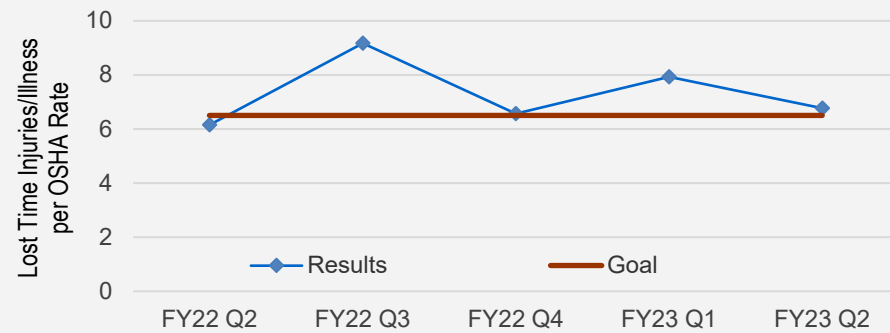


OSHA Recordable Injuries

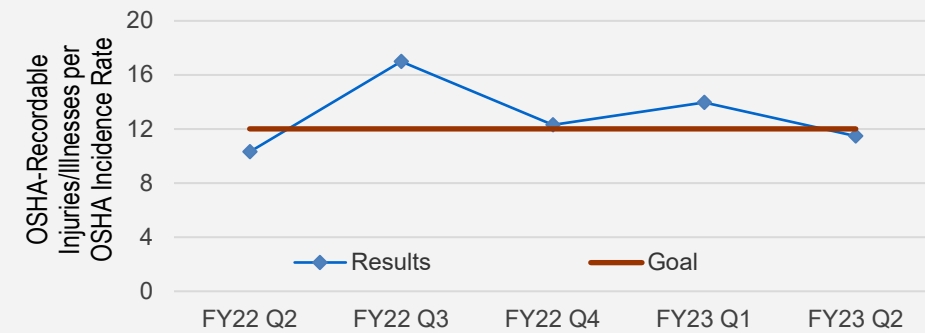
Breakdown of Recordable Injuries



● Lost Time due to Injuries



● OSHA Recordable Injuries

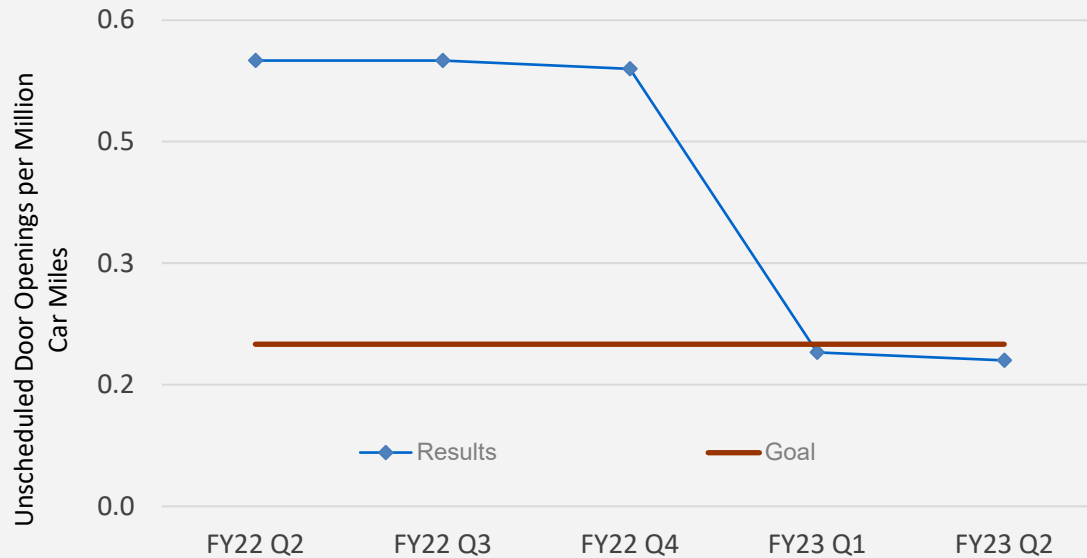


Safety – Procedure Violations

Unscheduled Door Openings

- October 2022 – 3 Unscheduled Openings
- November 2022 – 1 Unscheduled Opening

Unscheduled Door Openings

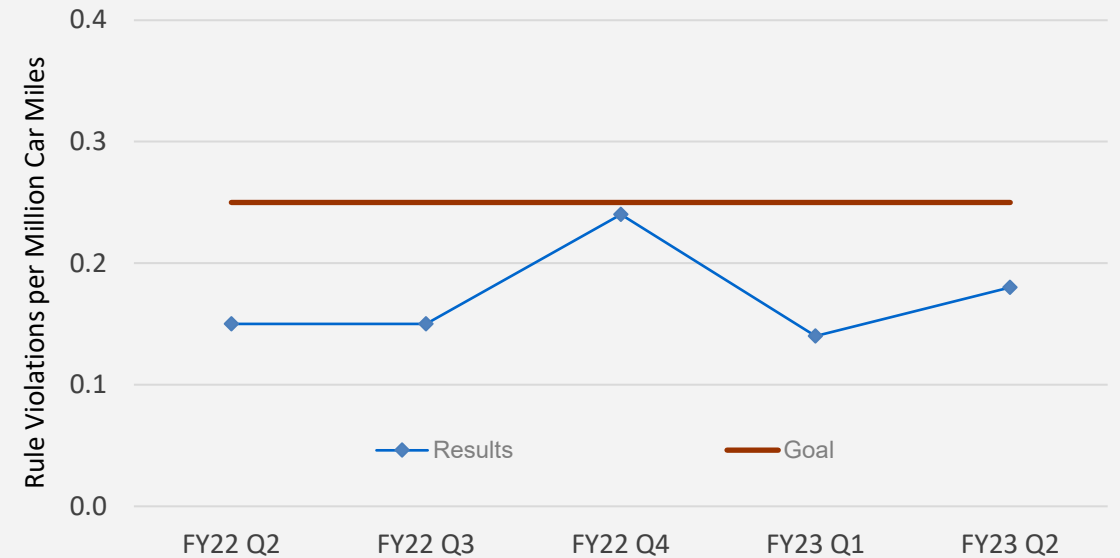


Rule Violations

- November 23rd – 1 Transportation Rule Violation
- December 26th – 1 Transportation Rule Violation
- December 30th – 1 Transportation Rule Violation



Rule Violations

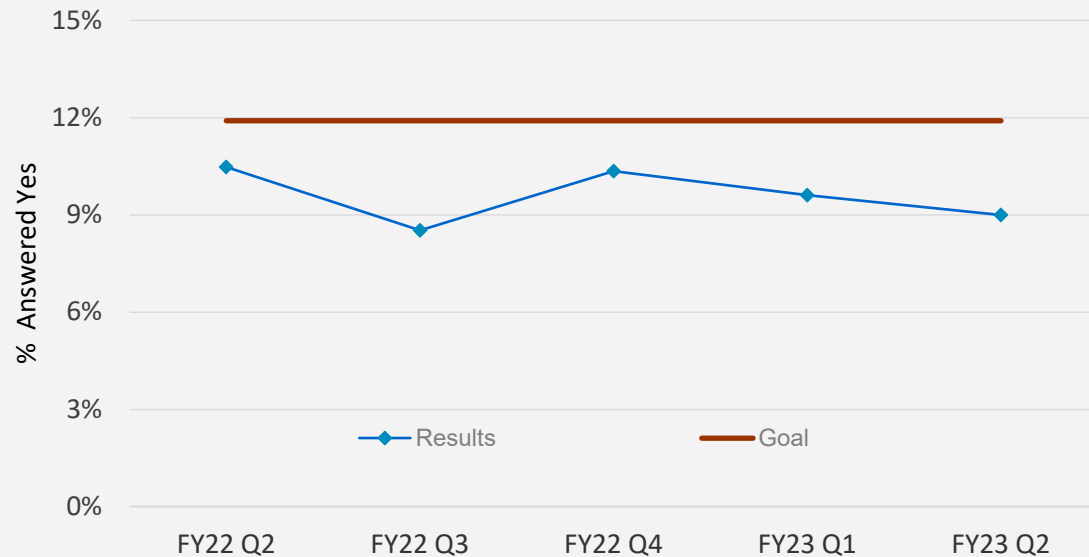


Police Presence

- Continued uniformed visibility, daytime and nighttime staffing at Civic Center
- 9,000 train checks recorded Q2 FY23

BART Police Presence

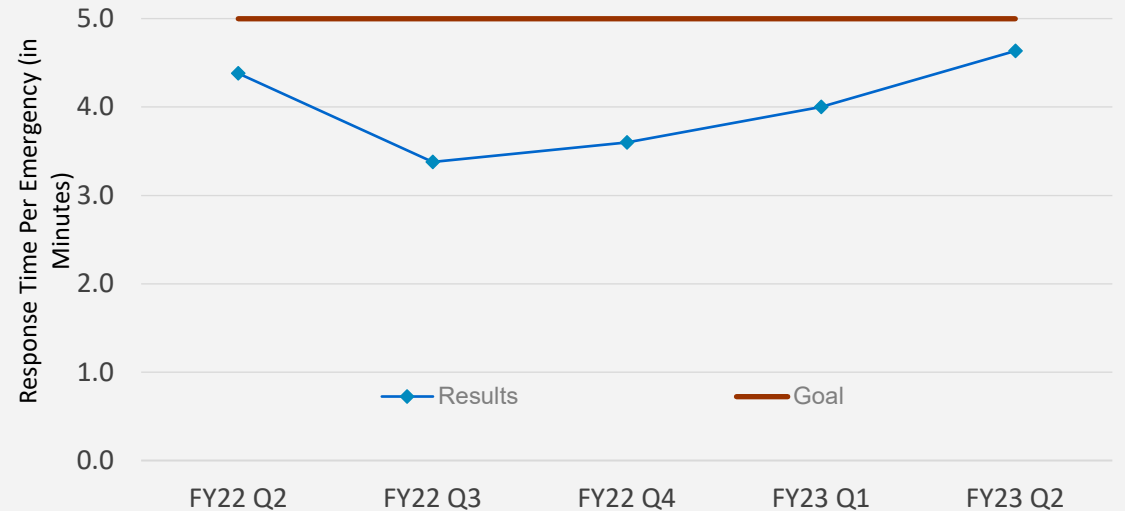
Did you see BART Police in the station today?
Did you see BART Police outside the station today?
Did you see BART Police on this train?



Police Response Time

- Goal met
- Expected to mirror ridership, increases/decreases influence number of calls
- December 2022 San Francisco and San Mateo county area Priority One calls were responded to within 2-3 minutes.

BART Police Response Time





Bike Theft

- Seeing slight increase to reports of locker-break in bicycle thefts
- Goal changed to less than 50 bike thefts in Q2 of FY23
- Goal met

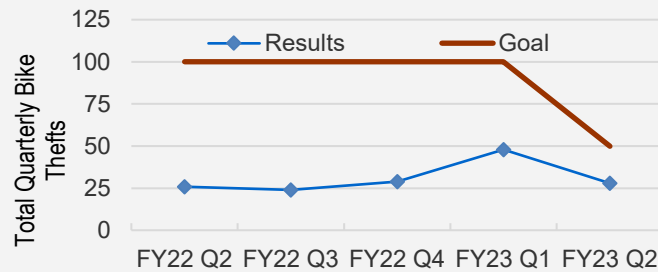
Auto Theft

- Goal changed to two auto thefts per 1,000 parking spaces in Q2 of FY23
- Goal met

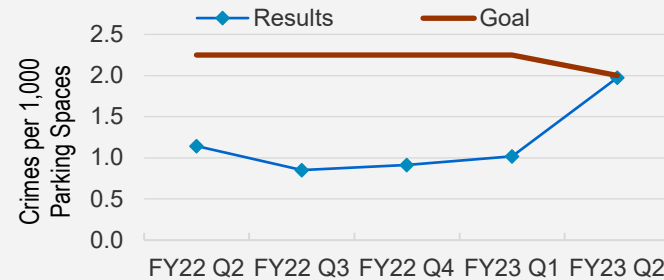
Auto Burglary

- Goal changed to 3.5 crimes per 1,000 parking spaces in Q2 of FY23
- Goal met

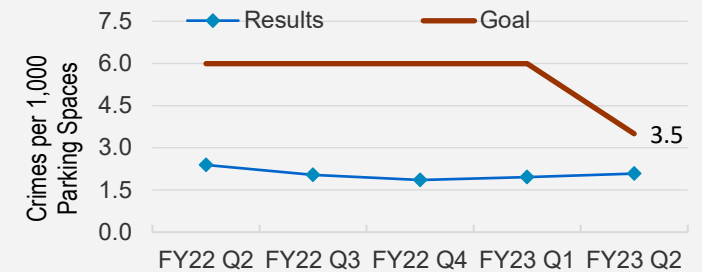
Bike Theft



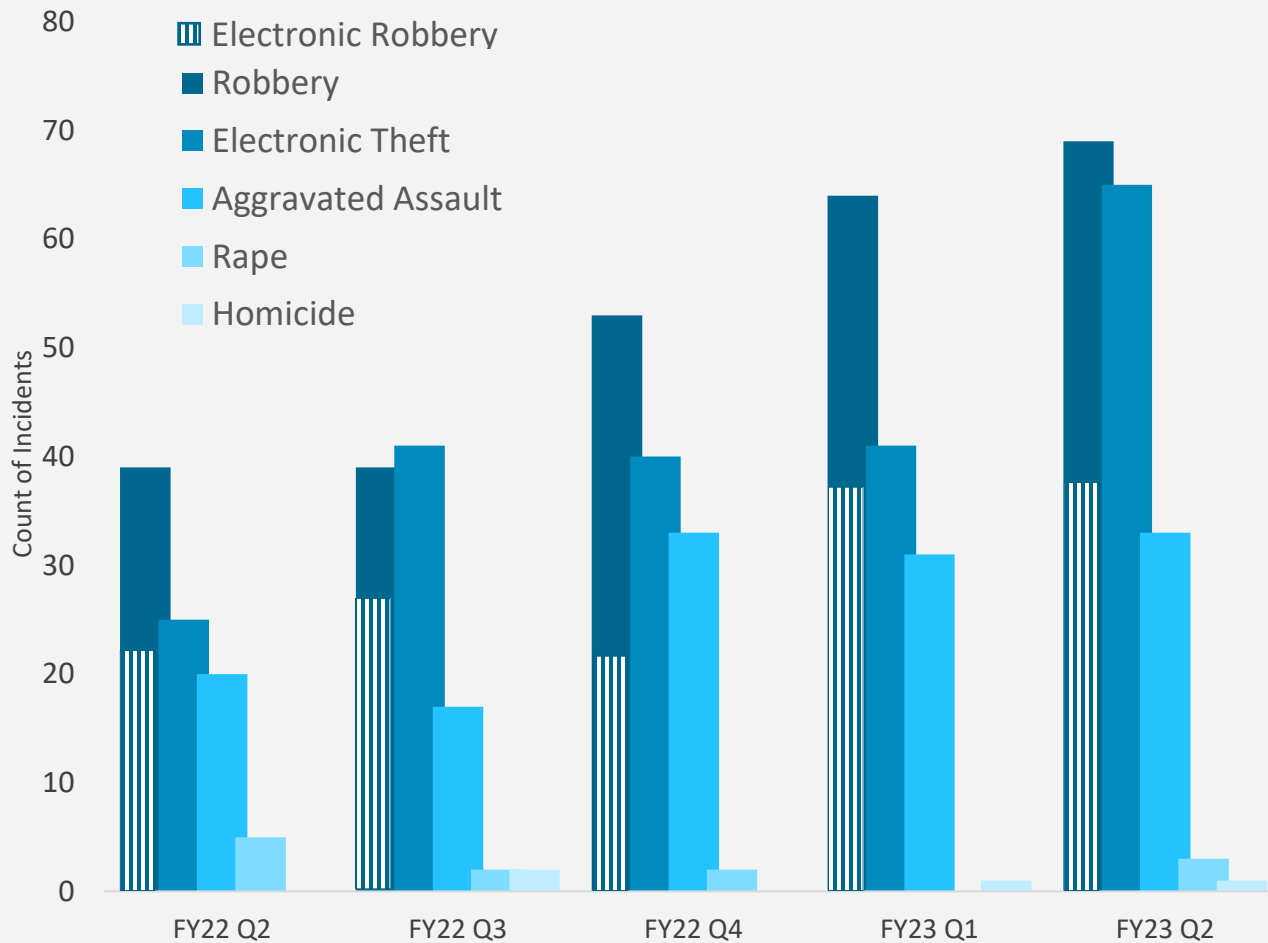
Auto Theft



Auto Burglary

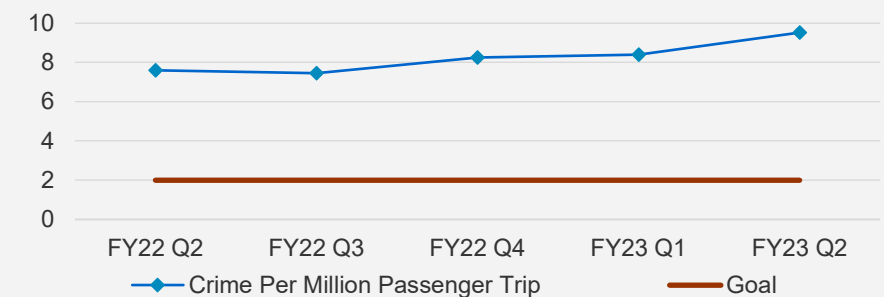


Crime – Against Persons

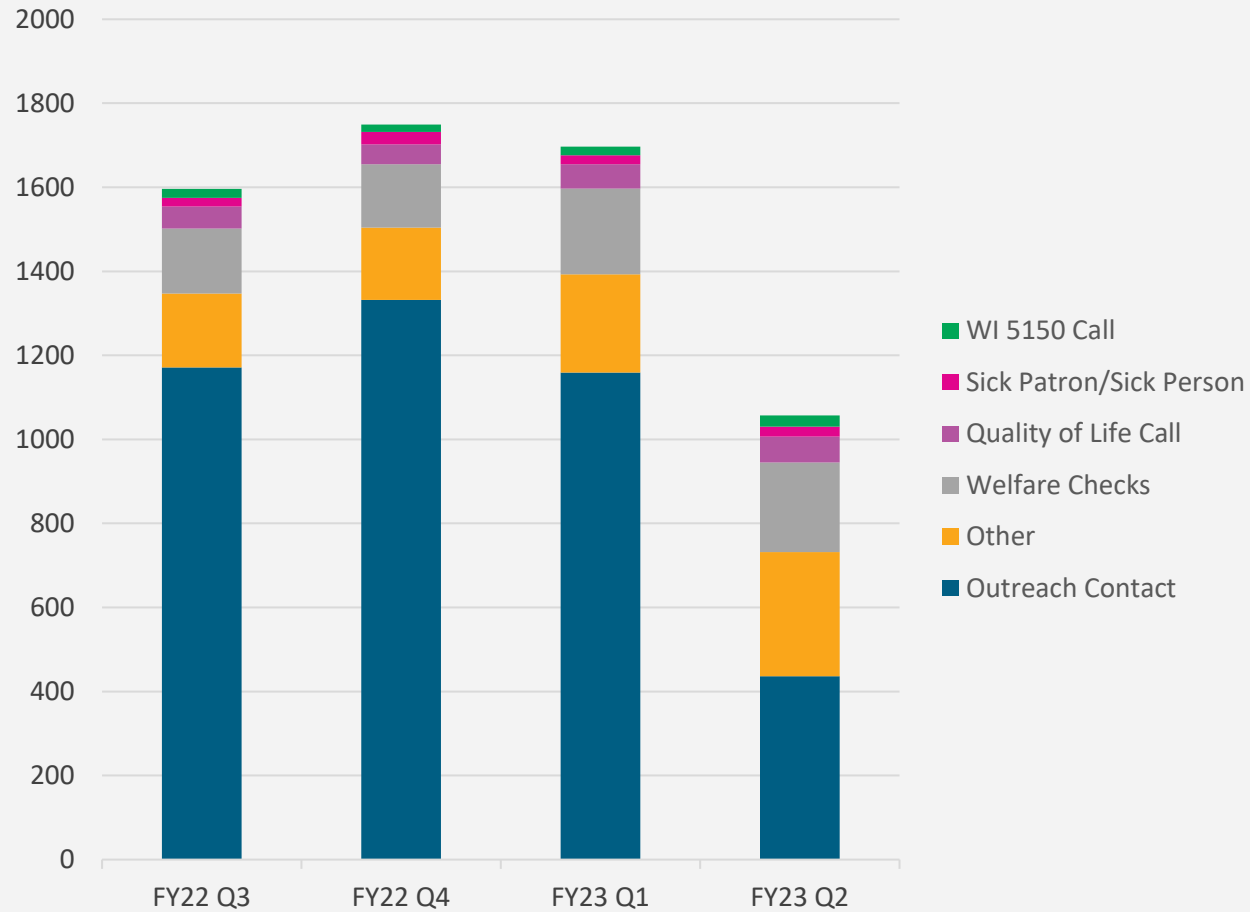


- Increased reports of electronic theft in past quarter

Crime Against Persons



Progressive Policing Contacts by Incident Type



Upcoming Progressive Policing Measures



Topic

Measure

1. Calls Diverted to PPC Bureau

- PPC Bureau diverts sworn officer calls

2. Services Offered & Connections Made

- Count and categories of referrals

3. Narcan deployments and doses

- Use and effectiveness of Narcan

4. Progressive Policing Team Deployments

- Coverage and staffing

5. Rider input – BART Watch App stats

- Monitor rider reports to BPD

QUESTIONS

