Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

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Board Report

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OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
NOVEMBER 15, 2018

SUBJECT: SMARTDRIVE PROGRAM UPDATE

RECOMMENDATION

RECEIVE oral report on SmartDrive program update to discuss the positive impact on safety, service and operator behavior as a result of the collaborative efforts between Safety/Risk Management, Operations and IT.

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November 15, 2018

Operations, Safety, and Customer Experience Committee

Introduction

- Incident-based digital video solution
- External and internal facing cameras, audio recording capabilities
- Proactive monitoring of safety-based triggers
- Video and operator performance data utilized to monitor driving behavior
- Provides video analysis, predictive analytics and performance review to help improve driving skills

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Introduction (Continued)

- Captures collisions and other unexpected events on video
- Allows investigators to identify safety issues that may lead to future accidents if not addressed
- Provides information for determining Root-Cause Analysis and liability
- Data analysis tool allows review of operator performance by type

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Program Overview

- Program inception date 2009 in Metro bus fleet, with installation for rail fleet currently in progress.

- Currently installed on:
  - All Metro Buses, including Contract Service Buses
  - Blue Line retrofit underway with new rail vehicles
  - Red & Purple Rail Vehicles
  - Gold Line installation currently in review process

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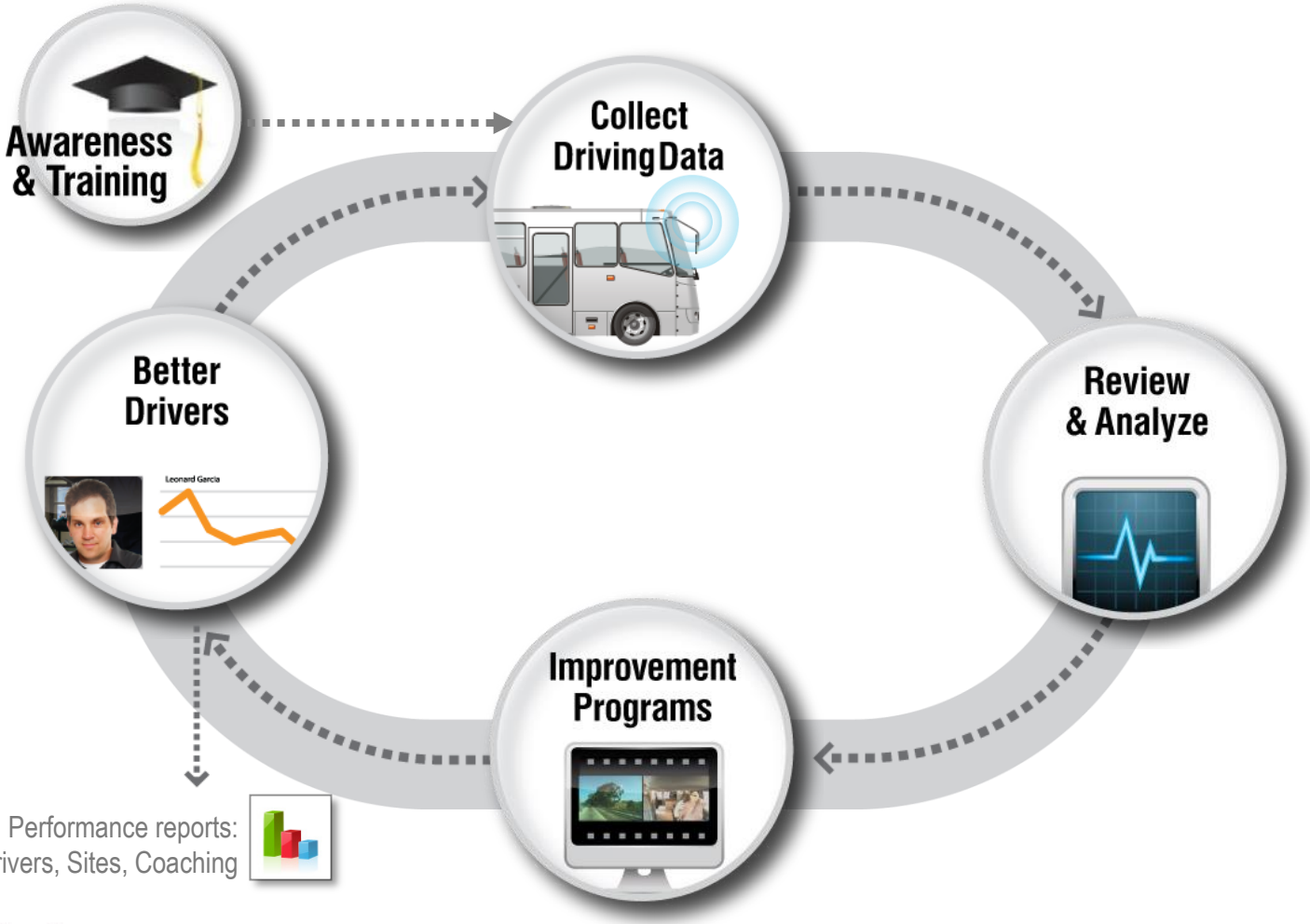
Program Workflow



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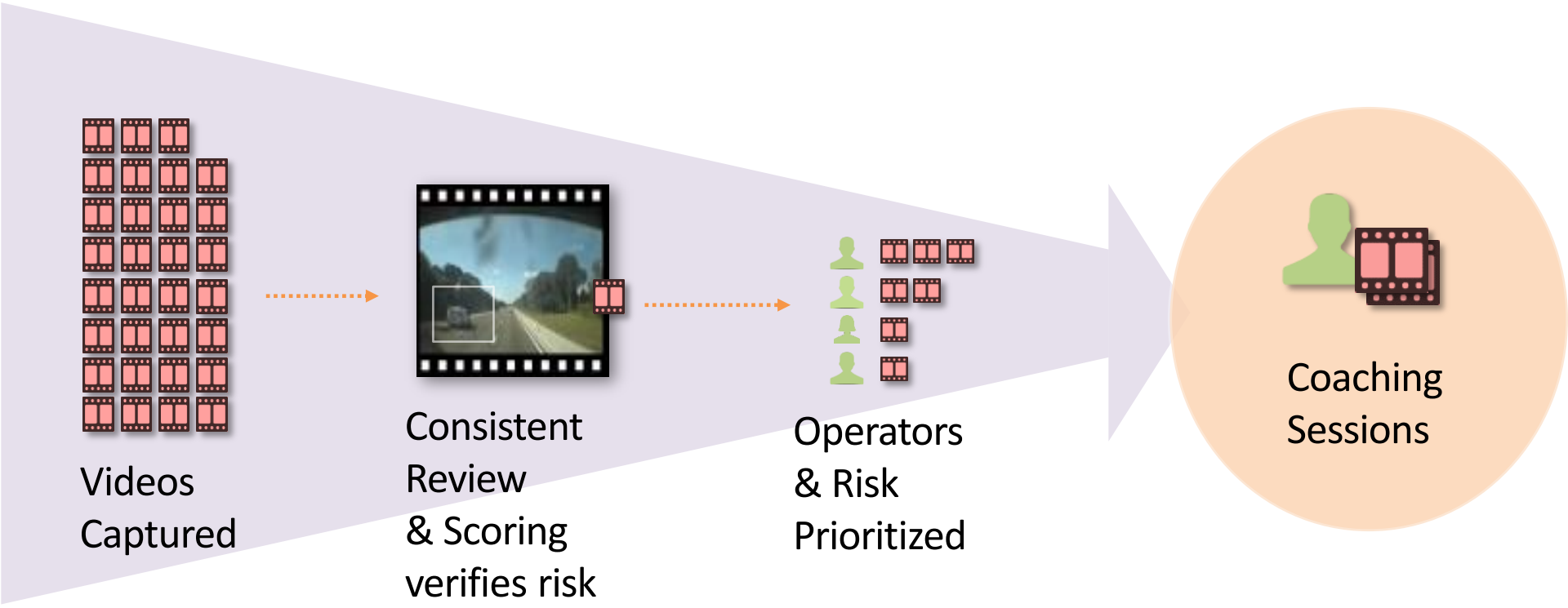
The SmartDrive Program

Focuses on the right operator, right skills, right priority



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Video Event Recording

SAFETY PRIORITIES

FLEET 1

- Speeding
- Unsafe Braking
- Mobile Phone
- Stopping
- Following to Close

SAFETY PRIORITIES

FLEET 2

- Speeding
- Passing Signal Bar
- Mobile Phone
- Paperwork
- Red over Red

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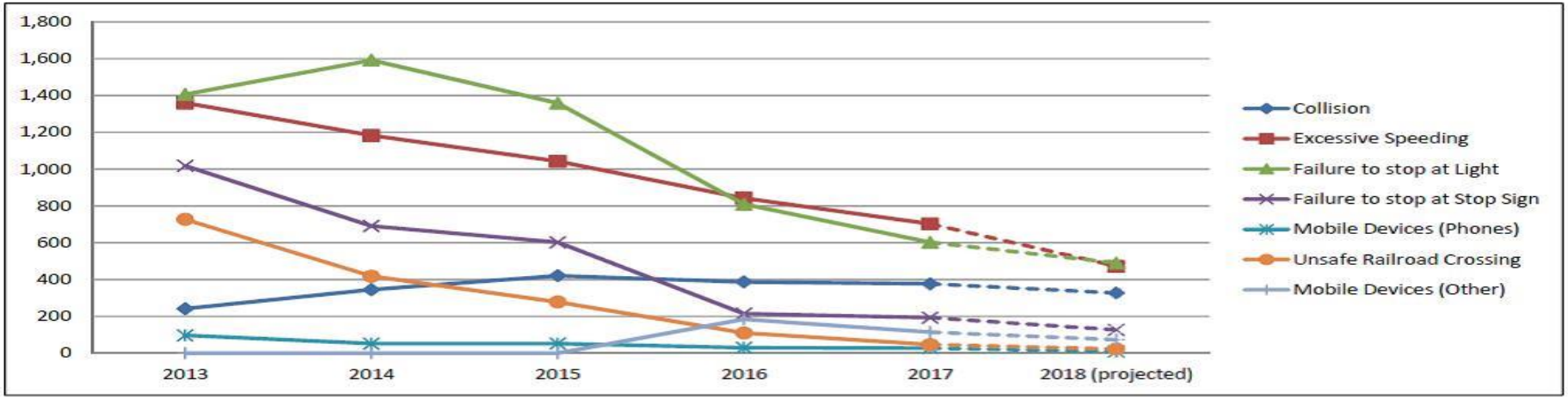
Safety Trends

Calendar Year 2013 - 2018(projected) Events by Type



Events	2013	2014	2015	2016	2017	2018 (projected)	2018 Q1-Q3 (actuals)
Collision	242	345	421	387	377	327	253
Excessive Speeding	1,359	1,183	1,042	842	703	473	347
Failure to stop at Light	1,406	1,592	1,358	809	602	490	390
Failure to stop at Stop Sign	1,018	691	602	215	193	126	104
Mobile Devices (Phones)	97	52	52	30	28	10	13
Unsafe Railroad Crossing	727	418	278	110	47	23	21
Mobile Devices (Other)	-	-	-	184	115	73	53
Total	4,849	4,281	3,753	2,577	2,065	1,521	1,181

*In 2016, the Mobile Device category was redefined. The Mobile Device (Other) category was created to consider any on board device (ATMS, Radio, Farebox, etc.) used by an operator while the vehicle is not at a complete stop. This change is reflected in Monthly and Annual Reports.

**CalYear 17 Q1, and CalYear 18 Q1-Q3 : WI-FI issues and Proof-of-Concept tests affected offloading on many devices

Merits

- Helps with the Safety Assurance aspect of System Safety Management (SMS), by providing the right data at the right time
- Increased visibility into validity of claims
- Supports regulatory reporting requirements
- Speed of access to data = faster collision review
- Substantially lower real payouts for bus liability claims since FY10

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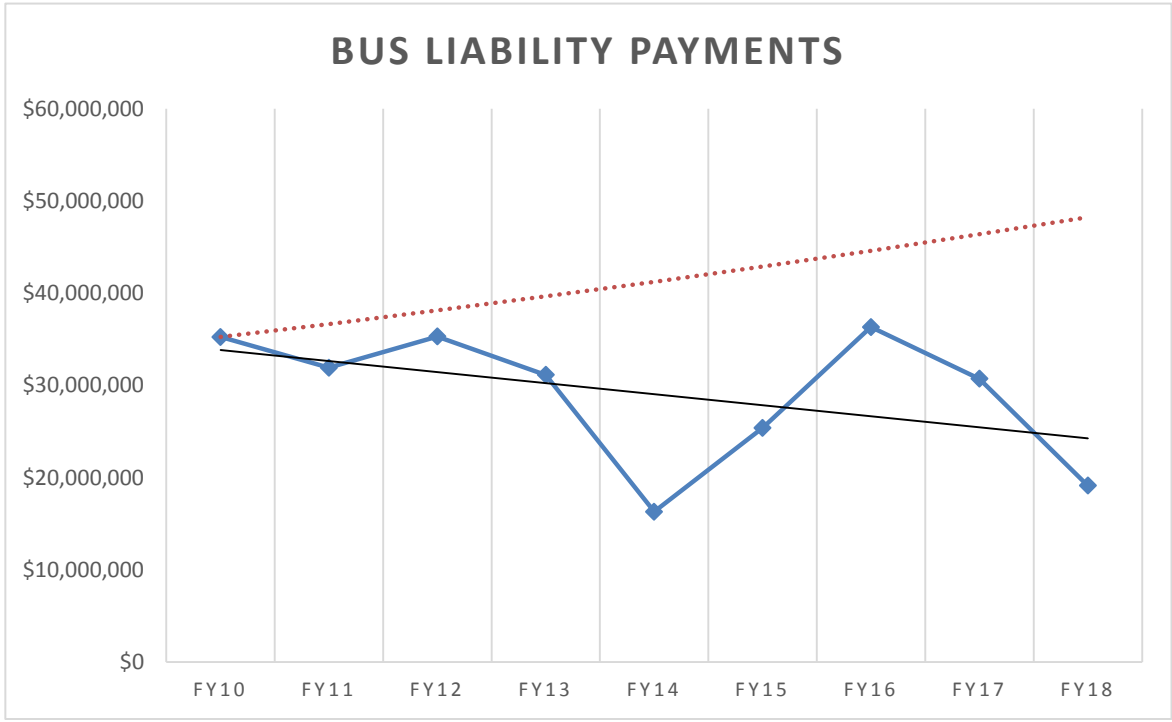
Bus Liability

BUS LIABILITY PAYMENTS	
FY10	$35,258,793
FY11	$31,926,123
FY12	$35,305,743
FY13	$31,150,778
FY14	$16,301,056
FY15	$25,394,643
FY16	$36,333,441
FY17	$30,717,957
FY18	$19,137,103



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Near Miss - Vehicle

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Near Miss – Grade Crossing

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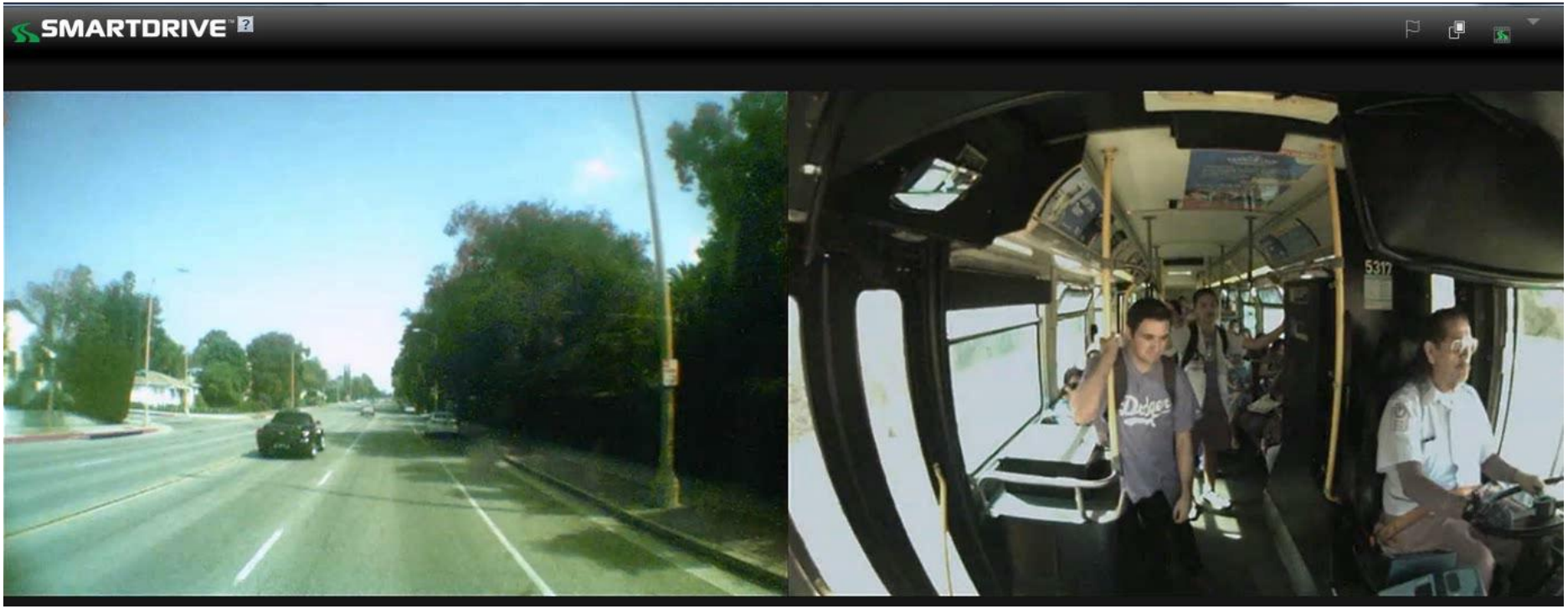
Near Miss – Bus/Pedestrian



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Near Miss – Rail/Pedestrian

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Bus: Quick Stats

- **SmartDrive Equipped Vehicles**
  - Bus 2,346
  - Contract Services 180

- **Event Volume**
  - Events Reviewed Last 12 Months
    - Bus 185,370
    - Contract Services 70,200
  - Collisions Captured Last 12 Months
    - Bus 410
    - Contract Services 77

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Rail: Quick Stats

- **SmartDrive Equipped Vehicles**
  - Red Line 104
  - Blue Line 7

- **Event Volume**
  - Events Reviewed Last 12 Months: 22,569
  - Collisions Captured Last 12 Months: 3

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