File No. 231145 **Committee Item No.** 3
Board Item No. 5

COMMITTEE/BOARD OF SUPERVISORS

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Committee: Rules Committee **Date** April 29, 2024

Board of Supervisors Meeting **Date** May 14, 2024

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Completed by: Victor Young **Date** April 25, 2024
Completed by: **Date**

[Administrative Code - Surveillance Technology Policy - Driver-Safety Video Analytics]

Ordinance approving a Surveillance Technology Policy for San Francisco Municipal Transportation Agency (SFMTA) use of Driver-Safety Video Analytics.

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in ~~*strikethrough italics Times New Roman font*~~.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. Background.

(a) Administrative Code Chapter 19(B) establishes requirements that City departments must follow before they may use or acquire new Surveillance Technology. Under Administrative Code Section 19B.2(a), a City department must obtain Board of Supervisors approval by ordinance of a Surveillance Technology Policy before: (1) seeking funds for Surveillance Technology; (2) acquiring or borrowing new Surveillance Technology; (3) using new or existing Surveillance Technology for a purpose, in a manner, or in a location not specified in a Board-approved Surveillance Technology ordinance; (4) entering into agreement with a non-City entity to acquire, share, or otherwise use Surveillance Technology; or (5) entering into an oral or written agreement under which a non-City entity or individual regularly provides the department with data or information acquired through the entity's use of Surveillance Technology.

(b) Under Administrative Code Section 19B.2(b), the Board of Supervisors may approve a Surveillance Technology Policy ordinance under Section 19B.2(a) only if: (1) the

department seeking Board approval first submits to the Committee on Information Technology (COIT) a Surveillance Impact Report for the Surveillance Technology to be acquired or used; (2) based on the Surveillance Impact Report, COIT develops a Surveillance Technology Policy for the Surveillance Technology to be acquired or used; and (3) at a public meeting at which COIT considers the Surveillance Technology Policy, COIT recommends that the Board adopt, adopt with modification, or decline to adopt the Surveillance Technology Policy for the Surveillance Technology to be acquired or used.

(c) Under Administrative Code Section 19B.4, the City policy is that the Board of Supervisors will approve a Surveillance Technology Policy ordinance only if it determines that the benefits that the Surveillance Technology ordinance authorizes outweigh its costs, that the Surveillance Technology Policy ordinance will safeguard civil liberties and civil rights, and that the uses and deployments of the Surveillance Technology under the ordinance will not be based upon discriminatory or viewpoint-based factors or have a disparate impact on any community or Protected Class.

Section 2. Surveillance Technology Policy Ordinance for SFMTA Use of Driver-Safety Video Analytics.

(a) Purpose. The San Francisco Municipal Transportation Agency ("SFMTA" or "the Department") seeks Board of Supervisors authorization under Section 19B.2(a) to use Driver-Safety Video Analytics software owned, leased, managed, or operated by the SFMTA as follows: (1) To identify collision dynamics, causation, and other factors; (2) To investigate passenger fall events and explore potential safety improvements; (3) To identify infrastructure (including but not limited to damaged or vandalized bus stop shelters, downed or hazardous trees, etc.) and signage issues (including but not limited to signs obscured by graffiti or by a low hanging or overgrown tree or shrub, etc.) as they relate to SFMTA transit service and safety; (4) To review customer complaints and look for potential ways to improve safety and

service in response to complaints; (5) To identify driver training issues, misconduct, or negligence; and (6) To commend drivers who demonstrate outstanding defensive driving skills.

(b) Surveillance Impact Report. The Department submitted to COIT a Surveillance Impact Report for Driver-Safety Video Analytics. A copy of the Department's Surveillance Impact Report for Driver-Safety Video Analytics is in Board File No. 231145, and is incorporated herein by reference.

(c) Public Hearings. Between January 27, 2023, and February 24, 2023, inclusive, COIT and its Privacy and Surveillance Advisory Board (PSAB) conducted two public hearings at which they considered the Surveillance Impact Report referenced in subsection (b) and developed a Surveillance Technology Policy for Department's use of Driver-Safety Video Analytics. A copy of the Surveillance Technology Policy for the SFMTA's use of the Driver-Safety Video Analytics ("SFMTA Driver-Safety Video Analytics Policy") is in Board File No. 231145, and is incorporated herein by reference.

(d) COIT Recommendation. On April 20, 2023, COIT voted to recommend the SFMTA's Driver-Safety Video Analytics Policy to the Board of Supervisors for approval.

(e) Findings. The Board of Supervisors hereby finds that the stated benefits of the Department's use of Driver-Safety Video Analytics outweigh the costs and risks of use of such Surveillance Technology; that the SFMTA's Driver-Safety Video Analytics Policy will safeguard civil liberties and civil rights; and that the uses and deployments of Driver-Safety Video Analytics, as set forth in the SFMTA's Driver-Safety Video Analytics Policy, will not be based upon discriminatory or viewpoint-based factors or have a disparate impact on any community or a protected class.

Section 3. Approval of Policy.

The Board of Supervisors hereby approves the SFMTA's Driver-Safety Video Analytics Policy.

Section 4. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

APPROVED AS TO FORM:
DAVID CHIU, City Attorney

By: /s/
ISIDRO ALARCON JIMENEZ
Deputy City Attorney

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FILE NO. 231145

LEGISLATIVE DIGEST

[Administrative Code - Surveillance Technology Policy - Driver-Safety Video Analytics]

Ordinance approving Surveillance Technology Policy for San Francisco Municipal Transportation Agency (SFMTA) use of Driver-Safety Video Analytics.

Background Information

Under Administrative Code Section 19B.2(b), the San Francisco Municipal Transportation Agency ("SFMTA") seeks Board of Supervisors approval of a Surveillance Technology Policy regarding the use of driver-safety video analytics technology. The proposed Surveillance Technology Policy would authorize the SFMTA to use the technology to: (1) identify collision dynamics, causation, and other factors; (2) investigate passenger fall events and explore potential safety improvements; (3) identify infrastructure (including but not limited to damaged or vandalized bus stop shelters, downed or hazardous trees, etc.) and signage issues (including but not limited to signs obscured by graffiti or by a low hanging or overgrown tree or shrub, etc.) as they relate to SFMTA transit service and safety; (4) review customer complaints and look for potential ways to improve safety and service in response to complaints; (5) identify driver training issues, misconduct, or negligence; and (6) commend drivers who demonstrate outstanding defensive driving skills.

Between January 27, 2023, and February 24, 2023, inclusive, the Committee on Information Technology ("COIT") and its Privacy and Surveillance Advisory Board conducted two public hearings at which they considered the Surveillance Impact Report for the SFMTA's use of driver-safety video analytics technology and developed a Surveillance Technology Policy.

On April 20, 2023, COIT voted to recommend that the Board of Supervisors adopt the SFMTA's Surveillance Technology Policy for the use of driver-safety video analytics technology.

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October 27, 2023

Angela Calvillo, Clerk of the Board
Board of Supervisors
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, CA 94102-4689

Re: Approval of the Surveillance Technology Policy for the SFMTA Use of Driver-Safety Video Analytics.

Dear Ms. Calvillo:

Attached please find a proposed Ordinance and Legislative Digest for Board of Supervisors approval.

The SFMTA seeks Board of Supervisors authorization under Section 19B.2(a) of the Administrative Code to use Driver-Safety Video Analytics owned, leased, managed, or operated by the SFMTA.

On April 20, 2023, the Committee on Information Technology (COIT) voted to recommend that the Board of Supervisors adopt SFMTA Surveillance Technology Policy for the use of Driver-Safety Video Analytics.

The following is a list of accompanying documents:

- Ordinance and Legislative Digest (Word format and PDF signature)
- Supporting documents
  - COIT Recommendation Memo
  - Driver Safety Video Analytics Policy
  - Driver Safety Video Analytics Impact Report.
- CEQA documentation
- MTAB Resolution to be submitted upon approval at the 12/5/23 MTAB meeting.

Please contact SFMTA's Local Legislative Affairs Program Manager, Janet Martinsen at 415-994-3143 or at janet.martinsen@sfmta.com to answer questions you may have about this submission.

Sincerely,

Jeffrey Tumlin
Director of Transportation

Surveillance Impact Report

Driver-Safety Video Analytics
Municipal Transportation Agency

As required by San Francisco Administrative Code, Section 19B, departments must submit a Surveillance Impact Report for each surveillance technology to the Committee on Information Technology ("COIT") and the Board of Supervisors.

This Surveillance Impact Report describes the benefits, costs, and potential impacts associated with the Department's use of Driver-Safety Video Analytics, (hereinafter referred to as "surveillance technology").

PURPOSE OF THE TECHNOLOGY

The Department's mission is to connect San Francisco through a safe, equitable, and sustainable transportation system.

The surveillance technology supports the Department's mission and provides important operational value in the following ways:

By enhancing Department's efforts to identify local transit and regional transportation safety issues, compliance with training standards, rules, and vehicle code laws, and assist in the investigation to determine causation for collisions and passenger falls.

The Department shall use the surveillance technology only for the following authorized purposes:

Authorized Use(s):

Review video and audio recordings triggered by events to identify their likely causes, including specific behaviors by transit operators.

To identify collision dynamics, causation, and other factors.

To investigate passenger fall events and explore potential safety improvements.

To identify infrastructure (damaged or vandalized bus stop shelters, downed or hazardous trees, etc.) and signage issues (signs obscured by graffiti or by a low hanging or overgrown tree or shrub, etc.) as they relate to MTA transit service and safety.

To review customer complaints and look for potential ways to improve safety and service.

To identify driver training issues, misconduct, or negligence.

To commend drivers who demonstrate outstanding defensive driving skills

Prohibited use cases include any uses not stated in the Authorized Use Case section.

Surveillance Oversight Review Dates
PSAB Review: 01/27/2023 ("Recommended: 02/24/2023")
COIT Review: TBD (list all dates at COIT, and write "Recommended: MM/DD/202X" for rec date)
Board of Supervisors Approval: TBD

Departments may use information collected from surveillance technology only for legally authorized purposes, and may not use that information to unlawfully discriminate against people based on race, ethnicity, political opinions, religious or philosophical beliefs, trade union membership, gender, gender identity, disability status, sexual orientation or activity, or genetic and/or biometric data. Additionally, departments may not use automated systems to scan footage and identify individuals based on any of the categories listed in the preceding sentence.

Surveillance technology may be deployed in the following locations, based on use case(s):

Inside every revenue vehicle (rubber-tired and rail vehicle) in the department's fleet, including reserve coaches and training coaches.

Description of Technology

This technology uses video and audio event recorders together with proprietary, vendor-owned algorithms to record and identify certain behavior-based safety events, such as operator looking at cell phone while driving.
The event recorders are triggered by excess g-forces (e.g., collision impacts, abrupt braking, excessive turning, etc.) and capture eight seconds of video/audio prior to the trigger, and four seconds after the trigger, for a total of 12 seconds of video and audio. Once recorded, the proprietary algorithm categorizes the event into one of several predefined safety events, which are then reviewed by the vendor for accuracy. If accurate, the vendor notifies and sends the recording to the department for further review.

Third-Party Vendor Access to Data

All data collected or processed by the surveillance technology is handled and stored on an ongoing basis by Lytx, the vendor that furnishes the Department with the surveillance technology. Specifically, Lytx and its sub-contractors handle and store the data to ensure the Department may continue to use the surveillance technology. All video and audio data are stored and encrypted on SD cards for the data stream of the DVR.

An example of such frequency is the following: For the 6-month period of August 2022 thru January 2023, the department's rubber-tire fleet of 845 Drivecam-Equipped busses (includes trolley-coaches) generated a combined total of 8,321 Drivecam events. Of that number:

- 883 (10.6%) were assessed by Lytx and returned to the department for further action.
- 47 (0.57%) were confirmed traffic collisions but were not assessed by Lytx (as per our contract). Lynx provides, to the department, the factual dynamic data associated with each collision, such as location, date/time, speed of the bus, type of trigger, and g-forces of turns.
- 21 (0.25%) were confirmed passenger falls but were not assessed by Lytx. As with collisions, dynamic data was provided.
- 991 (12%) were identified as "Near-Collision Unavoidable" by Lytx, but not assessed. All dynamic data was provided to the department.

Of the total 8,321 Drivecam events, only 1,942 (24%) events required a follow up action by the department (i.e., training, discipline, safety analysis, infrastructure analysis, driver commendation).

IMPACT ASSESSMENT

The impact assessment addresses the conditions for surveillance technology approval, as outlined by the Standards of Approval in San Francisco Administrative Code, Section 19B:

1. The benefits of the surveillance technology outweigh the costs.
2. The Department's Policy safeguards civil liberties and civil rights.
3. The uses and deployments of the surveillance technology are not based upon discriminatory or viewpoint-based factors and do not have a disparate impact on any community or Protected Class.

The Department's use of the surveillance technology is intended to support and benefit the residents of San Francisco while minimizing and mitigating all costs and potential civil rights and liberties impacts of residents.

A. Benefits

The Department's use of the surveillance technology has the following benefits for the residents of the City and County of San Francisco:

	Benefit	Description
▪	Education	
▪	Community Development	
▪	Health	
▪	Environment	
▪	Criminal Justice	
▪	Jobs	
▪	Housing	
X	Other: Public Safety	The technology allows the department to identify and target for training opportunities specific driver behaviors that trigger safety events so it can minimize these behaviors in the future and improve public safety.

B. Civil Rights Impacts and Safeguards

The Department has considered the potential impacts and has identified the technical, administrative, and physical protections as mitigating measures:

All persons within the department strive to comply with the policy, or defer to more knowledgeable managers for instruction. The Department has considered the potential impacts and has identified the following technical, administrative, and physical protections as mitigating measures:

- Dignity Loss (e.g., embarrassment and emotional distress). Vehicle Operator(s) and riders may experience dignity loss if the surveillance technology records videos of them committing acts

or experiencing situations that are embarrassing or distressing for them (e.g., altercations between Operator(s) and riders, criminal acts).
    - Administrative safeguards make this impact minimal because only designated Department and vendor staff have access to view video files, which occurs only under an authorized business case. Video files retained by the Department and vendor are generally not available to the public.
- Loss of Autonomy (e.g., loss of control over decisions on how personal information is used or processed). Vehicle Operators and riders may experience loss of autonomy if video recordings of their likeness are used for purposes other than authorized use cases or made generally available to the public.
    - Administrative safeguards make this impact minimal because only designated Department and vendor staff have access to view video files, which occurs only under an authorized business case. Video files retained by the Department and vendor are generally not available to the public.
- Loss of Liberty (i.e., improper exposure to arrest or detainment due to incomplete or inaccurate data). Vehicle Operators and riders may experience loss of liberty if law enforcement misidentifies them in connection with a crime recorded by the surveillance technology.
    - Administrative safeguards make this impact unlikely because law enforcement verify the identities of drivers and riders using data from other sources (e.g., company records, state data bases, etc.) before they take probable cause action.
- Physical Harm (e.g., physical harm or death). Vehicle Operators and riders may experience physical if they are identified, tracked, and physically attacked based on data collected by the surveillance technology.
    - Technical measures make this impact unlikely because the surveillance technology does not record personally identifiable information from Operator or passengers that (other than law enforcement) could reasonably be used to identity individuals or their locations (e.g., names, addresses, etc.).
- Loss of Trust (e.g., breach of implicit or explicit expectations or agreements about the processing of data, or failure to meet subjects' expectation of privacy for information collected). Vehicle Operators and riders may experience loss of autonomy if video recordings of their likeness are used for purposed other than authorized use cases or made generally available to the public.
    - Administrative safeguards make this impact minimal because only designated Department staff and vendor have access to view video files, which occurs only under an authorized business case. Video files retained by the Department and vendor are generally not available to the public.
- Overall
    - Administrative Safeguards: the Department provides access to password protected video and audio data from the surveillance technology only to authorized staff.

- Technical Safeguards: only authorized staff has access to video and is password protected.
- Physical Safeguards: Department facilities and offices where Driver-Safety Video Analytics is accessed are closed to public access. Entry to these areas requires coded swipe cards, and all digital devices require the authorized user's name and passwords.
- The technology provider for the rubber tires, Lytx, receives recorded transmitted video from the Video Event Recorder (VER) to Lytx's backend over an encrypted connection, and upon arrival to their Lytx cloud, video clips are encrypted at rest. Encryption at rest is a way to prevent the attacker from accessing data when it is saved in the disk/hard-drive. Moreover, Lytx has been asked not to view the live video feed from the DriveCam cameras, if system allows live viewing. The on-board recorder stores audio/video data on the SD card which is encrypted with 128-bit AES at rest. Lytx's primary production servers are located in two geographically separated N-tier (redundancy). Each datacenter is SSAE-18 (Statement on Standards for Attestation Engagements 18 – based on industry standards) certified, and provide 24/7 physical security monitoring, including biometric access controls. These datacenters are SOC2 Type 2 (Organization Control) attestation related to security, availability, and confidentiality. A SOC 2 Type 2 report is an internal controls report capturing how a company safeguards customer data and how well those controls are operating. Companies that use cloud service providers use SOC 2 reports to assess and address the risks associated with third party technology services.

C. Fiscal Analysis of Costs and Benefits

The Department's use of the surveillance technology yields the following business and operations benefits:

	Benefit	Description
▪	Financial Savings	
▪	Time Savings	
X	Staff Safety	Video enhances the safety and training procedures, identifies engineering needs, and identifies exemplary employees without the need for hundreds of additional personnel that it would require to gain the same insights that the technology provides
X	Data Quality	It enhances the safety and training procedures\, identifies engineering needs\, and identifies exemplary employees without the need for hundreds of additional personnel that it would require to gain the same insights that the technology provides.

X	Other	The technology allows the department to identify and target for training opportunities specific driver behaviors that trigger safety events so it can minimize these behaviors in the future and improve operator performance.

The fiscal cost, such as initial purchase, personnel and other ongoing costs, include:

Number of Budgeted FTE (new & existing) & Classification	1 FTE 9172 Manager	
	Annual Cost	***One-Time Cost***
Total Salary & Fringe	$86,200/year	FY23 loaded salary for 9172: $86,200/year
Software	Included in monthly cost for Rubber Tire. Unknown for LRVs as the Department is currently negotiating contract for LRV.	Software service solution. Department uses Lytx portal.
Hardware/Equipment	Department does not pay annual cost. Hardware is covered by warranty.	Hardware was waived. Extended wiring harnesses and one time install cost. $34,560. LRV cost not yet determined.
Professional Services	This is included in monthly cost and LRV are unknown.	This is a SaaS set up and there in no one time cost.
Training	$0 for Lytx and LRV is unknown.	There is no cost. LRV as well.
Other	N/A	N/A
Total Cost	***$86,200.00***	***$86,200.00***

The Department funds its use and maintenance of the surveillance technology through General Budget.

COMPARISON TO OTHER JURISDICTIONS

The surveillance technology is currently utilized by other governmental entities for similar purposes.

Other government entities have used the surveillance technology in the following way: Several state and local governments across the country use DriveCam technology. The City of Mobile of Alabama uses it on transit, public works, and fire truck fleets. The Orange County, Florida, government has a fleet of 2,200 vehicles (transit buses, shuttles, and fire trucks) with Drivecam installed and in West Texas, the Concho Valley Transit District serves a 12-county area with a fleet of buses and shuttles - all with Drivecam installed. All 3 of these government entities use Drivecam to conduct research into accident and other related incidents with their fleets. From such studies, driver safety programs were implemented which greatly reduced the number of accidents, near collisions and risky driver habits (example: speaking on cell phone).

The effectiveness of the surveillance technology while used by government entities is determined to be the following: By using the surveillance technology and the driver safety programs, the City of Mobile Alabama reported a 62% reduction of collisions, 39% reduction in risky driver behavior and a 50% reduction in near collisions. Orange County Florida reported a 40% reduction in collisions and the Texas Concho Valley Transit district saw a 58% decrease in traffic collisions.

There have not been adverse effects of the surveillance technology while it has been used by other government entities.

Surveillance Technology Policy

Driver-Safety Video Analytics
Municipal Transportation Agency

The City and County of San Francisco values privacy and protection of San Francisco residents' civil rights and civil liberties. As required by San Francisco Administrative Code, Section 19B, the Surveillance Technology Policy aims to ensure the responsible use of Driver-Safety Video Analytics itself as well as any associated data, and the protection of City and County of San Francisco residents' civil rights and liberties.

PURPOSE AND SCOPE

The Department's mission is to connect San Francisco through a safe, equitable, and sustainable transportation system.

This Surveillance Technology Policy ("Policy") defines the manner in which Driver-Safety Video Analytics will be used to support this mission, by describing its intended purpose, authorized and restricted uses, and requirements.

This Policy applies to all to department personnel that use, plan to use, or plan to secure Driver-Safety Video Analytics, including employees, contractors, and volunteers. Employees, consultants, volunteers, and vendors while working on behalf of the City with the Department are required to comply with this Policy.

POLICY STATEMENT

The authorized use of Driver-Safety Video Analytics for the Department is limited to the following use cases and is subject to the requirements listed in this Policy.

Authorized Use(s):

– *To identify collision dynamics, causation, and other factors.*
– *To investigate passenger fall events and exploring potential safety improvements.*
– *To identify infrastructure (damaged or vandalized bus stop shelters, downed or hazardous trees, etc.) and signage issues (signs obscured by graffiti or by a low hanging or overgrown tree or shrub, etc.) as they relate to MTA transit service and safety.*
– *To review customer complaints and look for potential ways to improve safety and service.*
– *To identify driver training issues, misconduct, or negligence.*
– *To commend drivers who demonstrate outstanding defensive driving skills.*

Prohibited use cases include any uses not stated in the Authorized Use Case section.

Surveillance Oversight Review Dates
PSAB Review: 01/27/2023 ("Recommended: 02/24/2023")
COIT Review: TBD (list all dates at COIT, and write "Recommended: MM/DD/202X" for rec date)
Board of Supervisors Approval: TBD

Departments may use information collected from surveillance technology only for legally authorized purposes, and may not use that information to unlawfully discriminate against people based on race, ethnicity, political opinions, religious or philosophical beliefs, trade union membership, gender, gender identity, disability status, sexual orientation or activity, or genetic and/or biometric data. Additionally, departments may not use automated systems to scan footage and identify individuals based on any of the categories listed in the preceding sentence.

BUSINESS JUSTIFICATION

Reason for Technology Use

Use of Driver-Safety Video Analytics supports the Department's mission and provides important operational value in the following ways:

By enhancing our efforts to identify local transit and regional transportation safety issues, comply with training standards, rules, and vehicle code laws, and determine the likely causations for vehicle collisions and passenger falls.

Description of Technology

This technology uses video and audio event recorders together with proprietary, vendor-owned algorithms to record and identify certain behavior-based safety events, such as operator looking at cell phone while driving.
The event recorders are triggered by excess g-forces (e.g., collision impacts, abrupt braking, excessive turning, etc.) and capture eight seconds of video/audio prior to the trigger, and four seconds after the trigger, for a total of 12 seconds of video and audio. Once recorded, the proprietary algorithm categorizes the event into one of several predefined safety events, which are then reviewed by the vendor for accuracy. If accurate, the vendor notifies and sends the recording to the department for further review.

Resident Benefits

The surveillance technology promises to benefit residents of San Francisco in the following ways:

	Benefit	Description
▪	Education	
▪	Community Development	
▪	Health	
▪	Environment	
▪	Criminal Justice	
▪	Jobs	
▪	Housing	

X	Other: Public Safety	The technology allows the department to identify and target for training opportunities specific driver behaviors that trigger safety events so it can minimize these behaviors in the future and improve public safety.

Department Benefits

The surveillance technology will benefit the department in the following ways:

	Benefit	Description
▪	Financial Savings	
▪	Time Savings	
X	Staff Safety	The G-Force video capture and AI-based algorithms enhance the mission of the Safety Division to improve safety procedures, identify training needs and identifies exemplary employees without the need for hundreds of additional personnel that it would require to gain the same insights that the technology provides.
X	Data Quality	It enhances the safety and training procedures\, identifies engineering needs\, and identifies exemplary employees without the need for hundreds of additional personnel that it would require to gain the same insights that the technology provides.
X	Other: Operator training	The technology allows the department to identify and target for training opportunities specific driver behaviors that trigger safety events so it can minimize these behaviors in the future and improve operator performance.

POLICY REQUIREMENTS

This Policy defines the responsible data management processes and enforceable safeguards required by the Department to ensure transparency, oversight, and accountability measures. Department's use of Driver-Safety Video Analytics and information collected, retained, processed, or shared by surveillance technology must be consistent with this Policy; must comply with all City, state, and federal laws and regulations; and must protect all state and federal constitutional guarantees.

Specifications: The software and/or firmware used to operate the surveillance technology must be up to date and maintained.

Data Collection: Department shall only collect data required to execute the authorized use cases. All data collected by the surveillance technology, including PII, shall be classified according to the City's Data Classification Standard.

The surveillance technology collects some or all of the following data type(s):

Data Type(s)	*Format(s)*	*Classification*
Video and audio images	MP4	Level 3
Reports	HTML, downloaded as PDFs	Level 3

Notification:

Department provides no public signage or notification in connection with Driver-Safety Video Analytics because Department does not use Driver-Safety Video Analytics to monitor or record passengers or other members of the public; The Department uses Video Safety Analytics to monitor incidents triggered by specific driver behaviors (speeding, rolling stops, etc.) or identified by specific AI algoritms (Talking on cell phone, eating while driving, drowsy/sleeping, etc.)".

Access: All parties requesting access to surveillance technology or data from [surveillance technology] must adhere to the following rules and processes:

- Prior to any person gaining access and use of the Driver-Safety Video Analytics and data, they must:
  - Have an SFMTA manager or supervisor authorize that person for access to the Driver-Safety Video Analytics web portal (Drivecam); New users cannot request access directly from the Drivecam administrator. That same authorizing manager or supervisor must notify the SFMTA Drivecam administrator and request that a user name and password for the new person be generated, and to what degree that access should be allowed.;(Access can be Read Only, Coach, or Safety Manager).
  - The Department's Driver-Safety Video Analytics administrator then enters that person as a user and sends instructions to that new user on how to login to the Drivecam web site. If the new user has never before been an authorized user, the department administrator cautions the new user in writing that the Driver-Safety Video Analytics videos and/or Driver-Safety Video Analytics reports are considered confidential personnel records and shall not be viewed, discussed, or forwarded to any

unauthorized person within the department, and with no other person outside of the department without; specific written permission;

- All department emails that contain an attached Driver-Safety Video Analytics or data report shall have in the Subject line of the email the following phrase: CONFIDENTIAL PERSONNEL MATTER. Investigators and attorneys employed by the San Francisco City Attorney may be granted access upon request made directly to the department's Chief Safety Officer or other department upper manager. Members of Law Enforcement agencies shall not be given access to the department's Driver-Safety Video Analytics web pages. However, upon written request from an investigating officer of a law enforcement agency describing the specific investigative need for any Driver-Safety Video Analytics video or data; report, videos may be provided upon the authorization of the department's Chief Safety Officer.
- All Driver-Safety Video Analytics videos and data reports provided to an authorized law enforcement investigator shall be cautioned that Driver-Safety Video Analytics reports are considered confidential personnel records and shall not be viewed, discussed, or forwarded to any unauthorized person.

A. Department employees

Once collected, the following roles and job titles are authorized to access and use data collected, retained, processed or shared by the surveillance technology:

- 9183 Deputy Director, Chief Safety Officer (CSO)
- 1406 Senior Clerk (4staff)
- 1820 Junior Administrative Analyst (4 staff)
- 1823 Senior Administrative Analyst
- 1840 Junior Management Assistant
- 5177 Safety Officer
- 6130 Safety Analyst
- 9172 Manager IIMTA (2 staff)
- 9520 Trans Safety Specialist 10 (2 staff)

B. Members of the public

Department will comply with the California Public Records Act, the San Francisco Sunshine Ordinance, the requirements of the federal and state constitutions, and federal and state civil procedure laws and rules.

Members of the public may request access by submission of a request pursuant to San Francisco's Sunshine Ordinance. No record shall be withheld from disclosure in its entirety unless all information contained in it is exempt from disclosure under express provisions of the California Public Records Act or other applicable law.

Training: To reduce the possibility that surveillance technology or its associated data will be misused or used contrary to its authorized use, all individuals requiring access must receive training on data security policies and procedures.

Department shall require all elected officials, employees, consultants, volunteers, and vendors working with the technology on its behalf to read and formally acknowledge all authorized and prohibited uses dictated by this policy.

Department shall require that all individuals requesting data or regularly requiring data access receive appropriate training before being granted access to systems containing PII.

Department training will include:

The training is basic navigation of the Driver-Safety Video Analytics site pages that houses our account and the events generated by the technology. There are other technical types of training for the maintenance crews.

Data Security: Department shall secure PII against unauthorized or unlawful processing or disclosure; unwarranted access, manipulation or misuse; and accidental loss, destruction, or damage. Surveillance technology data collected and retained by the Department shall be protected by the safeguards appropriate for its classification level(s) as defined by the National Institute of Standards and Technology (NIST) security framework 800-53, or equivalent requirements from other major cybersecurity framework selected by the department.

The technology provider for the rubber tires, Lytx, receives recorded transmitted video from the Video Event Recorder (VER) to Lytx's backend over an encrypted connection, and upon arrival to their Lytx cloud, video clips are encrypted at rest. Encryption at rest is a way to prevent the attacker from accessing data when it is saved in the disk/hard-drive. Moreover, Lytx has been asked not to view the live video feed from the DriveCam cameras, if system allows live viewing. The on-board recorder stores audio/video data on the SD card which is encrypted with 128-bit AES at rest. Lytx's primary production servers are located in two geographically separated

N-tier (redundancy). Each datacenter is SSAE-18 (Statement on Standards for Attestation Engagements 18 – based on industry standards) certified, and provide 24/7 physical security monitoring, including biometric access controls. These datacenters are SOC2 Type 2 (Organization Control) attestation related to security, availability, and confidentiality. A SOC 2 Type 2 report is an internal controls report capturing how a company safeguards customer data and how well those controls are operating. Companies that use cloud service providers use SOC 2 reports to assess and address the risks associated with third party technology services.

Department shall ensure compliance with these security standards through the following:

The Department Driver-Safety Video Analytics administrator shall:

- Conduct or have conducted a review of the list of authorized Driver-Safety Video Analytics users periodically throughout any given calendar year to determine the need to disable access of users who:
  - Have not logged into the Department Driver-Safety Video Analytics web pages within the past 365 days (except for active middle managers and supervisors).
  - Have retired or otherwise left the employment at the Department.
  - Have been reassigned to a position within the Department that does not have a demonstrative need for Driver-Safety Video Analytics access.
  - Have deceased.
  - Have had their authorization revoked by a Department manager or supervisor.

Misuse of access to the Department's Driver-Safety Video Analytics site shall be referred to that person's immediate supervisor or manager for follow up.

Data Storage: Data will be stored in the following location:

X Local storage (e.g., local server, storage area network (SAN), network attached storage (NAS), backup tapes, etc.)

- Department of Technology Data Center
- Software as a Service Product
- Cloud Storage Provider

Data Sharing: For internal and externally shared data, shared data shall not be accessed, used, or processed by the recipient in a manner incompatible with the authorized use cases stated in this Policy.

Department will endeavor to ensure that other agencies or departments that may receive data collected by the surveillance technology will act in conformity with this Policy. Department shall ensure proper administrative, technical, and physical safeguards are in place before sharing data with other CCSF departments, outside government entities, and third-party providers or vendors. *(See Data Security)*

Department shall ensure all PII and restricted data is de-identified or adequately protected to ensure the identities of individual subjects are effectively safeguarded from entities that do not have authorized access under this policy.

Each department that believes another agency or department receives or may receive data collected from its use of surveillance technologies should consult with its assigned deputy city attorney regarding their legal obligations.

Before sharing data with any recipients, the Department will use the following procedure to ensure appropriate data protections are in place:

- Confirm the purpose of the data sharing aligns with the department's mission.
- Consider alternative methods other than sharing data that can accomplish the same purpose.
- Redact names, scrub faces, and ensure all PII is removed in accordance with the department's data policies.
- Review of all existing safeguards to ensure shared data does not increase the risk of potential civil rights and liberties impacts on residents.
- Evaluation of what data can be permissibly shared with members of the public should a request be made in accordance with the San Francisco's Sunshine Ordinance.
- Ensure data will be shared in a cost-efficient manner and exported in a clean, machine-readable format.

A. Internal Data Sharing:

The department shares the following data with recipients within the City and County of San Francisco:

Data Type	Data Recipient
Video Recording	Access may be provided after SFPD written request approved by the Chief

	Safety Officer, City Attorney's Office (CAO).

Frequency - Data sharing occurs at the following frequency:
Frequency varies. On average 2 or 3 times per year and upon specific, written request for investigative purposes by the Police Department; 2 to 4 times per month by the City Attorney.

B. External Data Sharing:

Yes. Department shares data with provider (Lytx) for analysis.

Data Type	Data Recipient
Video Recording	Lytx

Reporting Frequency - An example of such frequency is the following: For the 6-month period of August 2022 thru January 2023, the department's rubber-tire fleet of 845 Drivecam-Equipped busses (includes trolley-coaches) generated a combined total of 8,321 Drivecam events. Of that number:

- 883 (10.6%) were assessed by Lytx and returned to the department for further action.
- 47 (0.57%) were confirmed traffic collisions but were not assessed by Lytx (as per our contract). Lynx provides, to the department, the factual dynamic data associated with each collision, such as location, date/time, speed of the bus, type of trigger, and g-forces of turns.
- 21 (0.25%) were confirmed passenger falls but were not assessed by Lytx. As with collisions, dynamic data was provided.
- 991 (12%) were identified as "Near-Collision Unavoidable" by Lytx, but not assessed. All dynamic data was provided to the department.

Of the total 8,321 Drivecam events, only 1,942 (24%) events required a follow up action by the department (i.e., training, discipline, safety analysis, infrastructure analysis, driver commendation).

Data Retention: Department may store and retain raw PII data only as long as necessary to accomplish a lawful and authorized purpose. Department data retention standards should align with how the department prepares its financial records and should be consistent with any relevant Federal Emergency Management Agency (FEMA) or California Office of Emergency Services (Cal OES) sections.

The Department's data retention period and justification are as follows:

Retention Period	Retention Justification
[Video and PDF Reports (by Department) is retained 365 days by vendor and then on day 366 it is deleted. If the video warrants further investigation based on use cases stated above, then the Department may retain the video longer on its servers. All video uploaded to the Lytx data center is retained and available for 90 days and then stored on backup media for an additional 275 days	Investigations and additional training needs appropriate amount of time to be scheduled and video is key to training efforts. Technology is only used when g- force exceeds a predefined threshold. Video and PDF Reports (by Department) is often needed by the City Attorney for civil litigation; therefore, Department needs to retain video for a longer period of time.

PII data shall not be kept in a form which permits identification of data subjects for any longer than is necessary for the purposes for which the personal data are processed.

Exceptions to Retention Period - PII data collected by the surveillance technology may be retained beyond the standard retention period only in the following circumstance(s):

- Investigations and additional training needs appropriate amount of time to be scheduled and video is key to training efforts. Technology is only used when g-force exceeds a predefined threshold. Video is often needed by the City Attorney for civil litigation, therefore the Department needs to retain video for a longer period of time

Departments must establish appropriate safeguards for PII data stored for longer periods.

Data Disposal: Upon completion of the data retention period, Department shall dispose of data in the following manner:

- Practices: DriveCam -Video Analytics data is disposed of by the system on the 366th day.
- Processes and Applications: Videos are automatically deleted from the data center on 91st day and deleted from the backup media on the 276th day on first in first out basis.

COMPLIANCE

Department Compliance

Department shall oversee and enforce compliance with this Policy according to the respective memorandum of understanding of employees and their respective labor union agreement.

If a Department is alleged to have violated the Ordinance under San Francisco Administrative Code Chapter 19B, Department shall post a notice on the Department's website that generally describes any corrective measure taken to address such allegation.

Department is subject to enforcement procedures, as outlined in San Francisco Administrative Code Section 19B.8

Oversight Personnel

Department shall be assigned the following personnel to oversee Policy compliance by the Department and third-parties.

- Chief Safety Officer – 9183
- Deputy Director Manager, Budget; Administration – 9172
- Manager II Drivecam Administrator – 9172

Sanctions for Violations

Sanctions for violations of this Policy include the following:

Violations of this Policy may result in disciplinary action commensurate with the severity of violation. Sanctions may include written warning, suspension, and termination of employment.

If a Department is alleged to have violated the Ordinance under San Francisco Administrative Code Chapter 19B, Department shall post a notice on the Department's website that generally describes any corrective measure taken to address such allegation.

Department is subject to enforcement procedures, as outlined in San Francisco Administrative Code Section 19B.8.

EXCEPTIONS

Only in exigent circumstances or in circumstances where law enforcement requires surveillance technology data for investigatory or prosecutorial functions, is data collected, retained, or processed by the department and shared with law enforcement.

DEFINITIONS

Personally Identifiable Information (PII):	Information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual.
Raw Data:	Information collected by a surveillance technology that has not been processed and cleaned of all personal identifiable information. The distribution and use of raw data is tightly restricted.
Exigent Circumstances	An emergency involving imminent danger of death or serious physical injury to any person that requires the immediate use of Surveillance Technology or the information it provides.

AUTHORIZATION

Section 19B.4 of the City's Administrative Code states, "It is the policy of the Board of Supervisors that it will approve a Surveillance Technology Policy ordinance only if it determines that the benefits the Surveillance Technology ordinance authorizes outweigh its costs, that the Surveillance Technology Policy ordinance will safeguard civil liberties and civil rights, and that the uses and deployments of the Surveillance Technology under the ordinance will not be based upon discriminatory or viewpoint-based factors or have a disparate impact on any community or Protected Class."

QUESTIONS & CONCERNS

Public Inquiries

Members of the public may register complaints or concerns about the deployment of the technology through 311.org.

Department shall acknowledge and respond to complaints and concerns in a timely and organized response, and in the following manner:

Department responds to all 311 complaints.

Inquiries from City and County of San Francisco Employees

All questions regarding this policy should be directed to the employee's supervisor or to the director. Similarly, questions about other applicable laws governing the use of the surveillance technology or the issues related to privacy should be directed to the employee's supervisor or the director.

Committee on Information Technology

Office of the City Administrator

To: Members of the Board of Supervisors

From: Carmen Chu, City Administrator
Jillian Johnson, Director, Committee of Information Technology

Date: October 5, 2023

Subject: Legislation introduced to approve Surveillance Technology Policy for the Municipal Transportation Agency's Driver Safety Video Analytics

In compliance with Section 19B of the City and County of San Francisco's Administrative Code, the City Administrator's Office is pleased to submit the Surveillance Technology Policy for the Municipal Transportation Agency's Driver Safety Video Analytics.

To engage the public in discussion on the role of government surveillance, the Committee on Information Technology (COIT) and its subcommittee the Privacy and Surveillance Advisory Board (PSAB) held 3 public meetings for Driver Safety Video Analytics between January and April 2023 to review and approve the policy. All details of these discussions are available at sf.gov/coit.

The following page provides greater detail on the review process for the Surveillance Technology Policy, and COIT's recommended course of action.

If you have questions on the review process please direct them to Jillian Johnson, Director of the Committee on Information Technology (COIT).

Driver Safety Video Analytics

Department	Authorized Uses
Municipal Transportation Agency	1. To identify collision dynamics, causation, and other factors. 2. To investigate passenger fall events and exploring potential safety improvements. 3. To identify infrastructure (damaged or vandalized bus stop shelters, downed or hazardous trees, etc.) and signage issues (signs obscured by graffiti or by a low hanging or overgrown tree or shrub, etc.) as they relate to MTA transit service and safety. 4. To review customer complaints and look for potential ways to improve safety and service. 5. To identify driver training issues, misconduct, or negligence. 6. To commend drivers who demonstrate outstanding defensive driving skills.

Driver Safety Video Analytics Public Meeting Dates

Date	Meeting
January 27, 2023	Privacy and Surveillance Advisory Board (PSAB)
February 24, 2023	Privacy and Surveillance Advisory Board (PSAB)
April 20, 2023	Committee on Information Technology (COIT)

COIT recommends the following action be taken on the policy:

- Approve the Driver Safety Video Analytics for the Municipal Transportation Agency

Driver Safety Video Analytics Policy

The San Francisco Municipal Transportation Agency (SFMTA) proposes to adopt the Driver Safety Video Analytics policy, and to present the policy to the San Francisco Board of Supervisors for their approval.

The proposed policy would authorize the SFMTA to use the technology to (1) identify collision dynamics, causation, and other factors; (2) investigate passenger fall events and exploring potential safety improvements; (3) identify infrastructure (damaged or vandalized bus stop shelters, downed or hazardous trees, etc.) and signage issues (signs obscured by graffiti or by a low hanging or overgrown tree or shrub, etc.) as they relate to transit service and safety; (4) review customer complaints and look for potential ways to improve safety and service; (5) identify driver training issues, misconduct, or negligence; and to (6) commend drivers who demonstrate outstanding defensive driving skills. The policy has already been approved by the Privacy and Surveillance Advisory Board (PSAB) and the Committee on Information Technology (COIT) and is required to be approved by the San Francisco Board of Supervisors per Administrative Code Section 19B.2(b).

Not a "project" under CEQA pursuant to CEQA Guidelines Sections 15060(c) and 15378(b) because the action would not result in a direct or a reasonably foreseeable indirect physical change to the environment.

Forrest Chamberlain 11/6/2023

Forrest Chamberlain, Environmental Review Team Date
San Francisco Municipal Transportation Agency

11/8/2023

Jennifer McKellar, Environmental Planning Division Date
San Francisco Planning Department

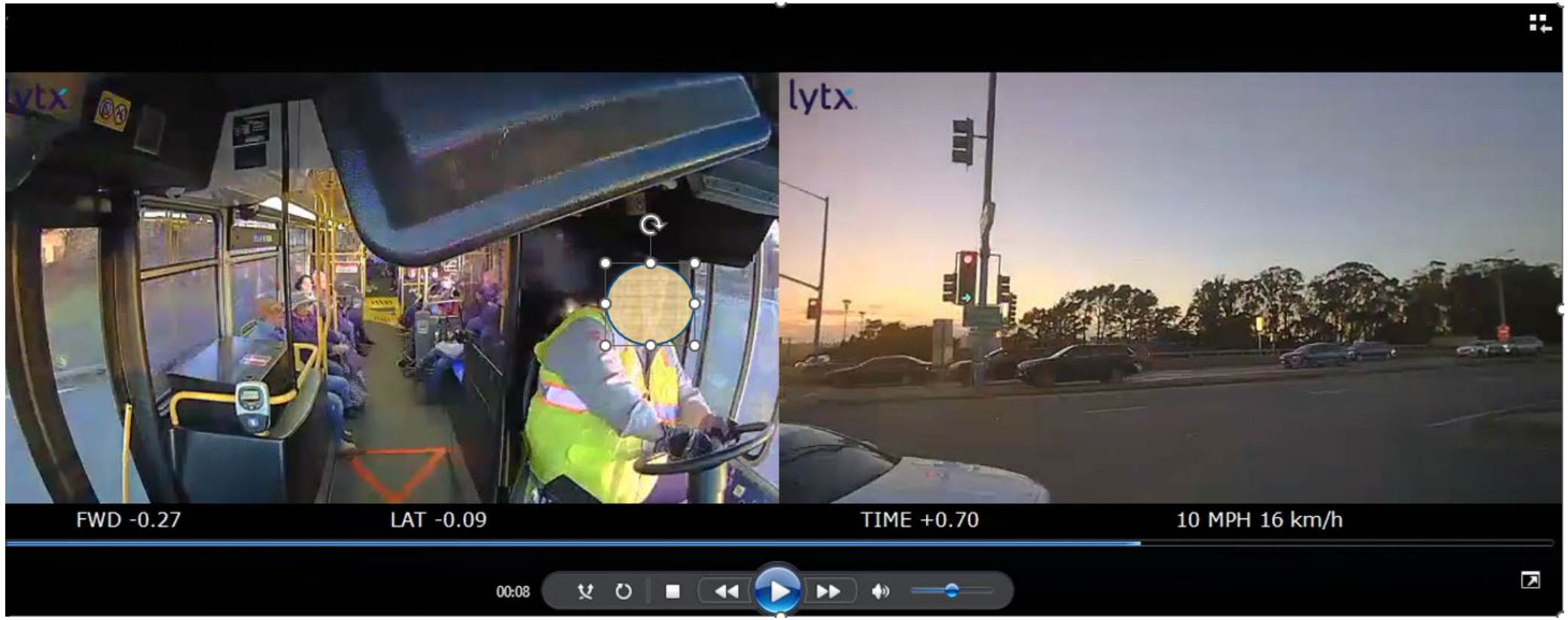
SFMTA Driver-Safety Video Analytics

BOS Rules Committee Meeting: April 2024

Technology Description

1) Video Analytics (the Technology) uses video and audio events recorders together with proprietary, vendor-owned algorithms to record and identify certain behavior-based safety events, such as operator looking at cell phone while driving etc.
2) The event records are triggered by excess G-forces (e.g., collision impacts, abrupt braking, excessive turning, etc.) and/ or identified by specific AI algorithms (talking on cell phone, eating while driving, drowsy/sleeping, etc.) and captures eight (8) seconds of video and audio prior to the trigger and four (4) seconds after the trigger, for a total of 12-seconds of audio and video.
3) This technology is currently in place for Department's Buses (Rubber tires) and planning to implement in Lite Rail Vehicles (LRVs)

Technology Description (example-1)



Front and back view of Department use technology

Example of PDF Report

Videos related PDF Report is used for an active investigation and/or disciplinary action may be kept longer than 365 days

EVENT
EXKQ99[redacted]

DRIVER [redacted]

VEHICLE [redacted]

TRIGGER
Other

BEHAVIORS
Possible Collision, Suspected Collision

Jan 9, 2023, 12:07:23 AM PST

Lytx Comments

Algorithms detected significant sensor activity that could indicate a collision.
There is a possibility a collision occurred in this event. Please investigate further and advise Lytx of the outcome so the event can be updated accordingly.
The event was triggered due to a force exceeding the video event recorder's threshold.

Event Notes

Ray Shine - Jan 10, 2023, 9:04:57 AM:

This collision was reported to TMC. It was assigned Tag #1748250. It occurred at Woodside and Portola. It is under investigation.

Authorized Use Cases

Department's use of the video data from the Driver-Safety Video Analytics technology is limited to the following use cases:

1. To identify collision dynamics, causation, and other factors
2. To investigate passenger, fall events and exploring potential safety improvements
3. To identify infrastructure and signage issues as they relate to MTA transit service and safety
4. To review customer complaints and look for potential ways to improve safety and service
5. To identify operator training issues, misconduct, or negligence
6. To commend operators who demonstrate outstanding defensive driving skills

Data Lifecycle Steps

- Collection
  - Video is stored on Local Storage and Offloaded to SaaS Cloud. If incident needs further investigation, it may be shared internally using email and Department's file share server
  - Department collects event specific video data based on identified Use Cases
- Processing & Use
  - Video data received by the Department may only be viewed by authorized staff with unique password
- Sharing
  - **Department** : Data is accessed only by authorized department staff
  - **Others** : SFPD, City Attorney's Office (CAO), Public Defender
  - **With Warrant/Subpoena** : Other law enforcement agencies
- Retention
  - Videos (by Vendor) 365 days
  - Video and PDF Reports (by Department): Videos related to an active investigation and/or disciplinary action may be kept longer than 365 days
- Disposal
  - Videos by Vendor: 366th Day
  - Local Data (on SD card) is Downloaded every 24-hour to vendor cloud

PSAB & COIT Meeting Dates

- PSAB Meeting:
  - Initial: January 27, 2023
  - Follow up: February 24, 2023

- PSAB Recommendation Date:
  - Date PSAB Recommended this policy for COIT's approval: February 24, 2023

- COIT Meeting:
  - April 20, 2023

- COIT Recommendation Date:
  - Date COIT Recommended this policy for BOS Review: April 20, 2023

Questions

Team members available to Answer Questions:

Safety Team:

– Ray Shine

Program Management Office (PMO)

– Sohail Warsi

– Robert Miller