

VEHICLE TELEMATICS: *update report*

Policy Analysis Report to Board President Norman Yee

Presentation to:

LAND USE AND TRANSPORTATION COMMITTEE

BOARD OF SUPERVISORS

CITY AND COUNTY OF SAN FRANCISCO

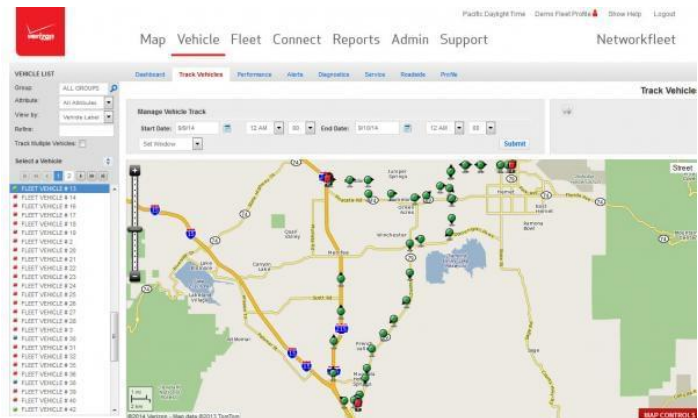
October 5, 2020

Telematics Definition

Vehicle telematics, sometimes known as black boxes or global positioning system (GPS) tracking, allow for tracking vehicles individually and collecting and reporting data on their location, history, speed, mechanical diagnostics, safety, and other information.



Example of a GPS and cellular tracking device that plugs into a standard vehicle port.



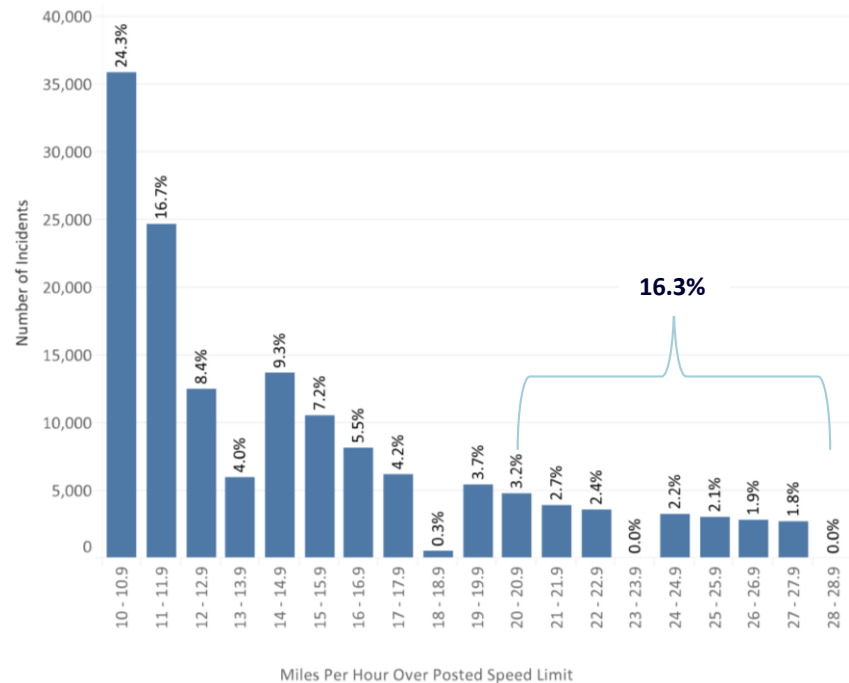
Example of an information screen available in a telematics monitoring system

Key Findings in 2020 Update Report

- August 2019: City's vehicle telematic equipment installed on 4,163, or 52 percent, of the 7,930 vehicles managed by the City Administrator's Central Shops Division. However, more are expected to be installed on public safety vehicles soon.
- Simply having vehicle telematic technology installed does not mean the City is benefitting from it.
 - Central Shops collects and reports only minimal data to departments.
 - No department or authority accountable for correcting problems recorded (e.g., 365 vehicles found to be underutilized; candidates for removal or repurposing).
- Monitoring and use of the system is generally decentralized and varies between departments.
- The system is underutilized, and the City does not effectively monitor or correct ongoing problems in these critical areas:
 - Safety such as speeding and aggressive driving behavior
 - Environmental impacts from idling, maintenance and emissions control
 - Underutilized vehicles and other cost-saving opportunities
 - Rental vehicle use
 - Take-home vehicle use

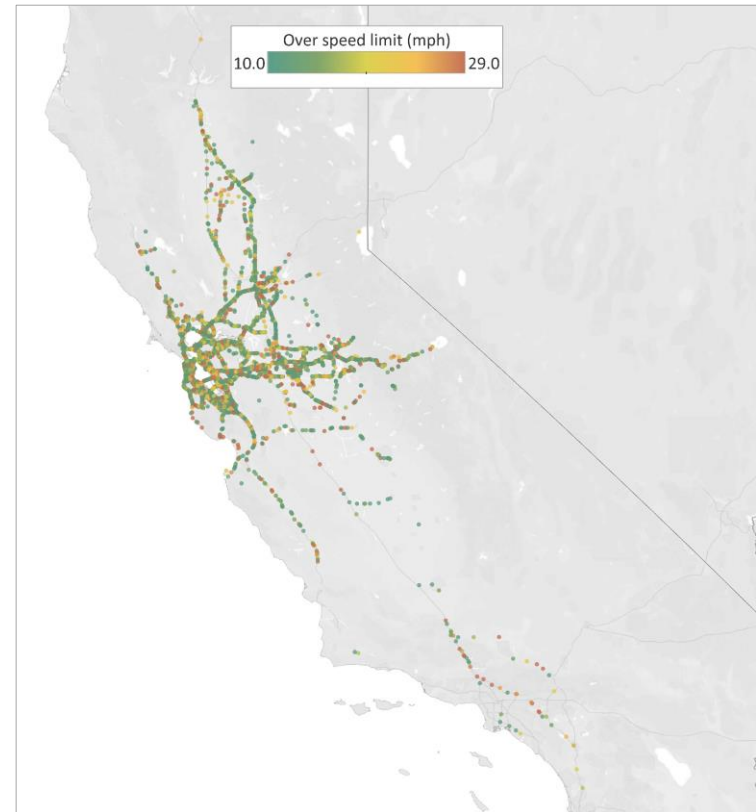
Safety issues reported from telematics equipment

- 2,619 individual vehicles had at least one speeding incident of more than 10 miles per hour over the posted speed limit: September 2018 and September 2019.
- 768 individual vehicles reported 50+ incidents each in the same 13-month period (avg. 3.8 incidents/mo. per vehicle).
- 16.3% of speeding incidents: 20 to 28.9 mph over limit- *safety risk to pedestrians, bicyclists, and other vehicles.*
- Central Shops only reports and monitors incidents where vehicles exceed 80 mph.
- Metrics related to aggressive driving behavior aren't reported.



Source: Budget and Legislative Analyst's Office analysis of speeding data provided by Central Shops. September 2018 to September 2019. Filters as described in Appendix A to reduce false positives.

Safety: Speeding Incidents September 2018 to September 2019

































Source: Budget and Legislative Analyst's Office analysis of speeding data provided by Central Shops.
September 2018 to September 2019. Data filtered to reduce false positives.

Rental Vehicle Use

- The City uses a contract with Enterprise Rent-a-Car to support departments' vehicle needs for short-term projects and temporary use. Telematics equipment installed in rented vehicles.
- \$1.3 million spent in FY 2018-19; daily rates ranged from \$21.00 to \$183.60/day
- Contract is not centrally monitored by the City Administrator's Office of Contract Management or Central Shops & neither approves individual department rentals.
- We found 55 instances where cars were rented for more than a year, which effectively subverts the Board of Supervisors' budget approval of departments' vehicle purchases.
- We found that 18.6 percent of City department vehicle rental days were for vehicles classified by Enterprise Rent-a-Car as luxury, premium or elite.

Rental Vehicle Use

| Type of Vehicle | Regular | Luxury, Premium or Elite | Grand Total |
|----------------------|--|--|--|
| 2 or 4 Door Sedan |  37,601 |  555 |  38,156 |
| Commercial Van/Truck | |  1,114 |  1,114 |
| Crossover | |  1,227 |  1,227 |
| Open Air All Terrain |  120 | |  120 |
| Passenger Van |  6,368 |  7 |  6,375 |
| Pickup Extended Cab | |  30 |  30 |
| Pickup Regular Cab |  1,931 |  8,990 |  10,921 |
| Special |  2 |  1,994 |  1,996 |
| Special Offer Car | |  6 |  6 |
| Sport |  306 | |  306 |
| SUV & Recreational |  18,299 |  804 |  19,103 |
| Grand Total |  64,627 |  14,727 |  79,354 |

Source: Budget and Legislative Analyst's Office analysis of rental data provided by Central Shops. September 2017 to September 2019. Type of vehicles were assessed using car classification system from the Standard Interline Passenger Procedure and the Association of Car Rental Industry Systems Standards

More Could Be Done

- More could be done to curb dangerous driving behavior, increase pedestrian, bicyclist, and public safety, reduce vehicle emissions, and lower spending and potential waste related to vehicle use.
- Combined, we estimate that these factors cost the City \$10.5 million annually in claims, repairs, and unnecessary vehicle purchases and maintenance.
- Central Shops currently provides departments with a monthly report, but it does not include enough effective metrics.
- These costs could be reduced if Central Shops reported and followed up on more detailed and effective metrics from the telematics system to ensure improvements in:
 - Incidents of speeding above the posted speed limit,
 - Aggressive driving behavior (recurring hard braking , acceleration)
 - Inappropriate use of vehicles such as unauthorized take-home use,
 - Excessive vehicle emissions,
 - Rental vehicle use, and
 - Underutilized vehicles.

Recommendations

- We recommend that the Board of Supervisors consider requesting a minimum set of specific and detailed measures for Central Shops to track and report and corrective plans and data showing trends over time to measure improvements. *(covered by proposed legislation)*
- Reporting on take home vehicle and rental vehicles should be instituted.

For further consideration:

- Central Shops could use its expertise to assist departments when investigating and correcting possible negative behaviors identified through the telematics system. Additional staff for investigations should be considered, with cost offsets in claims and unnecessary vehicle purchases and repairs.
- The frequency and outcomes of investigations, including resulting improvements, should also be annually reported to the Board of Supervisors to determine if these efforts are having the desired impact.
- The Board of Supervisors could request that the City Administrator or Mayor's Office assume responsibility for enforcing policies and procedures to improve driver behavior and vehicle fleet cost-effectiveness.
- Additional monitoring and reporting of take-home and rental vehicles.

Questions and comments

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