

iOT Quarterly Forum DCAS Fleet Office of Real Time Tracking (FORT)

NYC Fleet

September 9, 2021

**Keith Kerman, Deputy Commissioner, DCAS
Eric Ricardson, Deputy Chief Fleet Officer
Mathew Aronberg, Director of FORT**

Telematic Mandates

- Mayoral Executive Order 41 of 2019 established a requirement for live tracking of City fleet units. This Executive Order also established a use standard of 80% for fleet units and calls for fleet reduction of 1,000+ units, and commuter reduction of at least 500 commuters.
- Local Law 32 of 2019 required telematics in City school buses.

§ 2. Fleet Size. By June 30, 2019, DCAS will implement telematics, mapping, and analytics for all City on-road fleet units, including long-term rentals. The New York City Police Department will implement a similar initiative. Working with OMB, DCAS will set fleet daily usage targets for all City fleet agencies and major operational sub-divisions of the fleet, to ensure that the City achieves an optimal fleet size based on documented usage patterns. At least 1,000 existing on-road units will be reduced by June 30, 2021. In addition, DCAS and OMB will establish an 80 percent general usage standard for the fleet by agency and will also establish specific targets for critical agency operational sub-divisions along with guidelines for vehicle usage and replacement. Any exceptions to telematics installations or to these standards, such as for highly specialized fleet units or emergency response operations, must be approved in writing by DCAS and OMB.

Fleet Office of Real Time Tracking

- Through the Fleet Office of Real Time Tracking (FORT), DCAS now operates the nation's largest public fleet telematics initiative with 22,872 units including City fleet and school buses.
- In partnership with NYEM, we will add at least 1,000 off-road units in FY22.
- NYPD, FDNY and DSNY operate an additional 13,000 tracking units. We are working to incorporate DSNY and FDNY into the FORT.

11,540
Telematics Count

231
LocalMotion only

308
Geotab & LMZ

10,793
School Bus Geotab Installs

Total Telematics Installed

22,872

Fleet is Everywhere!



History of NYC Fleet GPS/Telematics

- Prior to 2015 a limited number of city vehicles had various, non-centralized, legacy GPS systems that were limited in scope and reporting capabilities.
- In 2015 NYC Fleet introduced the first citywide GPS program which transmitted data over the NYCWin network. The NYCWin network solution was not real time so alerts and immediate reporting was not generally available. At that time collision alerting through telematics was not yet available and information gathered from vehicle engine diagnostics and other safety information was limited.
- In 2017, DoITT made the decision to transition away from NYWin. DCAS proposed at that point to go to a real-time telematics provider.
- DCAS engaged market research to evaluate telematics options. Our priorities were real-time reporting, ease of installation, cost, crash management, dead-pinging, safety and usage reporting, data security, mapping, and website usability.
- DCAS then engaged a public bidding process based on a GSA schedule. DCAS procured GeoTab as the telematics provider with AT&T providing network and hosting services.
- DCAS worked with OMB on savings initiatives tied to telematics that were used to argue the case for a citywide telematics initiative. Savings including fleet and commuter reduction.
- The DCAS implementation currently involves 50 agencies and offices and 40 private school bus operators. NYPD manages its own telematics system as outlined in the EO.

How do we use the FORT?



Usage Reporting and Fleet Reduction

Non-Utilized Units Percentage Summary By Asset Class, Status & Subgroup

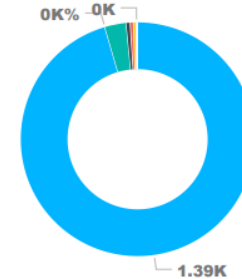
Aug 23, 2021 - Aug 27, 2021

Sub Group	Percentage of Non-Utilized Units
HEAVY DUTY	15%
LIGHT DUTY	12%
MEDIUM DUTY	10%
Not on M5	33%
OFF ROAD/SPECIALIZED UNITS	25%
Total	12%

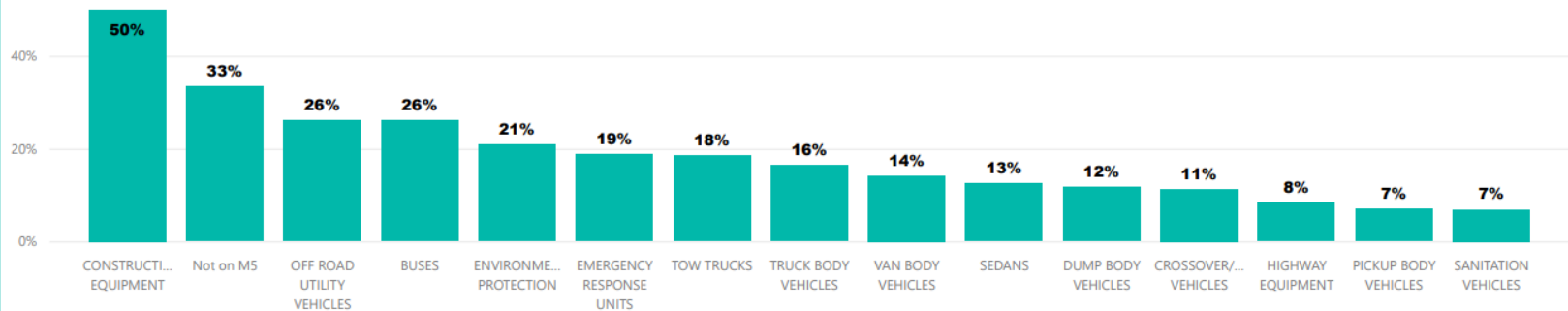
Percentage values are based on the number of non-utilized units within each subgroup compared to all units with Geotab within the respective subgroup.

Percentage of Non-Utilized Units by Status

Status ● Active ● Pending ... ● Inactive/E... ● New ● Not on ... ● Inactive/... ● Non-Inv...



Percentage of Non-Utilized Units by Asset Class



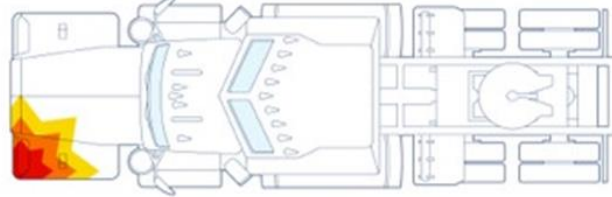
CRASH Management

Collision Reconstruction (BETA)

Device Information

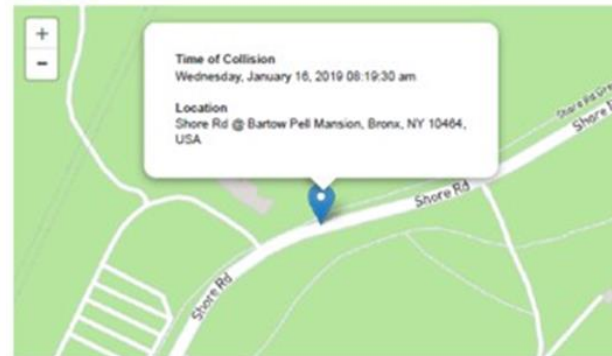
Vehicle Name: P8357
Driver: Unknown Driver
VIN: 2FZACFDK08AZ36598
Vehicle: 2008 Sterling Acterra
Time of Collision: Wednesday, January 16, 2019 08:19:30 am

Point of Impact



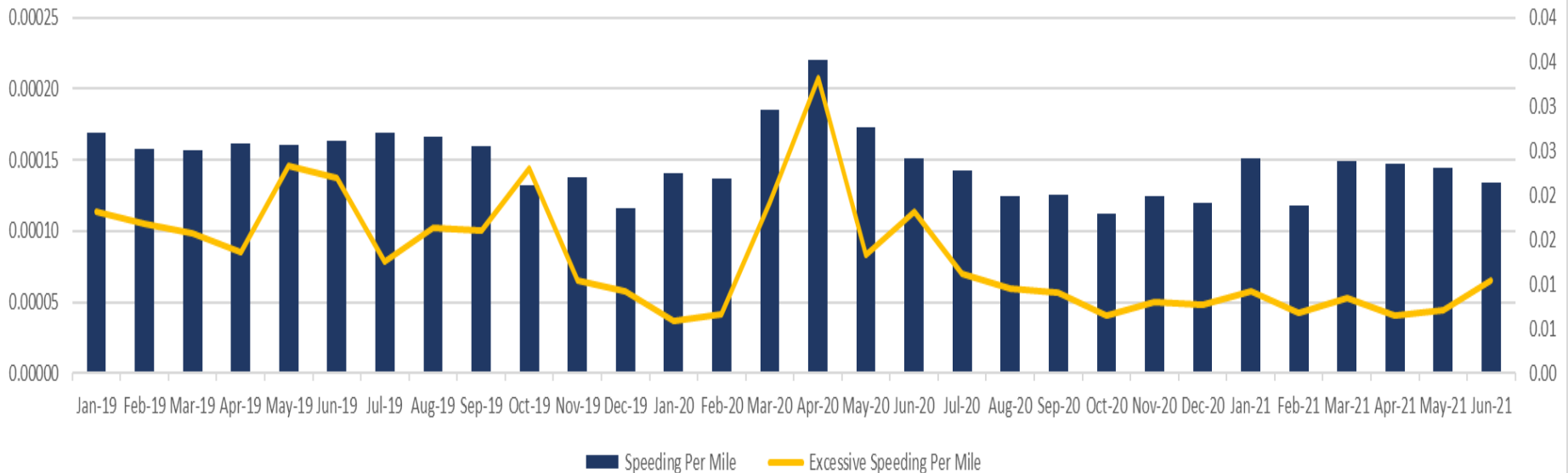
Map View

[Trip History](#)



Speed Management

Speeding/Excessive Speeding Alerts per Mile 2019-2021



Safety Culture

Geotab Safety Scorecard

87.08

Citywide Average Score

Agency	Average Score
DCAS	90.29
DEP	86.89
DHMH	88.77
DOCN	87.45
DOTR	88.37
DPAR	86.31
DSNY	86.75
NYCHA	86.27
Total	87.08

Aug 23, 2021 - Aug 27, 2021

Classification	
Low Risk	90
Mild Risk	70
Medium Risk	50
High Risk	0

Weighted Categories	
Hard Acceleration	10%
Harsh Braking	10%
Harsh Cornering	10%
Seat-Belt	20%
Speeding	20%
Excessive Speeding	30%
100%	

Safety Campaigns



Bill de Blasio, Mayor
Lisette Camilo, Commissioner
Keith T. Kerman, Deputy Commissioner
and Chief Fleet Officer

NYC Fleet Newsletter

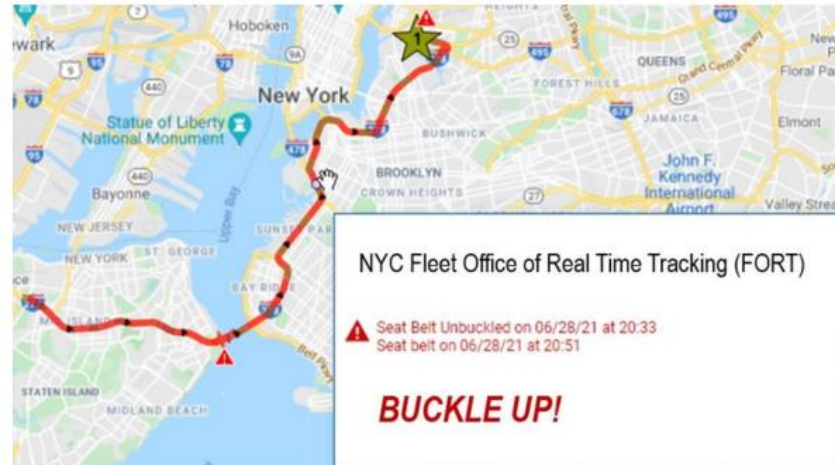
June 30, 2021 - Issue 350

Back to Basics for the Summer: Seatbelt Challenge!

By: Keith T. Kerman and Nate Koszer

NY State recently announced that nearly 70,000 tickets were issued in a two-week statewide Click It or Ticket initiative. Nationwide, [the National Highway Traffic Safety Administration \(NHTSA\)](#) reports that 90% of drivers properly use seatbelts. The rate is 88% for the Northeast.

[The National Safety Council](#) reports that seatbelts reduce fatalities and injuries by over 50% in cars and even more in pickups and vans, like those operated by so many NYC staff and crews. Our Fleet Newsletter has of course focused on seatbelt implementation many times, including [Issue 328 from last December](#).



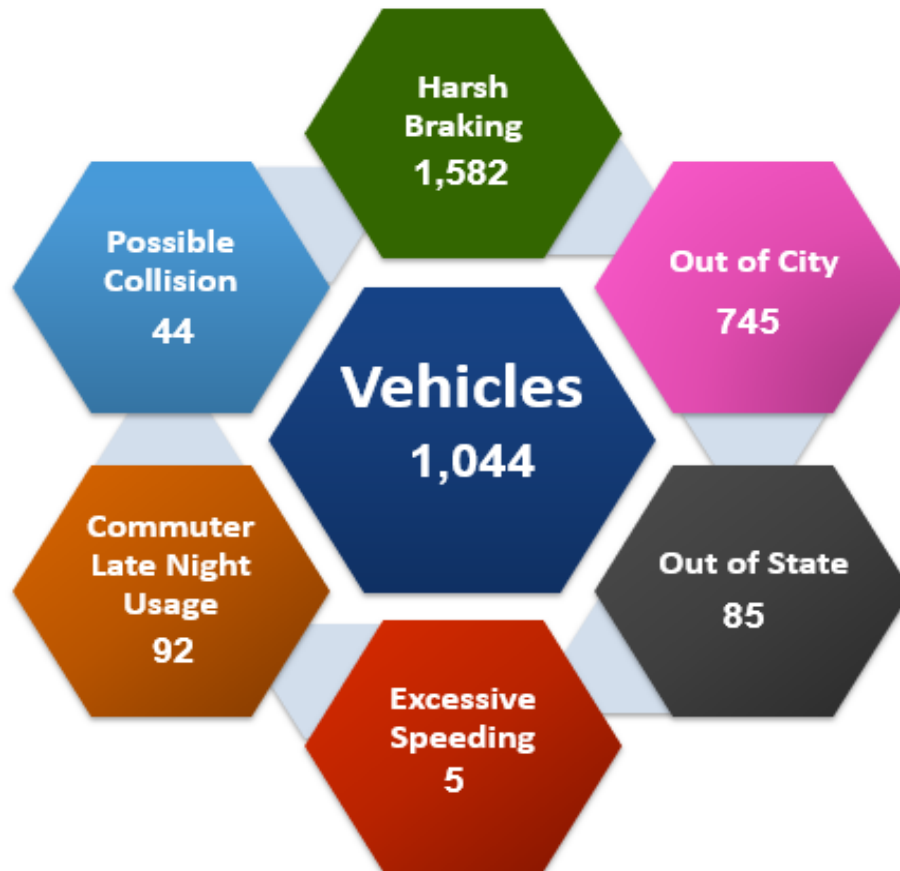
Daily Reporting

NYC Fleet

NYC DCAS
Citywide Administrative Services

Fleet Incidents

9/7/21



Real-Time Alerts and Geofencing

RE: [EXTERNAL] Excep Loc - Airport Alert - DSBS25 SN: G86920F97ECE JFK Airport- 09/01/21 3:50:02 PM



FORT (DCAS)

To FORT (DCAS); Allen, Stephen (SBS)

Cc Keith Kerman (DCAS)

Reply Reply All Forward

Fri 9/3/2021 1:

From: NYCFleet@geotab.com <NYCFleet@geotab.com>

Sent: Wednesday, September 1, 2021 4:35 PM

To: FORT (DCAS) <FORT@dcas.nyc.gov>

Subject: [EXTERNAL] Excep Loc - Airport Alert - DSBS25 SN: G86920F97ECE JFK Airport- 09/01/21 3:50:02 PM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. Forward suspect email to phish@cyber.nyc.gov as an attachment (Click the More button, then forward as attachment).

DSBS25 SN: G86920F97ECE has broken the Excep Loc - Airport rule at 3:50:02 PM on 09/01/21. Please see the alert details below:

Address: 148 St/150 Av, Queens, NY 11430, USA

GPS Coordinates: 40.66148, -73.79246

Zone: JFK Airport

Vehicle's Speed: 50 mph

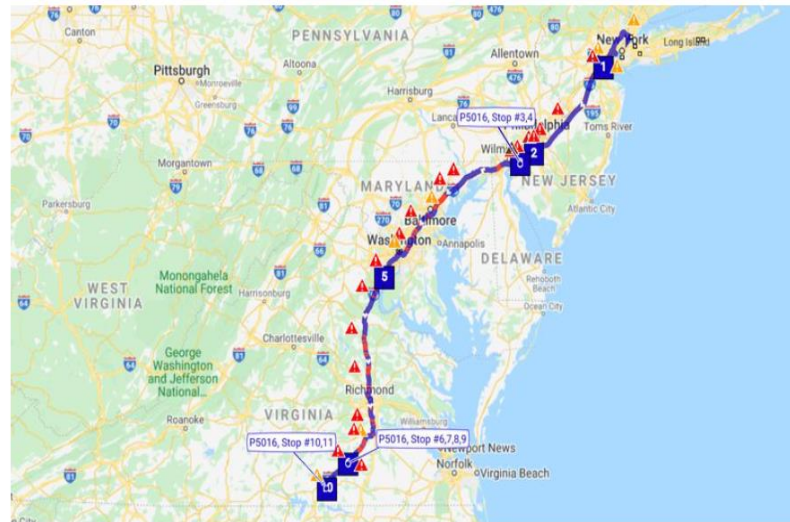
Speed Limit (If Applicable):

Theft Prevention

NYC officials use GPS to bust thieves who heisted Parks Dept. truck and sped to Virginia

By CLAYTON GUSE

NEW YORK DAILY NEWS | FEB 24, 2021 AT 6:03 PM



Map of the route for the stolen NYC Parks truck. (DCAS)

“We all watched this vehicle as it escaped the City of New York,” said Keith Kerman, chief fleet officer at the Department of Citywide Administrative Services. “This is a \$30,000 pickup truck used for park operations. It’s supposed to be used to keep our park clean and safe... We see it’s speeding down the highway going 95 mph.”

Compliance

COIB Order & Settlement Announced



Katherine Miller <KMiller@coib.nyc.gov>

To Katherine Miller

 You forwarded this message on 3/25/2021 11:54 AM.



COIB Order (DOC).pdf
511 KB



COIB Disposition (DOC).pdf
2 MB



FOR IMMEDIATE RELEASE: March 25, 2021

CONTACT: Katherine Miller at kmiller@coib.nyc.gov or (212) 437-0741

Fleet Analysis for Agencies



Fleet Analysis
June 2020



Asset Utilization

Most Utilized Vehicles					
Vehicle	Days Driven	Vehicle	Drive Time	Vehicle	Mileage
1 CA123	273	CA158	1185:19:38	CA156	10230.54
2 CA156	266	CA156	800:41:45	CA158	9563.39
3 CA1A	246	CA162	660:53:38	CA1A	9145.88
4 CA150	244	CA1A	640:30:05	CA162	8815.73
5 CA164	241	CA163	614:25:33	CA153	8755.71
6 CA46	236	CA153	572:51:49	CA126	7565.52
7 CA153	234	CA126	569:31:54	CA163	6966.29
8 CA152	228	CA159	510:47:23	CA157	6295.22
9 CA160	227	CA123	474:13:23	CA160	6213.34
10 CA159	224	CA46	413:55:57	CA123	6000.46

Asset Utilization (Exception types)

**7 Out of State Trips
(4 vehicles)**

**169 Overnight Trips
(Between Midnight and 4AM)
(6 vehicles)**

**7,660 Weekend Trips
(21 vehicles)**

Industry Analysis

Green Car Congress

Energy, technologies, issues and policies for sustainable mobility

NYC study of actual fuel economy of fleet finds hybrids more fuel efficient as compared to conventional vehicles than expected

06 June 2020

Using telematics, NYC Fleet, part of New York City's Department of Citywide Administrative Services (DCAS), recently **analyzed** actual fuel economy in its hybrid and non-hybrid vehicles and compared it to the EPA ratings for each make and model.

The results showed that hybrids performed better against their EPA ratings than non-hybrids—i.e., hybrids are even more fuel efficient as compared to regular fuel vehicles than expected.

In 2019, DCAS upgraded its vehicle telematics systems in a contract with Geotab and AT&T. This system has improved the ability to report on use-based fuel economy per vehicle.

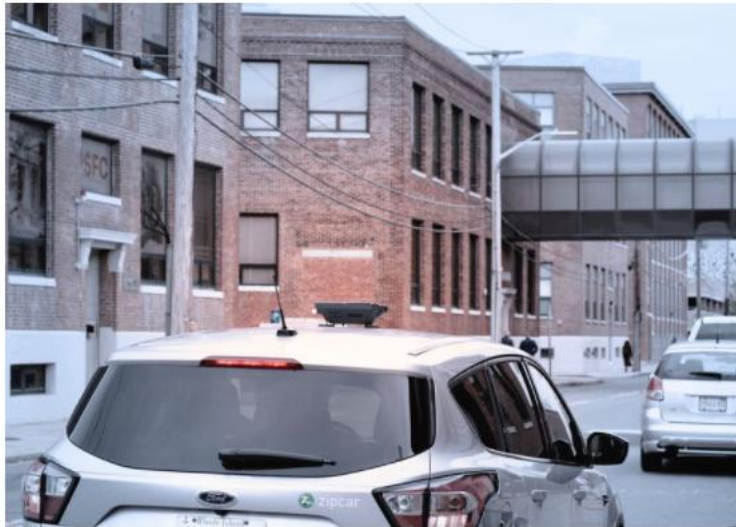
DCAS Fleet looked at actual fuel economy in calendar year 2019 for 4,000 non-policing

Environmental Analysis

POLITICS NEWS

NYC municipal vehicles to test local air quality for pollution in South Bronx with mobile sensors

By ANNA SANDERS
NEW YORK DAILY NEWS | JAN 21, 2020 AT 1:00 PM



New York City vehicles will be equipped with mobile air quality sensors developed by the Senseable City Lab at MIT to find pollution hotspots.

The city will start using municipal vehicles to test local air quality in the South Bronx as part of a pilot program that launched Tuesday.

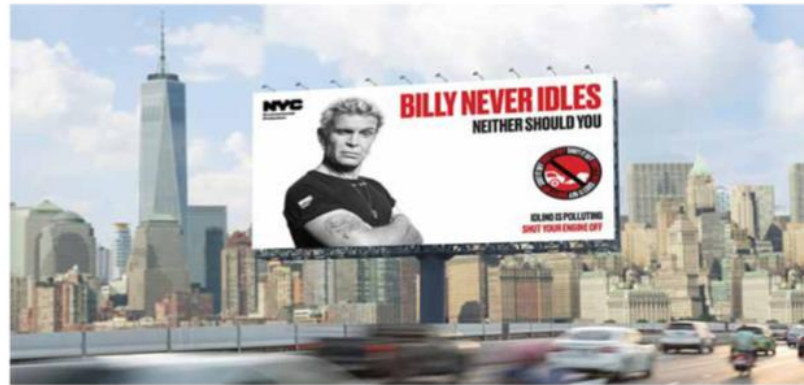
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Idle Management

telematics



NYC in real time

New York's new telematics command centre is not only transforming fleet management, it is also improving the delivery of direct services and enhancing core operations, writes NYC Chief Fleet Officer Keith Kerman.

Author
Keith Kerman

The alert came in the morning of April 1, 2021. A van belonging to the NYC Department of Education was missing and may have been stolen.

Once missing for a full day or more, the prospects of recovering a stolen City vehicle have historically been slim. No longer.

Immediately, a team from the Department of Citywide Administrative Services (DCAS), which runs the City vehicle fleet, the Department of Education (DOE), and the New York City Police Department (NYPD) worked together to track the missing vehicle online, follow it in person, arrest the perpetrators, and recover the vehicle.

The recovery was made possible through NYC's new [Fleet Office of Real Time Tracking \(FORT\)](#), a command centre for

more than 23,000 City vehicles and school buses that have been fitted with telematics tracking devices. It is the largest public vehicle telematics programme in the US and a model for efforts in public and private fleets for safety, efficiency, and fleet operations.

FORT is transforming fleet management in the City through the provision of new ways to track vehicle utilisation, safety, fuel economy, driving behaviours, crashes, and maintenance. While implemented by DCAS, FORT is also an exciting new tool for improving delivery of direct services and enhancing core operations.

Advancing the safety agenda

New York City's Vision Zero Safety plan was the initial impetus for the FORT. The City of New York has made enormous strides in reducing crashes involving fleet units. Despite

Above: In February 2020, Mayor de Blasio and rocker Billy Idol announced a campaign to reduce idling. Billy Never Idles.

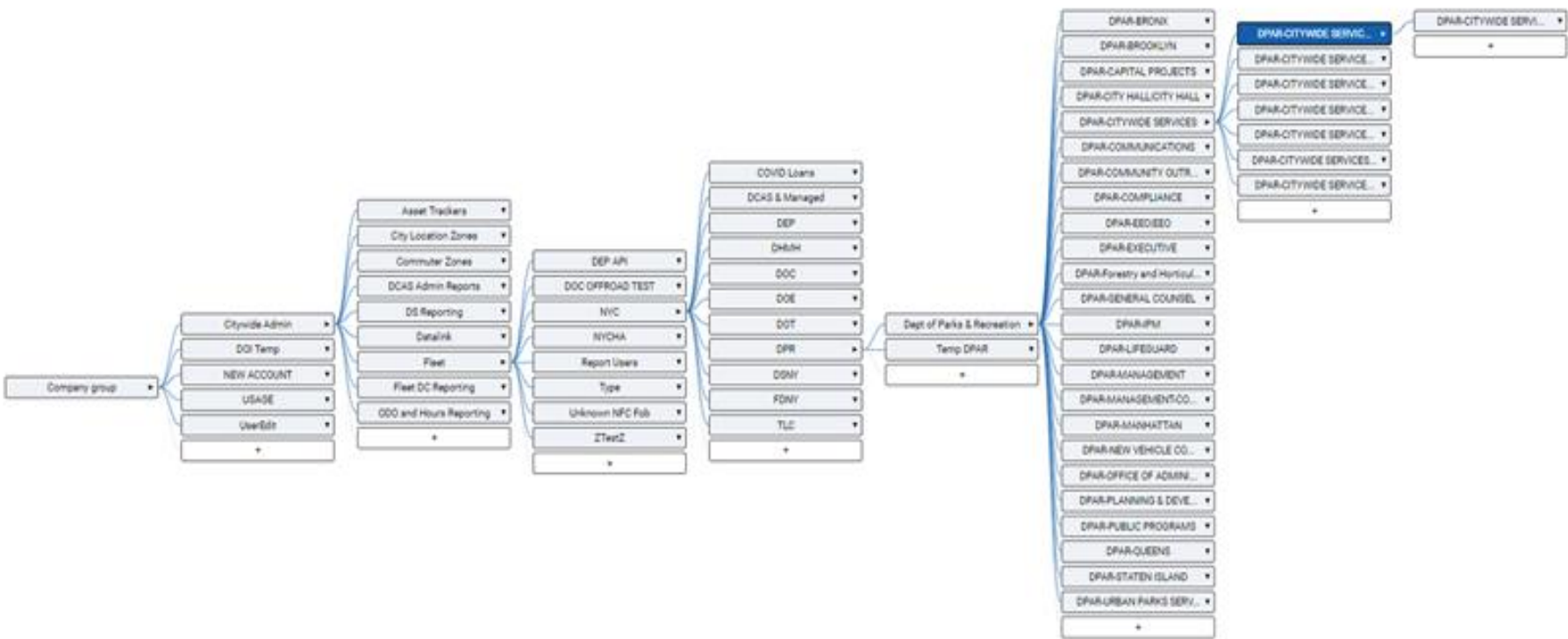
Top right: NYC fleet units are everywhere in the city.

Supporting Agency Operations

Geotab Data Supported API Projects

- DEP (311 Dispatching)
- Parks (Operations and Forestry)
- OCME (ArcGIS Online)
- DOC (Monitoring of court bus arrival times)
- NYC CTO (CityScanner-Air Quality Monitoring)
- DOT (Street Planning Unit, Connected Vehicle Pilot with US DOT, Speed Camera Deployment)
- PlowNYC/DSNY (in development)
- Haas Alert/FDNY (in development)

Support of Agency Hierarchies



EO 53: Safe and Clean Fleet Transition Plans

Tier 1	Tier 2	Tier 3
	Best Practice Technologies	Exploratory Technologies
High vision truck cabs where competitively available and operationally feasible * ⁵	Pedestrian AEB for medium- and heavy-duty vehicles where available (Class 3-8) * ⁵	Alcohol touch ignition interlock ⁵
Additional mirrors/lenses where applicable including Fresnel lenses *	Blind spot monitors	Cell phone physical or app-based lock box/ docking station ignition interlock ⁵
Appropriate technologies and techniques to see behind vehicle, such as but not exclusive to backup cameras	Enhanced Seat Belt Reminder systems (ESBRs)	Seatbelt assurance ignition interlock systems ⁵
Forward Collision Warning (FCW) and Pedestrian Collision Warning (PCW) for Class 1 and 2	Navigation systems	Surround cameras *
Automatic Emergency Braking (AEB) for light-duty vehicles (Class 1-2) with Advanced Pedestrian Monitoring as preferred option where available ⁵	Power mirrors and heated mirrors *	Turning alarms *
Automatic headlights where available	Speed governors * ⁵	Universal design
Enhanced truck rear underride guards *	Connected vehicle, or vehicle-to-vehicle (V2V), communication technology	Rear Automatic Emergency Braking (AEB) for light-duty vehicles (Class 1-2) ⁵
Safety lights for work trucks, such as but not exclusive to side-visible turn signals and roadwork lights (amber)	Broadband backup alarms †	Intelligent Speed Assistance (ISA) ⁵
Side underride guards * consistent with Local Law	Rear Automatic Emergency Braking (AEB) for heavy-duty vehicles with air brakes * ⁵	Automatic Emergency Braking (AEB) for medium- and heavy-duty vehicles (Class 3-8) * ⁵
Self-adjusting volume backup alarms †	Forward Collision Warning (FCW) and Pedestrian Collision Warning (PCW) for Class 3 and above	
Telematics to enable utilization, collision, speed, and safety reporting, among other uses	External Cameras and Recording	
Warning decals *	Training where feasible in appropriate use of technologies	

Note: Entries in bold are potential updates for 2018 (see explanations below)

* = Only apply to vehicles with gross vehicle weight rating of 10,000 lbs. or greater.

Partnership with US DOT Volpe

NYC Safe Fleet Transition



Partnerships



TRANSPORTATION
ALTERNATIVES



GeoTab Security Accreditations



Challenges

- Disconnects and jamming
- Translating data to action
- Too much data and too many reports, need for focus
- Big data, opportunity for creative analysis
- Integrating various fleet systems
- Getting one system for fleet tracking, fleet sharing, real-time safety alerts
- Keeping up with technology changes
- Data Security

DCAS

THANK YOU