



City of Dallas

Update of Fleet Initiatives

**City Council Briefing
November 2, 2022**

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Presentation Overview



- Background/History
- Purpose
- Major Fleet Initiatives Outline
- Future Policy and operational decisions impacting Fleet Management



Purpose



This briefing will:

- Provide status update on Fleet Initiatives
- Describe how Equipment and Fleet Management initiatives align with City Manager's Goals and CECAP
- Allow for City Council policy feedback on "Next steps"



Background



Equipment and Fleet Management (EFM):

- Was created October 1, 2018 (previously part of Equipment and Building Services)
- Operates as an Internal Service Fund by billing for services provided to customer departments without the emphasis of profit but cost neutrality
- Maintains 5,700+ of assets compared to 8,500+ citywide



Major Fleet Initiatives Outline



- 2018 Fleet Efficiency Study
- 2022 Fleet Electrification Study
- GPS Redeployment
- Alternative Fuels Strategy
- Acquisition/Funding Strategy for Vehicles and Equipment
- Dallas Police Vehicle Platform Needs for Patrol
- Sanitation 5-Day Schedule





2018 Fleet Efficiency Study



2018 Fleet Efficiency Study Recommendations



- Study completed by Alvarez and Marsal and briefed to City Council on December 5th, 2018
- Recommendations were provided in (5) categories
 1. Organizational Assessment
 2. Make Workshop Flow Improvements
 3. Follow Total Cost of Ownership Approach
 4. Utilization, Right-Sizing, Motor Pool
 5. Technology and Data Quality
- Additional updates briefed to Government Performance and Financial Management Committee in September 2019, September 2020 and October 2021



2018 Fleet Study Recommendations (update)



Organizational Assessment

TASK	STATUS
Hiring Program/Efficiency	Completed
Training Program (Internal/City-wide)	Completed
Employee Compensation	Completed

Make Workshop Flow Improvements

TASK	STATUS
Scheduling Improvements	Completed
Update Shop Equipment/Infrastructure	Completed
Work Order Management (In-Take/Outtake)	Completed

Follow TCO Procurement Approach

TASK	STATUS
Fleet Governance Committee	Completed
Preventative Maintenance Compliance	Completed
Centralize Purchase Decisions	Completed
Total Cost of Ownership (TCO) Approach	Completed
Enhance Fleet Replacement Funding	Completed
Enhance Outsource Contracting Options	Completed





2018 Fleet Study Recommendations (update)

Utilization, Right-Sizing, Motor Pool

TASK	STATUS
Identify Surplus	In-Progress
Validate Use with Data	In-Progress
Establish Business Rules/Requirements	In-Progress
Increase Motor Pool – Vehicle Sharing	In-Progress

Technology & Data Quality

TASK	STATUS
Maximize use of Fleet Management System	In-Progress
Support Staff to Monitor Data Quality	Completed
Simplify and Automate Internal Billing	In-Progress

Summary of Initiatives

INITIATIVES	COMPLETED	IN-PROGRESS
29	18	11
TOTAL %	62%	38%





Preventative Maintenance (PM)

- Preventative maintenance compliance improvements were a critical component of the study
- EFM measures PM compliance with two standards:
 - Compliance I – Percentage of units completed within the time interval scheduled
 - Compliance II – Percentage of units that have completed PM's
- PM 1.0 Training in November 2019 and PM 2.0 planned for this fiscal year



2018 Fleet Efficiency Study Recommendations





2022 Fleet Electrification Study



Electric Vehicle (EV) Study Recommendations



- Study completed by the National Renewable Energy Laboratory (NREL) and briefed Environmental and Sustainability Committee on August 1, 2022
- Vice Model/Vehicle Validation
 - 63 EVs purchased in FY21-22 (76 initially identified for conversion)
 - Working with City Departments on the FY22-23 purchase for EVs (452 identified for possible conversion)
 - Additional review of fleet inventory has determined that 1,580 of the initial 2,675 vehicles identified for conversion are EV compatible
- Working on Turnkey approach with Cooperative Purchase
 - Equipment Purchase
 - Installation Services
 - Charging Management Software



Next Steps



1. Deploy charging infrastructure and commercially available LD EV sedans and light trucks (dependent upon delays of manufacturing)
2. Test/demonstrate Medium- and Heavy-duty EVs in Dallas fleet service
3. Coordinate and seek lessons learned from others
4. Pending results from grant applications (charging infrastructure)
5. Incorporate charging software management into our fleet management system
6. Training for technicians and operators on use and maintenance of EVs

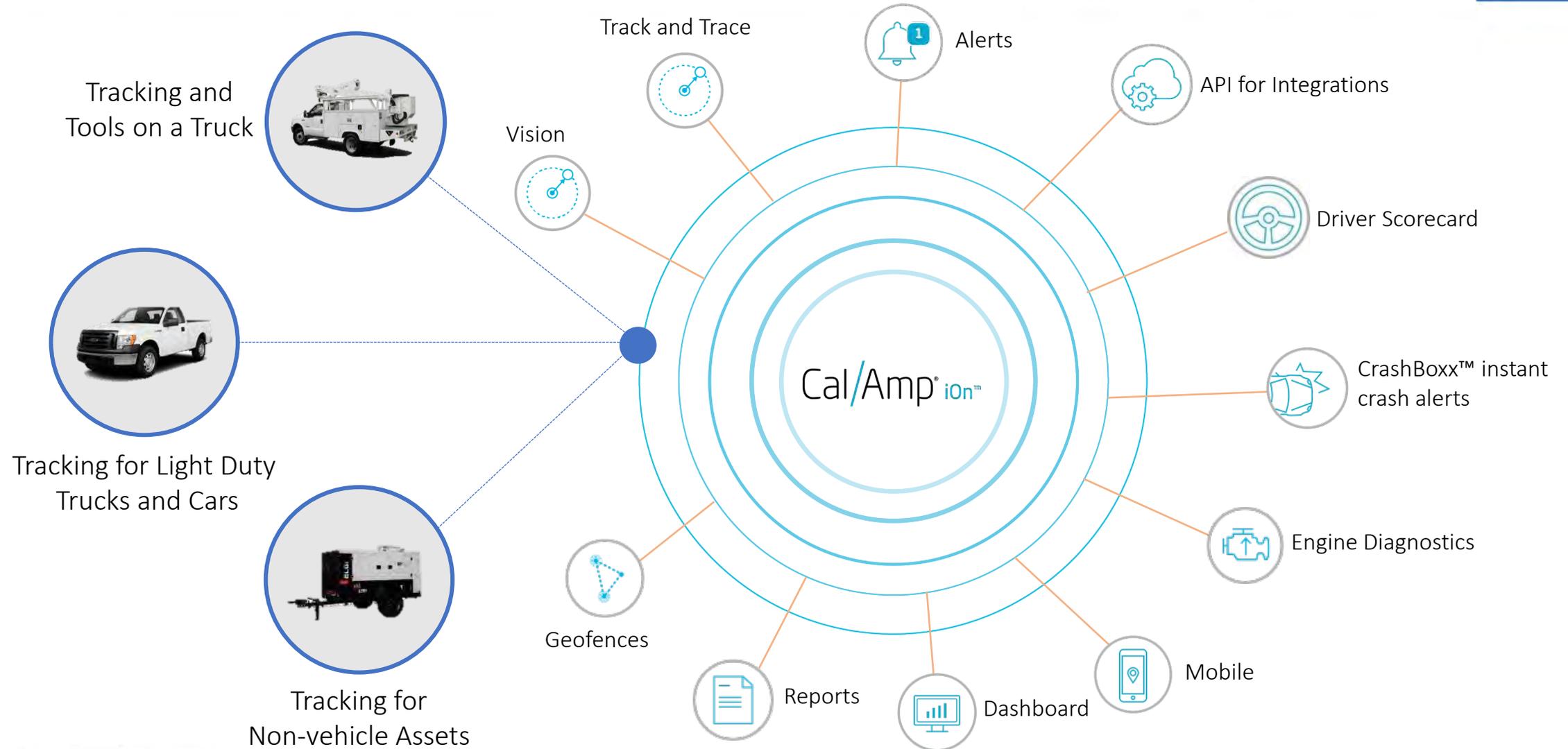




GPS Redeployment



Integrated Solution for Fleet Management





Highlights of GPS Strategy and Benefits

- Will result in the deployment of 2,991 GPS units (1,150 existing and 1,841 new units) across all City departments
- Dallas Fire-Rescue
 - Enhance PM Program by using GPS data to automate scheduled intervals
- Optimize utilization reviews
 - Allow EFM to help right-size the fleet and identify opportunities for fleet reductions and motor pool
- Reports and updated web application
 - Allow City departments to optimize utilization of vehicles and equipment, monitor operations, and make more data driven decisions



GPS Deployment Breakdown



GPS Redeployment Breakdown					GPS Redeployment Breakdown			
Department	Existing	Additional	Subtotal		Department	Existing	Additional	Subtotal
ATT	0	7	7		MCC	0	3	3
AVI	32	2	34		MGT	0	53	53
BSD	63	30	93		OCA	0	2	2
CCS	249	161	410		OEM	0	8	8
CTJ	0	1	1		OEQ	33	28	61
CTS	0	22	22		OPS	0	1	1
DAS	47	58	105		PBW	74	169	243
DEV	0	3	3		PKR	13	113	126
DFD	0	271	271		PNV	0	5	5
DPD	23	71	94		SAN	358	36	394
DSV	0	2	2		TRN	7	43	50
DWU	165	458	623		Fleet Studies	0	100	100
EFM	86	137	223		New Vehicles	0	40	40
HOU	0	13	13					
LIB	0	4	4		Grand Total	1,150	1,841	2,991





Alternative Fuels Strategy



Alternative Fuel Initiatives



- Install CNG facility at NW Service Center (grant funded)
- A renewable natural gas (RNG) Study was conducted by NREL
 - Goal for the study included the purchase of RNG to fuel City vehicles to support CECAP and maximize potential financial incentives
 - Request for Information (RFI) was released and (5) responses received in late April 2022
 - Contract expiring – public-private partnership for 2 CNG stations on City property
 - Study and staff recommendation include hiring a financial advisor/broker to help the City with next steps
- Inflation Reduction Act
 - Financial Incentives are available, and staff are reviewing the applicable provisions of the IRA that align with CECAP and are advantageous to the City





Acquisition/Funding Strategy for Vehicles and Equipment





Vehicle Acquisition and Funding Initiatives

Manufacturing of vehicles and equipment has been impacted by:

- Supply chain delays
- Microchip shortages
- Increased demand in a decreased supply environment

This has resulted in long lead times and in some cases cancellation of buy orders.

To protect the City from delays in equipment and vehicle replacements, a new multi-year acquisition and funding strategy will be implemented

- Advance FY 2023-24 budget appropriation to FY 2022-23 (mid year budget ordinance)
- Debt payment based on FY 2023-24 delivery
- No changes to future year assumptions- FY 2024-25 and beyond



Multi-Year Cost Summary – Fleet Replacements



General Fund - Annual Costs for Replacement Vehicles						
Department	FY22-23 - Backlog	FY22-23 Increase	FY23-24 Increase	FY24-25 Increase	FY25-26 Increase	Subtotal
ATT	\$84,051	\$0	\$43,972	\$0	\$0	\$128,023
BSD	\$863,478	\$332,896	\$38,503	\$805,263	\$135,343	\$2,175,483
CCS	\$1,292,206	\$341,716	\$774,342	\$1,420,380	\$2,595,279	\$6,423,922
CTJ	\$0	\$0	\$0	\$0	\$0	\$0
CTS	\$294,447	\$56,655	\$52,785	\$891,040	\$349,611	\$1,644,539
DAS	\$830,107	\$232,479	\$0	\$401,540	\$482,674	\$1,946,799
DFD - EFM Maintained	\$687,345	\$0	\$44,151	\$146,606	\$304,879	\$1,182,981
DPD - Non-Squads	\$8,989,928	\$820,064	\$1,714,799	\$1,153,321	\$7,249,975	\$19,928,086
DSV	\$39,595	\$0	\$181,075	\$0	\$0	\$220,670
EFM	\$27,685	\$633,784	\$233,894	\$2,070,889	\$394,476	\$3,360,728
HOU	\$81,282	\$0	\$28,821	\$44,731	\$38,052	\$192,886
LIB	\$0	\$0	\$37,255	\$0	\$0	\$37,255
MCC	\$0	\$0	\$0	\$38,415	\$0	\$38,415
MGT	\$439,766	\$147,309	\$109,846	\$120,098	\$0	\$817,019
OEM	\$35,746	\$53,826	\$0	\$0	\$137,705	\$227,278
OEQ	\$0	\$33,154	\$44,902	\$226,627	\$180,105	\$484,788
PBW	\$11,403,307	\$2,041,250	\$2,023,075	\$3,998,628	\$4,133,102	\$23,599,362
PKR	\$6,076,607	\$1,068,219	\$946,199	\$570,531	\$741,017	\$9,402,573
PNV	\$0	\$0	\$0	\$57,145	\$70,721	\$127,866
POM	\$0	\$39,745	\$0	\$0	\$0	\$39,745
TRN	\$342,653	\$153,951	\$219,012	\$165,229	\$284,641	\$1,165,486
Total General Fund	\$31,488,203	\$5,955,048	\$6,492,632	\$12,110,441	\$17,097,580	\$73,143,904





Dallas Police Vehicle Platform Needs for Patrol





Police Patrol Vehicle Considerations

- The Dallas Police Department, in partnership with EFM and ITS, evaluated options for the replacement of the Dodge Charger as the vehicle platform for Police Patrol
 - Public Safety Committee was briefed by memorandum on 10/11/22
- This was done in anticipation of fleet availability challenges along with the changing needs of Police Patrol
- The annual Michigan State Police Study was used as data source
- The results of the evaluation are depicted in the following slides



Evaluation Rubric



	Dodge Charger	Chevrolet Tahoe	Ford Police Utility
Price			✓
Cabin Space		✓	✓
2nd Row Space		✓	
Storage Space		✓	✓
Safety Ratings	✓		✓
Fuel Efficiency			✓
Hybrid Option			✓
AWD	✓		✓
Technology (ITS)		✓	✓
Ergonomics		✓	
Brake Test	✓		
Ground Clearance		✓	✓
Resale Value		✓	



Evaluation- Felony Traffic Stop



CHARGER



TAHOE



EXPLORER



Evaluation - Storage Space



CHARGER



TAHOE



EXPLORER



Evaluation - 2nd Row Space



Evaluation - Driver's Seat



CHARGER



TAHOE



EXPLORER



CHARGER



TAHOE



EXPLORER



Evaluation – Benchmark Cities



Department / Agency	Primary Patrol Vehicle	Secondary Patrol Vehicle
Texas DPS	Chevrolet Tahoe	Ford Interceptor Utility
Fort Worth	Ford Interceptor Utility	Chevrolet Tahoe
Austin	Ford Interceptor Utility	Chevrolet Tahoe
San Antonio	Ford Interceptor Utility	Chevrolet Tahoe
Houston	Ford Interceptor Utility	Chevrolet Tahoe
El Paso	Chevrolet Tahoe	N/A
Plano	Chevrolet Tahoe	N/A
Arlington	Chevrolet Tahoe	Dodge Chargers
Lubbock	Chevrolet Tahoe	Switching to all Ford Interceptor
Irving	Chevrolet Tahoe	Ford F150/Ford Utility
Garland	Chevrolet Tahoe	N/A
Amarillo	Ford Interceptor Utility	Ford PIU Hybrid



Current Patrol Fleet Cost/Replacement Status



Costs Per Mile			
City	Charger	Tahoe	Explorer
Austin	NA	39¢	48¢/32¢
Ft. Worth	NA	\$1.45	47¢
Grand Prairie	NA	45¢	57¢
San Antonio	NA	NA	80¢
Dallas	45¢	NA	NA

Current Replacement/Order Status - Pipeline			
Vehicle	FY22	FY23	Subtotal
Charger	164	83	247
Tahoe	1	65	66
Explorer	11	92	103
Total	176	240	416

Vehicle Platform	Purchase Price
Dodge Charger	\$49,545.00
Chevy Tahoe PPV	\$53,880.00
Ford Police Pursuit Utility	\$56,805.00
Ford Police Pursuit Utility (Hybrid)	\$59,910.00



Police Patrol Vehicle Considerations (Summary)



- Move from sedan to SUV platform
- Purchase a Chevy Tahoe and Ford Explorer mix
- Utilize hybrid technology to maximize fuel economy and reduce environmental impact
- Change replacement eligible criteria from 110k miles to 120k miles or six years





Sanitation 5-Day Schedule





Preparation for Sanitation 5-Day Schedule

- Sanitation Services will be moving from an existing 4-day schedule to a 5-day schedule on December 5, 2022 (briefed by memorandum on September 9, 2022)
- Equipment and Fleet Management (EFM) is preparing to support this initiative and will be increasing the number of reserves/spare trucks available for refuse and recyclables collection
- These spare trucks are available as a result of retaining trucks that were recently swapped with new replacements
- A series of repairs and refurbishments are being completed to restore the operational capacity of these trucks so they can be used as reserves/spares





Future Policy & Operational Issues/Decisions



Operational Issues/Decisions



- Supply Chain Issues
 - Central Warehouse opened at Hensley Field to hold inventory with long lead times and critical to operations
- Fuel/Oils/Grease/Lubricants
 - Pricing pressures, increased inventory because of delayed products
- Competitive Job Market
 - FY 2023 Budget includes funding for workforce development pilot program for (2) Automotive Technicians



Next Steps



- Continue work on action plans in response to consultant recommendations from both the 2018 Fleet Efficiency Study and 2022 Fleet Electrification Study
- Continue evaluating emerging technologies in alternative fuels such as hydrogen, renewable natural gas, and EV
- Continue to brief City Council on status of action plans and seek City Council feedback of future policy and operational plans





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