

# 2022 OHGFOA Annual Conference

**IT'S ELECTRIC:** Going Green, How Much is This Going to Hur.. Cost??



**FLEET MANAGEMENT**

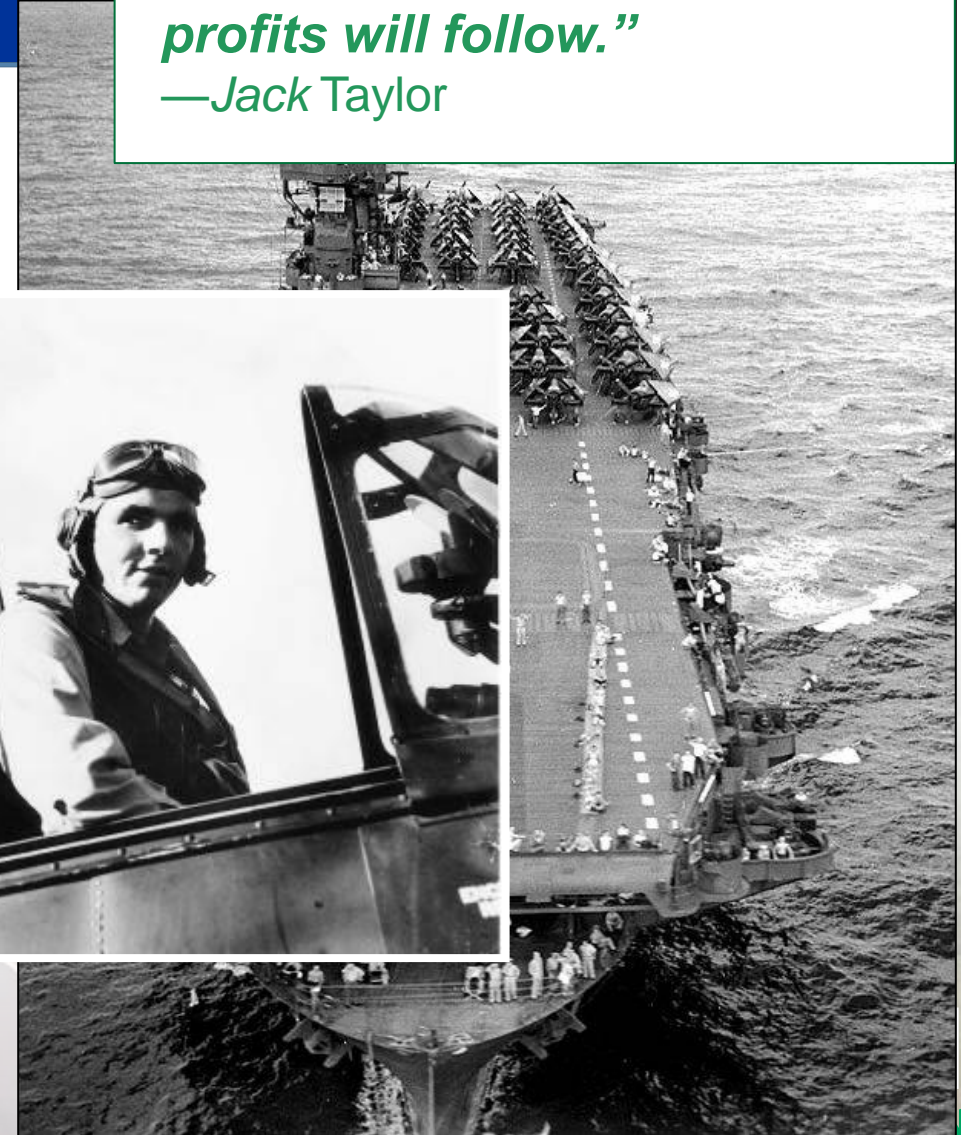




# WHO IS ENTERPRISE FLEET MANAGEMENT

*“Take care of your customers and employees first, and the profits will follow.”*  
—Jack Taylor

- Largest Purchaser of Vehicles on the Globe
- Manages 1.8M Vehicles Globally
- Recently performed a sustainability analysis to identify ~30k vehicles to go green
- Over 70 Ohio Government Partners and 1,000 Nationwide
- Assisted in the First Tesla Model Y converted Police Cruisers- City of Logan



# COMMON CHALLENGES IN TODAY'S MUNICIPALITIES

Sustainability/ Green Initiative Funding	Reduced Revenue	Increased Expenses	Tasked to do MORE with LESS
			



IF WE'RE GOING GREEN ALL WE NEED ARE EV'S RIGHT??



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# STEPS TO ELECTRIFICATION

Suitability  
Assessment

Solution  
Design

Electric Vehicle  
Implementation

Management &  
Optimization

1

2

3

4

**What** could we electrify? **How** do we electrify?

**Execute** the plan

**Operate** EV fleet



FLEET MAN/enterprise  
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# SUSTAINABILITY ASSESSMENT

## Understanding Fleet Operations

- Goal Setting
- Data Gathering & KPIs

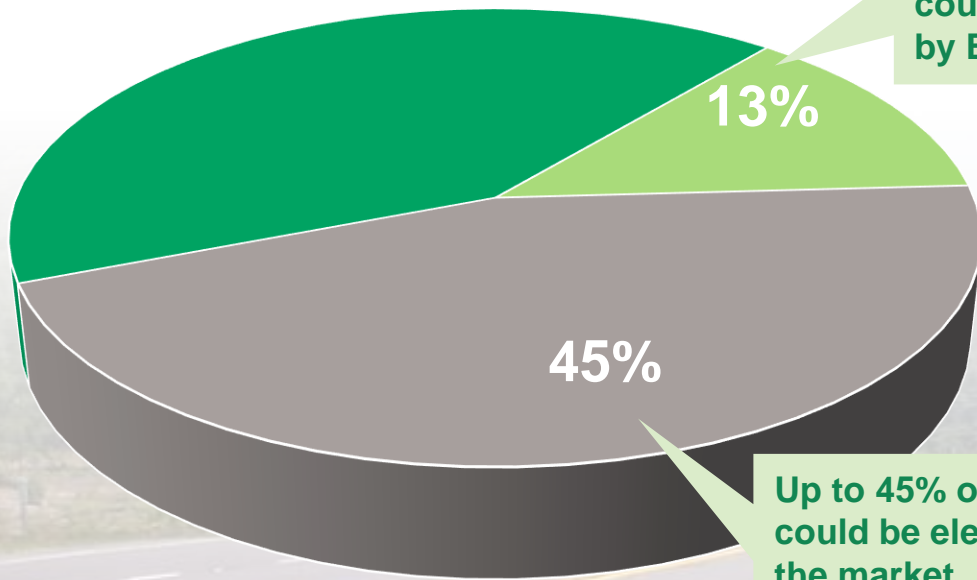




# WHAT IS THE EV SUITABILITY ASSESSMENT?

In 2021, Enterprise Fleet Management and Geotab conducted one of the largest fleet EV Suitability Assessments (EVSA).

Over 90,000 vehicles were analyzed



13% of the analyzed vehicles could be economically replaced by EVs today

Up to 45% of the analyzed vehicles could be electrified as EV pickups enter the market

Potential savings of **\$33 million** and reduction of **194,000 tons** of CO<sub>2</sub> emissions



**Enterprise**  
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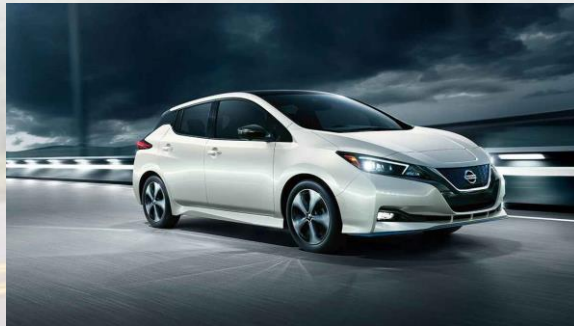
Details of the suitability assessment can be found [HERE](#)

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# SOLUTION DESIGN

## Options & Replacements

- Available Vehicle Options
- Replacement Feasibility





# ICE vs EV 10 Year Life Cycle Cost

## Sedans



## Compact SUV



## 1/2 Ton Truck



Year, Make, Model	2022 Chevrolet Malibu LS	2022 Nissan LEAF SV Plus	2022 Chevrolet Equinox LS AWD	2022 Kia Niro EV EX FWD	2022 Ford F-150 XL 4x4 SuperCrew Cab 5.5 ft	2022 Ford F-150 Lightning XLT All-Wheel Drive SuperCrew Cab 5.5 ft
EPA MPG City	29	114	25	123	19	76
Holding Period	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Annual Mileage	8,000	8,000	8,000	8,000	8,000	8,000
Acquisition Cost	\$19,353	\$34,624	\$25,012	\$40,286	\$36,790	\$54,769
Resale at Term	\$3,100	\$4,600	\$5,000	\$8,000	\$7,000	\$10,000
Total Fuel Cost	\$8,827	\$2,712	\$10,479	\$2,506	\$14,203	\$4,134
Total Maintenance Cost	\$7,389	\$5,930	\$7,389	\$5,930	\$8,429	\$6,764
<b>Cost Per Mile</b>	<b>\$0.49</b>	<b>\$0.56</b>	<b>\$0.56</b>	<b>\$0.58</b>	<b>\$0.75</b>	<b>\$0.77</b>



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# Challenges of Electrifying



**CLEAN FUELS**  
OHIO  
OHIO'S CLEAN TRANSPORTATION ADVOCATE

Enterprise Fleet Management

EV charging types vary greatly

	 <i>Miles / 10 Mins</i>	 <i>Use Case</i>	 <i>EVSE</i>	 <i>Install Cost</i>
<b>LEVEL 1 (AC) – Standard Outlet</b>	~1 Mile	Home	Included w/ Vehicle	None
<b>LEVEL 2 (AC) – High-Voltage Outlet</b>	~5 Miles	Home Public Access Fleet	\$250 up to \$1,300	\$500 up to \$3K
<b>FAST CHARGE (DC) – Charging Station</b>	~25+ Miles	Public Access Fleet	\$25K+ 50Kw Station	\$50K to over \$200K

Assuming \$100 per foot to trench through concrete, lay the conduit, and refill, it would cost:

- \$5,000 to trench 50 feet
- \$10,000 to trench 100 feet

**For Level 2 commercial EVSE in the EPRI study, the installation cost break down is approximately:**

- Labor: 55 - 60%
- Materials: 30 - 35%
- Permits: 5%
- Tax: 5%



ENTERPRISE HOLDINGS.

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# REFERENCES (some)

## Cities/ Townships/ Villages

City of North Ridgeville  
City of Sharonville  
City of Tallmadge  
City of Monroe  
City of Defiance  
Beavercreek Township  
City of Xenia  
City of Huber Heights  
City of Beechwood  
City of Athens  
City of Piqua

City of Rittman  
City of Canfield  
City of Bowling Green  
City of Toledo  
City of Miamisburg  
City of Logan  
City of Fairborn  
City of Marietta  
City of Forest Park  
City of Loveland  
City of Montgomery

Morrow County  
Medina County  
Highland County  
Portage County  
Crawford County  
Fairfield County  
Lucas County  
Allen County  
Clermont County

## Counties

| Summit County  
Brown County  
Delaware County  
Tuscarawas County  
Mahoning County  
Franklin County  
Licking County  
Adams County

## Law Enforcement/ Special Agencies

Mahoning Valley Law Enforcement Task Force  
Akron Police Department Narcotics Unit  
Fairfield Athens Major Crimes Unit

Summit County Drug Unit  
Summit County Sheriff's Office  
Trumble County Drug Task Force

Sourcewell 

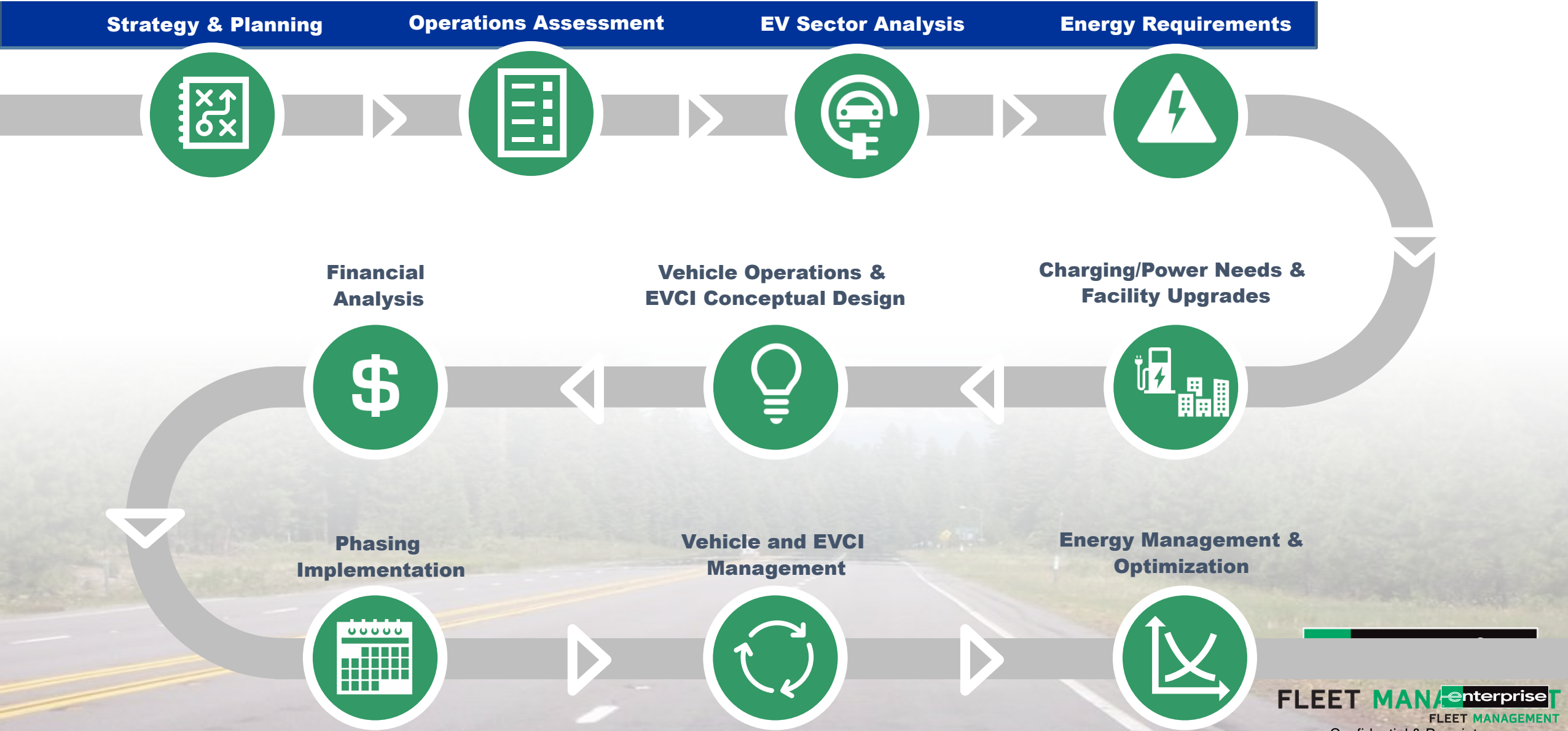
COOPERATIVE  
TIPS/TAPS  
PURCHASING SYSTEMS

E& Cooperative  
Services  
Sourcing. Strategy. Savings.

 enterprise  
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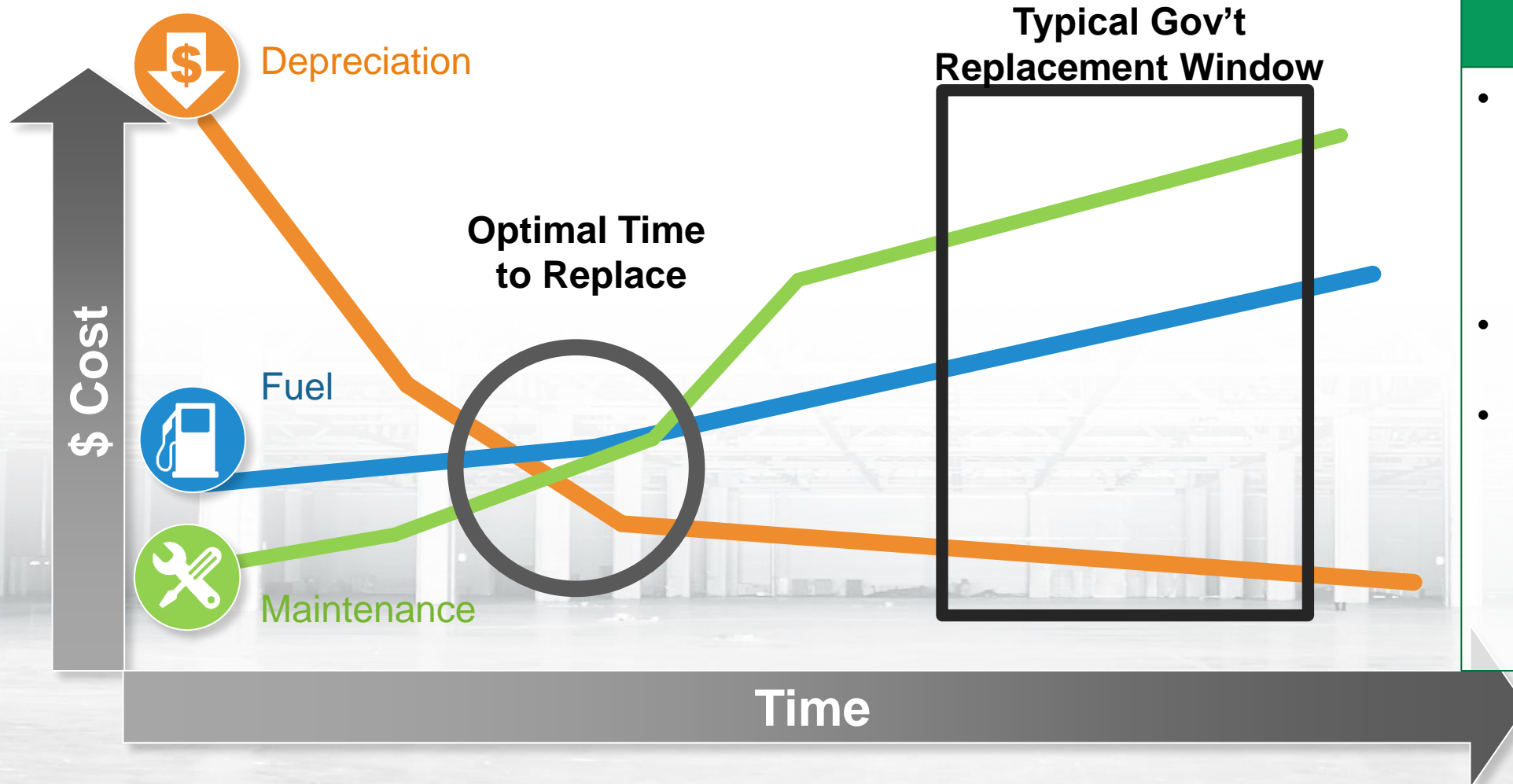
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# Electrification Lifecycle





# Optimal Replacement Cycle



## Key Observations

- Maintenance costs in the current replacement window are 2-3x's the costs of vehicles in the optimal range
- Fuel costs Typically 25% - 30%
- Resale values are 70% - 80% lower at your typical replacement point vs. Optimal

# Effects of an Aged Fleet

- Safety Concerns
  - Aged Fleet Inventory Typically Lacks Even Basic Safety Features
- Increased Operating Expenses
  - Older Vehicles Typically Cost 2-3 Times As Much To Maintain
- Reduced Resale Values
  - 70%-80% Reduction In Surplus Values vs. Optimal Cycle Point

All these factors lead to a higher Total Cost of Ownership, reduced reliability, and increased safety risks



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# Government Buying Power-



2021 Chevy 1500 WT Double Cab 4x4

\$34,125 Net Price 

← Chevrolet.com

Estimated State Contract

Price: **\$24,325**

## MANHEIM AUCTION RESULTS

VEHICLE	Odometer	Sale Price	Capital Outlay
2020 Chevy 1500 Dbl Cab WT 4x4	5,000	\$30,000	-\$5,675
2019 Chevy 1500 Dbl Cab WT 4x4	10,000	\$27,200	-\$2,875
2016 Chevy 1500 Dbl Cab WT 4x4	25,000	\$13,300	\$11,025
2011 Chevy 1500 Dbl Cab WT 4x4	50,000	\$10,900	\$13,425



# Vehicle Income Statement

## SAMPLE

2021 Silverado 1500 Double Cab WT 4x4 (8,000 Annual Miles)  
10 Years, 80,000 Miles

	Cash Buy & Hold on your own - Run 10 yrs	Enterprise Lease Solution - 5 Vehicles over 10 years
<b>Vehicle</b>		
Acquisition	\$24,325	\$137,369 (5 Vehicles)
Sale of Vehicles	(\$10,900)	(\$153,605) (5 Vehicles)
Depreciation	\$13,425	(\$16,236)
Interest	\$0	\$18,105
Sales Tax	\$0	\$0
<b>Total Vehicle</b>	<b>\$13,425</b>	<b>\$1,869</b> (2 vehicles)
<b>Operating</b>		
Maintenance	\$11,949	\$7,495
Fuel (EPA)	\$16,756	\$13,288
<b>Total Operating</b>	<b>\$28,705</b>	<b>\$20,783</b>
<b>Downtime</b>		
Driver Downtime	\$0	\$0
<b>Administrative</b>		
Management Fee	\$0	\$3,297
Service Charge	\$0	\$2,000
<b>Total Administrative</b>	<b>\$0</b>	<b>\$5,297</b>
<b>Total Cost of Ownership</b>	<b>\$42,130.00</b>	<b>\$27,949.00</b>
<b>Total Savings</b>		<b>\$14,181.00</b>

**Remember you are getting 5 vehicles through Enterprise vs. 1 in your current program**



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## Fleet Profile

## Fleet Replacement Schedule

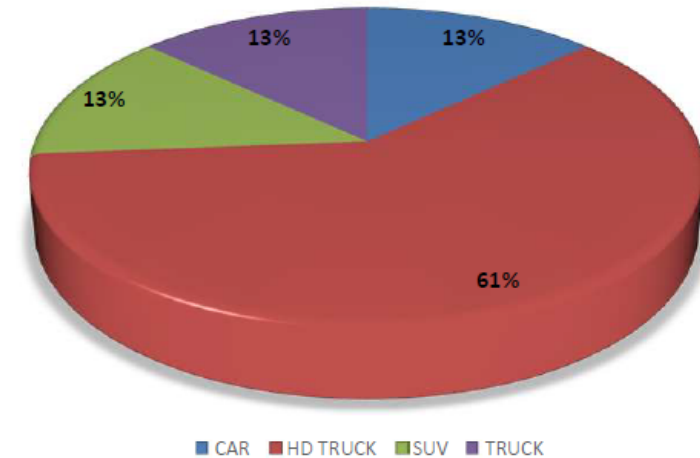
## Replacement Criteria

Vehicle Type	# of Type	Average Age (years)	Average Annual Mileage
Mid-size Sedan	5	3.6	13,900
Full-size Sedan	3	6.5	9,900
Compact SUV 4x4	4	3.6	3,400
Mid Size SUV 4x4	2	15.5	5,900
Full Size SUV 4x4	2	2.8	1,300
Compact Pickup Reg 4x4	3	18.7	4,300
Compact Pickup Quad 4x2	1	4.8	3,100
1/2 Ton Pickup Reg 4x2	1	4.8	6,900
1/2 Ton Pickup Ext 4x4	1	2.8	5,400
1/2 Ton Pickup Quad 4x4	2	1.0	100
3/4 Ton Pickup Reg 4x2	7	20.0	4,900
3/4 Ton Pickup Reg 4x4	7	6.1	3,900
3/4 Ton Pickup Ext 4x2	1	1.0	2,700
3/4 Ton Pickup Ext 4x4	2	7.3	6,200
3/4 Ton Pickup Quad 4x4	2	3.8	4,000
3/4 Ton Cab Chassis	1	18.0	5,500
1 Ton Pickup Reg 4x4	1	9.9	6,200
1 Ton Pickup Ext 4x4	2	7.9	4,900
1 Ton Cab Chassis	11	12.4	3,100
1 1/2 Ton Cab Chassis	3	3.3	2,300
<b>Totals/Averages</b>	<b>61</b>	<b>9.1</b>	<b>5,000</b>

2020	2021	2022	2023	2024	Under-Utilized
0	1	0	2	2	0
1	1	0	0	1	0
0	0	0	3	1	0
2	0	0	0	0	0
0	0	0	0	2	0
3	0	0	0	0	0
0	0	0	1	0	0
0	0	0	1	0	0
0	0	0	0	1	0
0	0	0	0	2	0
7	0	0	0	0	0
2	0	0	1	4	0
0	0	0	0	1	0
1	0	0	0	1	0
0	0	0	2	0	0
1	0	0	0	0	0
1	0	0	0	0	0
1	0	0	1	0	0
6	0	1	1	3	0
0	1	0	0	2	0
<b>25</b>	<b>3</b>	<b>1</b>	<b>12</b>	<b>20</b>	<b>0</b>

- \* Fiscal Year 2020 = 10 years old and older, or odometer over 100,000
- \* Fiscal Year 2021 = 8 years old and older, or odometer over 93,300
- \* Fiscal Year 2022 = 6 years old and older, or odometer over 86,600
- \* Fiscal Year 2023 = 4 years old and older, or odometer over 79,900
- \* Fiscal Year 2024 = Remaining Vehicles
- \* Underutilized = Annual Mileage less than 10

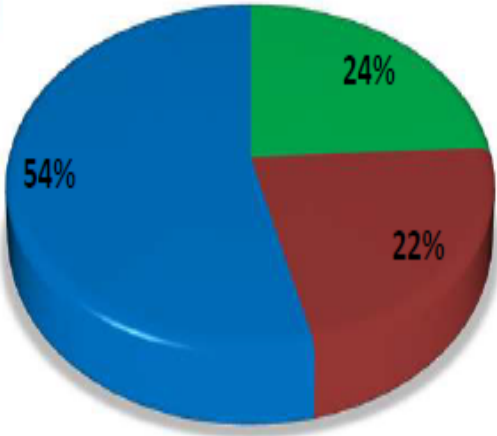
## Vehicle Types



# Fleet Costs Analysis

Current Fleet	61	Fleet Growth	0.00%	Proposed Fleet	61
Current Cycle	10.00	Annual Miles	5,000	Proposed Cycle	4.74
Maint. Cents Per Mile	\$0.23			Proposed Maint.	\$35.89
Current Maint.	\$95.83	Current MPG	10	Price/Gallon	\$2.50

Fiscal Year	Fleet Mix			Fleet Cost							Annual	
	Fleet Size	Annual Needs	Owned	Leased	Purchase	Lease*	Equity (Owned)	Equity (Leased)	Maintenance	Fuel	Fleet Budget	Net Cash
Average	61	6.0	61	0	170,674	0			70,150	76,250	317,074	0
'20	61	25	36	25	0	140,743	-76,200		52,167	70,000	186,711	130,363
'21	61	3	33	28	0	155,560	-32,000		50,009	69,250	242,820	74,254
'22	61	1	32	29	0	162,013	-22,000	-14,611	49,290	69,000	243,692	73,382
'23	61	15	20	41	0	222,354	-241,000		40,658	66,000	88,013	229,061
'24	61	20	0	61	0	340,164	-435,500	-215,817	26,272	61,000	-223,880	540,954
'25	61	22	0	61	0	340,164		-38,329	26,272	61,000	389,108	-72,035
'26	61	8	0	61	0	340,164		-24,652	26,272	61,000	402,785	-85,711
'27	61	4	0	61	0	340,164		-86,939	26,272	61,000	340,498	-23,425
'28	61	10	0	61	0	340,164		-190,095	26,272	61,000	237,342	79,731
'29	61	22	0	61	0	340,164		-231,234	26,272	61,000	196,202	120,871



Fuel Maintenance Purchase

<b>10 Year Savings</b>	<b>\$1,067,445</b>
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# Why Partner with Enterprise Fleet Management

- Infrastructure to Design & Develop Green Initiatives
- Lower the Age of your Fleet
- Improve Safety and Reliability
- Increase Cash flow
- Reduce Operational Cost
- Predictable, Budgetable, and Manageable Fleet Plan



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# Questions

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