



*Value Through Professional
Asset Management*

NATIONAL EDUCATION SEMINAR
AUGUST 10 –13, 2015
FORT WORTH, TEXAS



How to Reduce Fleet Costs

William Gookin & Scott Conlon
Mercury Associates



*Value Through Professional
Asset Management*

NATIONAL EDUCATION SEMINAR
AUGUST 10 -13, 2015
FORT WORTH, TEXAS

Ways to Reduce Fleet Costs

- Smaller fleet
- Reduce Vehicle Miles Traveled (VMT)
- Get more miles per gallon
- Lower fuel cost
- Reduce vehicle lifecycle cost
 - Lower acquisition cost
 - Higher resale
- Lower maintenance cost
 - Reduce labor cost
 - Reduce parts cost
 - Reduce commercial repair cost
- Lower overhead costs (management)

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Rating Cost Reduction Strategies

What	Savings Potential	Ability to Control
Smaller Fleet	\$\$\$\$	Medium
Reduce Vehicle Miles Traveled	\$	Low
Get more miles per gallon	\$	Medium
Lower fuel cost	\$	Low
Reduce vehicle lifecycle cost	\$\$\$	High
Lower maintenance cost	\$\$	Medium
Lower overhead costs (management)	\$	Low

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Smaller Fleet

- Estimate \$5,000 per vehicle savings (light duty) per year
- Reduce 20 vehicles = \$100 thousand per year
- Reduce 100 vehicles = \$0.5 million per year
- Reduce 200 vehicles = \$1 million per year

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

How To Reduce Your Fleet?

Perform VAM

- **Fleet Rightsizing**
- **Vehicle Alternative Fuels**
- **Vehicle Right Typing**
- **Must be Vehicle by Vehicle**
- **Must Address 100% of FAST* Reportable Fleet**
- **Must be Performed Annually for FMP* Updating**



Fleet Management Plan* (FMP)

- **Results of VAM**
- **Schedule to Achieve Optimal Fleet Inventory**
- **Plan & Schedule for placing AFV's near stations**
- **Vehicle Sourcing – GSA Lease* vs. Own vs. Commercial Lease**
- **FMP incorporated into Agency's SSPP***

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

*Pertains to Federal fleets

Reduce Vehicle Miles Traveled

– State of the Art Fleet Management Information System

- Lets you track vehicle utilization
- Enables you to position vehicles where demand is highest
- Provides opportunities for motor pooling vehicles
- Highlights potential opportunities for shuttle/taxi service
- Can assess need for Home-to-Work use

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Approaches to Reducing Vehicle Miles Traveled

- Reduce Home-to-Work (HTW)
- Use Teleconferencing
- Use Public Transportation
- Improve Routing/Scheduling (use GPS)
- Increase Car Pooling

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Example: Reduce HTW

- Eliminate HTW for 100 people
- Assume round trip commute of 40 miles/day
- Assume vehicle gets 20 m.p.g.
- Assume fuel cost of \$2.50 per gallon
- Assume 250 commute days per year
- Savings = \$1,750 per vehicle
- Savings for 100 people = \$125,000/yr

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Get More Miles Per Gallon

- Obtain more fuel efficient vehicles
 - Smaller vehicles such as Hybrids, Compacts, etc..
- Reduce unnecessary weight in the vehicle
 - 100 pounds can reduce your MPG by 2%*
- Reduce Idling
- Driver Training
 - Avoid excess speed
 - Avoid rapid acceleration
 - Use cruise control
- Ensure your vehicles are properly maintained
 - Vehicle is in top running condition (tuned up)
 - Tires are properly inflated

• *

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

*www.fueleconomy.gov

Example: more miles per gallon

- Current fleet: average of 20 m.p.g. @ 10,000 miles per year, \$2.50 per gallon = \$1,250 per vehicle/yr.
- Future fleet: average of 25 m.p.g. (25% improvement) @ 10,000 miles per year, \$2.50 per gallon = \$1,000 per vehicle/yr.
- Savings is \$250 per vehicle/yr.
- Savings for 1,000 vehicle fleet = \$250,000/yr.

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Lower Fuel Cost

- If possible use on-site fueling capabilities
- Ride Share
- Use on-site shuttle or taxi service
- Use low speed electric vehicles (LSEV)
- Right size vehicles for the mission
- Establish a motor pool

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Example: Lower Fuel Cost

- Current fleet: average of 20 m.p.g. @ 10,000 miles per year, \$2.50 per gallon = \$1,250 per vehicle/yr
- Future: average of 20 m.p.g. @ 10,000 miles per year, \$2.00 per gallon = \$1,000 per vehicle/yr
- Savings = \$250 per vehicle/yr
- Fleet of 1,000 vehicles savings = \$250,000

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Reduce Vehicle Lifecycle Cost

- GSA* replaces vehicles based upon an optimum life cycle
- Most Agency's hold on to their vehicles until they fall apart
 - Old Vehicles = less safety & technology
 - Increased management cost
 - Increased maintenance cost
 - Increased fuel cost
 - Increased vehicle down time

* General Services Administration provides vehicles to Federal fleets

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

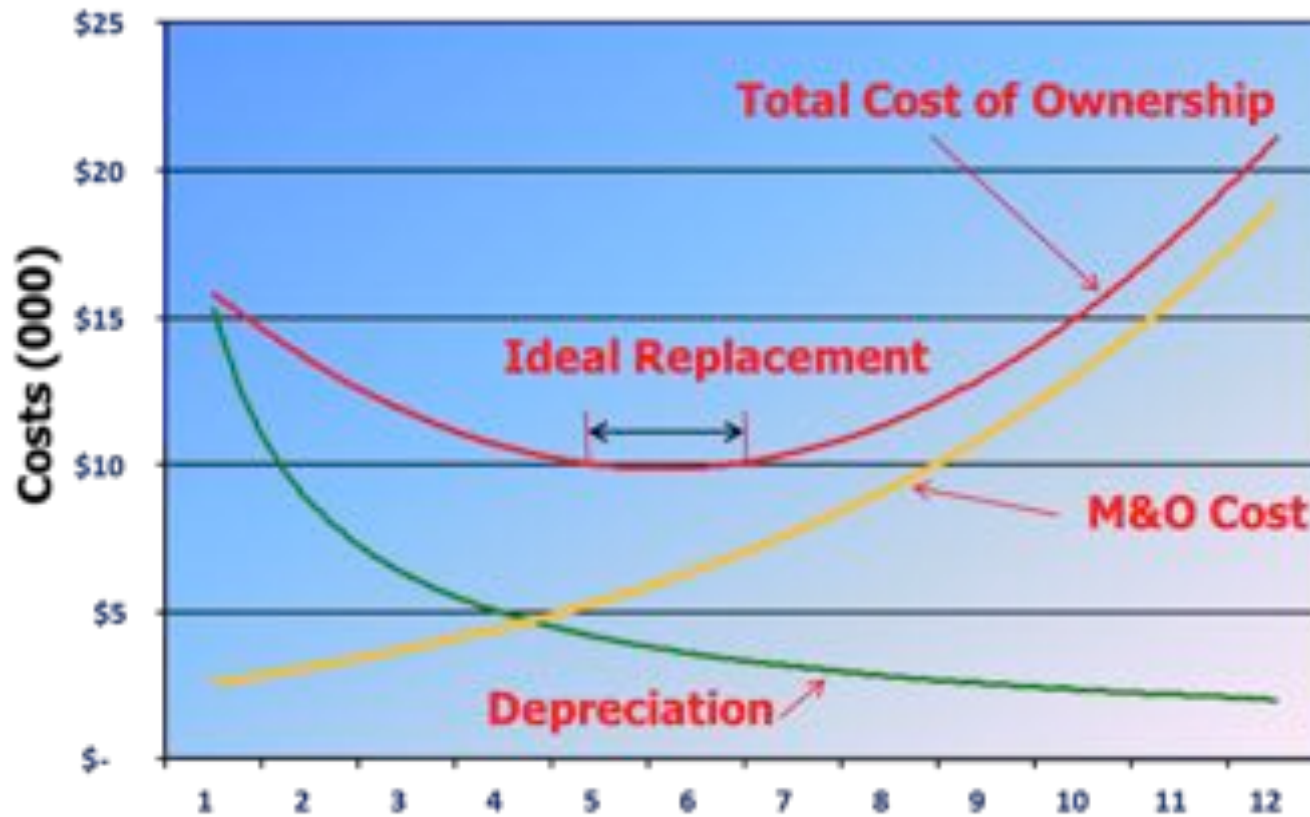
Reduce Vehicle Lifecycle Cost, Cont.

- Fewer vehicle safety features
- Reduced employee and public safety
- Decrease in employee morale
- May cause employees to have less focus on operator maintenance
- Decreased residual value on resale
- Fleet size may be larger to ensure backup vehicles are available

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Lifecycle Cost Analysis

Capital, Operating, and Total Cost Trend Lines



Replacement Cycle (years)

Copyright © 2015 Mercury Associates, Inc.
All Rights Reserved



Value Through Professional
Asset Management

Depreciation & Life Cycle Costs

A 7-yr cycle *is* cheaper than a 5-yr cycle

Replacement Cycle In Years:	1	2	3	4	5	6	7	8	9	10
Meter at replacement	9,407	18,814	28,221	37,628	47,035	56,442	65,849	75,256	84,663	94,070
CAPITAL COST										
Annual Depreciation	\$58,684	\$29,342	\$19,561	\$19,561	\$12,793	\$10,680	\$6,150	\$6,398	\$5,344	\$4,464
Cumulative Depreciation	\$58,684	\$88,025	\$107,587	\$127,148	\$139,941	\$150,621	\$156,772	\$163,170	\$168,514	\$172,978
OPERATING COSTS										
Annual Maint and Repair Cost	\$2,473	\$6,296	\$11,011	\$16,511	\$22,758	\$29,740	\$37,462	\$45,935	\$55,178	\$65,214
Annual Fuel Cost	\$11,361	\$11,819	\$12,295	\$12,791	\$13,306	\$13,842	\$14,400	\$14,981	\$15,584	\$16,212
Total Annual Operating Cost	\$13,834	\$18,115	\$23,306	\$29,302	\$36,064	\$43,583	\$51,862	\$60,915	\$70,762	\$81,427
Cumulative Operating Cost	\$13,834	\$31,949	\$55,255	\$84,556	\$120,620	\$164,203	\$216,066	\$276,981	\$347,743	\$429,170
TOTAL COST										
Annual Total Cost	\$72,518	\$47,457	\$42,867	\$48,863	\$48,857	\$54,263	\$58,013	\$67,314	\$76,106	\$85,890
Cumulative Total Cost	\$72,518	\$119,975	\$162,842	\$211,704	\$260,562	\$314,825	\$372,837	\$440,151	\$516,257	\$602,148
NPV of Cumulative Total Cost	\$68,413	\$110,649	\$146,641	\$185,345	\$221,854	\$260,108	\$298,689	\$340,923	\$385,970	\$433,931
Equivalent Annual Cost	\$76,465	\$57,827	\$51,842	\$49,863	\$48,443	\$48,015	\$47,942	\$48,567	\$49,572	\$50,876

...and cheaper than a 9-yr cycle too

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Cost Savings

Optimized Replacement Cycle

- Replace at 7 years vs. 10 years
- Savings = \$3,000 per vehicle per year
- At 7 years, total savings per vehicle = \$21,000
- Fleet of 100 trucks would save \$2,100,000 over 7 years (\$300K per year)

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

The Costs of Ignoring Depreciation

- Poor Decision-making: Lease vs. ownership financing methods are incorrectly evaluated
 - Pay before you go versus pay as you go
 - Sunk cost versus ongoing depreciation
- Poor Communication: Financial factors for replacement planning inadequate
- Life-cycle Costs Ignored: Focus on marginal M&R rather than total costs
- Marginal Costs Climb: Fleets get old
- Poor Fleet Management: Fleet expenses and budgets understated; cost of the owned fleet is unknown

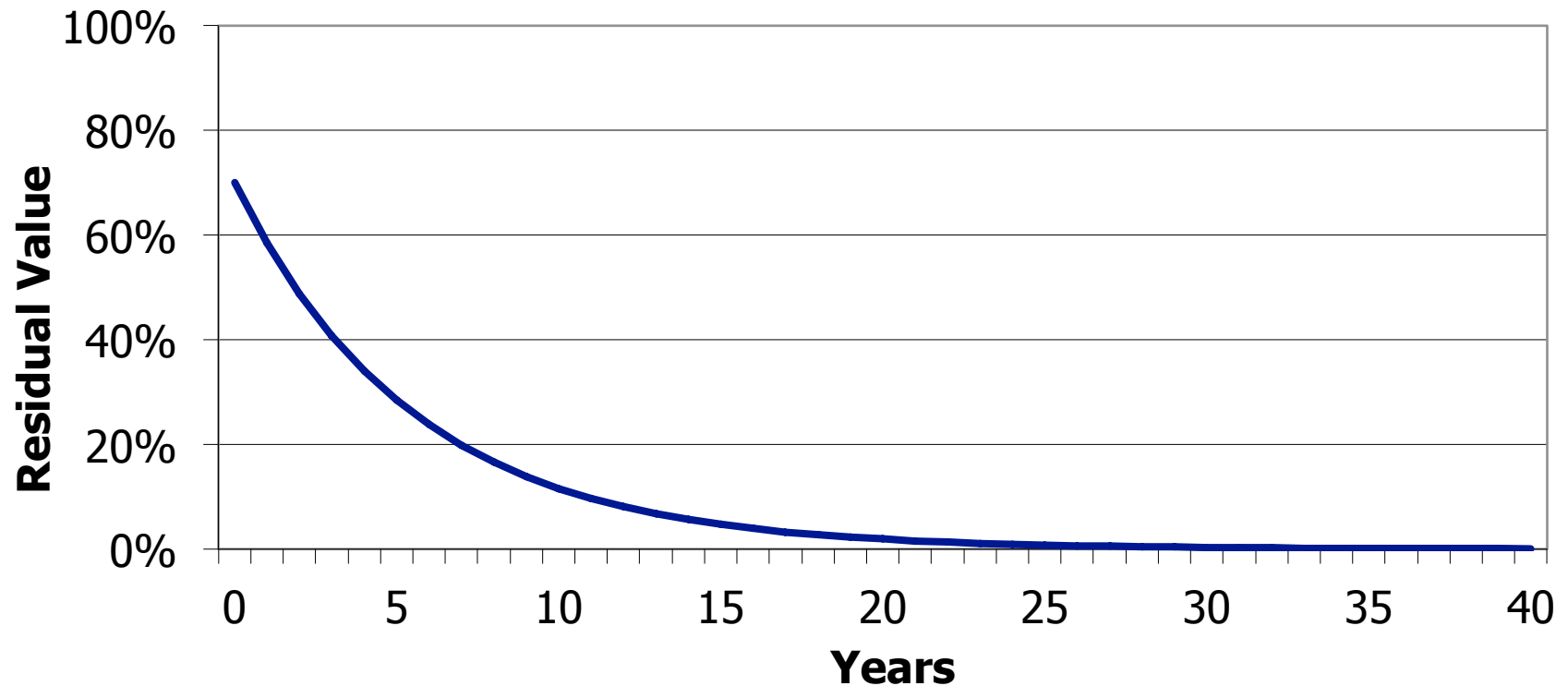
Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Consequences of Ineffective Replacement Practices

- Maintenance costs climb
- Resale (residual) value declines
- Older units use more fuel
- Older units pollute more
- Vehicle condition (and safety) declines with age, not just miles (technological obsolescence)
- Downtime increases which makes fleet users less productive
- Users avoid older units leading to lower usage, compared with newer units

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Residual Value



Residual Value is the projected market value of the asset at the end of its useful life (or at any time during its life).

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Lower Maintenance Costs

- Perform preventative maintenance
- Provide training to vehicle operators
- Ensure maintenance personnel are properly trained
- Replace vehicles at the end of their lifecycle
- Have a Fleet Management Information System

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Lower Maintenance Costs

- Enables the fleet manager to track which vehicles may require more maintenance than others
- Reduce Maintenance Cost per Mile from 18¢ per mile to 15¢ per mile
- Average fleet mileage = 10,000 miles per year
- Savings of \$300 per year per vehicle
- For 1,000 vehicle fleet, total savings of \$300,000 per year

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Lower Overhead Costs

- Consolidate fleet management operations
- Reduce size of the fleet
- Use GSA leasing
- Develop a lifecycle model for replacement of vehicles
- Ensure fleet managers, operators are trained
- Acquire a Fleet Management Information System (GSA FMIS free)
- Reduce 1 fleet management position
- Cost savings (with benefits) = \$130,000

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

Cost Savings for 1,000 Vehicle Fleet

Strategy	Annual Savings	Potential
Reduce Fleet by 100 vehicles	\$500,000	High
Eliminate HTW by 100 vehicles	\$125,000	Moderate
Improve m.p.g. by 25%	\$250,000	Moderate
Lower fuel cost from \$2.50 to \$2.00 per gallon	\$250,000	Low
Reduce vehicle lifecycle cost on 100 vehicles	\$300,000	Moderate
Lower maintenance cost	\$300,000	Moderate
Lower overhead costs	\$130,000	Moderate

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved

MERCURY ASSOCIATES, INC.

“Specializing in the science of fleet management.”

William Gookin
Director, Federal Fleet
Consulting
wgookin@mercury-assoc.com
Cell (540-809-3792)

Scott Conlon
Sr. Consultant, Federal Fleet
Consulting
sconlon@mercury-assoc.com
Cell (301-275-4799)

Copyright © 2015 Mercury Associates, Inc. All Rights Reserved