Vehicle Allocation Methodology

Requirements, Best Practices & Lessons Learned
Scott Conlon/Barry Shpil
Mercury Associates, Inc.
August 17, 2017

Tampa Convention Center • Tampa, Florida
## Mercury VAM Projects

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Vehicles Analyzed</th>
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<tbody>
<tr>
<td>DHS</td>
<td>53,000</td>
</tr>
<tr>
<td>CA DGS</td>
<td>48,000</td>
</tr>
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<td>State of Florida</td>
<td>26,000</td>
</tr>
<tr>
<td>State of New York</td>
<td>26,000</td>
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<tr>
<td>Los Angeles County</td>
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<td>DHS (less ICE/CBP)</td>
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<tr>
<td>State of South Carolina</td>
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</tr>
<tr>
<td>DOE</td>
<td>14,000</td>
</tr>
<tr>
<td>Department of State</td>
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<td>Marine Corps</td>
<td>12,700</td>
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<td>ICE</td>
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<td>City of San Francisco</td>
<td>9,300</td>
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<tr>
<td>USDA NRCS</td>
<td>9,000</td>
</tr>
<tr>
<td>BNSF Railway</td>
<td>7,000</td>
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<tr>
<td>Harris County (TX)</td>
<td>5,800</td>
</tr>
<tr>
<td>City of Baltimore (MD)</td>
<td>5,600</td>
</tr>
<tr>
<td>Orange County (CA)</td>
<td>3,000</td>
</tr>
<tr>
<td>Loudoun County (VA)</td>
<td>2,900</td>
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<tr>
<td>Corpus Christi (TX)</td>
<td>2,000</td>
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<td>San Antonio Water</td>
<td>2,000</td>
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<td>State of Alabama</td>
<td>2,000</td>
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<tr>
<td>DLA</td>
<td>1,900</td>
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<td>Howard County (MD)</td>
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<td>Palo Alto (CA)</td>
<td>1,000</td>
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<tr>
<td>GSA OAS</td>
<td>900</td>
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</table>

- Over 317,000 vehicles analyzed!
What is a VAM?

A structured and repeatable process of defining the proper *number* and *types* of vehicles needed to meet the organization’s mission, budget, and regulatory requirements to establish and maintain an optimal fleet.
What are the steps in a VAM process?

- **Fleet Inventory**: Export and analyze fleet inventory and use data.
- **Utilization Criteria**: Develop survey questions, configure survey, & test.
- **Survey & Analysis**: Distribute survey, report progress, & apply criteria.
- **Optimize Inventory**: Validate results.
Why do I have to perform a VAM?

41 CFR §102-34.50—What size motor vehicles may we obtain?

- (b) Agencies must establish and document a structured vehicle allocation methodology to determine the **appropriate size and number** of motor vehicles

EO 13693: *Planning for Federal Sustainability in the Next Decade* Sec. 3.g(i)

- the head of each agency shall, where life-cycle cost-effective . . . improve agency fleet and vehicle efficiency and management by . . . determining . . . the optimum fleet inventory with emphasis placed on **eliminating unnecessary or non-essential vehicles** from the agency’s fleet inventory.
How frequently do I have to do a VAM?

Implementing Instructions for Executive Order 13693 Planning for Federal Sustainability in the Next Decade

• To determine the optimum fleet inventory, agencies shall conduct a Vehicle Allocation Methodology (VAM) study to right-size its fleet. An agency should conduct a new VAM study at least once every five years or more frequently if the agency's mission or resource requirements change.
Is there additional guidance?

- **GSA FMR Bulletin B-43** provides:
  - A definition of the optimal fleet;
  - A description of VAM process steps;
  - Sample utilization criteria; &
  - Sample questions to ask.

- **Guidance for Federal Agencies on Executive Order 13693 – Federal Fleet Management** states that a VAM should identify opportunities to:
  - eliminate unnecessary vehicles;
  - deploy more efficient vehicles;
  - reduce fuel usage and miles driven; and
  - promote the deployment and use of ZEVs, PHEVs, and other alternative fuel vehicles (AFVs).
Also, specific to DHS: The SAVE Act

The White House
Office of the Press Secretary

For Immediate Release       June 06, 2017

President Donald J. Trump
Signs H.R. 366 into Law

On Tuesday, June 6, 2017, the President signed into law:

H.R. 366, the "DHS Stop Asset and Vehicle Excess Act or the DHS SAVE Act," which requires the Under Secretary for Management of the Department of Homeland Security (DHS) to oversee and manage vehicle fleets throughout DHS; and imposes new requirements on DHS components regarding the management of those fleets.
### Why should I perform a VAM?

- Fleet right-sizing and right-typing are fleet industry best practices
- You can keep acquisitions from running on autopilot
- It gives “permission” to your fleet users to be candid
- You can “find” vehicles that aren’t in the FMIS
- You can use the survey process to clean up FMIS data
- You can use the VAM process to gather information that doesn’t otherwise exist anywhere else
Phase 1
Fleet Inventory

- Agency FMIS Data
- Analyze fleet inventory data
- Data good?
  - Yes: Add data validation questions
  - No: Develop survey questionnaire

Phase 2
Utilization Criteria

- Configure survey in survey tool
- Survey good?
  - Yes: Vehicle good?
    - Yes: End
    - No: Report progress
  - No: Report progress

Phase 3
Survey & Analysis

- Distribute survey
- Respond to survey
- Report progress
- Vehicle good?
  - Yes: Vehicle good?
    - Yes: End
    - No: Report progress
  - No: Document results, submit, and outbrief

Phase 4
Optimize Inventory

- Distribute inventory
- Decide to accept or reject
- Report progress
- Agency to implement
Analyze Fleet Inventory and Use Data

• What data do I already have in my FMIS?
  – Usually vehicle attribute, assignment, and mileage
• Is my FMIS data accurate? Complete?
  – VINs mistyped
  – Vehicle types inconsistent with models
  – Incorrect mileage entries
• Does my fleet data pass VLD/ALD blocking and flagging rules?
  – The survey can include data validation questions for just those vehicles with bad data
Phase 1: Fleet Inventory
- Agency FMIS Data
- Analyze fleet inventory data
  - Data good? [Y/N]
    - [Y] Add data validation questions
    - [N] Develop survey questionnaire

Phase 2: Utilization Criteria
- Configure survey in survey tool
  - Survey good? [Y/N]
    - [Y] Develop survey questionnaire
    - [N] Configure survey in survey tool

Phase 3: Survey & Analysis
- Distribute survey
- Respond to survey
  - Vehicle good? [Y/N]
    - [Y] Report progress
    - [N] Distribute recommend
- Document results, submit, and outbrief
  - Agency to implement
- End

Phase 4: Optimize Inventory
- Report progress
  - [Y] Document results, submit, and outbrief
  - [N] Decide to accept or reject
What types of right-sizing questions are there?

• Utilization
  – Mileage per trip, hours per trip, trips per day/week
• Criticality
  – What are the consequences of not having a vehicle?
  – How easy is it to substitute another vehicle?
Phase 1: Fleet Inventory
- Agency FMIS Data
- Analyze fleet inventory data
  - Data good?
    - Y: Add data validation questions
    - N: Develop survey questionnaire
  - N: Configure survey in survey tool
    - Survey good?
      - Y: Distribute survey
      - N: Configure survey in survey tool
      - N: Develop survey questionnaire
- Respond to survey
- Report progress
- Vehicle good?
  - Y: End
  - N: Document results, submit, and outbrief
  - N: Distribute recommend
- Decide to accept or reject
- Report progress
- Agency to implement
What types of **right-typing** questions are there?

- **Body type questions:**
  - Passenger, cargo (size and weight), towing capacity
  - Installed or carried equipment
- **Drivetrain questions:**
  - Operating environment, road condition
- **Fuel type questions:**
  - Survey can be used to gather range requirements/limitations, and answer other EV questions (HEV, PHEV, EREV, BEV, LSEV)
# VAM Process: Consideration Checklist

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RESPONSE</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you created a thorough, written, standard justification that documents the need to add this vehicle to the fleet and do you have such justification on file if needed for audit purposes?</td>
<td></td>
<td>Motor Vehicle Program Manual Section ###; DOE FEMP Comprehensive Federal Fleet Management Handbook, Chapters XXXX.</td>
</tr>
<tr>
<td>Why is this vehicle being requested?</td>
<td></td>
<td>Motor Vehicle Fleet Program Manual ###, Acquisition Planning ###; Comprehensive Federal Fleet Management Handbook, Chapters XXXX.</td>
</tr>
<tr>
<td>Have you assessed all other means of transportation such as use of a motor pool, rental, taxi, bus, POV or other transportation alternatives to determine if the vehicle is still needed?</td>
<td></td>
<td>Motor Vehicle Fleet Program Manual ###, Acquisition Planning; Comprehensive Federal Fleet Management Handbook, Chapters XXXX. FMR Bulletin #30.</td>
</tr>
<tr>
<td>Will this vehicle be used regularly by more than one person (excluding only drivers over work shifts) - i.e. multiple drivers, a work crew, or transporting several people? (answer No if used primarily by one person)</td>
<td></td>
<td>FMR Subpart B, Obtaining Fuel Efficient Motor Vehicles, FMR §102-34.50</td>
</tr>
</tbody>
</table>
Configure and Test the Survey

• Test survey for clarity and functionality with:
  – Agency HQ level
  – Intermediate level fleet managers
  – Test with select fleet users

• Not all survey software has the same features
  – Builder interface and text editor (ease of creation)
  – Supported question types (text, multiple choice)
  – Available validation rules (affects quality)
  – Conditional logic (reduces effort for response)
Distribute the Survey

• Announcement email from exec. prevents pushback
• Distribution email should go out to respondents with link to survey, vehicle list, instructions and FAQs
• Typical immediate responses:
  – Out of office
  – Undeliverable mail (POC misspelled or gone from org.)
  – Not my vehicle; never heard of it
  – I moved to another duty station
  – I am reporting this as SPAM email
  – I have an extra vehicle that isn’t in the inventory
Key Aspects of Survey Distribution

• Timing of survey distribution/submission is important; consider major annual milestone dates in planning, such as fiscal year-end budget close-out, up-tempo operations, and typical holiday/calendar absences of key individuals...Bad timing can lead to bad results.

• Ensure VAM surveys are distributed to the individuals most likely to know the actual/intended use of the vehicle being surveyed
# Reporting Progress: Real-time Visibility is Key

## Survey Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Remaining</th>
<th>Incomplete</th>
<th>Complete</th>
<th>Total</th>
<th>Completion %</th>
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<td>1</td>
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<tr>
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<td>1</td>
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<td>2</td>
<td>2</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

| Total | 5 | 0 | 1713 | 1718 | 99.71% |
Reminder Emails: Sample Schedule and Escalation

• After a week:
  – Remind those that haven’t responded yet

• After two weeks:
  – Remind those that haven’t responded yet
  – Notify relevant fleet manager with listing

• After three weeks:
  – Remind those that haven’t responded yet
  – Notify relevant fleet manager and site director with listing
Results can be surprisingly candid...

• “This vehicle has been parked for over six months”
• “I do not need to have a GOV because I don't travel enough to justify it.”
• “This vehicle is used on occasion but the other vehicles at [blank] are used much more often and are more suitable to travel during severe weather events. They must keep all other vehicles but they can do without this one.”
• “This vehicle is no longer needed at this location. There is no longer a [blank] team here to use it.”
Analysis

• Utilization and criticality answers are assigned point values
• Points are totaled and vehicles are compared to other vehicles within each class (and installation)
  – For example, SUVs are only compared to SUVs
  – For example, SUVs at Camp X are only compared to other SUVs at Camp X, and not Camp Y
• Mismatches between current vehicle type and reported use are identified
• Fuel opportunities are evaluated
Gaining Consensus: Agreement or Disagreement

- Fleet managers or site directors review results
  - Agree or disagree with getting rid of the vehicles
  - Agree or disagree with changing the vehicle type upon replacement
- This can be accomplished through a second brief survey
- Results are documented, submitted, and the agency is outbriefed
## Sample Results

### Pre-Consensus

<table>
<thead>
<tr>
<th>Purchase Type</th>
<th>Count of Units With Savings</th>
<th>Savings</th>
<th>Count of Units With Savings</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSA Lease</td>
<td>19</td>
<td>$54,192</td>
<td>-</td>
<td>$</td>
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<tr>
<td>Owned</td>
<td>977</td>
<td>$3,140,801</td>
<td>2,268</td>
<td>$2,076,781</td>
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<tr>
<td>Total</td>
<td>996</td>
<td>$3,194,993</td>
<td>2,268</td>
<td>$2,076,781</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td></td>
<td>$5,271,774</td>
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</table>

### Post-Consensus

<table>
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<th>Purchase Type</th>
<th>Count of Units With Savings</th>
<th>Savings</th>
<th>Count of Units With Savings</th>
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<tr>
<td>GSA Lease</td>
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<td>-</td>
<td>$</td>
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<tr>
<td>Owned</td>
<td>152</td>
<td>$595,988</td>
<td>792</td>
<td>$588,159</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td>$600,044</td>
<td>792</td>
<td>$588,159</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td></td>
<td></td>
<td>$1,188,204</td>
</tr>
</tbody>
</table>
Recommended/Required Action Items

- Get results signed off at high level
- Dispose/reallocate and track target fleet size
- Submit Optimal Fleet Profile via FAST
- Describe VAM actions/results in Fleet Management Plan
- Update replacement policies and procedures to reference VAM results
- Use VAM-like questions to screen new requirements
- Prioritize the deployment of EVSE
Prime EVSE Opportunities
Upfront communication with stakeholders (superiors, peers, sub-fleet managers, vehicle custodians and vehicle operators) is key to success:

• What you are doing?
• Why you are doing it/what requires it?
• How you are doing it?
• What is expected?
• What are the timeframes?
• What will be the outcomes?
• Biggest question of all: What’s in it for me?
In conclusion...

• From our perspective, the analysis is the easy part; the real challenge is in managing the process
• From the agency perspective, carrying out the results can be the most difficult part
• Quality control is essential: nobody wants to send one email with errors, let alone several thousand
• Most beneficial for unVAMed fleets, but even repeat agencies can still find:
  – One to two percent reductions
  – Five to ten percent right-typing
  – Pay back of more than ten-to-one relative to cost
Questions?

Contact us:
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• Mercury Associates, Inc.
  • www.mercury-assoc.com
### What services does Mercury provide?

#### Fleet Management Consulting
- Utilization & VAM
- Optimal Replacement
- Replacement Plans
- Chargeback Rates and Alternative Financing
- Fuel Studies
- Fleet Technology
- Outsourcing
- Policy & Procedures
- RFP & SOW Development
- Best Practices, Audits, & Benchmarking

#### Fleet IT Consulting
- Fit-Gap Assessments
- Solution Acquisition
- Turn-key System Implementation Services
- Project Management Quality Assurance
- System Administration
- Data Analytics
- Cloud Services
What services does Mercury provide?

**Professional Development**
- Federal Fleet Manager Certification
  - Specialist, Administrator, and Manager level certifications through the NPMA
- Fleet Management Education
  - On-site workshops
  - Trade shows & Seminars
- Fleet Technician and Staff Training

**Everything Else**
- Business Development
- Executive Recruiting
- Expert Witness & Subject Matter Experts
- Market Research
- Reimbursement/Business Allowance
- Staffing
  - Fleet Management Support
  - Property Management
  - Travel and Relocation