



AUGUST 29 - SEPTEMBER 1, 2016
2016 National Education Seminar (NES)
Gaylord Opryland Resort, Nashville, TN
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Fleet Information Management and Asset-Level Data Reporting

Data Elements and Validation



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What This Session Covers

- Federal Automotive Statistical Tool (FAST)
Requirements for gathering data
- Required data elements
- Methods of checking and validating fleet data to ensure accuracy and reliability

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A FAST Overview

What is it?

A web-based reporting tool that consolidates Federal fleet information for reporting to the GSA, OMB, White House, Congress, etc.

Why change it now?

- Current data is aggregated and manipulated before submission.
- Vehicle level data will:
 - Promote the accurate collection of fleet data
 - Promote information-based management of the fleet

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Trends in Fleet Management

Old Model - Decentralized

- Local control
- High duplication of effort
- Low standardization
- Management by individual effort or tradition

New Model - Consolidated

- Centralization of functions
- Economies of scale
- Uniform business rules
- Management by exception reporting and data analysis

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Trends in FAST Reporting

Sectioned Data

1. By vehicle type, size, and engine configuration
2. By vehicle class and ownership
3. By fuel type, location, and exemption

Vehicle-Level Data

By individual vehicle with

- Operating data (mileage, fuel consumption)
- Operating costs (maintenance, fuel)
- Capital costs (depreciation)
- Indirect costs (overhead)
- Lease costs (if applicable)
- Designations (LE, 701...)

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Requirements/References

- Section 3 (g) (iv) of Executive Order 13693: *Planning for Federal Sustainability in the Next Decade* (March 19, 2015)
- Section III.C.6 of the *Implementing Instructions for E.O. 13693* (June 10, 2015)
- Federal Automotive Statistical Tool Vehicle-Level Data Element Reference (June 21, 2016)*
- Federal Automotive Statistical Tool Vehicle-Level Data Business Rules Reference (June 21, 2016)*

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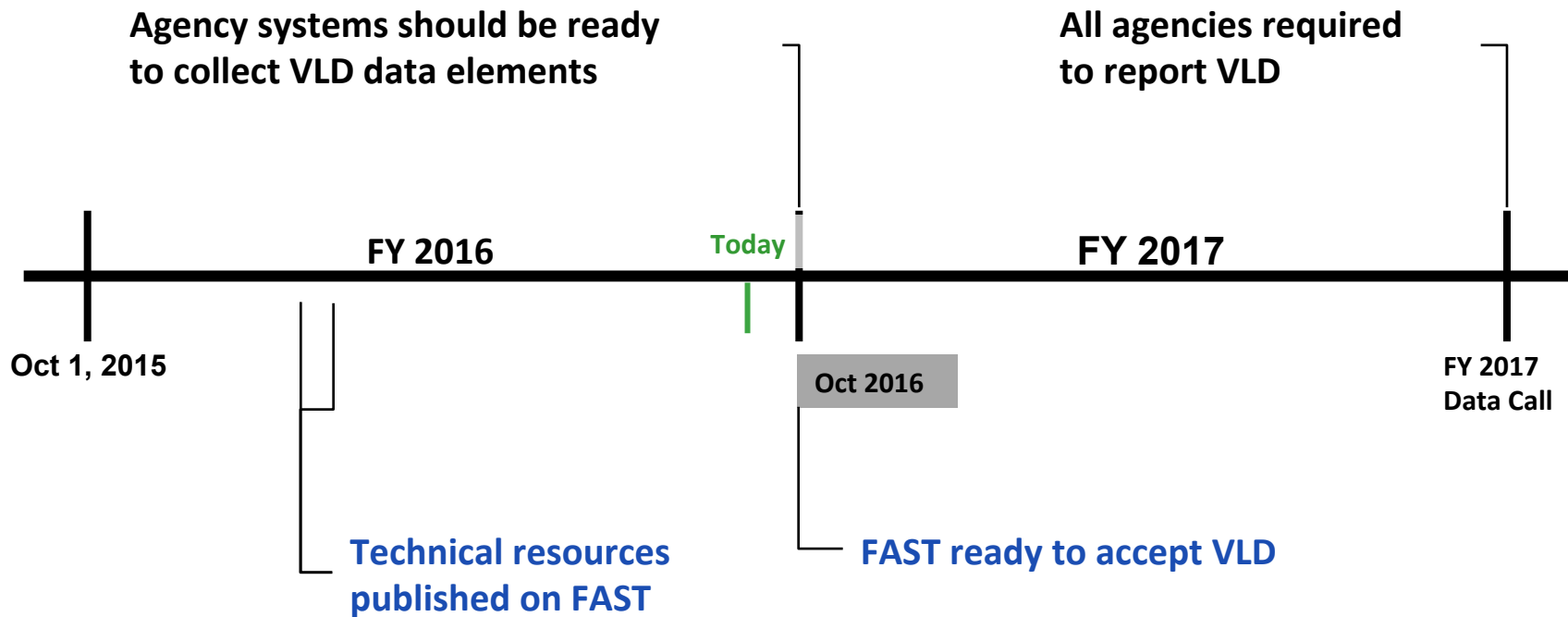
* Available at <https://fastweb.inl.gov/help/index.cfm/resources/vehicle-level-data>

E.O. 13693 Sec. 3: Sustainability Goals

- “...the head of each agency shall, where life-cycle cost-effective, beginning in fiscal year 2016, unless otherwise specified: improve agency fleet and vehicle efficiency and management by:
- (iv) ensuring that agency annual asset-level fleet data is properly and accurately accounted for in a formal agency Fleet Management System and any relevant data is submitted to the Federal Automotive Statistical Tool reporting database, the Federal Motor Vehicle Registration System, and the Fleet Sustainability Dashboard (FleetDASH) system”

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FAST Timeline*



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*From an INL presentation given March 29, 2016

Two Paths to Good Data

Internal Data Validation

- Ad hoc analysis to export and analyze data that passes business rules, but are still suspicious
- Limited only by skill and time available

FAST Sand Box and Query Tools

- Sand box to test import processes (valid XML, what's preventing data from importing, what's getting flagged)
- Query tool capabilities specific to new VLD shape
- Will enable you to meet the minimum requirements for data submission
- Still in development

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Business Rules Reference Example

Element	Element Name	ID	Business Rule	Class
A-1	Unique Vehicle Identifier	A-1.1	Type: text string with a maximum of 36 characters	Block
		A-1.2	Content: must not be empty or blank	Block
		A-1.3	Content: alphanumeric characters plus period and dash; first character must be alphanumeric	Block
		A-1.4	Must be unique across all vehicles within reporting agency and within a file being imported into the system	Block

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Gap Analysis

For each data element:

- Is it currently tracked?
- What system is it in?
- What are the front end and backend names?
- What is the format?

For each business rule:

- Is it compliant with the business rule?

Gap analysis format:

- Add additional columns to the Business Rules Reference to organize your findings.

Stakeholder groups:

- IT staff
- Vehicle users
- Fleet managers
- FAST system administrators
- Security (for sensitive missions)

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Business Rules Reference

Blocking

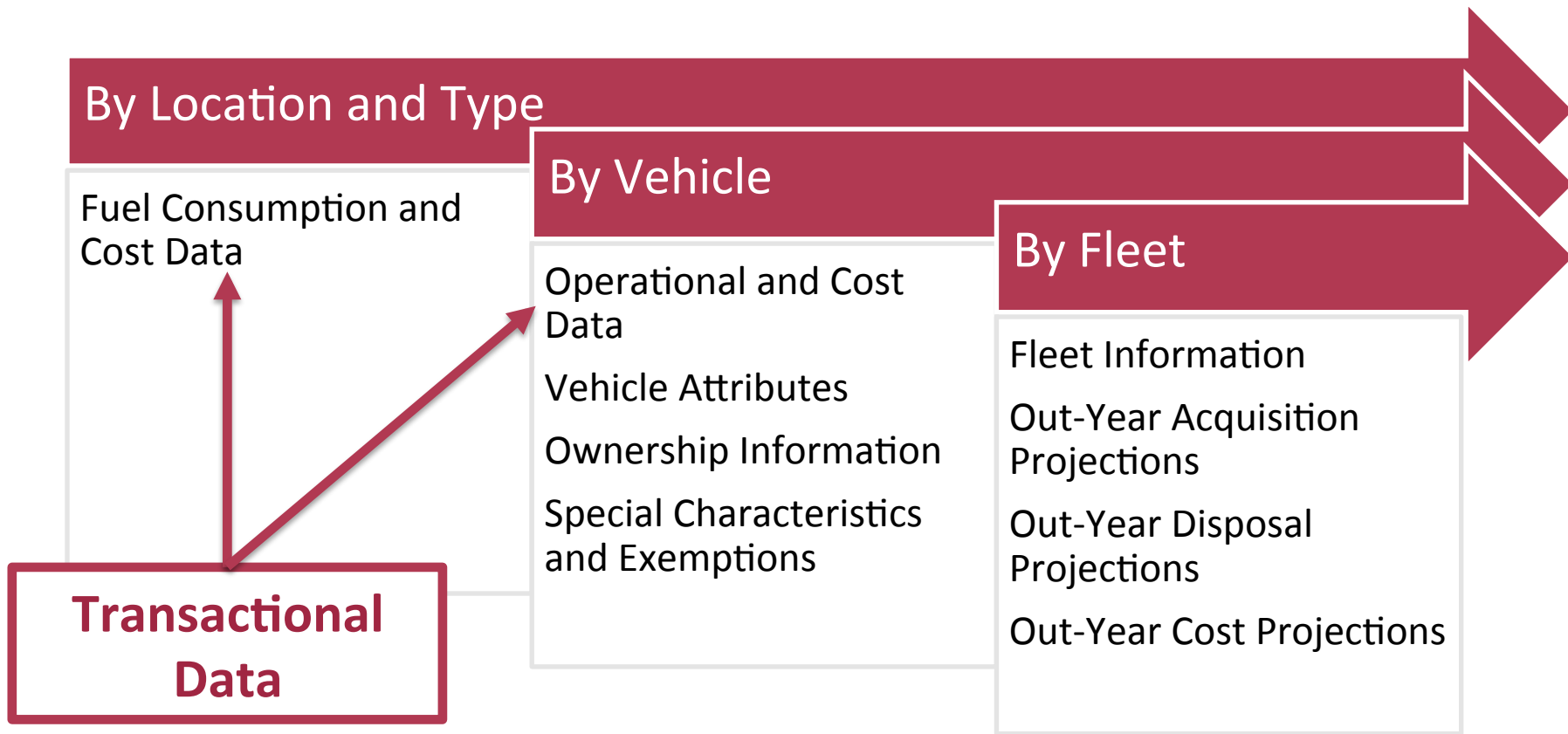
Any violation of blocking rules **will prevent** the data from being imported into FAST and **must be resolved** in the import file before any data from the file will be imported.

Flagging

Violations of flagging rules will not prevent data from being imported; rather, flagged data will be presented to the reporting agency as suspect and may merit further review.

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Data Element Prioritization



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Fuel Consumption and Cost Data

Prioritize your effort on the blocking rules in this area first –

- Why?
- Largest volume of data
- Difficult to correct after-the-fact
- Data collection starts on October 1, 2016

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Fuel Consumption and Cost Data

Element	Element Name	ID	Business Rule	Class
F-1	Fuel Location	F-1.1	Type: enumeration; must match one the U.S. Postal Service abbreviations for the 50 states or one of the following values: DC (District of Columbia) PR (Puerto Rico) OT (Other U.S. Territories) FO (Foreign)	Block
		F-1.2	Must be consistent with vehicle's Garage - Domestic (A-8) designation	Block

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Fuel Consumption and Cost Data

Element	Element Name	ID	Business Rule	Class
F-2	Fuel Type	F-2.1	Type: enumeration; must match one of the following values: B100 (Pure biodiesel) B20 (20% biodiesel/diesel blend) CNG (Compressed natural gas) DSL (Diesel) E85 (85% ethanol/gasoline blend) ELE (Electricity) GAS (Gasoline) HYD (Hydrogen) LNG (Liquefied natural gas) LPG (Liquefied petroleum gas)	Block
		F-2.2	Must be consistent with Vehicle Fuel Type/ Configuration (A-7)	Block

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Fuel Consumption and Cost Data

Element	Element Name	ID	Business Rule	Class
F-3	Fuel Units	F-3.1	Type: enumeration; must match one of the following values: GGE (Gasoline gallon equivalents) GAL (Gallons) GAL@2400 (Gallons at 2,400 PSI) GAL@3000 (Gallons at 3,000 PSI) GAL@3600 (Gallons at 3,600 PSI) HF3 (Hundred cubic feet) KWH (Kilowatt hours) KG(Kilograms)	Block
		F-3.2	Must be consistent with Fuel Type (F-2)	Block

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Fuel Consumption and Cost Data

Element	Element Name	ID	Business Rule	Class
F-4	Fuel Volume	F-4.1	Type: integer	Block
		F-4.2	Minimum value: 0	Block
		F-4.3	Maximum value: 10,000	Block
		F-4.4	Total fuel consumption for all fuel entries for vehicle with non-zero mileage must be greater than zero	Block
F-5	Fuel Cost	F-5.1	Type: integer	Block
		F-5.2	Minimum value: 0	Block
		F-5.3	Maximum value: 500,000	Block
OR	Other Rules (not related to a specific data element)	OR-1	Each vehicle must have one or more fuel consumption entry (elements F1 through F5).	Block

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Recap - Fuel Consumption and Cost Data

Unique Vehicle Identifier

Any identifier—vehicle identification number (VIN), asset identifier, or other—that is unique within the agency (i.e., cannot ever be reused within the agency), is permanent (i.e., cannot ever change for a given vehicle), and avoids potential security concerns

Fuel Consumption and Cost Data

Identifier	Element Name
F-1	Fuel Location
F-2	Fuel Type
F-3	Fuel Units
F-4	Fuel Volume
F-5	Fuel Cost
F-6	Fuel Comment
OR	Other Rules

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Operational and Cost Data

Prioritize your effort in this area second –

- Why?
- Second largest volume of data
- Difficult to correct after-the-fact
- Data collection starts on October 1, 2016

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Operational and Cost Data - Overview

Unique Vehicle Identifier

- Any identifier—vehicle identification number (VIN), asset identifier, or other—that is unique within the agency (i.e., cannot ever be reused within the agency), is permanent (i.e., cannot ever change for a given vehicle), and avoids potential security concerns

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Operational and Cost Data

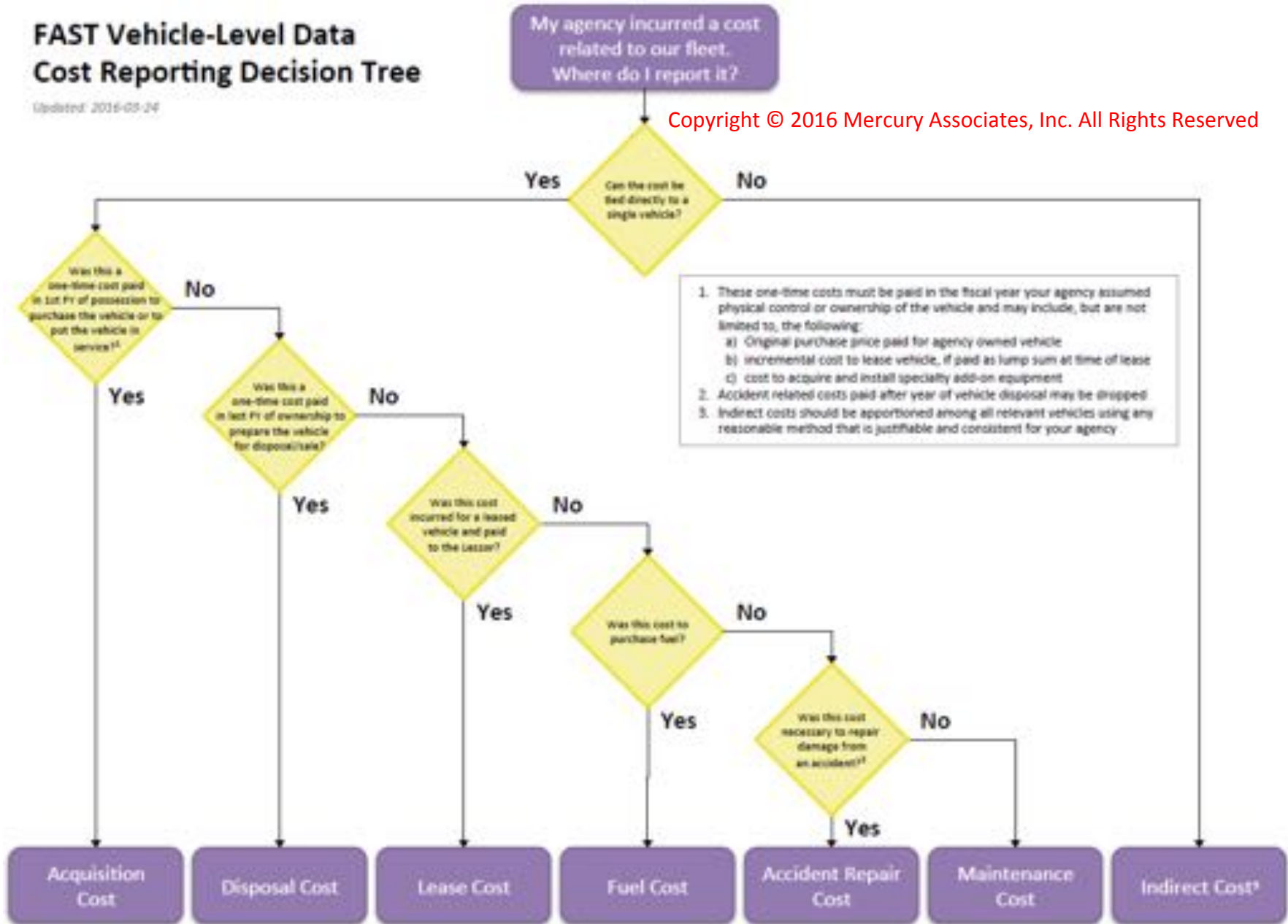
Identifier	Element Name
OC-1	Acquisition Cost
OC-2	Capitalized Item
OC-3	Salvage Percent
OC-4	Useful Life
OC-5	Depreciation Cumulative
OC-6	Miles Traveled
OC-7	Lease Cost
OC-8	Maintenance Cost
OC-9	Accident Repair Cost
OC-10	Indirect Cost*
OC-11	Disposal Cost
OC-12	Disposal Proceeds

*Review Standard Indirect Cost Factors at FAST site under 'Other Resources'

FAST Vehicle-Level Data Cost Reporting Decision Tree

Updated: 2016-03-24

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Per-Vehicle Information

Vehicle Attributes

Identifier	Element Name
A-1	Unique Vehicle Identifier
A-2	Make*
A-3	Model
A-4	Model Year
A-5	GVWR
A-6	Vehicle Type
A-7	Vehicle Fuel Type/Configuration
A-8	Garage - Domestic
A-9	Location Withheld
A-10	Garage - ZIP
A-11	Garage - Latitude
A-12	Garage - Longitude
A-13	Agency Budget Element Code
A-14	Agency Sort Field
A-15	Vehicle Comment

Ownership Information

Identifier	Element Name
OW-1	Acquisition Date
OW-2	Ownership Type
OW-3	Vehicle Assignment Type
OW-4	Actual Disposal Date
OW-5	Actual Disposal Reason

*Some obscure vehicle makes may not be on the list of recognized makes – if this occurs, contact INL to have those vehicles added.

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Per-Vehicle Information

Special Characteristics and Exemptions

Identifier	Element Name
S-1	EPA Act Coverage Designation
S-2	EPA Act 2005 Section 701 Designation
S-3	EISA Section 141 Designation
S-4	EO 13693 Designation
S-5	Petroleum- Dedicated LGHG Vehicle Qualifying as AFV
S-6	Law Enforcement Designation
S-7	Emergency Response Designation
S-8	Armored Designation

Operational and Cost Data

Identifier	Element Name
OC-1	Acquisition Cost
OC-2	Capitalized Item
OC-3	Salvage Percent
OC-4	Useful Life
OC-5	Depreciation Cumulative
OC-6	Miles Traveled
OC-7	Lease Cost
OC-8	Maintenance Cost
OC-9	Accident Repair Cost
OC-10	Indirect Cost
OC-11	Disposal Cost
OC-12	Disposal Proceeds

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Fleet Information

Identifier	Element Name
FL-1	Fleet Abbreviation
FL-2	Fleet Point of Contact
FL-3	Fleet POC Email
FL-4	Fleet Comment

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Fleet-Level Out-Year Acquisition, Disposal and Cost Projections

Out-Year Vehicle Acquisition Projections

Identifier	Element Name
AP-1	FY
AP-2	Ownership Type
AP-3	Vehicle Type
AP-4	Vehicle Fuel Type/Configuration
AP-5	Garage - Domestic
AP-6	Law Enforcement Designation
AP-7	Emergency Response Designation
AP-8	Armored Designation
AP-9	Quantity
AP-10	Acquisition Costs
AP-11	Agency Budget Element Code
AP-12	Agency Sort Field
AP-13	Comment

Out-Year Vehicle Disposal Projections

Identifier	Element Name
DP-1	FY
DP-2	Ownership Type
DP-3	Vehicle Type
DP-4	Vehicle Fuel Type/Configuration
DP-5	Garage - Domestic
DP-6	Law Enforcement Designation
DP-7	Emergency Response Designation
DP-8	Armored Designation
DP-9	Quantity
DP-10	Average Vehicle Age
DP-11	Disposal Proceeds
DP-12	Agency Budget Element Code
DP-13	Agency Sort Field
DP-14	Comment

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Questions?

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