Fleet Utilization Management and Rightsizing

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Why is proper fleet size and composition important?

- For ensuring an acceptable level of asset availability and service delivery
- For controlling fleet and service delivery costs
- For maintaining uniform levels of asset usage and reducing their life cycle costs
What are vehicles and equipment assets used for?

- Movement of people
- Movement of goods
- Movement of tools and equipment
- Performance of work tasks in the field that require a mobile office or work platform
Is rightsizing more difficult for some types of asset uses than for others?

- Predictable use
  - Public transit
  - Student transportation
  - Refuse collection
  - Meter reading
  - Street sweeping
  - Groundskeeping
Is rightsizing more difficult for some types of asset uses than for others?

- Semi-predictable use
  - Manufacturing
  - Mining
  - Infrastructure maintenance
  - Package and freight delivery
  - Law enforcement
  - Health and building inspection
  - Construction
  - Sales
  - Seasonal activities
Is rightsizing more difficult for some types of asset uses than for others?

- Unpredictable use
- Fire fighting
- Emergency medical services
- Disaster response and recovery
- Administrative travel
Is rightsizing more difficult for fleets comprised of some types of assets than of others?

- Old assets
- Assets of organizations with inefficient and/or ineffective maintenance and repair practices
- Assets maintained and repaired by third parties
- “Free” assets
  - Costs are not visible
  - Users are not accountable for them
  - Costs are viewed as “sunk”
Is rightsizing more difficult for fleets comprised of some types of assets than of others?

- **Assets that can be acquired easily (without rigorous justification)**
- **Assets for which ready substitutes are not available (e.g., specialty assets, assets used in remote locations)**
- **Assets that cannot easily be shared among multiple users**
Is rightsizing more important for fleets comprised of some types of assets than of others?

- Mission-critical assets
- High-cost assets
What are the obligations of fleet managers in managing fleet size and composition?

- Inherent versus defined responsibility?
- Regulator versus motivator?
- Decision maker versus analyst/ advisor?
If the fleet manager should not ensure that the fleet is rightsized, who should?

- Elected officials
- Upper management
- Finance officials
- Budget analysts
- Auditors
- Others
- Fleet users
Fleet Rightsizing Processes and Techniques

- Utilization Management Policy
- New Asset Acquisition Justification/ Under-Used Asset Retention Rejustification
- Ongoing Utilization Measurement and Reporting
- Internal Cost Charge-back System
- Ad Hoc Fleet Rightsizing Study
Utilization Management Policy

- **Objective**
  - Identify goals and objectives associated with managing fleet asset utilization
  - Assign responsibility and authority to manage utilization
  - Depoliticize vehicle utilization and fleet size and composition-related decision making
Acquisition Justification Process

- **Objective:**
  - Identify the most cost-effective way to meet an organization’s need for vehicles and equipment

- **When:**
  - When making requests for funds to add assets to the fleet
  - Annually for assets whose usage consistently falls below appropriate usage guidelines or benchmarks
  - When assets are eligible for replacement based on pre-defined criteria

- **Pros**
  - Engages fleet users in examining and justifying the costs of asset availability
  - Reduces pressure on fleet managers to justify fleet size, composition, and utilization levels

- **Cons:**
  - Does not address impact of changing operational needs on suitability of current fleet size and composition
Acquisition Justification Process

How

- Define the business need that an asset is intended to fulfill
- Define the associated asset usage requirements (frequency, duration, predictability, etc.)
- Quantify and compare the costs and benefits under viable alternative provision methods
  - Own
  - Rent (commercially or from internal pool)
  - Reimburse
- Identify the most cost-effective method of meeting the need
Acquisition Justification Process: Sample Rent v Own Decision Tree

1. Can the asset be rented locally?
   
   No: STOP HERE. Buy or borrow. 
   Yes: Continue

2. Are there or will there be sufficient funds to purchase the asset?
   
   No: STOP HERE. Rent or borrow. 
   Yes: Continue

3. Can the asset (or an acceptable substitute) be borrowed from another facility whenever it is needed?
   
   No: Continue. 
   Yes: STOP HERE. Borrow as needed.

4. Does the manager expect to use the asset more than once?
   
   No: STOP HERE. Rent. 
   Yes: Continue.

5. Does the manager expect to use the asset on a regular basis for more than six months?
   
   No: STOP HERE. Rent 
   Yes: Continue.

6. What is the estimated cost of purchasing the asset? 
   A. $ _______________

7. What is the expected value of the asset at the end of its useful life? 
   B. $ _______________

8. What is the estimated net capital cost of the asset? (A minus B) 
   C. $ _______________

9. What is the life expectancy in years of the asset? 
   D. ____________ years
Acquisition Justification Process: Sample Rent v Own Decision Tree

1. What is the average annual capital cost of owning the asset? (C divided by D)  
   E. $ __________ per year

2. What is the estimated number of days per year that the asset will be used?  
   F. _______________ days

3. What is the average capital cost per day to own the asset (E divided by F)  
   G. $ __________ per day

4. What is the average cost per day to rent or lease the asset? (Be sure to include taxes, transportation, insurance, and any other applicable charges or costs, other than fuel.)  
   H. $ __________ per day

5. Is G less than or equal to H?  
   - No: STOP HERE. Rent  
   - Yes: Continue.

10. What is the average annual capital cost of owning the asset? (C divided by D)  
    E. $ __________ per year

11. What is the estimated number of days per year that the asset will be used?  
    F. _______________ days

12. What is the average capital cost per day to own the asset (E divided by F)  
    G. $ __________ per day

13. What is the average cost per day to rent or lease the asset? (Be sure to include taxes, transportation, insurance, and any other applicable charges or costs, other than fuel.)  
    H. $ __________ per day

14. Is G less than or equal to H?  
   - No: STOP HERE. Rent  
   - Yes: Continue.
## Retention Justification Process: Sample Usage Guidelines

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Meter Type</th>
<th>Annual Utilization Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedans</td>
<td>Miles</td>
<td>6,000 to 10,000</td>
</tr>
<tr>
<td>SUV</td>
<td>Miles</td>
<td>6,000 to 10,000</td>
</tr>
<tr>
<td>Vans, Passenger</td>
<td>Miles</td>
<td>6,000 to 10,000</td>
</tr>
<tr>
<td>Vans, Cargo</td>
<td>Miles</td>
<td>4,000 to 10,000</td>
</tr>
<tr>
<td>Trucks, Light</td>
<td>Miles</td>
<td>5,000 to 7,000</td>
</tr>
<tr>
<td>Trucks, Utility, 1 Ton &amp; Up</td>
<td>Miles</td>
<td>4,000</td>
</tr>
<tr>
<td>Trucks, Specialty</td>
<td>Miles</td>
<td>3,000</td>
</tr>
<tr>
<td>Truck Tractors</td>
<td>Miles</td>
<td>8,000 to 10,000</td>
</tr>
<tr>
<td>Truck Tractors SW</td>
<td>Miles</td>
<td>10,000</td>
</tr>
<tr>
<td>Dump Trucks</td>
<td>Miles</td>
<td>4,000</td>
</tr>
<tr>
<td>Dump Trucks Flatbed</td>
<td>Miles</td>
<td>4,000</td>
</tr>
<tr>
<td>Ambulances</td>
<td>Miles</td>
<td>10,000</td>
</tr>
<tr>
<td>Construction Equipment</td>
<td>Hours</td>
<td>250</td>
</tr>
<tr>
<td>Mowing Equip/Agricultural Tractors</td>
<td>Hours</td>
<td>100</td>
</tr>
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</table>
Utilization Measurement and Reporting

Objective:
- Monitor asset usage on a continuous basis and alert users, analysts, and decision makers to cost savings opportunities

When:
- Quarterly

Pros:
- Measurement facilitates ongoing awareness of, and promotes accountability for, asset usage levels
- Reporting can create peer pressure among business units managers to actively manage asset use

Cons:
- Dependent on availability, accessibility, and quality of data
Utilization Measurement and Reporting

- How do we measure fleet asset utilization?
  - **Usage rate**: miles/hours per day/week/month/year
  - **Load factor**: revenue passenger miles as a percentage of total bus miles
  - **Load factor**: average percentage of truck capacity used
  - **Percentage of miles driven empty**
  - **Unavailability rate**: percentage of time asset is not available for use by others
Utilization Measurement and Reporting

Where do the data for measuring utilization come from?
- Odometer, hour meter, and hubometer readings
- During maintenance and repair transactions
- During fueling transactions
- Driver logs
- Dispatching systems
- Farebox collection systems
- Telematics systems
- Geofencing systems
- Random moment sampling systems
Utilization Measurement and Reporting

- Vehicle Tracking Systems
Cost Charge-Back System

Objective:
- Create economic incentives for efficient vehicle assignment and use

When:
- Continuously

Pros:
- Draws attention to, and requires users to manage, costs of asset availability
- Places onus on fleet users to justify utilization levels and costs

Cons:
- Rate design can undermine incentives associated with charging costs back to users - rates for activity-based costing versus asset cost control
- Centralized budgeting and cost control can undermine user motivation to manage and reduce costs
Cost Charge-Back System

How

- Decide how to distribute costs of asset availability to asset users – time-based charges are best
- Group fleet assets by type
- Identify annual direct and indirect capital costs of all assets in each asset class
- Determine total annual units (e.g., months) of availability
- Calculate rates
- Establish budgeting and internal billing process that requires fleet users to budget and pay for the assets at their disposal (i.e., whether they use them or not)
Ad Hoc Rightsizing Analyses

Objective:
- Identify under-utilized assets through periodic, targeted studies

When:
- Every five years or so

Pros:
- Can yield immediate savings by uncovering and initiating the disposal of unneeded assets (5-20 percent)
- Reinforce the importance of making sound resource management decisions

Cons:
- Expensive and time consuming to perform properly
- Results may be disappointing depending on effectiveness of other practices
- Contentious and intrusive
Ad Hoc Rightsizing Analyses

How
- Define objectives (downsizing versus optimization)
- Screen assets based on current utilization levels
  - Usage thresholds by asset types and user
  - Vehicle downsizing potential
- Survey asset users
- Negotiate changes with users
- Find the “spoon full of sugar” – e.g., fleet modernization – that will help the “medicine” go down
- Quantify cost savings (i.e., avoidable costs) - $5-10K per year per eliminated asset
- Execute
Data Collection Tools: On-line Driver Surveys
A Word About Take-Home Vehicles...

<table>
<thead>
<tr>
<th>Type of Benefit</th>
<th>$ per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private benefits to officers</td>
<td>550,000</td>
</tr>
<tr>
<td>Extended hours during commuting</td>
<td>1,300,000</td>
</tr>
<tr>
<td>Contacts during commuting</td>
<td>120,000</td>
</tr>
<tr>
<td>Call-out while off duty</td>
<td>230,000</td>
</tr>
<tr>
<td>Increased productivity</td>
<td>530,000</td>
</tr>
<tr>
<td>Rapid disaster response</td>
<td>500,000</td>
</tr>
<tr>
<td>Free parking at homes</td>
<td>710,000</td>
</tr>
<tr>
<td>Non-reimbursed officer expenses</td>
<td>20,000</td>
</tr>
<tr>
<td><strong>Total benefits of THV Program</strong></td>
<td><strong>3,960,000</strong></td>
</tr>
</tbody>
</table>
Recap

- Recognize that asset utilization management is not equally important or difficult for all types of assets.
- Figure out who “owns the problem” of managing fleet utilization in your organization – it should be fleet users, not fleet managers.
- Develop and utilize an integrated set of utilization management policies, processes, and ad hoc studies.
- Keep in mind the interrelationship between fleet size, composition, replacement, and capital financing practices.
For Further Information

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Presentation available for download at
www.mercury-assoc.com
(click on Resources tab)