2014 NBAA
MAINTENANCE MANAGERS CONFERENCE

Asset Management and Operational Costs -
A Journey to the Dark Unfamiliar Side

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Average Asset Value, New = $24.9 M
What is Asset Management?

– “...is the strategic management of physical assets during their life in the organization. Physical assets have a life: they are planned and created, used, managed and maintained, and when no longer required prepared for disposal.” (Intelligent Workplace Management)

– “...is a systematic process of operating, maintaining, and upgrading assets cost-effectively.” (American Associate of State Highway and Transportation Officials)

– “It is not something you can buy, but rather a discipline you must follow in order to maintain your assets. (Robert Michael Aegis Asset Management)

– “... refers to any system whereby things that are of value to an entity or group are monitored and maintained.” (Wikipedia)
What is asset management?
(my words)

– From the asset’s acquisition to its disposition, it represents the activities (processes) of the organization to ensure the asset is
  • safe,
  • available,
  • productive, and
  • of value (monetarily and customer’s perception).
Maintenance’s Responsibilities?

- Safe Operations (Compliance w/ Regulations)
- Aircraft Availability
- Quality Customer Experience
- Value Retention of Asset (Aircraft)
- Cost Efficiency
How is Maintenance Involved?

- **Maintenance establishes the environment.**
  - Procedures
  - Manuals
  - Technical Records
  - Level of Work Performed
  - Training
  - Tools
  - Experience
  - Physical Facility
Without Asset Management ...

... Especially Maintenance
... Assets Become Worthless
What element is missing from our discussion?
Operating Costs!
When it comes to communication ...

... the organizations are in different orbits.
Bringing people to the “business” side ...

... Is never easy!
Three Takeaways About Operating Costs

1. Establish the importance
2. Learn the language
3. Tool to communicate
Establish the Importance

1. They are **significant**.

Operating Cost Compared to Purchase Price

<table>
<thead>
<tr>
<th>Aircraft Type</th>
<th>Est. Purchase Price</th>
<th>Est. Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Jet</td>
<td>2.7 times</td>
<td></td>
</tr>
<tr>
<td>Medium Jet</td>
<td>2.1 x</td>
<td></td>
</tr>
<tr>
<td>Large Jet</td>
<td>1.1 x</td>
<td></td>
</tr>
<tr>
<td>Turboprop</td>
<td>3.4 x</td>
<td></td>
</tr>
<tr>
<td>Helicopter</td>
<td>2.4 x</td>
<td></td>
</tr>
</tbody>
</table>

Assumptions:
- Fifteen Years
- 500 Hours per Year
- Purchase Price for New Aircraft

2. We have different perspectives.

Factors Affecting our Perspectives

- **Type of work** -
  - Planning
  - Flight ops
  - Human resources
  - Materials
  - Maintenance planning

- **Basic background**

- **Years and type of experience**

- **Type of aircraft we work with**
3. They can be confusing.

- Due to influence of many factors and variables
  - Period of time
  - Categories of cost
  - Length of ownership
  - Environment
  - Mission
  - Location of operation
4. There is a change in interest.

- More questions go to a greater level of detail than before.
  - Major maintenance cost categories
  - Fuel costs
  - Engine costs
  - Basis of estimates
  - Salaries
  - Insurance
Because they

- Are significant.
- Can mean different things to different people (perspective).
- Can be confusing.
- Are changing in importance.
Three Takeaways About Operating Costs

1. Establish the importance
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Learn the Language

a. Variable and Fixed Costs
b. Direct and Indirect Costs
c. Variability of Maintenance Costs

There are others ...
- Depreciation
- Assignment of Overhead Costs
- Training
- Etc.

...But not enough time today!
The **Behavior** of Costs

- **Variable** - As activity increases, the total cost will increase but the cost per unit will remain constant.

- **Fixed** - For a given level of activity or period of time, the total cost remains constant.

**Why is the designation important?**
• **Direct Costs** - Cost Can Be Directly Traced or Tied to An Activity or Product

• **Indirect Costs** - No Direct Link Exists Between Cost and Activity or Product

Classification Can Change Based on the Situation.
Learn the language

**Situation #1**

Changes with the Situation - Direct or Indirect?

**Maintenance Manager**
Salary - $100,000

By Aviation Department

By Aircraft
Learn the language

Situation #2

Direct or Indirect? Maintenance Labor Costs

Depends on How You’re Tracking It

Technician Salary $60,000
Situation #3

Direct or Indirect?
Hangar Costs

Annual Cost - $200,000
Variability of Maintenance Costs

Fluctuations can be Large and Difficult to Predict

Cost per Flt Hour

$0 $50 $100 $150 $200

Year

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Model: Helicopter
Learn the language

Confusion about Maintenance Costs

• Clarify common misunderstandings by those outside of maintenance

  – Sticker shock (Amount)

  – Replacement (You do what and why?)

  – Wide fluctuations (Major items and events)
Three Takeaways About Operating Costs

1. Establish the importance
2. Learn the language
3. Tool to communicate - Budgeting
Importance of Budgeting

A Premise Relevant to All

Financial Resources are Limited!
Quick Review

2. Importance of Budgeting

Sources
- Equity
- Credit

Financial Management Organization

Sales
- Capital Expenses
- Payables
- Taxes
- Wages
- Dividends
- Debt Repayment

Uses
- Dividends
- Debt Repayment

Tool to Communicate
2. Importance of Budgeting

Managing Cash Is Critical to a Successful Organization

If You’re Lucky ...

... No Fluctuations
1. **Accounting versus Budgeting**
   - Historical (Actual) vs Prediction (Estimation)
2. **Potential measurement tool**
   - Compare actual expenses to the prediction
3. **Instructions from executives**
   - Guidance, instructions, common assumptions
4. **Cost categories**
   - Focus on the significant ones
5. **Uncertainty in predictions**
   - Identify methods for generating estimates
   - Document your assumptions *****
   - Submit assumptions with budget
6. **Timing of budget exercise**
   - Ease the usual time constraint

7. **Recognize your environment**
   - How is the company doing?
   - New objectives?
   - How is your organization viewed?

8. **Acceptance of budget**
   - Develop credibility
   - Present yourself well
   - Complement numbers w/ charts
Three Takeaways About Operating Costs

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3. Tool to communicate
Thank You!