Best Practices in Federal Cost Management

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Outline

- What is Managerial Cost Accounting
- Why Managerial Cost Accounting
- Considerations in Successful Cost Management
What is “Managerial” Cost Accounting?

Cost Accounting
- Production costs of an organization’s products and services

Managerial Accounting
- Financial condition of an organization, principally for internal management
- Does not require GAAP as focus is on internal relevancy, not external consistency

Financial Accounting
- Financial condition of an organization, principally for external parties (investors, tax authorities, stewardship, etc.)
- Requires GAAP for consistency
Why Managerial Cost Accounting?

In managing federal government programs, cost information is essential in the following five areas:

1. budgeting and cost control,
2. performance measurement,
3. determining reimbursements and setting fees and prices,
4. program evaluations, and
5. making economic choice decisions.

~ SFFAS #4
Why Managerial Cost Accounting? (cont’d)

“Core Financial System Requirements”
Office of Federal Financial Management, OMB
OMB Core Financial System
Requirements for Cost Management

- Cost Setup and Accumulation (CMA): the Core financial system **must**
  provide automated functionality to do the following:
  - **CMA-01: Define cost objects**—Define the following types of cost objects for
    accumulation, distribution and reporting purposes:
    - Accounting classification elements
    - Specific customers, vendors, reimbursable agreements, contracts, PAs, task orders, work orders, and
      grants
    - GPRA goals.
  - **CMA-02: Accumulate costs**—Accumulate costs and revenue by cost object.
  - **CMA-03: Costs objects on prepaid expenses**—Associate the purchase of fixed
    assets and inventory and the payment of advances with related cost objects so
    that subsequent expenditures are identified by cost object.
  - **CMA-04: Full cost**—Accumulate the full cost of cost objects. Full costs include
    direct costs, indirect cost allocations, implicit costs (e.g., costs provided by other
    government agencies such as pension costs), and unfunded costs (e.g., annual
    leave costs).
  - **CMA-05: Non-financial data**—Accumulate non-financial data (e.g., units
    purchased, units sold) by cost object at the transaction level.
Core Financial System Requirements (cont’d)

- **Cost Distribution (CMB)**
  - **CMB-01**: *Recording cost distribution entries in GL*—Distribute the full cost of goods and services by cost object. Record the cost distribution entries in the GL.
  - **CMB-02**: *Attributes on cost distribution*—Capture U.S. SGL attributes on cost distribution entries needed to prepare the Statement of Net Cost. For example, costs distributed to programs and used in the preparation of the Statement of Net Cost should retain the Federal/Non-Federal, Exchange/Non-Exchange, and Custodial/Non-Custodial classifications.
  - **CMB-03**: *Multi-layer overhead distributions*—Perform multi-layer overhead distributions that are agency-defined (at least 3 levels of distribution) using multiple rates and fixed amount allocation methods.
  - **CMB-04**: *Re-distribute costs*—Re-distribute costs based on revised rates and allocation amounts.
Core Financial System Requirements (cont’d)

- **Cost Reporting (CMC).**
  - **CMC-01: Comparative income statement by cost object**—Generate the Comparative Income Statement by Cost Object. Parameters include cost object and accounting periods (month and year). Result is a report that compares month and year-to-date activity to prior month and prior year-to-date activity, by cost object. The report must list the following data:
    - Revenue
    - Direct expenses
    - Indirect expenses (overhead)
    - Total expenses
    - Net revenue/cost.
  - **CMC-02: Cost object income statement**—Generate Cost Object Income Statement. Parameters include any cost object and accounting period. Result is a report with revenue, direct cost, and indirect cost (overhead) by cost object.
  - **CMC-03: Cost object audit trail**—Maintain an audit trail of transactions from their origin to the final cost object(s).
SFFAS #4 Requirements

- Standards:
  - Requirement for Cost Accounting (paragraphs 67-76)
  - Responsibility Segments (paragraphs 77-88)
  - Full Cost (paragraphs 89-104)
  - Inter-Entity Costs (paragraphs 105-115)
  - Costing Methodology (paragraphs 116-162)
So Why Managerial Cost Accounting

1. Compliance: Because we have to according to OMB, GAO, IG, ... 
2. Operations: It is a necessary part of day to day business (fee setting, performance reporting, etc.)
3. ?
# Pressures on the Federal Budget in the Near Term

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Oldest members of the baby-boom generation became eligible for early Social Security retirement benefits</td>
</tr>
<tr>
<td>2008</td>
<td>Medicare Hospital Insurance (HI) outlays exceeded cash income</td>
</tr>
<tr>
<td>2010</td>
<td>Social Security runs first cash deficit since 1984(^a)</td>
</tr>
<tr>
<td>2011</td>
<td>Oldest members of the baby-boom generation become eligible for Medicare</td>
</tr>
<tr>
<td>2014</td>
<td>45 percent of Medicare outlays funded by general revenue(^b)</td>
</tr>
<tr>
<td>2016</td>
<td>Social Security begins running consistent annual cash deficits</td>
</tr>
<tr>
<td>2017</td>
<td>Medicare HI trust fund exhausted. Income sufficient to pay about 81 percent of benefits(^b)</td>
</tr>
<tr>
<td>2020</td>
<td>Debt held by the public under GAO’s Alternative simulation exceeds the historical high reached in the aftermath of World War II (CBO projection modified to reflect historical trends and preferences).</td>
</tr>
</tbody>
</table>

Source: GAO analysis.

Notes:

\(^a\)Based on CBO’s January 2010 baseline projections.

\(^b\)Based on 2009 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (May 12, 2009).
Potential Fiscal Outcomes per a GAO Simulation

Revenues and Composition of Spending as Percent of GDP

Source: GAO.

Note: Data are from GAO’s January 2010 analysis based on the Trustees’ assumptions for Social Security and Medicare.
So Why Managerial Cost Accounting

1. Compliance: Because we have to according to OMB, GAO, IG, ...
2. Operations: It is a necessary part of day to day business (pricing, performance reporting, etc.)
3. Competitive advantage: Increased customer value or even agency survival
Success through Maximizing Value

- Value is the relationship between the benefits provided to the cost of gaining those benefits:

\[
V = \frac{\text{Benefits provided to a customer or other stakeholder}}{\text{Cost of providing those benefits}}
\]

- Value is improved by a combination of:
  - **Effectiveness**: Understanding and providing what the customer wants
  - **Efficiency**: Using the minimum resources necessary in meeting customer needs
A Systems View of Value

- Too often organizations fail to develop a true *Systems* view

- Effectiveness results when
  \[ \text{Outcome Achieved} = \text{Customer Need} \]

- ...but is the result affordable?
Managing Efficiency

- What in the system can we directly manage? What do we measure?

Customer Need → Input → Process → Output → Outcome Achieved

- Cost Management

- Input:
  - $$
  - Persons
  - Hours
  - Etc.

- Process:
  - Cost drivers
  - Process effectiveness
  - Process efficiency
  - Etc.

- Output:
  - Unit volume
  - Unit cost
  - Defect rate
  - Etc.
The Value Pyramid

Methodologies and IT systems are *Enablers*, not *End Objectives*.
MCA: Another “Silver Bullet”? 

- Long history of implementing “solutions” with limited thought for the problem to be solved
- Often the result of a “band wagon” approach to implementing the latest management fad

This Year’s Improvement Initiatives
- Statistical Process Control
- TQM
- Strategic Planning
- Performance Measurement
- Business Process Reengineering
- Integrated Product Teams
- Lean 6 Sigma
- Managerial Cost Accounting

and others...
5 Keys to Successful Cost Management

- Identify and Communicate the Business Need
- Design the Cost System to meet Business Needs
- Manage Process
- Provide Leadership
- Manage Change / Institutionalize
The Business Need

- Cost management is NOT an end objective
- For cost management to be an effective tool, organizations must be able to answer the following:
  - Who are the decision-makers to use this information?
  - What decisions will be made differently with the availability of improved cost information?
  - Is the use of this information supportive of strategic priorities?
  - Can a compelling case be made and communicated for the use of this information?
Appropriate Design

- Does the cost information support decision-making in the highest priority areas?
- Does the level of detail in cost information lend itself to answering needed questions?
  - Too much or too little detail to be relevant?
- Is the cost/burden of data collection less than the value of resulting information in decision-making?
- Are design tradeoffs consistent with policy?
- If cost information stopped coming, would decision-makers complain, celebrate, or even notice?
Any user fee design embodies trade-offs among the four dimensions of equity, efficiency, revenue adequacy, and administrative burden. While there are purely analytic aspects to each of these criteria, the trade-offs depend on policy and value decisions. No single design will satisfy everyone on all dimensions.

~ Susan J. Irving, Director for Federal Budget Analysis, GAO

The notion of tradeoffs in cost accounting system design is universal and not limited to fee setting.
Manage Process

Input

End-to-End Process

Dept. 1

Dept. 2

Dept. 3

Product or Service (Output)

Customer Need (Outcome)

Requirements

Constraints

Where costs are “managed”
Process Costing

- Improving efficiency in production of products or services requires understanding of:
  - Where costs are incurred, and
  - Where improvement opportunities exist
- Traditional cost accounting allows understanding total cost of production, but NOT the source of those costs
- Only Activity Based Costing can provide needed insight into process costs
Federal Research Organization: Before and After Perspectives

### Before

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Appropriations</td>
<td>$ 51.2M</td>
</tr>
<tr>
<td>• Trans./Freight</td>
<td>25K</td>
</tr>
<tr>
<td>• Traffic Mgt.</td>
<td>1,195K</td>
</tr>
<tr>
<td>• Reproduction</td>
<td>440K</td>
</tr>
<tr>
<td>• Etc.</td>
<td></td>
</tr>
<tr>
<td>Overhead Support</td>
<td>80.1M</td>
</tr>
<tr>
<td>• Engineering Services</td>
<td>1,262K</td>
</tr>
<tr>
<td>• Research Facility Mods</td>
<td>350K</td>
</tr>
<tr>
<td>• Etc.</td>
<td></td>
</tr>
<tr>
<td>Construction of Facilities</td>
<td>12.0M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$ 143.3M</td>
</tr>
</tbody>
</table>

**Insights Gained by Activity View**
- “Total” Cost of Operations
- High-Cost Activities
- Key Factors Driving Cost

### After

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare &amp; Operate Research &amp; Test Facilities</td>
<td>$ 56.6M</td>
</tr>
<tr>
<td>Provide Engineering, Design, Integration, &amp; Test Services</td>
<td>46.0M</td>
</tr>
<tr>
<td>Fabricate/Research-Related Hardware</td>
<td>43.2M</td>
</tr>
<tr>
<td>Maintain/Repair Facilities and related equipment</td>
<td>40.0M</td>
</tr>
<tr>
<td>Provide Central Scientific Computing</td>
<td>34.7M</td>
</tr>
<tr>
<td>Provide Other Administrative Services</td>
<td>27.4M</td>
</tr>
<tr>
<td>Modify Facilities</td>
<td></td>
</tr>
<tr>
<td>Provide Communication Services</td>
<td>23.0M</td>
</tr>
<tr>
<td>Provide Flight Services</td>
<td>9.5M</td>
</tr>
<tr>
<td>Provide Procurement Services</td>
<td>8.5M</td>
</tr>
<tr>
<td>Build New Facilities and Roads</td>
<td>8.5M</td>
</tr>
<tr>
<td>Other Activities</td>
<td>7.9M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$ 347.3M</td>
</tr>
</tbody>
</table>
Federal Research Organization: Bill of Activities

Cost Object: Research Support

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Prepare &amp; Operate Research Test Facilities</td>
<td>$56.6M</td>
</tr>
<tr>
<td>Provide Engin., Design, Integ., &amp; Test Serv.</td>
<td>46.0M</td>
</tr>
<tr>
<td>Fabricate Research-Related Hardware</td>
<td>43.2M</td>
</tr>
<tr>
<td>Provide Central Scientific Computing Services</td>
<td>34.7M</td>
</tr>
<tr>
<td>Maintain/Repair Facilities and related equipment</td>
<td>31.0M</td>
</tr>
<tr>
<td>Modify Facilities</td>
<td>20.1M</td>
</tr>
<tr>
<td>Provide Flight Services</td>
<td>8.5M</td>
</tr>
<tr>
<td>Build New Facilities and Roads</td>
<td>7.9M</td>
</tr>
<tr>
<td>Provide Procurement Services</td>
<td>4.8M</td>
</tr>
<tr>
<td>Provide Publications Support</td>
<td>4.4M</td>
</tr>
<tr>
<td>Operate Library</td>
<td>4.3M</td>
</tr>
<tr>
<td>Other Activities</td>
<td>10.1M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$271.6M</strong></td>
</tr>
</tbody>
</table>
Federal Research Organization: Bill of Activities

Cost Object: Infrastructure

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Other Admin Services (Center-level)</td>
<td>$27.4M</td>
</tr>
<tr>
<td>Provide Communications Services</td>
<td>9.5M</td>
</tr>
<tr>
<td>Maintain/Repair Facilities and related equipment</td>
<td>9.0M</td>
</tr>
<tr>
<td>Provide Safety</td>
<td>3.9M</td>
</tr>
<tr>
<td>Provide Procurement Services</td>
<td>3.7M</td>
</tr>
<tr>
<td>Manage and Conduct Environmental Compliance Program</td>
<td>3.1M</td>
</tr>
<tr>
<td>Modify Facilities</td>
<td>2.9M</td>
</tr>
<tr>
<td>Provide Security</td>
<td>2.6M</td>
</tr>
<tr>
<td>Manage Correspondence, Records, Dir.,....</td>
<td>2.3M</td>
</tr>
<tr>
<td>Manage Transportation/Moving Services</td>
<td>2.3M</td>
</tr>
<tr>
<td>Manage Janitorial Services</td>
<td>2.2M</td>
</tr>
<tr>
<td>Other Activities</td>
<td>6.8M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$75.7M</strong></td>
</tr>
</tbody>
</table>
Linking Resources Consumed and Objectives Achieved

- Infrastructure 22%
- Research Support 78%
# Federal Research Center: Activities vs. Organization Relationships

**An Organizational Perspective**

<table>
<thead>
<tr>
<th>Activities</th>
<th>An Organizational Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build New Facilities &amp; Roads</td>
<td></td>
</tr>
<tr>
<td>Central &amp; Manage Space</td>
<td></td>
</tr>
<tr>
<td>Maintain/Repair Fac. &amp; Collateral Equip. &amp; Systems</td>
<td></td>
</tr>
<tr>
<td>Modify Facilities</td>
<td></td>
</tr>
<tr>
<td>Provide Animal Services</td>
<td></td>
</tr>
<tr>
<td>Provide Janitorial Services</td>
<td></td>
</tr>
<tr>
<td>Maintain/Repair Facilities, Collateral Equip. &amp; Systems</td>
<td></td>
</tr>
<tr>
<td>Modify Facilities</td>
<td></td>
</tr>
<tr>
<td>Provide Janitorial Services</td>
<td></td>
</tr>
<tr>
<td>Supply Equipment</td>
<td></td>
</tr>
<tr>
<td>Supplies, Materials, Contracted Services, Property, Logistics Support</td>
<td></td>
</tr>
<tr>
<td>Skilled People, Information, Guidance</td>
<td></td>
</tr>
<tr>
<td>Facility &amp; Aircraft Operations, Technology, Hardware</td>
<td></td>
</tr>
</tbody>
</table>

## Operational, Clean and Safe Work Environment

- Supplies, Materials, Contracted Services, Property, Logistics Support

## Skilled People, Information, Guidance

- Provide Janitorial Services
- Provide Animal Services

## Facility & Aircraft Operations, Technology, Hardware

- Provide Janitorial Services
- Provide Animal Services
“In closing, Mr. Chairman, I want to emphasize that strong leadership in the departments will be required to implement managerial cost accounting across government. This is true regardless of whether the department wants a department-wide system or delegates responsibility for system development to component agencies. In either case, the leadership will need to focus on promoting the benefits of managerial cost accounting, monitoring its implementation, and establishing a sound system of controls to help ensure the reliability of the data used.”

Statement of Robert E. Martin, Director
Financial Management and Assurance, GAO
GAO-05-1031T
Change Management: Building an Educated, Motivated User

Yes Yes Yes

No No

Are Decision-Makers Incentivized?

Yes

Provide Incentives

Is the Need Understood?

Yes

Educate

No

Decision-Makers Requesting Information

User

Motivated

Educated

32
Institutionalizing Improvement by Changing Behavior
Leadership vs. Institutionalization

- Leadership commitment quickest to achieve (if leadership “buys in”)
- Leadership commitment also quickest to depart (average political appointee tenure ~2 years)
- Institutionalization slower to develop, but less dependent on individuals
- Without institutionalization, there will be need for constant pressure to maintain capability and use.
- Both are needed
Developing “Top Down” vs. “Bottom Up”

- Initial implementation need not be enterprise-wide
- Success depends on ability to control the “cost-benefit” balance
  - Will your organization assume all the “costs” of cost management (additional data collection, etc.)?
  - Will use of cost information be visibly greater than costs incurred?
- Success at lower levels can provide incentives for implementation elsewhere in the organization
10th Annual Performance Report Scorecard (George Mason Univ. Mercatus Center):

- 1st place award to DOL
- 56 out of 60 points (highest score ever given)
  - Transparency: 17 pts.
  - Public Benefits: 19 pts.
  - Leadership: 20 pts.

Public Benefits citation:
- "The report links costs to strategic and performance goals, as well as to numerous individual performance measures for the current and two previous fiscal years."
Managerial Cost Accounting at DOL

- Cost Analysis Manager program initiated in 2003; provides 18 cost models in support of 15 agencies and the Department of Labor
- Through CAM, agencies can:
  - Understand the cost of achieving strategic and performance goals
  - Link cost to performance through the calculation of unit cost of outputs
  - Establish cost-based efficiency measures for support of the Program Assessment Rating Tool (PART), compliance to GPRA, and the development of the PAR
  - Analyze program performance from a cost perspective across lifecycle
  - Identify the differences in cost between regional offices, programs, and the overall portfolio of DOL programs
  - Improve accountability of line managers
  - Justify budget requests through historical and auditable total cost of ownership
  - Substantiate business cases for new information technology systems with activity and output cost data
  - Remain compliant with legislative mandates such as the PMA, FASAB #4, and OMB Circulars A-11, A-123, and A-130
Implementation Challenges

- Viewed as “one size fits all”
- Viewed as a “silver bullet”
- Unclear Objectives
- Lack of buy-in/understanding
- Failure to establish necessary incentives
- Viewed as a software solution
- IT support inadequate to meet objectives