Best Practices in Federal Cost Management

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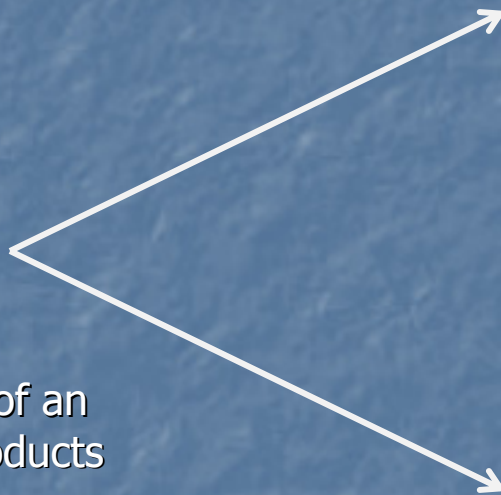
June 15, 2010

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
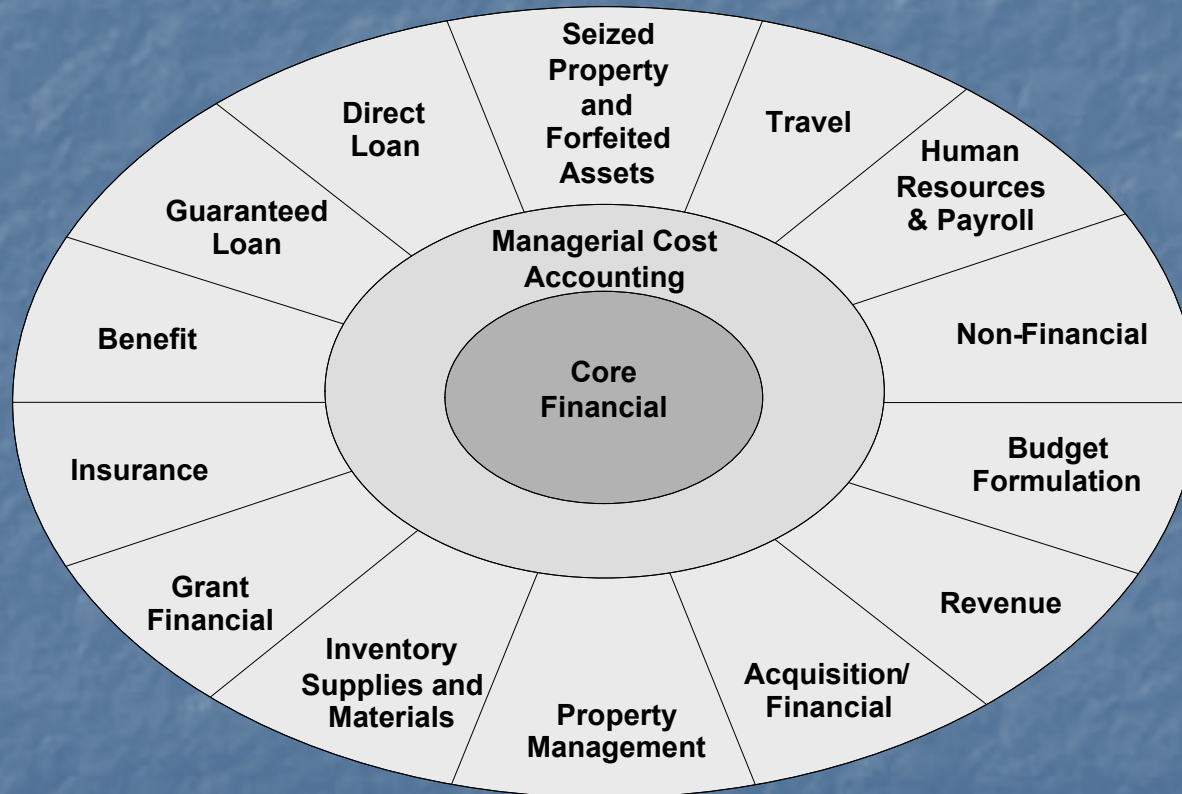
Financial
Accounting

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

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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

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Why Managerial Cost Accounting? (cont'd)

"Core Financial System Requirements"
Office of Federal Financial Management, OMB

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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 <u>Managerial</u> 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

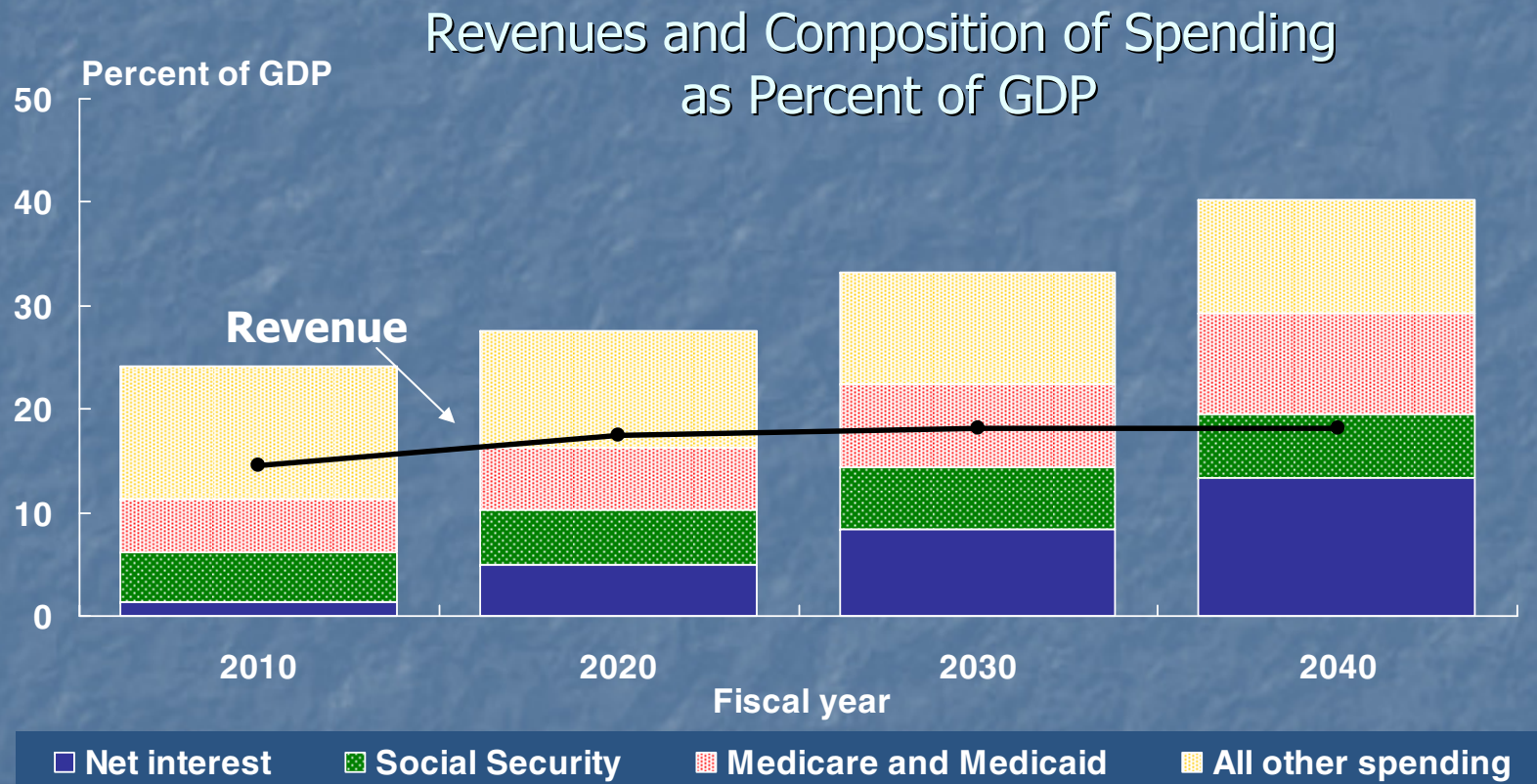| 2008	Oldest members of the baby-boom generation became eligible for early Social Security retirement benefits
2008	Medicare Hospital Insurance (HI) outlays exceeded cash income
2010	Social Security runs first cash deficit since 1984[a]
2011	Oldest members of the baby-boom generation become eligible for Medicare
2014	45 percent of Medicare outlays funded by general revenue[b]
2016	Social Security begins running consistent annual cash deficits
2017	Medicare HI trust fund exhausted. Income sufficient to pay about 81 percent of benefits[b]
2020	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).

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

Percent of GDP

Revenue

Fiscal year

Net interest | Social Security | Medicare and Medicaid | All other spending

Source: GAO.

Note: Data are from GAO's January 2010 analysis based on the Trustees' assumptions for Social Security and Medicare.
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DEBT AS A PERCENTAGE OF GDP
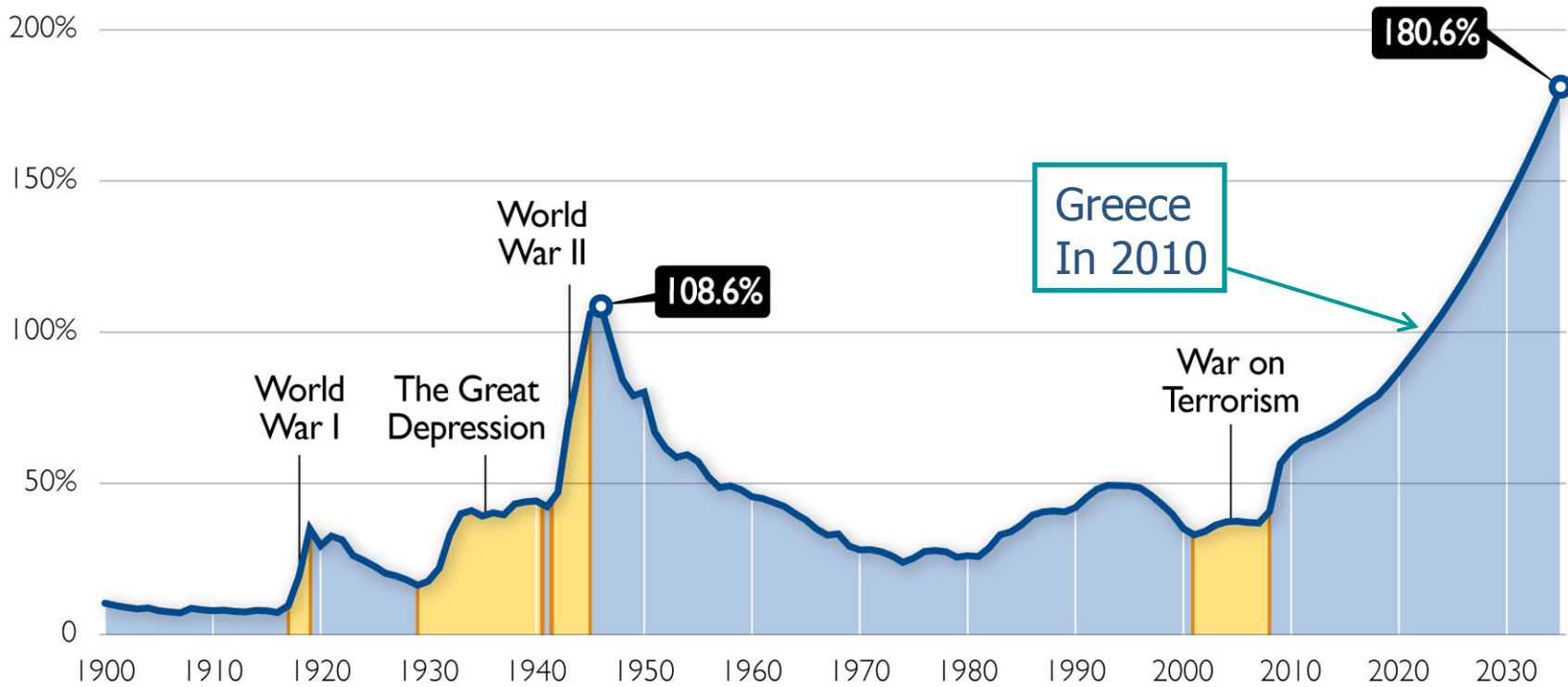
So Why <u>Managerial</u> Cost Accounting

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:
  - <u>Effectiveness</u>: Understanding and providing what the customer wants
  - <u>Efficiency</u>: Using the minimum resources necessary in meeting customer needs
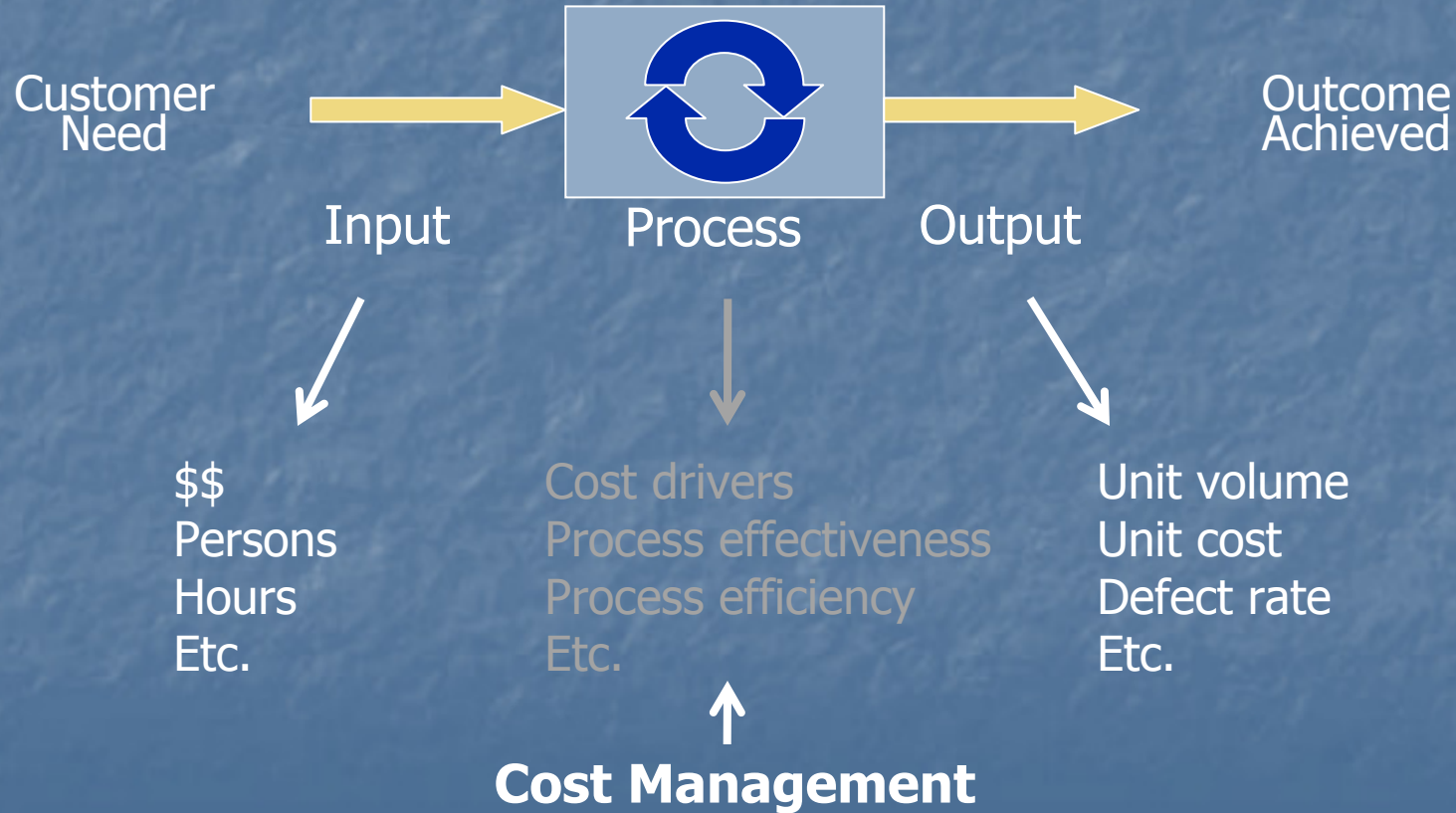
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A Systems View of Value

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

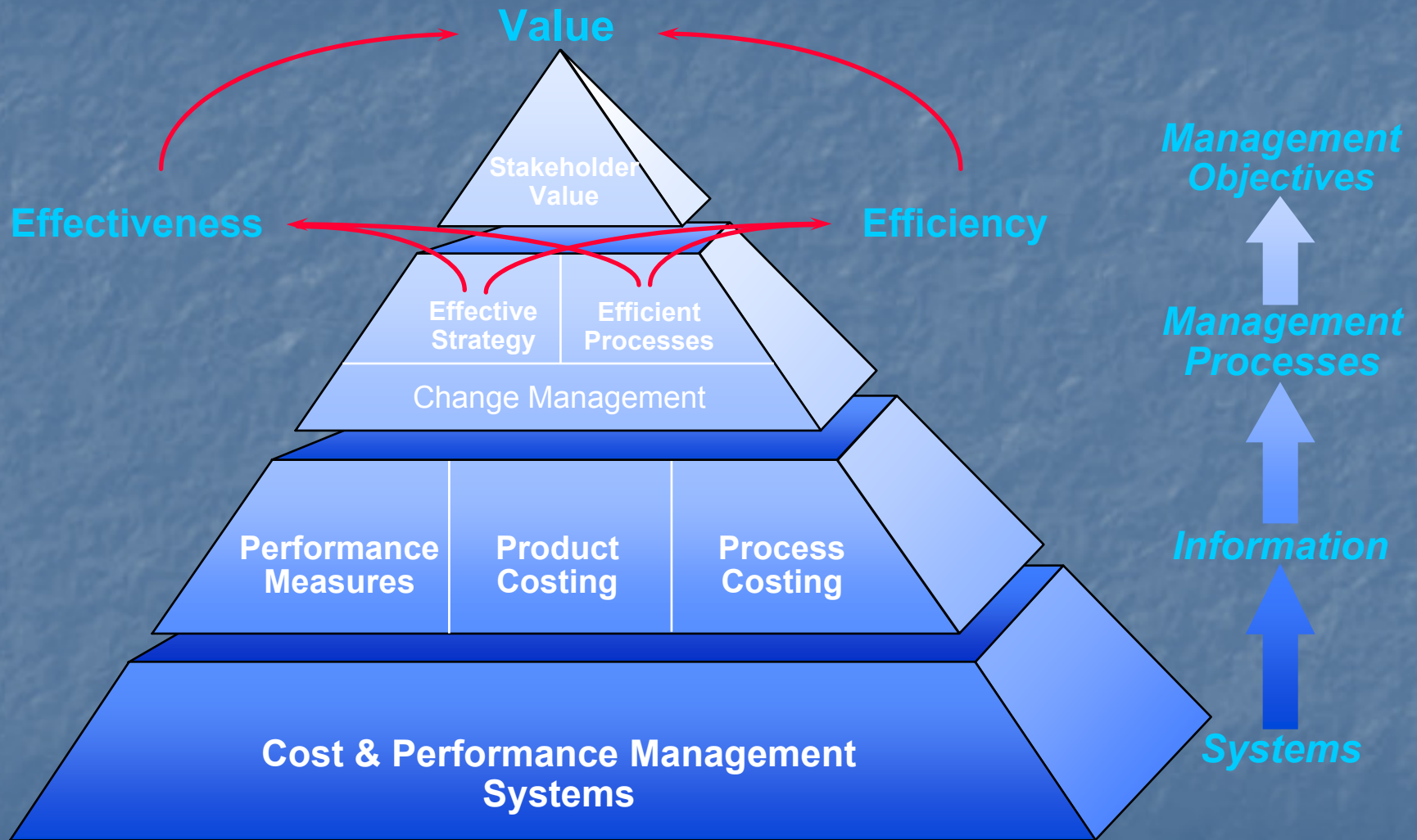Customer Need → Input → Process → Output → Outcome Achieved

- Effectiveness results when

Outcome Achieved = Customer Need

- …but is the result affordable?

Managing Efficiency

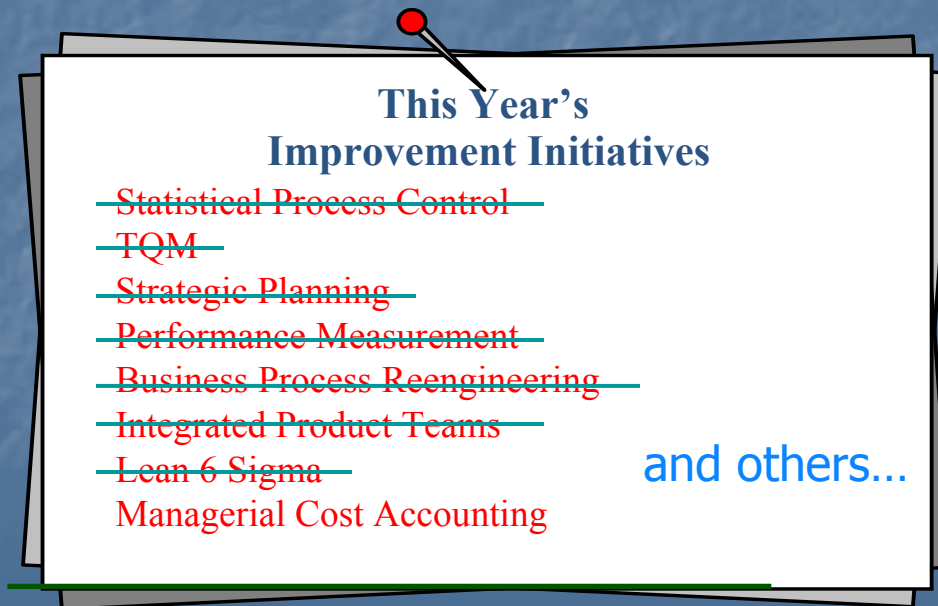- What in the system can we directly <u>manage</u>? What do we measure?

Customer Need	→	Input	Process	Output	→	Outcome Achieved

Input ↓

$$ Process ↓

Output ↓

$$	Cost drivers	Unit volume
Persons	Process effectiveness	Unit cost
Hours	Process efficiency	Defect rate
Etc.	Etc.	Etc.

↑
Cost Management

The Value Pyramid

Value

Effectiveness — Efficiency

Stakeholder Value

Effective Strategy | **Efficient Processes**

Change Management

Performance Measures | **Product Costing** | **Process Costing**

Cost & Performance Management Systems

Management Objectives

Management Processes

Information

Systems

Methodologies and IT systems are *Enablers*, not *End Objectives*

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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~~   and others...

Managerial Cost Accounting

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?
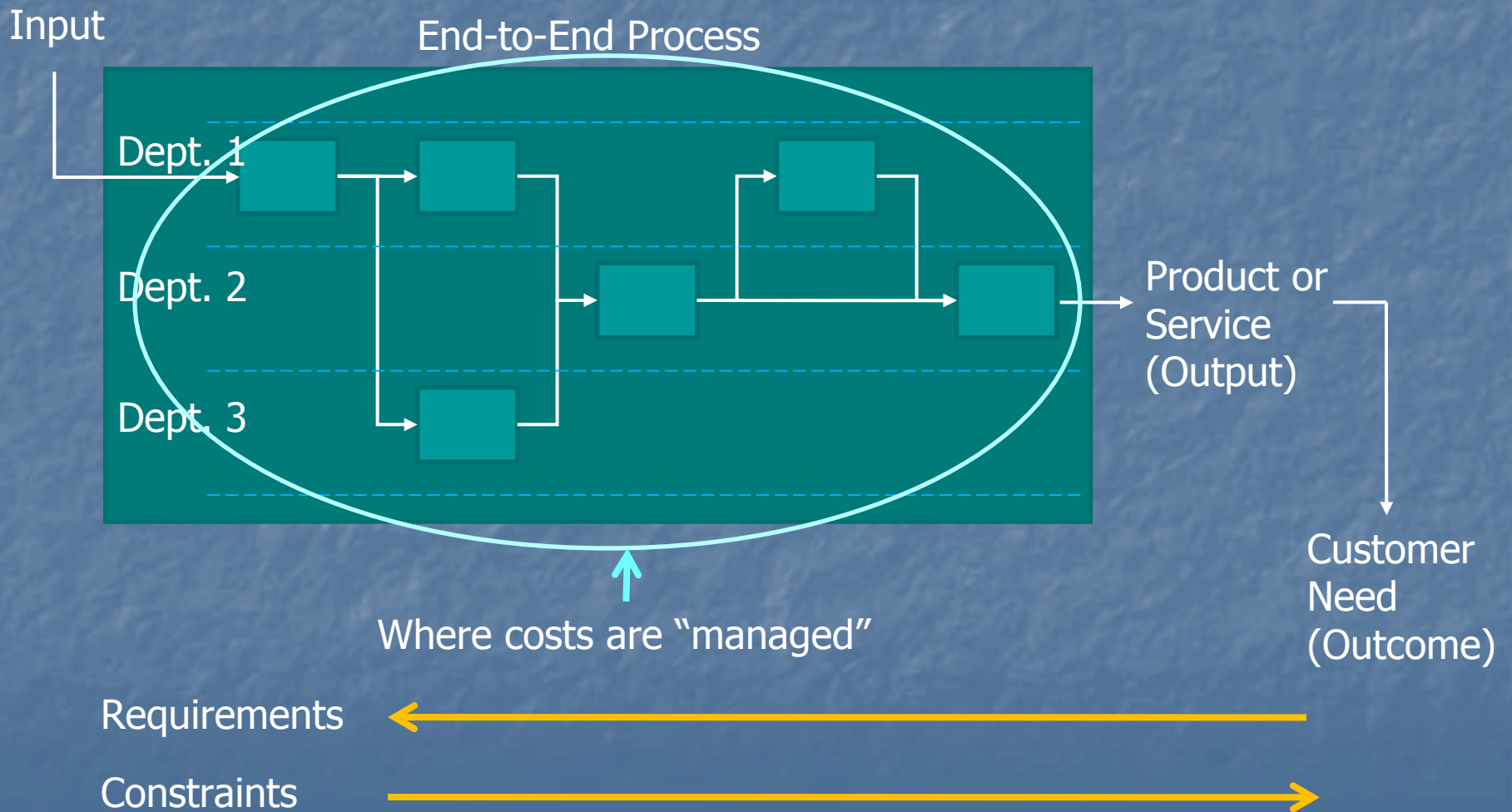 - Can a compelling case be made and communicated for the use of this information?

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?

Appropriate Design

- 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
        - *FEDERAL USER FEES: Fee Design Characteristics and Trade-Offs Illustrated by USCIS's Immigration and Naturalization Fees*

- 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

Where costs are "managed"

Product or Service (Output)

Customer Need (Outcome)

Requirements

Constraints

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

Research Appropriations	**$ 51.2M**
•Trans./Freight	25K
•Traffic Mgt.	1,195K
•Reproduction	440K
•Etc.	
Overhead Support	**80.1M**
•Engineering Services	1,262K
•Research Facility Mods	350K
•Etc.	
Construction of Facilities	**12.0M**
TOTAL	**$ 143.3M**

After

Prepare & Operate Research & Test Facilities	**$ 56.6M**
Provide Engineering, Design, Integration, & Test Services	**46.0M**
Fabricate/Research-Related Hardware	**43.2M**
Maintain/Repair Facilities and related equipment	**40.0M**
Provide Central Scientific Computing	**34.7M**
Provide Other Administrative Services	**27.4M**
Modify Facilities	
Provide Communication Services	**23.0M**
Provide Flight Services	**9.5M**
Provide Procurement Services	**8.5M**
Build New Facilities and Roads	**8.5M**
Other Activities	**7.9M**
	42.0M
TOTAL	**$ 347.3M**

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

Federal Research Organization :
Bill of Activities

Cost Object: Research Support

Prepare & Operate Research Test Facilities	$56.6M
Provide Engin., Design, Integ., & Test Serv.	46.0M
Fabricate Research-Related Hardware	43.2M
Provide Central Scientific Computing Services	34.7M
Maintain/Repair Facilities and related equipment	31.0M
Modify Facilities	20.1M
Provide Flight Services	8.5M
Build New Facilities and Roads	7.9M
Provide Procurement Services	4.8M
Provide Publications Support	4.4M
Operate Library	4.3M
Other Activities	10.1M
TOTAL	$271.6M

Federal Research Organization : Bill of Activities

Cost Object: Infrastructure

Provide Other Admin Services (Center-level)	$27.4M
Provide Communications Services	9.5M
Maintain/Repair Facilities and related equipment	9.0M
Provide Safety	3.9M
Provide Procurement Services	3.7M
Manage and Conduct Environmental Compliance Program	3.1M
Modify Facilities	2.9M
Provide Security	2.6M
Manage Correspondence, Records, Dir.,...	2.3M
Manage Transportation/Moving Services	2.3M
Manage Janitorial Services	2.2M
Other Activities	6.8M
TOTAL	$75.7M

Linking Resources Consumed and Objectives Achieved

Infrastructure 22%

Research Support 78%

Federal Research Center:
Activities vs. Organization Relationships
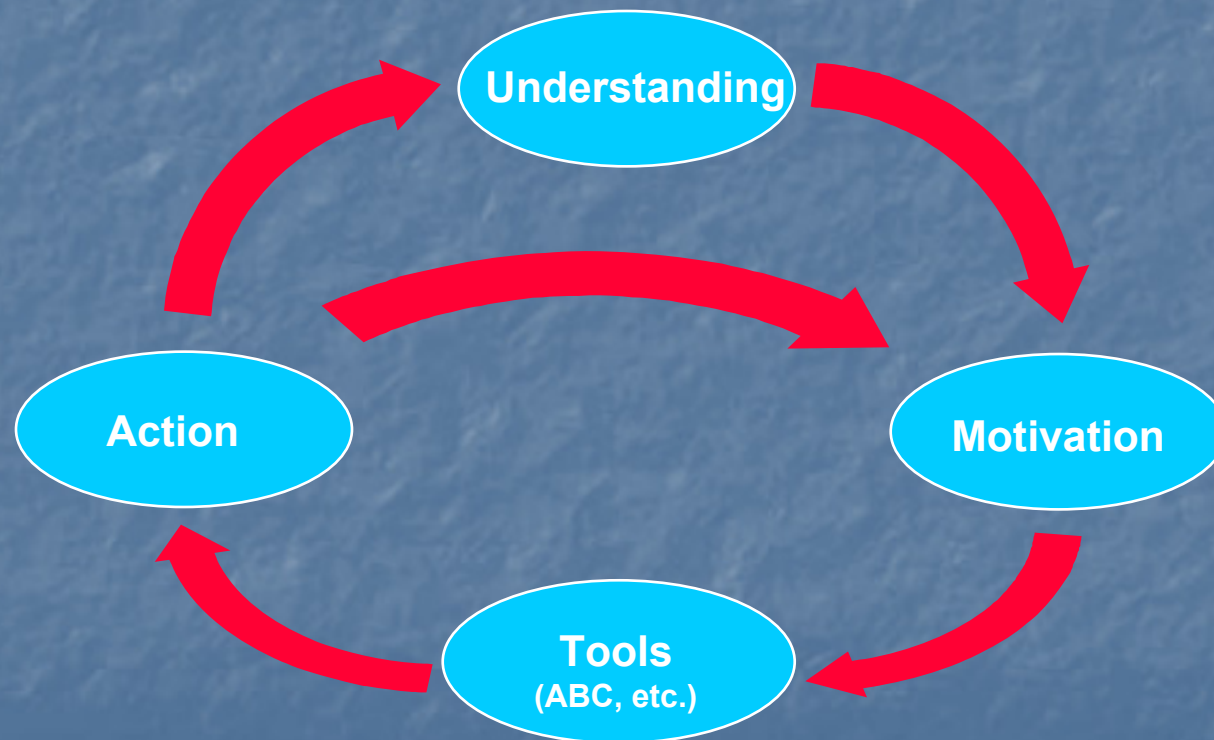### *An Organizational Perspective*

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Leadership

"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

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Change Management: Building an Educated, Motivated User

Decision-Makers Requesting Information

Yes

No

Are Decision-Makers Incentivized?

Yes

No

Provide Incentives

Is the Need Understood?

Yes

No

Educate

Yes

User

Motivated

Educated

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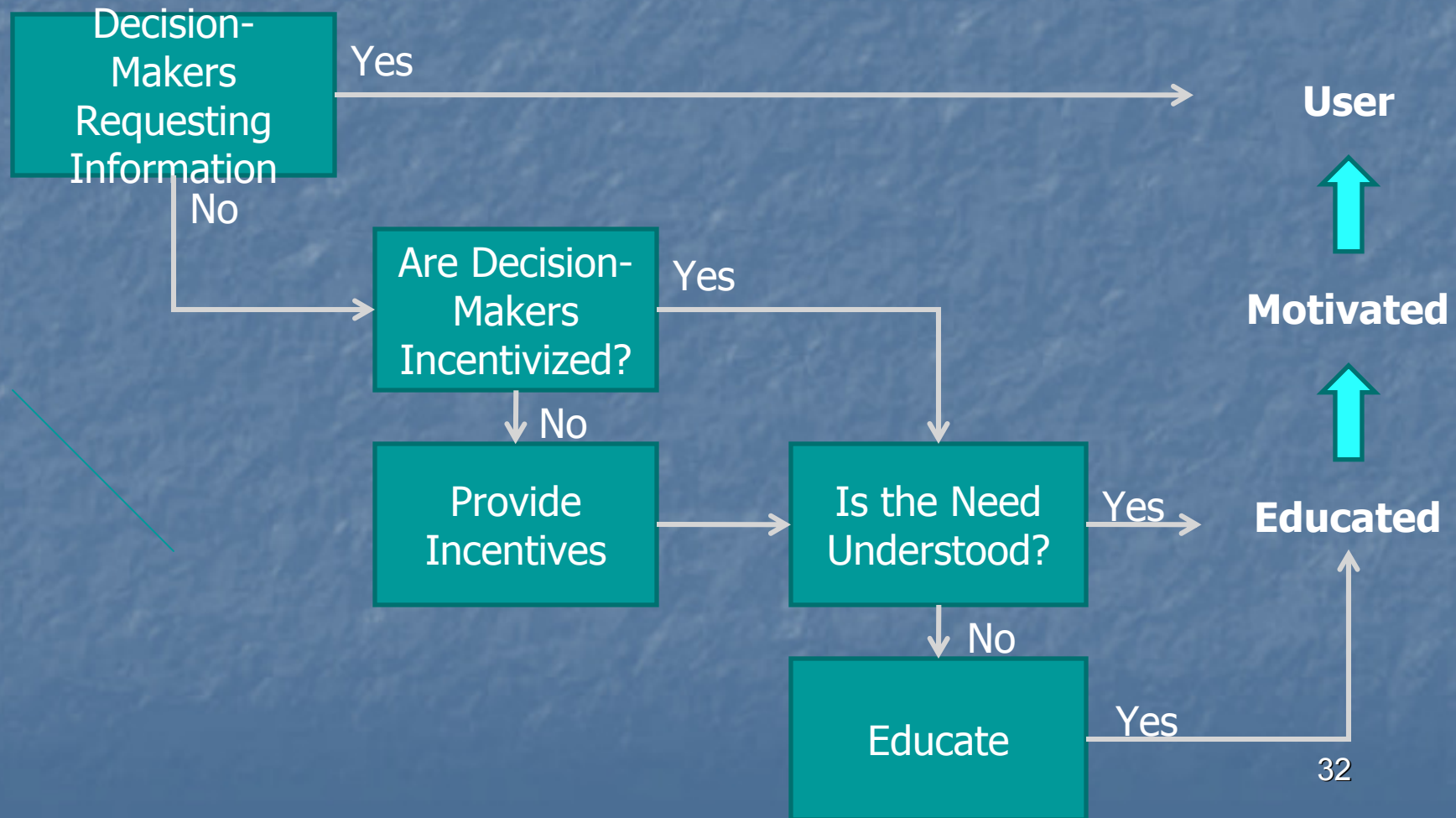
Institutionalizing Improvement by Changing Behavior

Leadership vs. Institutionalization

Commitment to Cost Management

Institutionalization

Required "Critical Mass"

Leadership Commitment
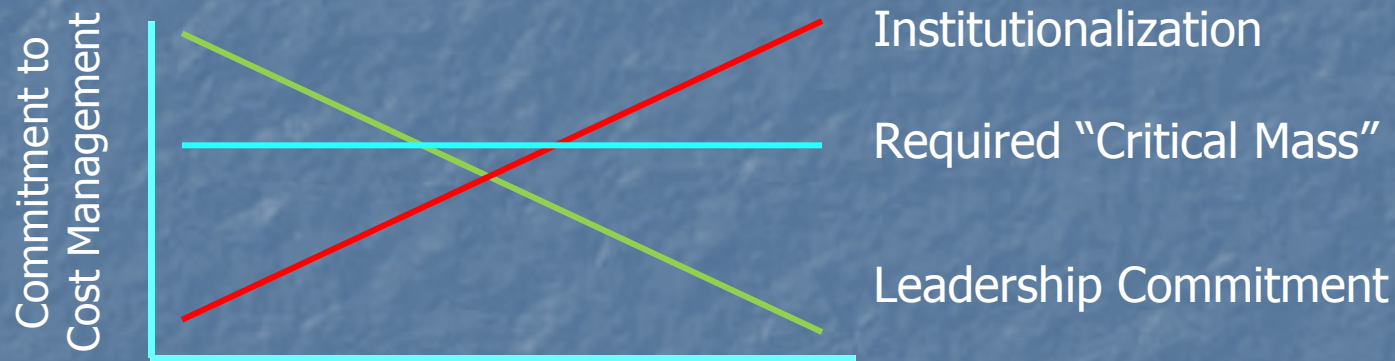
- Leadership commitment quickest to achieve (if leadership "buys in")
- Leadership commitment also quickest to depart (average political appointee tenure ~2 years)
- Institutionalization slower to develop, but less dependent on individuals
- Without institutionalization, there will be need for constant 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

Department of Labor

- 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