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Part II – Tools and Techniques for Implementing a Managerial Cost Accounting Process

Preface

This *Managerial Cost Accounting Implementation Guide* is a technical practice aid to assist federal entities in implementing cost accounting. The document contains recommendations on many cost accounting issues; however, it is not intended to address all possible uses of cost accounting information. Although its use is optional, federal agencies should find this Guide very helpful in their efforts to understand and implement managerial cost accounting. Additional recommendations on costing issues will most likely be addressed at a future time either by the Governmentwide Cost Accounting Committee or another costing committee. Agencies planning to implement a managerial cost accounting system should refer to the Joint Financial Management Improvement Program's (JFMIP) *System Requirements for Managerial Cost Accounting* document, which establishes the standard, Governmentwide system requirements that an agency should consider for systems supporting managerial cost accounting functions.

This Guide is presented in two parts: Part I (Recommendations on Cost Accounting Issues) and Part II (Tools and Techniques for Implementing a Managerial Cost Accounting Process). Recommendations that would either create or modify accounting or budgeting policy are indicated by bolded text. For each of these recommendations to become official policy, the appropriate policy-setting organization, such as the Office of Management and Budget (OMB) or Congress, would need to adopt and promulgate it. Each part of this Guide functions as a stand-alone document and, therefore, the Guide need not be read in the order presented. The appendices provide a jump-start on implementing managerial cost accounting by providing valuable samples and exhibits. The Guide is available in electronic format on the

Governmentwide Cost Accounting Committee's worldwide web site:
www.financenet.gov/financenet/fed/cfo/cfocost/cfocost.htm

During March 1996, the Governmentwide Cost Accounting Work Group, later renamed the Governmentwide Cost Accounting Committee, was created to provide federal entities with a focal point for the discussion of cost related issues and problems. It is chartered under the auspices of the Chief Financial Officers (CFO) Council. The Committee is overseen by a seven-member board of directors, and its primary objectives are to:

- provide a forum for open communication and discussion of cost accounting questions facing member agencies;

- achieve a consensus among member agencies in the resolution of cost accounting issues which cut across agency lines, particularly in the areas of terminology, procedures, and reporting practices used in federal cost accounting;

- provide nonauthoritative guidance for agencies in understanding (1) the *Managerial Cost Accounting Concepts and Standards for the Federal Government* developed by the Federal Accounting Standards Advisory Board (FASAB) and published by OMB and the General Accounting Office (GAO), and (2) *System Requirements for Managerial Cost Accounting* published by JFMIP;

- develop tools to assist agencies in implementing cost accounting standards; and

- undertake special studies and projects related to costing, as directed by the CFO Council.

Four subgroups were formed to carry out the Committee's objectives:

1. Integration of Cost Accounting, Budget, and GPRA
2. Accounting for Full Costs
3. Implementation of a Managerial Cost Accounting Process
4. Reporting of Managerial Cost Information

On June 30, 1997, a draft of the *Managerial Cost Accounting Implementation Guide* was distributed to members of both the federal and private sector financial communities. The Board of Directors of the Governmentwide Cost Accounting Committee considered all comments received on the draft Guide. As a result of these comments, changes were made to various chapters of the Guide. The majority of the changes incorporated dealt with Chapters 2 and 3 of Part I of the Guide and related to the areas of relevant costs, inter-entity costs, and budgeting for program support costs. The Introduction discusses the legislative mandates that emphasize management reform and stronger financial management as well as many of the ways that managerial cost accounting enhances program management and accountability.

Introduction

<u>Importance and Role of Managerial Cost Accounting</u>

Why should federal entities implement managerial cost accounting? That is a question many program managers are asking and will continue to ask as they struggle to implement cost accounting in their agencies. The fundamental answer to the question is that cost information is an essential component of any well managed, cost effective organization. Managerial cost accounting assists federal agencies as they strive to achieve cost effective mission performance and provide full accountability for taxpayer resources. In addition, managerial cost accounting practices are recognized as a valuable tool in aiding federal agencies' efforts to demonstrate accountability in financial accounting, budgeting (allocating resources), and managing programs. Managerial cost accounting's relationship to these three areas of accountability is discussed in Part I of this Guide. As Dorcus Hardy, the former Director of the Social Security Administration stated in March 1987, "The business of government should be businesslike." To be truly effective, it is incumbent on management to lead the effort in implementing managerial cost accounting.

Program managers measure operational performance from three perspectives--cycle time, quality/productivity, and cost. This Guide is intended to bring costing to the operational decision-making table. It does not state that cost should always be the primary factor in decision-making, but any well-managed entity should know what quality or cycle time changes are available through more or less expensive options. This is a key reason why entities should want and actually need to perform managerial cost accounting.

Legislative Mandates

The 1990s have proven to be the decade of "rightsizing" and eliminating inefficiencies. This trend is not exclusive to the private sector, but is actively underway in the public sector as well.

The *Chief Financial Officers (CFO) Act of 1990* contains several provisions related to managerial cost accounting, one of which states that an agency's CFO should develop and maintain an integrated accounting and financial management system that provides for the development and reporting of cost information. This information allows program managers to assess how well their organizations and programs are doing in meeting their strategic goals and objectives.

The *Government Performance and Results Act (GPRA) of 1993*, requires federal agencies to develop five-year strategic plans and annual performance plans beginning with fiscal year 1999; and report annually on actual performance compared to goals. Cost accounting information will aid entities in evaluating and reporting planned performance measures with actual results.

The *Federal Financial Management Improvement Act (FFMIA) of 1996* states that agencies must incorporate accounting standards and reporting objectives established for the federal government into their financial management systems so that all the assets, liabilities, revenues, and expenses of the programs and activities of the federal government can be consistently and accurately recorded, monitored, and uniformly reported throughout the federal government.

The *National Performance Review (NPR)* sets the stage for reforms to create a government that works better and costs less. On the importance of management information systems, such as managerial cost accounting, NPR states:

> "Management isn't about guessing, it's about knowing. Those in positions of responsibility must have the information they need to make good decisions. Good managers have the right information at their fingertips. Poor managers don't...Good information comes from good information systems...If federal decision-makers are supplied the same type of financial and performance information that private managers use, it too will show up on the bottom line...and cut the cost of government."[1]

The *Government Management Reform Act (GMRA) of 1994* authorizes the establishment of franchise fund pilot programs in six executive agencies. The purpose of these franchise funds is to provide common administrative support services both internally to the agency and externally to other agencies in an efficient manner. Services are provided by such funds on a competitive basis, and each fund is expected to be self-sustaining through the collection of fees charged to their customers. Participation in these franchise funds requires proper costing procedures.

The *Clinger-Cohen Act*, formerly known as the *Information Technology Management Reform Act (ITMRA) of 1996*, revolutionizes the procurement and management of Information Technology (IT). The Act eliminates GSA procurement authority over IT and thereby streamlines IT acquisitions. It emphasizes the management of IT as a capital investment, emphasizes planning of IT acquisitions as part of the agency's strategic plan, and establishes a chief information officer in each agency. The Act, for the first time, links IT management to agency mission and budget formulation, and makes agency management more accountable for IT projects by requiring the development of performance measures that will be tied to the agency's strategic plan.

Other Requirements

In July 1995, OMB and GAO approved and published the Statement of Federal Financial Accounting Standards (SFFAS) No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, as recommended by FASAB. Effective October 1, 1997, federal entities are required to implement these managerial cost accounting standards. In addition, full cost reporting is recommended in the Statement of Federal Financial Accounting Concepts (SFFAC) No. 2, *Entity and Display*, and required in the SFFAS No. 7, *Accounting for Revenue and Other Financial Sources*, for the annual general purpose financial statements of federal entities.

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[1] "From Red Tape to Results: Creating a Government That Works Better and Costs Less," *Report of the National Performance Review* (September 1993).

In March of 1996, OMB issued its OMB Circular A-76 Revised Supplemental Handbook to expand the level of competition for the procurement of commercial goods and services, by encouraging agencies to compete with one another and with the private sector on a level playing field. Competition spurs efficiency. Entities--be they private sector contractors or federal agencies--need the stimulus of competition to sharpen their technology, accounting, and reinvention skills, improve performance, bring new technologies, capital, and management techniques to bear on existing performance, and to control costs. In the interim, the A-76 Revised Supplemental Handbook relies on standardized cost factors and specific costing guidance. In the long-term, managers and competitors will be better served by replacing these standards with improved cost information developed on a site and functional basis through improved cost accounting.

Enhancing Program Management and Accountability

With the budget on an obligation basis, it is difficult to draw a correlation between a program's budget and how much it costs to run the program. The question "How much is spent within a budget appropriation?" can generally be answered, but in most cases the question "What does it cost to provide a product or service to the customers?" cannot.

The Comptroller General has recognized the deficiencies in the current budget process and has stated "The federal government has always stressed appropriation accounting and fund control, in other words, the budget process. This is certainly a critical part of government financial management; unfortunately, in many organizations, it may be the only part that is seriously considered. In many situations, the question 'How much can I spend?' overshadows the equally important question 'How well am I managing and controlling the resources I already have?'"[2]

Federal managers are witnessing shrinking budgets. There are fewer resources to do even larger tasks. Therefore, it is imperative that managers use available resources in the most efficient manner. Cost accounting will play a crucial role in providing managers with information they need to manage available resources in the most efficient manner. Cost accounting will provide management with information about the full and relevant costs of activities, goods, and services, thereby enabling managers to know which activities to pursue and which to eliminate. Effective pricing decisions cannot be made and reimbursable rates cannot be established without proper cost data. Managerial cost accounting will provide an answer to the question "How much are we spending for what we are getting?" and thereby assist management in relating resources consumed and results achieved. There will often be difficult decisions to make regarding agency reorganizations and downsizing. However, fear of these decisions should not preclude adoption of managerial cost accounting.

Cost accounting aids stakeholders such as OMB, Congress, and the American public in evaluating the efficiency of government

[2] GAO Report, *GAO/T-AFMD-90.*

*operations and the cost-effectiveness of programs by informing them of*The Accountability Model

Public demand to reduce federal spending is causing the federal government to rethink, re-engineer and restructure the way it provides goods and services. Growing out of this budgetary pressure is the need for improved accountability and program management. As these needs have increased, the President, the Congress, and other stakeholders have looked for ways to better focus discussions on program expectations and results in order to better allocate and monitor program spending. The CFO Act, GPRA, GMRA, and the Clinger-Cohen Act provide the statutory foundation to achieve these improvements. For these laws to succeed, federal managers need tools to demonstrate accountability, improve program performance, and reduce program costs. This Guide presents one such tool--managerial cost accounting.

A New Standard for Accountability

Federal agencies are increasingly accountable to the American public for the results achieved with tax dollars spent. The NPR reinvention initiatives and the management reforms cited in the Introduction were developed to improve federal operations and restore faith that tax dollars are being spent wisely. The American public wants the federal government to be more accountable, better managed, and less costly.

Webster defines accountability in two ways, the first being “answerable.” This historically is how accountability has been viewed in the federal government. The negative overtones that this definition carries have often led to the interpretation of having one’s head on the chopping block. Reports of program operations focused primarily on demonstrating that federal resources were spent in accordance with the law.

A second more positive definition of accountable is “capable of being explained.” Adequately explaining program operations in terms of the results achieved is closer to the new standard and is broader than just being answerable for how dollars were spent. It requires quantifiable measurements of program performance, management discussion, and analysis of those performance measurements, and more comprehensive, consistent, and meaningful financial reporting in audited financial statements, budget requests, and performance reports.

Establishing a Strategic Management Process

A strategic management process focuses policy and funding discussions around relevant information, assists managers in monitoring program performance, and helps taxpayers understand the goals and objectives that programs are intended to accomplish and the results that were achieved. The GPRA is the centerpiece of agency strategic management. It provides a broad framework for improving agency management and accountability.

GPRA envisions a management process where federal agencies routinely develop strategic plans, articulate program goals, allocate federal resources to meet desired performance levels, and measure and report program results. The requirement for audited financial statements contained in the CFO Act and the GMRA, the FASAB development of federal accounting standards, particularly SFFAS No. 4, and the improved information technology planning requirements contained in the Clinger-Cohen Act, all provide components of the strategic management process.

Developing a long-term strategic plan that defines the overall agency mission and major goals is the first step of a strategic management process. An agency’s strategic plan should be driven by top management, and made available to stakeholders and customers. In addition to defining the agency mission and over-arching goals, the plan should also address goals for each major program that supports the agencywide goals. An annual performance plan elaborates further on these goals by defining quantifiable measures for each major program.

Plans and performance goals are developed based upon anticipated resource levels. At this point in the process, program managers are beginning to connect resources to results. However, without cost accounting in place, managers are likely to plan based upon resources directly allotted to their programs and ignore the support to program operations requiring the use of indirect services that are separately appropriated or paid from pooled funds. When the cost of a program is identified through cost accounting, and the goals are defined, program costs can be monitored and managed more efficiently.

In a fully integrated strategic management process, the program objectives, federal resources used to accomplish the objectives, and the actual program activity results achieved are closely linked. Currently, there are varying degrees of linkage between the program objectives in strategic plans, the federal resources described in annual budgets, and federal resources actually spent to carry out the program. Cost accounting is intended to enhance this linkage by identifying the cost of federal resources used by a program and by supporting the process of resource allocation to program activities in the budget process.

Implementing an effective process requires that financial accounting, budgeting, and management functions come together to form a fully integrated system. Standing alone, the effectiveness of these individual functions is limited. However, when linked, they can create a powerful process for improving program management and accountability. Improving the linkage between these processes may require agencies to overcome significant organizational barriers associated with coordinating across functional areas. To integrate these processes, agencies must weave together existing and possibly new systems to create a better way of doing business.

Introducing the Accountability Model

Financial accounting, budgeting, and managing are three essential ingredients of accountability in the federal government. The managerial cost accounting concepts contained in SFFAS No. 4, which can be viewed as general guidance but not authoritative requirements, describe the relationship between these elements and discuss how information should be drawn from a common data source by all three. SFFAS No. 4 summarizes the managerial cost accounting concepts in the federal government as follows:

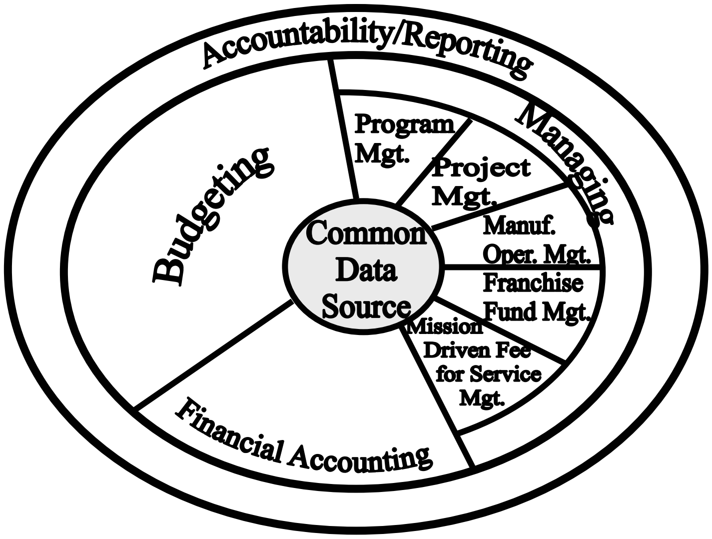
"Managerial cost accounting should be a fundamental part of the financial management system, and to the extent practicable, should be integrated with other parts of the system. Managerial costing should use a basis of accounting, recognition, and measurement appropriate for the intended purpose. Cost information developed for different purposes should be drawn from a common data source, and output reports should be reconcilable to each other."[3]

The common data source, as SFFAS No. 4 describes it, "consists of all financial and programmatic information used by the budgeting, cost accounting, and financial accounting processes. The common data source may include many different kinds of data, which may be spread among multiple systems or locations, including non-computerized sources. This data is far more than the information about financial transactions found in the standard general ledger, although that is a significant part of the data source."[4]

The five standards in SFFAS No. 4, which provide specific guidance and are authoritative in nature, set forth the fundamental elements of managerial cost accounting for the federal government: (1) accumulating and reporting costs of activities on a regular basis for management information purposes, (2) establishing responsibility segments to match costs with outputs, (3) determining the full cost of government goods and services, (4) recognizing the costs of goods and services provided by one federal entity to another, and (5) using appropriate costing methodologies to accumulate and assign costs to outputs. These standards are broad enough to allow maximum flexibility for agency managers to develop costing methods that are best suited to their operational environment. Managerial cost accounting standards and practices are expected to evolve and improve as agencies gain experience in using them.

[3] Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, par. 4.
[4] Ibid., pars. 43-44.

Figure 1
The Accountability Model



The graphical presentation in Figure 1 depicts a model of the interrelationship of the three major aspects of accountability, each drawing on a common data source. Cost accounting information supports all three aspects of accountability as will be explored in more detail later in this Guide. Managerial cost information must support decision-making within a variety of different business environments, such as in:

- **Budgeting** - to make resource allocation decisions;

- **Managing**
  Program Management - to manage resources in the accomplishment of broad program purposes;

  Project Management - to manage resources allocated to the project for achievement of desired results by a given deadline or according to a particular schedule;

  Manufacturing Operations Management - to manage the unit costs of output to ensure that the units of output are produced as inexpensively as possible;

  Franchise Fund Management - to determine pricing and to manage costs to be competitive in the marketplace; and

  Mission Driven Fee for Service Management - to set fees within legal requirements and to allow external oversight organizations to monitor and review fee decisions.

- **Financial Accounting** – “financial accounting is largely concerned with assigning the value of past transactions to appropriate time periods”.[5] “Federal financial reporting should assist report users in evaluating service efforts, costs, and accomplishments of the reporting entity.”[6]

In each of these environments, management must know the costs of their organizations/lines of business and cost objects (programs, projects, activities, goods, or services) in order to make good business decisions and to report the financial and performance information to external parties such as Congress and the public. Thus, the Accountability Model presented in Figure 1 depicts the manner in which cost information is derived from a common data source that supports financial accounting, budgeting, and managing, the components of accountability discussed in detail in this Guide.

The subsequent chapters of this Guide focus on: the interrelationship of cost accounting information in the federal government (cost components (differentiating funded and/or reimbursed costs from unfunded and/or non-reimbursed costs), types of cost information to use, uses of costs information, and levels to which costs are assigned) and the relationship of cost accounting to budgeting, managing, and financial accounting.

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[5] Ibid., pars. 46-48; Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, par. 168.
[6] Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting,* par. 122.

The Relationship of Managerial Cost Accounting to Financial Accounting

Financial accounting provides the ability to track the effects of financial events on the financial position of the federal government and results of operations, including assets, liabilities, changes in net position, revenues, and expenses. "Managerial cost accounting is the process of accumulating, measuring, analyzing, interpreting, and reporting cost information useful to both internal and external groups concerned with the way in which the organization uses, accounts for, safeguards, and controls its resources to meet its objectives. Managerial cost accounting is therefore the servant of budgeting, financial accounting, and reporting because it assists those functions in providing information. In addition, managerial cost accounting provides useful information directly to management."[7] Although this chapter touches on budgeting, managing, and reporting since all are related closely to managerial cost accounting, the primary focus in this chapter is the impact of federal financial accounting standards and other federal regulations on managerial cost accounting.

The Interrelationship of Cost Accounting Information in the Federal Government

The chart in Figure 2 provides the foundation to this Guide by displaying the interrelationship of cost accounting information to management decision-making situations and the organizational units, programs, and outputs to which costs are assigned. It identifies the cost components (differentiating funded and/or reimbursed costs from unfunded and/or non-reimbursed costs), types of cost information to use, uses of cost information, and level to which costs are assigned. In addition, it relates the uses of cost information to cost components defined in federal accounting standards and to OMB Bulletin 97-01, *Form and Content of Agency Financial Statements*, although it does not attempt to illustrate how exchange revenues would be applied to determine net costs.[8] A detailed explanation of each of the terms used in the chart is presented on the following pages. In addition, this chapter discusses cost information needing additional guidance.

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[7]Statement of Federal Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, par. 42.
[8]See SFFAS No. 7, *Accounting for Revenue and Other Financing Sources*; FASAB's Implementation Guide to SFFAS No. 7; and OMB Bulletin 97-01, *Form and Content of Agency Financial Statements*, for more information on the proper treatment of revenues and other financing sources.

Figure 2 – Interrelationship of Cost Accounting Information in the Federal Government

Uses of Cost Information	Types of Cost Info. to Use	COST COMPONENTS								Level to Which Costs are Assigned
		Program Costs						Costs Not Assigned to Programs (general mgmt. support & non-production)		
		Direct Costs (specifically identified with an output)		Indirect Costs (used to produce multiple outputs)		Program Non-Production Costs (not related to outputs)				
		Funded or Reim-bursed	Unfunded or Non-Reimbursed	Funded or Reim-bursed	Unfunded or Non-Reimbursed	Funded or Reim-bursed	Unfunded or Non-Reimbursed	Funded or Reim-bursed	Unfunded or Non-Reimbursed	
Budgeting										
Resource Allocation	Full Cost	X	X	X	X	X	X			Programs
Budget Formulation/ Execution & Funds Control	Relevant Costs	X		X		X				Programs
Managing										
Cost Control[1]	Relevant Costs	X		X						Activities, Goods, Services
Performance Measurement (GPRA)	Full Cost	X	X	X	X	X	X			Programs
Contracting Out Decisions (A-76)	Relevant Costs	X	X	X	X	2	2	2	2	Activities, Goods, Services
Devolution Decisions[3]	Relevant Costs	X	X	X	X	X	X			Programs
Pricing Gov't User Fees	Relevant Costs	X		X						Activities, Goods, Services
Pricing Non-Gov't User Fees (OMB A-25)[4]	Full Cost	X	X	X	X					Activities, Goods, Services
Accounting										
Asset Valuation	Full Cost[5]	X	X	X	X					Asset
Financial Statements	Full Cost[6]	X	X	X	X	X	X	X	X	Respon-sibility Segment

Notes to Figure 2:

1 For certain decisions, managers may focus primarily on variable and controllable costs, but full cost to the government should also be considered.

2 Relevant costs include, for example, certain adjustments to depreciation, cost of capital, insurance premium equivalents, potential federal income tax revenue foregone, and others. See OMB Circular A-76 and the associated Supplemental Handbook for information.

3 Direct and indirect costs to be considered are primarily those that would be eliminated by the devolution. Non-production costs are non-recurring costs that would be incurred because of the transition or shut-down of operations. This chart assumes no changes in "costs not assigned to programs" such as general management and administrative support costs. If they do change, the associated costs should also be examined.

4 See OMB Circular A-25, *User Charges*, for specific guidance. In general, user charges are based on full cost. In certain instances, they can be based on market prices that are greater than full cost.

5 This category encompasses general property, plant, and equipment (PP&E) and inventory and related property. FASAB has published an exposure draft on accounting for internal software that proposes capitalizing only direct costs of such software.

6 In accordance with OMB Bulletin 97-01, non-recurring/non-production costs should be included in the cost of a program unless the cost can not be

Cost Components – *The two principle components of Cost are Program Costs and Costs not Assigned to Programs.*

Program Costs

Program costs include direct costs, indirect costs, and non-production costs associated with programs. Program costs include the full cost of the program outputs, which consist of the direct costs and indirect costs (all other costs that can be directly traced, assigned on a cause and effect basis, or reasonably allocated to the program outputs). In addition, program costs include non-production costs that can be assigned to the program but not to its outputs. The costs of program outputs shall include the costs of services provided by other federal entities whether or not the providing entity is fully reimbursed. The cost of program outputs shall also include costs that are paid in total or in part by other entities to the extent that the accounting standards require them to be recognized in financial statements. Although not illustrated in Figure 2, OMB Bulletin 97-01 requires “costs related to the production of goods and services provided to other programs to be reported separately from the costs of goods, services, transfers, and grants to the public.”[9]

Programs that make transfer payments to the public (e.g., welfare payments, social insurance payments) should separately identify (1) “the costs of federal resources that have been or will be transferred to individuals and state/local governments, and (2) the costs of operating the programs.”[10] These transfer payments would be considered direct costs in most instances, since they would be outputs of the program. In most cases, transfer payments will be funded for budgetary purposes by the program making the payments. In some instances, such as the trust funds operated by the Department of Labor for unemployment and workers compensation payments, agencies make payments to the program’s funds to cover the costs.

An important distinction needs to be made between costing and pricing. The same amounts are not necessarily used. Although full costs are recorded and reported, the prices charged and paid may be very different. (See the discussions on Pricing for Governmental User Fees below.)

Direct Costs

“Direct costs are costs that can be specifically identified with a single cost object (e.g., an output).”[11] Direct costs are assigned to cost objects by direct tracing of units of resources consumed by individual activities that lead to the production of an output. “Examples of resources that are directly used in the production of an output and might be included in direct costs include materials that are used in the production of the output, employees who directly worked on the output, facilities and equipment used exclusively in the production of the output, and goods or services received from other entities that are directly used in the production of the output.”[12] “Although direct cost tracing increases accuracy in cost assignments, it can be very expensive. Management must use their judgment to determine whether the information and accuracy obtained by using direct tracing to identify direct costs is worth the effort and expense of doing so.”[13]

Many direct costs are incurred internally by the program, responsibility segment, reporting entity, or other cost object, depending on the level of reporting needed. Two very common examples are salaries and other benefits of employees who work for the organization, and the cost of goods and services purchased from the private sector. The full cost of these items is to be included in the cost of the output whether or not it is funded in the budget covering the program.

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[9]OMB Bulletin 97-01, *Form and Content of Agency Financial Statements*, p. 27.
[10]SFFAS No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, par. 99.
[11]Ibid., par. 90.
[12]Ibid., pars. 90 and 126.
[13]Ibid., par. 128.

Another type of direct cost is the costs of goods and services received from other federal entities that can be directly traced to one of the program's outputs. An example is computer services obtained from another agency's data center that are used to produce the output. The costs of these goods and services, called inter-entity costs, included in the full cost of the output, may be fully reimbursed, partially reimbursed, or not reimbursed at all.

◊ *Funded and/or Reimbursed Costs*

Funded and/or Reimbursed Costs include amounts that were either budgeted to an entity or that were paid to another entity for goods or services provided. It should be fairly easy to see why the entity receiving goods or services from another federal entity would record reimbursed amounts as a cost. This is similar to the accounting treatment used for purchasing goods and services from a vendor or contractor in the private sector. Recording costs (as either expenses or assets, as appropriate) equal to the price paid also applies to items received from other federal entities for which payment is made to cover the providing entity's full cost. The primary difference between accounting for goods and services received from another federal entity where full costs are reimbursed and accounting for goods and services from a non-federal entity is the need to identify the costs as inter-entity costs, along with the other entity's identification, so that appropriate elimination entries can be made when preparing consolidated reports that cover both entities to avoid double-counting. It is important to know whom the other entities are to allow crosschecking and verification of inter-entity amounts and to determine which amounts are to be eliminated. For example, intra-entity costs and revenues between two bureaus in the same Department, if recorded, would be eliminated when preparing the Departmental consolidated financial statements. Inter-entity transactions between Departments would not be eliminated for Departmental statements but would be for the Governmentwide Consolidated Financial Statements.

◊ *Unfunded and/or Non-reimbursed Costs*

Unfunded costs represent amounts for which no entity has paid. An example of an unfunded cost is accrued annual leave. Non-reimbursed costs represent amounts that were paid by an entity other than the entity receiving the benefit. An example of a non-reimbursed cost is the retirement costs paid by the Office of Personnel Management (OPM) for federal retirees. If goods and services are received from another federal entity with no or partial reimbursement, the receiving entity may need to record non-reimbursed costs in addition to the reimbursements in order to determine the full cost to the government of goods and services received and of outputs ultimately produced by the receiving entity. Non-reimbursed costs to other federal entities are still a cost to the government as a whole, and ultimately to the taxpayers. Treating these costs as a "free resource" to the receiving entity distorts the actual costs to the government and would make cost comparisons between goods and services provided by the private sector and by other federal entities invalid.

Ideally, all inter-entity costs should be recognized. However, there are some cases in which the cost of non-reimbursed or under-reimbursed goods or services received from other entities need not be recognized as part of the cost of the receiving entity. Recognition of inter-entity costs that are not fully reimbursed is limited to material items that (1) are significant to the receiving entity (the cost of the good or service is large enough that management should be aware of the cost when making decisions), (2) have a direct relationship to the entity's operations (the good or service provided is an integral part of and necessary to the output produced by the entity), and (3) can be identified or matched to the receiving entity with reasonable precision. Broad and general support services provided by an entity to all or most other entities (e.g., OMB oversight) should not be recognized unless such services form a vital and integral part of the operations or output of the receiving entity. Both the providing entity and the receiving entity should recognize the cost of the goods and services, which will include those inter-entity costs specifically identified by OMB. To the extent that reimbursement is less than the full cost (direct and indirect costs) of the output, the receiving entity should recognize the difference in its accounting records as a financing source, which will appear on the Statement of Changes in Net Position. Inter-entity expenses/assets and financing sources would be eliminated for any consolidated financial statements covering both entities.

Reimbursed amounts of inter-entity costs need to be matched with the other entity's records because one agency has the expense (payable) and the other has the revenue (receivable), but non-reimbursed costs can be eliminated against the imputed financing sources at the receiving entity, since it has both the cost and the financing source. The providing entity doesn't need to be involved in the elimination of imputed costs and financing sources, although it is involved in providing cost information to the receiving entity. The entity providing the goods and services has the responsibility to provide the receiving entity with the cost information of such goods or services, either through billing or other advice. Agencies are strongly encouraged to negotiate reimbursable agreements that include a description of both the reimbursed and non-reimbursed portions of the cost and provide sufficient support to be auditable. Full cost should be determined in accordance with the federal accounting standards and using the best available estimates. The receiving entity should record the cost (both the reimbursed and non-reimbursed amounts) as goods and services are received.

In some cases the federal budget has been established such that some costs incurred by a federal entity are actually paid for, in part or in full, by another federal entity using its budgetary resources. Common examples are (1) the cost of pensions and other retirement benefits covered by trust funds administered by OPM and the Department of Defense (DOD), and (2) items paid by the Treasury Judgment Fund on behalf of other agencies. Pensions are funded by contributions to the trust funds by employees and the employer entities as well as by the trust funds themselves (e.g., direct appropriation to the trust fund, interest earned on investments). The employee contributions are transferred to the administrative agency (e.g., OPM or DOD), and the employer entity records no costs for these. Budgetary resources of the employer entity are used (i.e., obligations are incurred) and payment made for the employer entity's contributions as required by law. "The employer entity recognizes an 'employer's pension expense' in an amount equal to the service cost (based on the plan's actuarial cost method and assumptions) attributable to its employees during the accounting period, less the employees' contributions. The difference between the employer's pension expense and the employer's contribution is credited to the employing entity as a financing source"[14] in much the same way that non-reimbursed inter-entity costs (discussed above) are. Likewise, as judgment costs are incurred, they should be recognized by the agency in litigation, even though they are paid by the Treasury Judgement Fund.

Modifying the federal budget such that the employer agencies provide contributions covering all of the federal government's portion of these employee-related costs to the agencies administering the trust funds would help bring budgeting, costing, and financial accounting more into line with each other. This would reduce the need for calculating imputed costs and imputed financing sources, thereby reducing potential confusion among users of financial and budgetary information. In addition to bringing budgeting and accounting closer for the costs of an agency's own employees, it would also bring closer the costs of inter-entity services and reimbursements. The budgets of the agencies that administer the pension and other retirement benefits programs should be adjusted to reflect the additional revenues they will receive from the agencies, and the employer agency budgets should be increased to reflect the additional payments they will make. The net dollar effect of these changes to the budget should be zero.

Indirect Costs

"Indirect costs are costs of resources that are jointly or commonly used to produce two or more types of outputs but are not specifically identifiable with any one of the outputs. Typical examples of indirect costs include costs of general administrative services, general research and technical support, security, rent, employee health and recreation facilities, and operation and maintenance costs for buildings, equipment, and utilities."[15] As with direct costs, indirect costs can be incurred internally or for goods and services received from other federal entities and may or may not be funded in the budget covering the program.

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[14]SFFAS No. 5, *Accounting for Liabilities of the Federal Government*, par 74.
[15]Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, par. 91.

Non-Production Costs

Non-production costs (as a part of program costs) are costs linked to events other than the production of goods and services that can be traced to a particular program. (Non-production costs that cannot be traced to a program are designated as "costs not assigned to programs." See the discussion below.) These costs are not factored into the full cost of an output, but are considered part of the full cost of a program. Examples of non-production costs include the following:

- other post-employment benefits (OPEB) costs recognized as expenses when an OPEB event occurs (e.g., a reduction in force);
- certain property acquisition costs recognized as expenses at the time of acquisition (e.g., costs of acquiring or constructing stewardship property, plant, and equipment);
- reorganization costs; and
- nonrecurring cleanup costs resulting from facility abandonments that are not accrued.

"Since these costs are recognized for a period in which a particular event occurs, assigning these costs to goods and services produced in that period would distort the production costs."[16]

In special purpose cost studies, management may have reasons to determine the cost of outputs by distributing some of the non-production costs to the cost of outputs over a number of past periods. Such distribution may be appropriate when (1) experience shows that the non-production costs are recurring in a regular pattern, and (2) a nexus can be established between the costs and the production of outputs that may have benefited from those costs.

OMB Bulletin 97-01 requires separate reporting on the Statement of Net Cost for non-production costs associated with stewardship property, plant, and equipment (PP&E); heritage assets; and stewardship land -- known collectively as stewardship PP&E. Costs of acquiring or constructing these items, which are usually considered to be non-production costs and expensed in the period incurred, must be reported separately from each other and from other non-production costs. Recurring costs associated with stewardship PP&E, such as the National Park Service's ongoing maintenance of a building designated as a heritage asset, could be treated as a direct cost or indirect cost assigned to an output (see above), since part of their mission is to maintain such buildings and make them available to the public. Costs associated with stewardship PP&E that cannot be assigned to a particular program should be shown under "costs not assigned to programs." (See below.)

Costs Not Assigned to Programs

"Costs not assigned to programs consist of costs that are attributable to the reporting entity or responsibility segment but cannot be assigned reasonably to programs through direct tracing, assignment on a cause-and-effect basis, or a reasonable allocation method. Examples of such costs include (1) high-level general management and administrative support costs (e.g., the Department Secretary's office and other central office functions), and (2) non-production costs that cannot be assigned to a program. These costs appear on the Statement of Net Cost as part of the entity and suborganization costs and are labeled "costs not assigned to programs."[17] Since these costs are not part of the full cost of an output, generally (though not necessarily always) they would not be included in the prices of those outputs either.

Types of Cost Information to Use

[16]Ibid., par 104.
[17]OMB Bulletin 97-01, *Form and Content of Agency Financial Statements*, p. 28.

The term "full cost" is defined in SFFAS No. 4. This Guide uses the term "relevant costs" when full cost is not required. When to use full cost or relevant costs is dependent upon management's use of the cost information.

Full Cost

FASAB recommended, and OMB issued, a requirement (contained in SFFAS No. 4) for developing and reporting cost accounting information. SFFAS No. 4 requires "the full cost of outputs to be reported in general purpose financial reports."[18] In addition, full costing capability is required in federal agencies' basic cost accounting processes. "Each reporting entity should measure the full cost of outputs so that total unit cost of outputs can be determined."[19] The Statement of Net Cost, in an agency's financial statements, is the report most obviously affected by these requirements. "The Statement of Net Cost and related supporting schedules show the net cost of operations for the reporting entity as a whole and for its suborganizations and programs."[20] "The full cost accounting standard does not require full cost reporting in federal entities' internal reports or special cost studies."[21] Full cost is required in certain situations such as financial statements and performance measurement under GPRA.

Relevant Costs

Those cost elements that are necessary for particular management analyses and/or decision-making purposes when full cost is not necessarily required. Relevant costs are appropriate for decision-making purposes such as devolution decisions and the pricing of governmental user fees. For example, certain management decisions might involve looking only at variable costs. The costs appropriate for consideration in particular situations may only be a portion of the full cost, may be greater (e.g., A-76 contracting-out decisions), or in the case of budgeting, be computed on a different basis other than the accrual basis, which is normally used for financial reporting. Of course, full cost may also be relevant to these decisions as well.

Uses of Cost Information

Budgeting

Provides information and analysis for use in achieving annual and long-term revenue and resource levels, in making resource allocation decisions, and for use in monitoring performance against those decisions throughout the budget period.

- *Resource Allocation* - This use includes the comparison of the costs and benefits of various proposals and the resulting decisions to allocate planned federal resources. Using the full cost of programs allows for more meaningful cost comparisons because more of the costs to taxpayers are considered than might be if using only funds directly appropriated to the program.

- *Budgeting Formulation, Budget Execution, and Funds Control* – This use focuses on identifying budgetary resources and tracking obligations and outlays incurred against them. These are measured on a different basis than the accrual basis used to measure full cost.

Managing

[18]SFFAS No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, p. 36.
[19] Ibid., par. 71.
[20]OMB Bulletin 97-01, *Form and Content of Agency Financial Statements*, pgs. 25-29.
[21]SFFAS No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, par. 89.

Provides information on the performance of operations and assists managers in determining the prices to be charged for outputs.

- *Cost Control* - This use, which can be looked at from several levels, includes management decisions to control costs by changing work processes or allocating/reallocating federal resources. In some situations, managers may only look at variable costs that would be affected by a change in output volume.

- *Performance Measurement (GPRA)* - This use includes the costs to be considered when reporting performance measures, including the costs relating to outputs or outcomes in order to meet the objectives of GPRA.

- *Contracting-Out Decisions (Commercial Activities as defined in OMB Circular A-76*) - This use includes costs to consider (full cost plus other items, such as federal taxes and bid and proposal costs) for comparative purposes, when evaluating whether non-sovereign activities should be performed in-house, using federal government resources and personnel, or under contract with commercial sources.

- *Devolution Decisions* - This use includes costs to use in management decisions to spin-off or discontinue some or all of the operations of an organizational component.

- *Determining the Price to be Charged for Governmental User Fees* - This use applies only in situations when one federal entity provides an activity, good, or service to another federal entity. **Generally, the price charged would only include the recovery of costs that the providing agency was funded for and/or reimbursed. However, the providing entity must furnish information regarding the full cost of the activity, good, or service provided, regardless of whether or not these amounts are recovered from the receiving entity. In situations other than revolving funds, costs related to capitalized assets are treated differently for budgetary and financial accounting. Full acquisition cost is a budgetary expenditure in the year acquired, whereas the asset's cost is depreciated over more than one period for financial accounting purposes. Where fees are based upon depreciation expense or other expenses not funded out of the providing entity's current appropriation, the amount collected from the receiving entity that relates to the unfunded expense should be forwarded to the U.S. Treasury, unless specifically allowed by statute or as outlined in OMB Circular A-25, to be retained by the providing entity. Within an agency, funding can also be in a separate appropriation. When billing within a reporting entity (as defined in the Statement of Federal Financial Accounting Concepts No. 2, *Entity and Display*), intra-entity costs do not have to be recovered. However, when billing another reporting entity, all intra-entity costs have to be recovered (subject to specific legislation preventing this recovery).**

- *Determining the Price to be Charged for Nongovernmental User Fees (OMB Circular A-25 Situations)* – This use applies only to the activities, goods, and services provided to nonfederal entities and includes the prices charged for the sale or use of government property or federal resources and for services rendered. The prices set for nongovernmental user fees should recover all direct and indirect costs (funded or reimbursed as well as unfunded or non- reimbursed) incurred in providing the good or service. **The portion of the fees collected that were not funded out of the providing entity's current appropriation, e.g., depreciation included in the direct costs that was funded in a different year should be collected from the receiving entity by the providing entity and forwarded to the U.S. Treasury, unless specific legislation allows the providing entity to retain these funds. OMB Circular A-25 allows prices to be set at market price levels in excess of full cost in**

certain situations.

Financial Accounting
Evaluates service efforts, costs, and accomplishments of the organization.

- *Asset Valuation* – Certain costs, such as for inventory and general property, plant, and equipment (PP&E), are capitalized rather than expensed in the period incurred. "To match the costs more closely to the periods benefited, expenses are recognized over time as inventory is used and general PP&E is depreciated."[22]

- *Financial Statements* - This use includes the consolidated governmentwide financial statements and the organizationwide (agency) financial statements used by federal executives, program managers, Congress, and the American public.

Levels to Which Costs are Assigned

The Hierarchical Levels (in descending order) for Which Costs are Assigned
- Governmentwide
- Agencywide (reporting entity defined under FASAB)
- Responsibility Segments (suborganizations)
- Programs
- Projects
- Outputs (activities, goods, and services)

- *Governmentwide* - The total federal government (Executive Branch at this time), including all costs incurred by the government and reported in the federal consolidated Governmentwide financial statements.

- *Agencywide* - A reporting entity, which is generally assumed to be an agency or department. If a large government department has organizational components that are themselves reporting entities (e.g., Internal Revenue Service within the Treasury Department, Forest Service within the Department of Agriculture), then the reporting components and their organizational equivalents could also be considered the agencywide level.

- *Responsibility Segment* - A major suborganization of the agency that has responsibility for delivery of an activity, good, or service within the reporting entity.

- *Programs* – "Agencies should decide the exact classification of major programs based on the missions and outputs described in the GPRA strategic and annual plans, the entity's budget structure and the guidance for defining and structuring responsibility segments presented in SFFAS No. 4."[23]

- *Projects* - Planned undertakings, usually related to a specific activity, such as the research and development of a new product or the redesign of the layout of a production plant. Projects generally have a finite life span, with a specific start and end date.

- *Activities, Goods, and Services*

  ◊ Activities - Work tasks or steps performed in producing goods or services.

[22] SFFAS No. 3, *Accounting for Inventory and Related Property*; SFFAS No. 6, *Accounting for Property, Plant, and Equipment*.
[23] OMB Bulletin 97-01, *Form and Content of Agency Financial Statements*, p. 26.

◊ Goods and Services - Outputs generated from the consumption of resources.

As indicated in Figure 2, the full cost for programs includes all direct, indirect, and program non-production costs (funded or reimbursed as well as unfunded or non-reimbursed). The full cost for an output (activity, good, or service) includes all direct and indirect costs (funded or reimbursed as well as unfunded or non-reimbursed) but does not include any program non-production costs because these costs can not be related to outputs.

Costs for Which Additional Guidance May Be Needed

"To assist in implementing the inter-entity costing standard in a practical and consistent manner by the various federal entities, OMB, with assistance from FASAB, is supposed to identify and provide guidance on the specific inter-entity costs that federal entities should begin recognizing."[24] OMB should also identify other costs that may not be inter-entity costs under FASAB's definition but should be recorded as costs to the entity and are not paid for from the entity's budget, in a manner similar to the treatment of pension and other retirement benefits. As of December 1997, OMB has not yet developed this guidance. **OMB needs to develop this guidance as soon as possible.** Agencies will need time to implement the guidance once it is released. Without this guidance, agencies and their auditors will interpret the cost accounting standards in their own ways, which will likely lead to inconsistencies across government.

Costs for which there is no reimbursement are the most controversial and difficult to capture. Costs that OMB should consider in preparing this guidance (and determining whether or not the receiving entity should record the costs) include, but are certainly not limited to, the following:

- **space provided to another entity for which there is no negotiated inter-agency agreement;**
- **costs of employees working on non-reimbursed details;**
- **costs of employees working on inter-agency working groups or task forces;**
- **Department of Justice legal services (lawyer and staff time to develop cases);**
- **payment services provided by Treasury, if material to the receiving entity; and**
- **recognition of environmental clean-up costs by the entities causing the damage and/or doing the clean-up.**

In May of 1997, OMB, working with GAO, Treasury, the CFO Council, and the President's Council on Integrity and Efficiency, established the Accounting and Audit Policy Committee (AAPC) to research accounting and auditing issues requiring guidance. The AAPC is intended to address issues, which arise in implementation and are not specifically or fully discussed in the accounting standards, interpretations of the accounting standards, OMB's Form and Content Bulletin, or OMB's Audit Bulletin. OMB is to issue the final interpretations based on the AAPC's recommendations. Agencies and other interested parties can submit issues to the AAPC for their consideration.

FASAB is currently working on projects to develop accounting standards for natural resources, internal use software, and the cost of capital. These standards, once developed, will probably also affect how entities determine the full cost of their outputs and programs.

[24]SFFAS No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, par. 110.

The Relationship of Managerial Cost Accounting to Budgeting

Importance of Cost Accounting to the Budget Process

Federal agencies account for costs at different levels and use different costing methods as defined in Chapter 2. Generally costs are accumulated at the budget account (Treasury Fund Symbol), object classification, and program level according to budgetary accounting guidelines to meet budget needs, and are accounted for using accrual accounting as defined in federal financial accounting standards for financial statement purposes. Historically, the emphasis has been on costs accumulated at the budget account level using budgetary accounting to ensure that dollars spent (amounts obligated within a budget account) did not exceed the amount appropriated, apportioned, or allotted.

While the accounting of costs in budget appropriation accounts is necessary for legal purposes, it is not always the most effective way to accumulate cost information for budget analysis or information purposes. Specifically, while appropriations funded in separate statutorily authorized accounts have the advantage of enhancing control by designating a specific level of federal resources for specific purposes, they do not facilitate an understanding of the total level of federal resources needed to achieve policy or program goals. Cost accounting can play an important role in the budget process and assist the Congressional and executive decision-makers who allocate federal resources during budget formulation by informing them of the costs of federal resources required to support policy and program goals. Cost accounting also assists the budget execution process by consistently accumulating and reporting the costs of the federal resources consumed, and by comparing actual against planned federal resource consumption.

Budgeting

Budgeting provides information and analysis for use in achieving annual and long-term revenue and resource levels, in making resource allocation decisions, and for use in monitoring performance against those decisions throughout the budget period.

There are two major aspects to budgeting. The first, called budget formulation, allocates budgetary resources in accordance with national priorities and program objectives established by the President and the Congress. The second, budget execution, controls the funds and other resources allocated to federal entities during the budget formulation process.

Budget Formulation

"Budget formulation is the annual cycle wherein budget estimates are developed (formulated), using projections and forecasts, beginning each spring within the agencies' organizational (program) units, submitted to OMB for review, transmitted by the President to the Congress, and tracked through the Congressional appropriation process."[25] OMB Circular A-11, *Preparation and Submission of Budget Estimates*, provides the guidance for the budget formulation process. Although the budget is not prepared on an accrual basis, cost information can still be very useful in making resource allocation decisions during the budget formulation process. The costs and benefits of various proposals should be compared to determine their relative merits. Cost accounting information on the full cost of a program, regardless of how it is funded, can provide a different perspective to the decision-makers that they may not get by only looking at budgetary information.

In addition to the differences caused by using different bases of accounting, the current budget structure does not line up the budgetary resources provided with the costs of programs that are authorized. For example, some of the

[25] JFMIP, *Framework for Federal Financial Management Systems*, pgs. 17-18.

costs associated with pensions and other retirement benefits are funded through OPM and DOD, even though the employees work for other agencies. (See the discussion in Chapter 2 on Unfunded and/or Non-reimbursed Costs.) Several misalignments between programs and budget accounts have arisen over the years for various reasons that may no longer be valid, thus causing unnecessary administrative work and potential confusion. Once the decision is made to fund a particular program, the budgetary resources (e.g., appropriations, anticipated reimbursements) need to be assigned to the appropriate budget accounts. The closer this assignment is to the accounting for costs of the program, the easier it is for the agencies and other users of budgetary and cost information.

Budget Execution/Funds Control

Budget execution includes funds control and provides features to record, distribute, and control budget authority and spending in accordance with the provisions of OMB Circular A-34, *Instructions on Budget Execution*. "Budget execution provides the ability to track the effects of financial events on the sources and uses of budgetary resources authorized by the President and the Congress. Its primary purpose is to ensure that spending does not exceed the funds appropriated or authorized."[26]

Cost information on an accrual basis is probably not as useful to budget execution as it is to budget formulation. However, it still can be used to predict the possibility of a need for additional budgetary resources in the future. Furthermore, the closer that budget and cost accounting can be aligned, the more useful cost information will be for budget execution.

In defining the annual performance plans connected with the budgeting process, program managers can establish performance goals based upon an understanding of both the direct and indirect costs of their programs, and therefore appropriately connect resources to results. Cost goals can be defined that will assist managers in deploying resources more efficiently. Cost accounting's consistent accumulation and reporting of the costs of resources consumed supports the budget execution process and the comparison of actual versus planned resource consumption assists management in identifying and addressing problems.

Managerial cost accounting, as envisioned under SFFAS No. 4, assists budget analysts and policy-makers in four key areas:

- aligning the level of federal resources consumed by a program with the program's outputs and results;
- providing reliable and consistent cost information for different programs;
- prioritizing how limited federal resources can be allocated to achieve desired policy objectives; and
- making other specific budget decisions such as those concerning future capital expenditures and lease/purchase alternatives.

Cost accounting focuses on evaluating performance plans, goals, and objectives in quantitative (numerical) terms. "Just because qualitative factors cannot be measured in numerical terms, does not make them unimportant."[27] Successful performance requires maximizing both quantitative and qualitative factors.

If incomplete or inaccurate cost information is used in budget decisions, some programs could gain approval under the expectation that they will yield a net gain for society. With complete cost information, decision-makers at various levels can better establish budget priorities based on a more comprehensive accounting of the costs incurred in the administration of federal programs.

Aligning Cost Information with the Budget

[26]Ibid., p. 19.

[27] Charles T. Horngren, *Cost Accounting, A Managerial Emphasis*, p. 369.

The GAO report, titled *Budget Account Structure – A Descriptive Overview*, issued September 1995, notes "Nearly eighty percent of the federal government's resources are clustered in less than five percent of budget accounts. Conversely, eighty-five percent of all budget accounts contain about six percent of the federal government's total budgetary resources."[28]

The alignment of cost accounting with budget and management practices is necessary to achieve the objectives of managerial cost accounting standards in an effective and efficient manner. **A first step in implementing a system of accounting for costs is to develop a plan for aligning or crosswalking an agency's programs to budgeted federal resources.**

Cost accounting is focused on identifying the full or relevant, as appropriate, costs for a specific program, but funding for the program in many cases is budgeted from multiple appropriation accounts. In addition to this structural misalignment, costs may be accounted for using different guidelines (bases) for budgeting and financial statement purposes. It is not the intention of this document to discuss the issues or pros and cons of different accounting bases, other than to acknowledge that the accrual basis is appropriate for financial and cost accounting. The differences between budget accounting and financial accounting should be reconciled, and that is, in fact accomplished in the Statement of Financing prepared as part of an agency's financial statements.

If the steps to better alignment of cost accounting and budgeting presented in this chapter are accomplished, the differences between budget accounting and financial accounting that now exist should be greatly reduced. The agencies, OMB, and Congress will be able to make better use of cost information when allocating budgetary resources because the reconciliations needed because of differing structures and accounting practices will be much less onerous. Furthermore, the need to impute costs (and offsetting financing sources) to determine full cost, which is needed when significant costs such as employee benefits and pensions are funded in the budget by another entity, will be reduced significantly.

A very clean budget appropriation account structure, from a cost accounting perspective, would have a straightforward alignment between budget accounts and major programs. However, in many cases under the current budget structure, a program's costs are funded from a multitude of different budget accounts. **Agencies need to analyze the relationship between their budget account structure and their programs in order to better align programs with the identification and accumulation of their costs.** The following three examples illustrate the differences between programs and the budget structure:

- Administrative costs for departmental management within the Department of Health and Human Services (HHS) are funded from one appropriation account. To identify the complete cost of, for example, the Head Start program, Head Start's share of administrative costs needs to be assigned to the program.

- In the case of the Department of Veterans Affairs (VA), the cost of providing medical care to veterans is budgeted in a number of separate appropriation accounts. Separate appropriations are provided for medical care operations, construction, and administration. To determine the cost of providing this service to veterans, the costs within these separate budget accounts must be crosswalked to the medical care program.

- Another example in VA is the National Cemetery System (NCS) which receives programmatic support from the Veterans Benefits Administration (VBA). Total funding for NCS operations is provided from two different appropriation accounts--a direct NCS appropriation and a VBA account. Authorizing statutes require that graveliners used by NCS be funded by VBA's Compensation & Pension Appropriation. The total cost of NCS' programs must include the costs funded from both of these appropriations.

In all of these cases, the budget appropriation account structure is not aligned with the program it funds. The disclosure of a program's cost requires that the costs contained in various budget accounts be assigned to the program to which they relate. Determining the cost of a program by crosswalking between budget accounts and the program may require establishing a methodology to identify a program's share of administrative costs as in the HHS example. In the case of the first VA example, it would require totaling a number of related budget accounts. In the

[28] GAO report GAO/AIMD-95-179, *Budget Account Structure – A Descriptive Overview*. p. 7.

last VA example, it would necessitate identifying the appropriate share of direct program costs statutorily required to be funded from another appropriation.

The intent of the steps to better alignment is not to proliferate budget accounts. The overriding intent is to align budgeted federal resources to programs. Where feasible, aligning budget accounts to programs as defined in strategic plans and financial statements can facilitate this alignment. The definition of a "program" is a matter of perspective, and **agencies need to define programs to be isolated in separate budget accounts based upon their strategic goals.**

Where appropriate and feasible, budget account restructuring could be a way to avoid complex crosswalks between the two structures. However, budget account restructuring will not eliminate the need to have systems or procedures in place that assign a share of indirect administrative costs to a program. The following sections contain steps that can be taken in the near future and over the long-term to create a better linkage between cost accounting information contained in financial statements, GPRA performance reports, and budget accounts.

Steps to Better Alignment

To achieve proper integration of cost accounting with budgeting and management, the following approaches could be used to better align costs with program budgets and thereby, minimize the need for unnecessary reconciliation efforts and improve the usefulness of comparative information.

1. **Align Program Budgets with Program Objectives - All budget accounts should be aligned with the programs providing goods, services, grants, and transfers to the public.** In many cases under the current budget structure, agencies have been given the authority to move people and other resources between programs to meet emergencies or other changing requirements. **In those instances, it may be appropriate for one budget account to fund multiple programs or for the agency to have transfer authority between accounts**. In other situations, Congress or OMB may wish to maintain legal control over different aspects of the program, such as separating the administrative costs from the benefit payments to citizens in a social insurance program. **In this case, two budget accounts should be established, but the sum of these accounts should align with the program and the account numbers should indicate the association.** Credit programs operating under credit reform use two accounts – a program account and a financing account – but only the program account is included in the budget totals.

2. **Align the Data Classification Structures Used for Managerial Cost Accounting and Budgeting – To the extent possible, the data classification structures and the code values used to classify information for purposes of managerial cost accounting and for budget formulation and execution should be made the same, or at least consistent. For example, organization codes used for accounting and budgeting should be the same, although cost accounting may go to a lower level of detail. Aligning program budgets with program objectives (as discussed in Step 1 above) should enable more consistent coding of program designations and budget accounts (appropriation codes). It may not be possible to align object classes used for budget purposes perfectly with cost categories used for management and accounting because of the variety of decisions made and controls imposed. For example, a manager may want to know the complete cost of transferring an employee from one place to another and use a cost code to capture that information. Under the current OMB object class structure, several object classes are used to capture pieces of that cost. Another agency may need to capture these costs in another way. Despite these variations, the object class data and cost category data should be reconcilable at least at a summary level.**

3. **Charge Traceable Costs to Program Budgets - Preferably, the cost of all significant**

inputs that can be traced to the achievement of the program outputs and intended outcomes should be *budgeted and charged* to the program budget account (or accounts). For example, salaries and expenses related to personnel used in providing a program should be charged to one of the program's budget accounts. This includes (1) costs incurred by the program but now funded elsewhere (e.g., pension costs paid for by general funds payments to OPM), and (2) non-reimbursed costs for goods and services received from another federal entity that are included in the entity's full costs reported on the financial statements. Following this approach will provide more accurate and complete information to decision-makers reviewing the budget and will reduce the differences between reported program costs in financial statements and the budget.

If political or other considerations require budgeting salaries and expenses centrally instead of charging them directly to programs, then actual salaries and expenses used by each program and the expected amount of the " call on" the central fund in future years should be reported as an information item under the Program and Financing Schedule submitted as part of the agency's budget submission. **Another option to be considered when budgeting for such resources centrally is to place them in a revolving fund, which then charges programs, support services, and the Secretary's office as they are used**.

4. **Charge the Costs of Support Activities to Programs Through the Use of Revolving Funds – Support activities are those that provide goods and services to an agency's own programs and sometimes to other agencies' programs. They include personnel services; safety and health services; security; legal services; financial management services; information technology, automated data processing, and communications services; mail and messenger services; publications, reproduction, graphics, and video services; library services; scientific facilities; research and analytical services; office and commissary supplies; office and ground maintenance; procurement and contracting services; services to acquire, maintain, rent, and operate plant and equipment; and more. As much as possible, these services should be provided through a self-sustaining revolving fund that must remain competitive in terms of both cost and quality. Users of these services (e.g., programs, other support activities, Secretary-level offices) would budget and be charged for the costs of these support goods and services received and, barring other constraints, would be able to obtain these services anywhere. If a revolving fund has not been established for a particular type of support activity, special budget exhibits should be prepared showing the costs incurred by programs for support services even though they are not actually funded by the program.**

5. **Separately Identify Agency Management Costs - Agency management costs should be identified separately, perhaps in a separate budget account, which is used to finance the agency head's immediate office and to purchase support services for policy development and coordination. These costs would then be more easily identified for cost analyses purposes.**
6. **Align Budgets for Inventory and Fixed Asset Expenditures with Usage - In the case of inventories and fixed assets, the budget outlay precedes the use of the resource. To adjust for these timing differences (caused by the use of different accounting bases), inventories could be handled through the use of self-sustaining revolving funds. These funds could also accommodate operation and maintenance of fixed assets. In these cases, a separate budget account could be established solely for ownership of the assets. Internal borrowing from the U.S. Treasury and rental charges to the program could finance the acquisition of inventory and fixed assets and support accounts could finance**

acquisition and capital costs.

7. **Reflect Liabilities for Future Costs in Budget Accounts -** In the case of retirement benefits and environmental clean up costs, the accrual of the expense precedes the outlay. **Individual agencies could be provided appropriate funding and be required to pay the accrued expense from their program and support budget accounts to the employee benefit or environmental cleanup accounts, which would be responsible for paying these benefits or carrying out cleanup operations.**

The Relationship of Cost Accounting to Managing - Supporting Management's Needs

One of the primary objectives of cost accounting information is to provide useful information in support of management's different functions. These functions may be performed at various levels in an organization, and the cost accounting needs at different organizational levels related to these functions may vary. "To meet these needs, managerial cost accounting should use basic cost data and nonfinancial or programmatic data. For example, data should be tracked for the outputs produced and the inputs used, including the amount of labor consumed in terms of employees or employee-hours. Information from cost analyses can also be used to compare actual to predetermined or anticipated costs. In determining actual as well as anticipated costs, an organization may use cost estimates, cost studies, and cost finding techniques."[29]

The key issue related to management is how decisions are made and what information is considered in making those decisions. Resources required for an activity, good, or service may include elements of cost to the federal government as a whole that are not reflected in the obligations and/or outlays of the providing entity. If decisions are based on incomplete or inappropriate cost information, the "under priced" resource, which in reality may have higher costs, will tend to be over used. Providing full and relevant cost information, as appropriate, will disclose the real costs of activities, goods, and services. Once the costs are known, this should result in an overall savings to the government being realized as the result of management's decision to use a mix of inputs that includes less of the "under priced" resource and more of its less costly substitutes.

Cost information for management's use in decision-making must support the diverse needs described in the sections that follow:

Planning

1. **Provides Information on Planned Versus Actual Costs -** Information on planned and actual costs is necessary for planning and control. For planning purposes, information such as historical cost information, projected volumes of production, and information on changes in processes will assist in the allocation of federal resources. For control purposes, managers need feedback on actual costs compared to planned costs. This information should assist managers in detecting variances from expected results and the cause of these variances. The feedback information should provide sufficient detail to allow managers to change plans, reallocate federal resources, adjust prices, and measure performance.

[29] Statement of Federal Financial Accounting Standards (SFFAS) No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government,* par. 53.

Cost Management

1. Monitors Performance and Aids in Implementing GPRA **- This information should provide operational, financial, and policy managers with cost data on the various processes involved in producing an activity, good, or service. This information assists operational managers in making decisions on staffing, work assignments, and the allocation of federal resources. Activity or process cost information also assists policy-makers with strategic planning. This type of cost information focuses on the economy and efficiency of existing processes. Cost information for long-term decisions should assist the decision-makers in determining whether to change operating processes, automate processes, eliminate costly and unnecessary processes, or search for alternative methods of accomplishing objectives. This type of information should provide the cost of current processes as well as the projected costs of new processes.**

   Full and relevant, as appropriate, cost information can help managers improve efficiency by showing program and project managers where costs are being incurred so they can redesign operations to reduce costs and/or increase performance. An analysis of the components of cost information can help managers to better understand how their projects or program operations place a demand on the federal resources of other organizational units and contribute to their organizational costs.

   Cost accounting is an integral part of GPRA. Determining the costs of outputs and the relationship of program costs to program outcomes is critical to enhanced management and accountability.

2. **Furnishes Information on Capital Purchases and Investments** - Cost information on capital purchases and investments should provide managers with sufficient information to determine the life-cycle costs of the investments and the effect of capital purchases and investments on the cost of activities, goods, and services. The cost information should include installation, start-up, and maintenance costs. Information about depreciation, salvage value, and replacement costs of capital equipment is important for many capital investment decisions. **Cost information on capital purchases should also include the cost of conversion, "shut down" costs, and/or consolidation costs.** (Organizations usually incur such costs when installing or adapting to new technologies.)

3. **Provides Information on Excess Capacity Costs - Information on excess capacity needs to be available to assist managers in hiring decisions, use of contract or seasonal labor, and determining whether to market excess capacity. When marketing excess capacity, sufficient cost information needs to be provided to enable potential customers to fairly evaluate the cost, efficiency, and effectiveness between potential providers of the activities, goods, and services.**

Pricing

1. Produces Market-Type Incentives for Efficiency **- In franchise fund and working capital fund operations, the government organization acts much like a private sector organization, competing its services with alternative sources on the basis of price and quality to the customer and recovering the full or relevant costs as shown in Figure 2 in Chapter 2. This is done by operating with sufficient efficiency to keep costs at or below the revenues collected. To operate in this manner, managers need cost information that is produced on a businesslike basis, and that focuses on the full and/or relevant costs of the outputs produced, not on the specific federal funding sources. This will facilitate comparison between federal and private sources for like goods and services.**

2. **Provides Managers with Cost Information with Which to Make Pricing Decisions - For pricing decisions, information must provide details on direct and indirect costs, methods used to assign costs and the items included as indirect costs. Fixed and variable costs need to be identified, as well as the levels of output at which fixed costs change. Cost information in support of pricing decisions should include the volumes of output used in calculating unit costs and any variables that may affect the anticipated volumes.** Such cost information provides managers with the ability to perform analyses, such as "what if" and break-even, to determine optimal pricing and reserve strategies. (Reserves may be for capital equipment replacement or for contingencies, such as unexpected fluctuations in the demand for activities, goods, and services.)

3. **Provides Cost Data to the Customers and Users of Activities, Goods, and Services for Which Fees are Charged** - Because the federal government is a public entity, accountable to various customers and the American taxpayers, cost information needs to be made available to justify price levels and/or increases in fees. Customers include not only the internal and external direct users of the activities, goods, and services, but also interest groups, Congressional staffs, central agencies, and the public at large. Cost information can also assist all customers in determining if the activities, goods, and services provide value for the prices charged.

An annual performance plan defines measurements for each major activity, good, and service. Plans and performance goals are developed based upon anticipated resource levels. In the budget formulation process, program managers begin to connect federal resources to results. However, without cost accounting in place, managers are likely to base their planning upon federal resources directly allotted to their programs and ignore the allocated support for activities, goods, and services requiring the use of indirect services that are separately appropriated or paid from pooled funds. When the cost of a program is identified through cost accounting, and cost goals are defined, the costs of the activity, good, and service can be monitored and managed more efficiently.

The Relationship of Cost Accounting to Reporting

Proper financial management requires that the three accounting processes work closely together to provide useful reporting to both internal and external users. The internal-external dual focus of federal reporting has been established in the Objectives of Federal Financial Reporting*. It states that "The FASAB and its sponsors believe that any description of federal financial reporting objectives should consider the needs of both internal and external users and the decisions they make."*[30] *Four major groups use financial information: program managers, executives, the Congress, and citizens. These categories include both internal and external users. This chapter covers the reporting of cost information for both internal and external purposes.*

Internal Reporting

This section attempts to answer the questions quite often asked by managers: "Why do I need cost reports?" and "How can internal cost reports help me manage better?" No matter what information they may purport to contain, internal cost reports are meaningless without having a fundamental understanding of the purpose, attributes, and benefits of internal cost reporting.

The need to focus on an entity's internal management and operational reporting requirements has been stressed repeatedly. Based on a limited survey, the federal government, with few exceptions, e.g., the Department of the Treasury's Bureau of Engraving and Printing (BEP) and the Department of Defense, has little experience capturing cost accounting data and arraying that data in such a manner that it is useful to management. Rather, most federal agencies surveyed have only recently begun to implement cost accounting and reporting in their agencies.

Several federal agencies were asked to prepare case studies of their efforts to implement cost accounting in their agencies. These studies show the types of reports they use and their benefits in managing operations more effectively and efficiently. Some of the agency case studies are provided in the appendices of Part II of this Guide (Tools and Techniques for Implementing a Managerial Cost Accounting Process). Where appropriate, this chapter cross-references the material in the case studies to emphasize important points.

Cost accounting's manipulation and accumulation of information is based upon the characteristics and attributes of the information that influence what data is accumulated and how it is reported in internal cost accounting reports. It could also be described as a reflection of managers' expectations regarding the data portrayed on cost accounting reports and the "story" that a data array "tells." What may be new to some is the notion that the federal government is really not very different from the private sector--every manager needs good cost accounting information to make informed management decisions. What seemingly makes the thought of employing cost accounting in the federal sector more difficult than it otherwise would be is a cultural mind-set that inevitably relies on obligational execution data to manage operations rather than cost data related to operational performance. Some federal agencies have begun to embrace change and are now exploring how cost accounting information can aid managers in their day-to-day decision-making. Some leaders and managers are discovering that there is a better way to do business--accounting for the full and relevant, as appropriate, costs of a business enterprise, measuring the success (or failure)

[30] Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, par. 23.

of the performance of each activity, good, and service, and linking the budget with cost data derived from a cost accounting and reporting system. This section and the case studies presented in Part II of this Guide, provide insights into the way some federal agencies are employing internal cost reports to their advantage.

This section is intended to be descriptive, depicting the many benefits associated with employing cost accounting and reporting in an entity's day-to-day operations. It should not be construed as prescriptive or authoritative, requiring other agencies to duplicate illustrated cost systems, operations, and reports in their implementation of cost accounting.

CHARACTERISTICS OF INTERNAL COST REPORTS

- **Link Budget Goals to Outputs**
- **Capture the Full and Relevant Costs of Outputs Produced**
- **Provide Variance Analysis Information**
- **Provide Management Data at Various Entity Levels**

Characteristics of Internal Cost Reports

The characteristics and attributes of good internal cost reports are critical for making cost information understandable. The list below is not all-inclusive; rather, it highlights a few of the many important aspects of internal cost reporting.

Link Budget Goals to Outputs

Assigning federal resources to outputs is the process of using the budget to establish goals for entity functions, based on the estimated number and cost of activities, goods, and services to be produced. This process directly ties cost accounting to the budget and internal cost reporting. In addition, this information can be used to measure actual performance against established goals for more effective decision-making.

It is important for preparers and users of internal cost reports to understand the relationship of cost accounting to the more traditional areas of financial accounting, financial reporting, and budgeting. Cost is a key element in performance measurement. Linking costs to outputs is essential for determining the financial efficiency of a given task. When managerial cost accounting is used to supply information for the preparation and review of budgets, cost data should be consistent with the basis of accounting and measurement used.

Capture the Full and Relevant Costs of Outputs Produced

As required by SFFAS No. 4, reporting entities should report the full cost of outputs in financial reports. The full cost of an output produced by an entity is the sum of (1) the costs of federal resources consumed that directly or indirectly contribute to the entity's activity, good, or service, and (2) the costs of identifiable supporting functions provided by other responsibility segments within the reporting entity, and by other reporting entities. Relevant costs are those costs that are appropriate to the specific use of the cost information.

Consistent and reliable internal cost reports should be provided to help users determine the full and relevant costs of providing activities, goods, and services and the composition of, and changes in those costs. Examples of where relevant cost are used is in budgeting where Congressional action dictates how costs are captured for budgetary formulation and execution, which may be different than full cost as defined by FASAB, and in making contracting-out decisions which follow OMB Circular A-76 rules when making cost comparisons. These reports provide management with both an understanding of the federal resources allocated to outputs and the costs incurred to produce each activity, good, and service. These reports also assist managers in making decisions concerning where, when, and how to most effectively employ their available federal resources. Decision-makers must focus on managing processes and costs as they relate to established budget goals. They need to recognize that full and relevant cost information can lead to better, more informed decision-making. By relating costs to outputs, producers and customers become aware of the resource utilization of activities, goods, and services. Internal cost reporting provides information for establishing strategic goals and measuring performance.

Provide Variance Analysis Information

Using planned cost goals as a benchmark against the actual cost of an output enables managers to perform variance analysis. Variance analysis is a managerial accounting technique used, for example, to determine the difference (or variance) between actual operating results (actual cost per output) and projected results (planned cost goals) or benchmark against other similar activities in the public or private sectors. This analysis helps management understand where and why differences occur. In conducting variance analysis, different aspects of actual cost per unit output (input costs, quantity of output, and productivity) can be compared with the planned cost goal (the "should cost"), and to target expected input costs, planned output, and planned productivity. When properly executed, variance analysis provides the information necessary to target production processes in need of management attention. If, for example, lower than expected output is achieved and unit cost exceeds the planned cost goal, management will need to evaluate the following: why output is low; whether output will increase later in the accounting period; why costs exceed budgeted projections; and whether the problem lies with the process or the goal.

An examination of a Bureau of Engraving and Printing (BEP) internal cost report in Figure 3 shows how variance analysis can be reported and used by management.

Figure 3

Bureau of Engraving and Printing

MONTHLY COST OF PRODUCING CURRENCY
MONTH OF JUNE

	--- COST/1000 ---		- FAVORABLE (UNFAVORABLE) VARIANCE -				
OPERATION	STAND.	ACTUAL	TOTAL	EFFIC.	RATE	VOLUME	SPEND
PAPER	$3.37	$3.35	$0.02	$0.00	$0.02	$0.00	$0.00
BACK INK	1.02	0.95	0.07	0.05	0.02	0.00	0.00
FACE INK	0.73	0.69	0.04	0.03	0.01	0.00	0.00
PRINT BACK	0.98	0.94	0.04	(0.01)	(0.01)	0.07	(0.01)
PRINT FACE	1.00	0.97	0.03	(0.02)	(0.01)	0.07	(0.01)
	$7.10	$6.90	$0.20	$0.05	$0.03	$0.14	$(0.02)
EXAMINE	1.40	1.38	0.02	0.02	(0.01)	0.01	0.00
OVERPRT	1.96	1.75	0.21	0.06	0.00	0.08	0.07
VAULT	0.22	0.21	0.01	0.00	0.00	0.00	0.01
	$3.58	$3.34	$0.24	0.08	$(0.01)	$0.09	$0.08
SPOILAGE	0.70	0.60	0.10	0.07	0.03	0.00	0.00
TOTAL	$11.38	$10.84	$0.54	$0.20	$0.05	$0.23	$0.06

The third operation being reported is "face ink" and the price is expressed as $/1,000 units. The standard cost for this operation is $0.73. For the month of June, the actual cost per 1,000 units was $0.69. Simply stated, the cost report compares the standard, $0.73, against the actual, $0.69, and displays a favorable total variance of $0.04 of which $0.03 is attributed to an efficiency variance (the measure of how effectively an organization utilizes inputs in the production of activities, goods, and services) and $0.01 attributed to a price variance (the measure of the difference between actual and standard prices multiplied by the actual quantity).

Favorable and unfavorable variances are only attention directors, not answer givers. The variance analysis process does not end with calculating and reporting variances; management must seek explanations for the existence of those variances. A favorable rate variance of $0.01 reported by BEP for its "face ink" operation may be caused by a number of factors including general economic conditions and favorable price changes. Also, a number of tools such as buying in economical lots, taking advantage of cash discounts, and selecting the most economical means of delivery are available to management to control price variances. Responsibility for controlling price variances generally rests with purchasing managers.

A favorable efficiency variance of $0.03 reported by BEP for its "face ink" operation may be caused by a number of factors including efficient labor or using superior raw material that results in less spoilage. An unfavorable efficiency variance may be caused by improper handling of materials, inferior quality of materials, or poor workmanship. The responsibility for controlling efficiency variances rests with production managers.

The question of when to investigate variances rests on the subjective judgment of management because it may not be easy to decide when a variance is significant enough to warrant management's attention. For some items, a small deviation may prompt follow-up. For other items, a minimum dollar amount or a certain percentage deviation from budget may be necessary before investigations commence. A 4% deviation in a $10 million material cost may deserve more attention than a 20% variance in a $10,000 repair cost.

Provide Management Data at Various Entity Levels

Internal cost reports are a useful management tool at all levels of the entity. At each level, the focus on full and relevant costs provides useful information for managing the specific responsibility segments of an entity. It helps the entity make the decisions necessary at each level of the organization to ensure that federal resources are efficiently and effectively used. A suborganization of the federal government may be a reporting entity in itself and, at the same time, it may also be a responsibility segment of a higher-level reporting entity to which it belongs. For entities that consist of components engaging in diverse functions, it is desirable to provide management reports that display information for significant components individually and for the entity in its entirety. Some entities may find costs accumulated by responsibility segments useful in support of financial reporting by components. For example, internal cost reports are used to manage operations at various levels: (1) entity-level, (2) management headquarters-level and (3) provider/producer or activity-level.

Entity-Level

Entity-level internal cost reporting should provide pertinent and reliable cost information to assist executives in making decisions about allocating federal resources, authorizing and modifying activities, goods, and services, evaluating performance, and ensuring consistency between costs reported in external financial reports and costs reported internally to managers. Internal cost reports at the entity-level should provide reliable and relevant information for financial and budgetary accounting, allow senior officials to assess how well an organization has met its expectations, and enable senior officials and analysts to determine the total cost of each of the various activities, goods, and services. Managerial cost reports should also provide an indicator of performance among producers of similar activities, goods, and services. It should not be the only measure of performance; other measures of performance, such as quality and timeliness, are equally important.

Management Headquarters-Level

Internal cost reports used at the management headquarters-level provide the managers of support functions with the ability to view total cost as it relates to total work accomplished, across and among individual processes. The distributed cost per unit output goal provides a financial benchmark for support area managers to evaluate subordinate processes' performance. Consistent and regular internal cost reporting is essential for determining the costs of specific activities, goods, and services and the composition of and changes in those costs.

Provider/Producer or Activity-Level

Internal cost reports encourage managers to focus on both the full and relevant costs of producing the activity, good, or service and the production process. The manager can review the cost of federal resources that directly or indirectly contribute to the production of activities, goods, and services. This focus on full and relevant costs encourages consideration of alternate methods of production and provides a consistent benchmark for evaluating a process over an extended period of time.

Internal cost reports must also meet the specific objectives of the organization. Such reports will drive cost policies and affect operating procedures. The degree to which costs are controllable or uncontrollable may affect the presentation of cost information.

Benefits of Internal Cost Reports

Federal internal cost reporting should provide information that helps users determine: (1) full and relevant costs of specific activities, goods, and services and the composition of and changes in, those costs; (2) efforts and accomplishments associated with activities, goods, and services and their changes over time in relation to costs; and (3) efficiency and effectiveness of the government's management of its assets and liabilities.

BENEFITS OF INTERNAL COST REPORTS

- **Trace Production Costs to Outputs**
- **Target Areas Needing Management Attention**
- **Consider Alternative Processes**
- **Highlight Operational Efficiencies**
- **Provide Financial Benchmarks for Activity Performance**
- **Measure and Reward Performance**
- **Provide a Common Managerial Framework Among Support Activities**
- **Facilitate Decision-Making**

One of the most important aspects of internal cost reporting is performance evaluation. Measuring and reporting actual performance against established goals is essential to assessing government accountability. Cost information is necessary in establishing strategic goals and measuring and relating service efforts to accomplishments. The importance of cost information in relation to performance measurement and performance reporting has been recognized in the Statement of Federal Financial Accounting Concepts No. 1, *Objectives of Federal Financial Reporting*, which states "The topics of cost and performance measurement are related because it is by associating costs with activities or cost objectives that accounting can make much of its contribution to reporting on performance."[31]

Cost information is essential to effective financial management and should play an important role in federal financial reporting. Managerial cost accounting processes are the means of providing cost information in an efficient and reliable manner. To perform managerial cost accounting on a "regular basis" means that entities should establish procedures to accumulate and report costs continuously, routinely, and consistently for management information purposes.

Internal cost reports are as varied as the operational missions of an entity. Each reporting entity should determine the appropriate detail for its internal cost reporting processes and procedures based on several factors. These include the: (1) nature of the entity's operations; (2) precision

[31] Ibid., par. 192.

desired and needed in cost information; (3) practicality of data collection and processing; (4) availability of electronic data handling facilities; (5) cost of installing, operating, and maintaining the cost accounting processes; and (6) any specific information needs of management.

Sample reports from the BEP and the Department of the Treasury's Financial Management Service (FMS) are presented in Part II of this Guide.

Internal cost reports provide decision-makers with the flexibility to look at their operations from many different angles. Cost components essential for one type of analysis may not be appropriate for inclusion in the analysis of a different aspect of a process. For example, a manager may wish to determine the level to which an output's costs are affected by an organization's central office support costs. The relevant report should include a breakdown of the central office costs in relation to the full and relevant costs of the output. However, if a manager wishes to determine the relative efficiency of two production facilities manufacturing the same product, the central office support costs would not be included, as neither facility has control of these costs.

The flexibility of internal reporting provides managers with the capability to focus their attention on specific pieces of a process, and to view an operation from many different levels. Each federal agency must make its own determination of which pieces and what levels are most important to its own mission and objectives.

Using Internal Cost Reports Makes Sense

Does using internal cost reports make sense?

As a financial management tool, internal cost reports focus the attention of managers and employees on both the process of producing activities, goods, and services as well as the full and relevant costs incurred in producing these activities, goods, and services. This is a necessary and fundamental shift in focus from managing inputs to managing the production/operation processes and increasing cost awareness.

"Yes!" Managing with powerful cost accounting tools and using internal cost reports make good sense.

Managerial cost accounting information empowers managers, but does not make management decisions. Internal cost reports are not a substitute for informed management; however, enlightened managers will see the usefulness of employing cost information. Providing cost information to every level of a function enables employees to participate actively in process improvement. Unit cost encourages, complements, and reinforces the use of other modern management and accounting tools.

Using internal cost reports and cost accounting principles challenges the entire work force as we recast the way we do business and make decisions. Success at improving the government will happen only with active participation from all levels. Management information specialists at all levels, committed to instilling cost accounting principles in their workplace culture, will help their organizations realize more value for each dollar spent. Yes, managing with and using internal cost reports makes sense.

External Reporting

Financial statements are formal presentations of an entity's costs, revenues, and other financing sources for specific periods of time, and assets and liabilities at a specific point in time. They are a primary means of achieving accountability to the public for the federal resources accumulated and consumed, and the resulting state of the government's financial position.

The financial statement reporting requirement specifies the use of SFFAS No. 4 's definition of full cost. FASAB recognizes that the objectives of financial statements may be different depending upon the reporting entity's level and the scope of its responsibilities. The costs of certain federal central agencies are included in the consolidated governmentwide financial statements, but are not separately shown on each federal agency's financial statements.

Financial statements prepared by federal agencies must be prepared in accordance with OMB Bulletin 97-01, *Form and Content of Agency Financial Statements* (or successor bulletins). Three of the statements required by this Bulletin are pertinent to reporting performance results and emphasize the importance of both budgetary accounting and managerial cost accounting.

Statement of Net Cost

Fiscal Year 1998 is the first year that agencies are required to prepare a Statement of Net Cost, though some prepared it for Fiscal Year 1997. The Statement of Net Cost is designed to show separately the components of the net cost of the reporting entity's operations for the period. The Statement of Net Cost and related supporting schedules classify revenue and cost information by suborganization or responsibility segment and to the extent practicable, within each classification by major program. Suborganizations are considered to be generally equivalent to responsibility segments. One key objective of using a full cost approach in the Statement of Net Cost is to more closely relate program performance to gross and net costs incurred for such programs.

The net cost of operations is the gross cost incurred by the reporting entity less any exchange revenue earned from its activities. The gross cost of a program consists of the full cost of the outputs produced by that program plus any non-production costs that can be assigned to the program (non-production costs are costs linked to events other than the production of goods and services). The net cost of a program consists of gross cost less related exchange revenues. By disclosing the gross and net costs of the entity's programs, the Statement of Net Cost provides information that can be related to the outputs and outcomes of the programs and activities.

Some costs, specifically inter-entity costs funded from another agency's appropriation, included in the Statement of Net Cost, may not be covered by the reporting entity's appropriation. In other cases, costs such as unfunded future retirement benefits may not be covered by any agency's appropriation. But, because they are part of the actual costs of the federal resources that were utilized during the accounting period by the programs, they are to be measured, recognized, and reported as costs of the program.

Statement of Budgetary Resources

The Statement of Budgetary Resources provides information about how budgetary federal resources were made available and their status at the end of the period, and illustrates the information reported on the Report of Budget Execution (SF-133). Recognition and measurement of budgetary information reported on this statement should be based on budget terminology, definitions, and guidance contained in OMB Circular A-34, *Instructions on Budget Execution*.

The Statement of Budgetary Resources should be aggregated to reflect the activity of the reporting entity for the year covered by the financial statements. Prior year information may be presented to allow the reader to make appropriate comparisons with prior periods.

Monitoring of budget execution is at the individual account level. Accordingly, budgetary information aggregated for the Statement of Budgetary Resources should be disaggregated for each of the reporting entity's major budget accounts and presented as supplementary information. Small budget accounts may be aggregated.

Statement of Financing

The Statement of Financing reconciles the financial (proprietary) net cost of operations in the Statement of Net Cost with obligations in the Statement of Budgetary Resources. Accrual-based measures in the Statement of Net Cost differ from the obligation-based measures used in the Statement of Budgetary Resources. In order to understand these differences, information is needed to reconcile the financial (proprietary) net cost of operations with the obligations of budget authority. This reconciliation also ensures that there is a proper relationship between proprietary and budgetary accounts in the reporting entity's financial management system. The Statement of Financing is designed to report those differences and facilitate the reconciliation.
the "true" costs of providing governmental activities, goods, and services.

Marketing Managerial Cost Accounting

Implementation of a managerial cost accounting process requires support from all layers in an organization. This section focuses on developing a plan to market managerial cost accounting (MCA). There are three basic topics that should be covered to successfully complete this task. The first addresses developing a support strategy; once the support strategy is in place, the second topic focuses on identifying MCA customers and their needs relevant to the initiative; and the final topic concentrates on educating customers about MCA and its benefits.

Developing a Support Strategy for Managerial Cost Accounting

The development of a support strategy for marketing MCA will be difficult, time-consuming and critical, but it will prove to be the foundation of your marketing plan. The purpose of developing a successful support strategy is to gain the full support and commitment for the initiative from senior management. Having them take responsibility for the initiative will in turn encourage support and acceptance from the staff. Without senior management support, a new initiative may be derailed before it gets started. Listed below are five areas of consideration for developing a support strategy.

Gaining a Working Knowledge of MCA and its Benefits

A working knowledge of MCA and its benefits will greatly enhance your ability to successfully market MCA. There are many excellent articles, books, case studies, and videotapes about

MCA. Appendix D lists several references for your information. In addition to this reference list, the Association of Government Accountants (AGA) and the Federal Accounting Standards Advisory Board (FASAB) hold seminars and conferences on MCA. There are also other federal entities currently implementing MCA that should be tapped as informational resources. Planning, training, and technical assistance from experienced specialists, whether internal or contracted, can ensure that you are well versed on MCA. Once a working knowledge of MCA and its benefits have been obtained, you will begin to understand how valuable this tool is to managers. It will allow you to focus on marketing the value-added benefits of MCA, and to "work smarter, not necessarily harder" to create a government that does more and costs less.

An important aspect of your working knowledge of MCA is an understanding of the legislative history mandating MCA for federal entities. Your knowledge of and ability to convey the Congressional intent of this legislation will help gain the support of senior management. The Introduction in Part I of this Guide has more information on the federal statutory requirements and how they apply to federal entities.

Understanding the Work Environment

Understanding the work environment and the uniqueness of your entity is essential to developing a successful support strategy for marketing MCA. Find out how other similar major initiatives were successfully implemented within your organization. Discovering how those were implemented as well as who was involved with the initiatives may serve your support strategy for marketing MCA well. Researching successful MCA initiatives of other federal entities may also benefit your marketing process. Appendix H lists other federal organizations currently implementing MCA initiatives.

Natural Resistance to Change

Most new initiatives like MCA require some changes in responsibilities or patterns of work. These changes, small and large, generally cause a certain amount of fear among the affected employees. Any type of change, however beneficial, almost always meets with some degree of resistance because of the human tendency to maintain the status quo. This fear can generate a ripple effect of resistance to the new initiative. This is natural and is to be expected. Be aware of this, but also be sensitive to it. Do your homework up front and identify how MCA will benefit your personnel in their work environment. Chapter 3 offers additional details on how other companies have dealt with resistance to change relative to MCA.

Finding a Champion of MCA

Finding a champion of MCA is critical to the support strategy for marketing MCA. A champion is someone who has enough organizational influence to effectively implement MCA changes in the work environment. This person must understand the value of MCA and support that value throughout the implementation process. The ideal person may not necessarily come from the financial community, but from a major program or operational area. Having a champion from a program or operational area will advance the idea that MCA is not just another financial/accounting initiative. Chapter 2 presents additional ideas for gaining management support including finding a champion.

Conduct a Pilot Program

Conducting or assessing a successful MCA pilot, that produces accurate and relevant cost information, is an excellent tool for demonstrating the benefits of MCA and can be instrumental in gaining support for MCA. You can either use the results of a pilot implemented in your entity or use the results of another organization's pilot. Using the results of another organization's pilot involves having it demonstrate the benefits that MCA has afforded. Initiating a pilot program within your entity involves several actions. These actions include selecting a sponsor who would be willing to let the department or functional area be used as the pilot site, selecting a project team responsible for designing and implementing an MCA pilot within that department or functional area, and identifying specific criteria and measurements for the pilot in order to measure the success and value of MCA. A successful pilot is pivotal in marketing MCA, so great care should be taken to select a segment of your organization most likely to succeed. Chapter 3 offers additional details for conducting a successful MCA pilot. Appendix I contains case studies about two agencies that have successfully implemented an MCA pilot.

Developing a support strategy will require much perseverance and patience. However, with a support strategy in place, the focus for your marketing plan can shift to the second topic of identifying MCA customers and their needs. Your support strategy has set the stage for completing the marketing plan.

Identifying Your Customers

With your support strategy in place, you can focus on the second topic of the marketing plan--identifying MCA customers and their needs. MCA customers are internal and external. Every entity should take special care in identifying those customers unique to its organization. Once the types of customers are identified (e.g., program managers, finance staff, etc.), you can develop an appropriate marketing strategy for each.

Internal Customers:

Senior Management

Gaining full support and commitment from senior management may be the single most important element in implementing MCA. If they learn the value-added benefits of MCA, they can use cost information to help them make decisions, discuss cost information with their subordinates, and make MCA a regular part of operations. If they are persuaded to support MCA, the effort will have achieved a solid foundation on which to begin.

<u>Program and Mission Support Managers</u>

Program and mission support managers are the primary users of cost information. They are responsible for carrying out program objectives with the resources entrusted to them. Reliable and timely cost information helps them ensure that resources are spent to achieve expected results and outputs. This information will also alert them to waste and inefficiency. Gaining their support for this initiative is vital because they are the people who will incorporate MCA in day-to-day operations and make MCA a reality in the workplace.

<u>Core Business Systems Owners</u>

If business process reengineering (BPR) efforts are under way, obtaining the support of your core business systems owners is similar to gaining senior management's support. It is essential for both parties to form a partnership and demonstrate a clear endorsement of MCA implementation, because they are responsible for the existing systems from which MCA will extract data. In addition, the core business systems owners are involved in the future system designs of your organization, so you want their support for MCA to ensure smooth transitions between future system implementations and MCA. Because of the overall benefits that MCA can provide, MCA should be viewed as an entity-wide support system, not just another finance system.

<u>Financial Management and Budget Staff</u>

MCA, if successfully designed and implemented, has the ability to transform financial management because it builds on the existing financial systems and processes. In order to have this opportunity, MCA must be successfully marketed to financial management staff to ensure that all budget and financial system requirements are identified and satisfied within the parameters of MCA. A strong selling point to the financial management staff is the prospect of Congress mandating performance based budgeting. MCA can effectively enhance the budgeting effort by providing detailed cost information about your entity's resource use among its different programs. Supplying Congress with actual cost information will support your budget proposals. MCA can also provide financial management staff with cost information that will provide additional accuracy in the pricing of products, services, and user fees, increased cost awareness, focus on customer satisfaction, improved efficiency and effectiveness, and continuous business improvement.

<u>External Customers</u>

Congress, OMB, and FASAB all have varying degrees of influence over government agencies. Congress passed the Government Performance and Results Act (GPRA) of 1993 requiring federal agencies to prepare annual plans setting performance goals and to report annually on actual performance compared to those goals. FASAB was named by the National Performance Review (NPR) to set standards for federal cost accounting. OMB has control of an agency's budget and oversight of program outputs as well as the responsibility for prescribing the form and content of financial statements. MCA should be developed to provide your entity with the relevant cost information necessary to satisfy the needs and requirements of these external customers. MCA users will have the ability to gather cost management information from the system, use that information to better manage operations, and provide the information required by their external customers. Successfully implementing MCA will satisfy the applicable recommendations issued by OMB and FASAB and provide pertinent costing information for Congressional inquiries and to justify future budget requests.

Educating Customers on MCA and its Benefits

Having identified MCA customers and their needs, you can now focus on the final topic--educating those customers on the benefits of MCA. The amount of time devoted to training MCA customers will vary according to the size of your entity and the funds available. For each type of customer, a training needs assessment should be conducted to identify:

1. the appropriate level and type of training needed;
2. the resources required to accomplish the training (i.e., in-house or contracted); and
3. the customer requirements that MCA needs to satisfy.

Chapter 4 offers detailed information on preparing a training needs assessment.

Once this is completed, you can design a training plan appropriate to meet your customer needs. Whether you present in-house training classes using overviews and/or videos, or travel off-site, make sure your training material caters to the particular customers you are training. They must see the value-added benefits of MCA. Training should be viewed as on-going and, if possible, in two phases, addressing both short- and long-term objectives. The short-term training should focus on promoting MCA awareness and its benefits. The long-term training should focus on performance measurement and continuous improvements. Be sure your training plans have management approval.

Senior Management

Training for senior management should focus on presenting a high level overview of MCA. The training should stress the legislative mandates and their objectives for federal entities. MCA pilot results should be used to the extent possible to demonstrate how MCA will help organizations and programs achieve mandated objectives. Senior management must have a good understanding of MCA--why it is a useful managerial tool, and the benefits it affords.
While the implementation of MCA requires long-term commitment, senior management also needs to see immediate benefits. They have to answer tough cost questions from OMB and Congress by demonstrating how MCA can provide immediate benefits. Benefits should emphasize results measured in process improvement, cost savings, and better service to customers.

One way to introduce senior management to MCA and its benefits is by presenting case studies about agencies that have successfully implemented MCA (Appendix I). In addition to case studies, there are also many excellent articles, books, and videos that provide detailed information on the cost benefits MCA has afforded different operations. You should research these options and find examples that relate to your mission. Circulate the material among your senior management with notes explaining its importance and relevancy to your organization. These examples should stress the value-added benefits that MCA can offer. Provide dates of future MCA demonstrations (FASAB, AGA, etc.) or offer to discuss MCA and its benefits in greater detail.

Program and Mission Support Managers, Core Business Systems Owners, and Financial Management Staff

This level of training should offer a more detailed level of MCA terms, concepts, and benefits. MCA pilot results should be used to demonstrate how MCA would provide decision support information to enable these customers to better perform their jobs. For example, glean the pilot results to show how MCA can provide improved resource allocation decisions, increased accountability for program delivery and cost effectiveness, and justification of fees, and focus on performance measurements.

Marketing MCA to these customers should mimic the marketing plan used for senior management, except there should be additional detailed information on the actual operational benefits of MCA. Using appropriate articles, books, videos, and case studies employing the results of a successfully implemented MCA pilot will provide them with detailed illustrations of MCA benefits. MCA can provide managers with the cost information needed to provide accurate pricing of products and services, increase cost awareness, and focus on customer satisfaction. It can also provide opportunities to improve efficiency and effectiveness promote continuous business improvement, and focus on performance measures. Providing the opportunity for managers to see the benefits that MCA can provide for daily business operations will greatly increase their support for the initiative.

Although marketing MCA may be difficult, it is imperative that government agencies incorporate initiatives to ensure more efficient operations for the future.

Introduction to Project Management

In order for cost accounting to be successful, implementation must be both well planned and well managed. What follows is a brief introduction to project management including the role of the project manager. Many articles and textbooks have been written on the subject of project management. (A listing of material used in this Chapter follows the text.)

Project Management Defined

In order to understand project management, one must begin with the definition of a project. A project can be considered to be any series of activities and tasks that:

- have specific objectives to be completed within certain specifications;
- have defined start and end dates;
- have funding limits; and
- consume resources (e.g., money, time, equipment)

A project can be thought of as an allocation of resources directed toward a specific objective following a planned, organized approach. Because project objectives can be and often are vaguely defined, a strategy (a.k.a. road map) defining how the objectives are to be accomplished is needed to support the objectives. In turn, the project strategy should be documented in the project plan, which is a living document that constantly changes as the project progresses.

Project management for implementing a successful cost accounting system is defined as the management and direction of time, material, personnel, and costs to complete the system in an orderly, economical manner; and to meet established objectives in time, dollars, and technical results. It is a managerial function responsible for:

- determining what kind of data you want from your cost accounting system (Refer to Appendix F for a Sample User Needs Questionnaire);
- identifying the costing methodology which best meets those needs (See Chapter 6);
- breaking down the required work into component activities;
- determining the sequential details;
- determining the procedures, resources, and requirements;
- determining the project's organizational structure;
- devising a schedule by estimating the time required for activities;
- calculating the resource schedule;
- considering improvements by resource allocation methods;
- communicating the plan to those involved;
- controlling and monitoring the progress of the project;
- comparing actual to predicted results;
- making adjustments as necessary;
- updating and revising the plan and schedule as necessary; and
- decision-making based upon experience and judgment.

Successful project management can be defined as having achieved the project objectives on time; within budget; at the desired performance/technology level, and while utilizing the assigned resources effectively and efficiently.

The Role of the Project Manager

The project manager is responsible for coordinating and integrating activities across multiple, functional lines. In order to do this successfully, the project manager needs strong communication and interpersonal skills; familiarity with the operations of each line organization; and at least a general knowledge of the technology involved.

In the project environment, everything revolves around the project manager. Because the project organization is a temporary, task-oriented entity, which depends on the permanent organization for its resources and support, the project manager walks a fine line between the two organizations. The term *interface management* is used to describe this role, which can be defined as:

- managing human interrelationships within the project organization, as well as between and among project personnel and support personnel;
- coping with the risks associated with project management;
- maintaining an appropriate balance between technical and managerial project functions; and
- surviving organizational and resource constraints.

The ideal project manager should:

- have a thorough understanding of the project goals;
- be capable of understanding staff needs;
- have a good head for details;
- be willing to put in long hours;
- be able to cope with setbacks and disappointments;
- possess good negotiating skills;
- be results oriented, but practical in expectations;
- be cost conscious and possess basic analytical skills;
- be politically savvy, i.e., perceptive of power relationships; and
- have a high tolerance for ambiguity, and an unfailing optimism in the project.

Success vs. Failure

When project success is measured in terms of achieving the expected results on time and within budget, a majority of projects are not deemed successful. Today's continuing challenge is to do more with less. Yet, when projects fail, already scarce resources are wasted. Contrary to popular belief, primary responsibility for failed projects rests with management, not the project leader. In fact, in many instances project failure occurs in spite of the best efforts of skilled project leaders.

The typical scenario begins when management directs that a project be initiated. The responsibility for planning, implementing, tracking, and evaluating the project is delegated to an appointed project leader. Later, when the desired project results are not accomplished, milestones are missed, or significant budget overruns develop, the project manager gets blamed. Other than conducting an occasional project status review, management in most organizations washes its hands of the project in the belief that the project manager is capable of magic, or at least doing whatever it takes to achieve the expected results. That, of course, is a recipe for disaster.

Although it is not common practice, both management and the project leader are responsible for ensuring project success. The responsibility for project success cannot and should not be borne by the project manager alone. This is not to say that the project manager is not to be held accountable for getting things done. The organization, and more specifically, management, is equally responsible for providing support and resources to the project manager to at least allow for the possibility of success. To be consistently successful, both the project manager and management must accept responsibility for doing everything necessary to ensure a project's success.

Reference Materials Used in This Chapter:

Harold Kerzner
Project Management
Van Nostrand Reinold Co., 1984

Handbook of Management by Projects
Editor: Roland Gareis, 1990

J. Davidson Frame
The New Project Management
Jossey-Bass Publishers, 1994
San Francisco, CA

Bennett P. Lientz/Kathryn P. Rea
Project Management for the 21st Century
Academic Press, 1995

Jeffrey S. Leavitt/Phillip C. Nunn
Total Quality Through Project Management
McGraw-Hill Publishing Co., 1994

Project Management Demystified
No author named
Geoff Press, 1991

Strategy for Implementation

The intent of this Chapter is to outline the six steps that should be considered when implementing a managerial cost accounting process.

Step 1: Obtain Management Support

The success of any new improvement method is greatly enhanced by management's visible support. This support may take some time and effort to cultivate. It is critical that management be shown that a need for the MCA information exists and that the current cost information provided is inaccurate or insufficient to aid in decision-making in the organization. Chapter 1 of this Guide addresses marketing managerial cost accounting.

Step 2: Have Clear Objectives

In order for the MCA initiative to progress and succeed, objectives of the implementation plan must be clearly stated. Once the objectives have been defined, they must be approved by management. The objectives, if not defined by a management steering committee, must require its concurrence. The approval process is an integral part of the management buy-in phase noted above. It is also recommended that the objectives be incorporated into a team charter. See
Step 5 and Appendix B for more discussion on a team charter.

The objectives should define why the MCA initiative is being undertaken and how the information from a new cost system will be used by the organization. Other questions that may help define the MCA objectives include:

- Should the MCA process be integrated with existing accounting systems?
- Who will be responsible for updating the final process and its related data?
- What amount of detail is required? (for full, agency, and avoidable costing)
- What degree of precision is necessary?

<u>Step 3: Conduct A Pilot Study</u>

When implementing an entity-wide MCA process, it is preferable to start with a pilot study. In this approach a specific segment of an organization is chosen to implement an MCA program best suited to its needs. The pilot may concentrate on a major business or product line of the entity, a particular classification of activity (e.g., manufacturing, distribution, etc.), or a cost object (e.g., a type of client). Management will also have to determine if the pilot should be conducted at one site or multiple sites.

Management should take special care in selecting its pilot study. *A pilot site should be chosen where it is perceived to have a good chance for success*. A significant factor to consider when selecting a pilot site is the type of management at the facility. For example, a progressive management team, one that is not adverse to change, may offer support rather than resistance to the MCA process. However, being able to deal with resistance inside the organization is also an important aspect of any pilot program.

Some causes of resistance documented by entities that have implemented new MCA processes include:

- fear that the new process may change the existing power structure;
- fear that inefficient practices hidden by traditional cost accounting systems may be revealed;
- fear of anything new;
- fear of added work required to implement a new MCA process; and
- fear that it will be used to reduce the work force.

Even though many of these fears may have little or no basis, they are perceived by the employees and must be dealt with by the organization. The consequences of not dealing with these issues could be detrimental to the pilot study.

Chrysler Corporation and Safety-Kleen (a mid-sized waste-recycling company) used the following approach to deal with resistance[32]

1. Critical employees were persuaded to give the new managerial cost process a try and ultimately to embrace the process;
2. Major educational programs on the principles and mechanics of MCA were conducted for employees at all levels; and

[32] For additional information, see Joseph A. Ness and Thomas G. Cuccuzz, "Tapping the Full Potential of ABC," *Harvard Business Review* (July-August 1995), pp. 130-138.

3. MCA was implemented at one facility and based on its success, was then implemented throughout the organization. Both companies made sure local managers and employees were actively involved in the process.

Chrysler had a technical team that linked the new MCA model with the general ledger, its manufacturing planning system, and other support systems.

Safety-Kleen was able to streamline and automate its accounting procedure after its processing plants had been converted to the new MCA process. Even though more data is being collected, reported, and analyzed, the monthly closing of the accounting records is being done as quickly as before.

This approach has served as a model for other entities implementing a new MCA process.

Step 4: Establish an MCA Project Team

The next step would be to establish a project team, which would be responsible for designing and implementing an MCA process for the selected pilot program.

Guidelines for the organizational composition of the project team are as follows:

- The team should be headed by a project manager who is knowledgeable about the organization and various costing methodologies. It may be inadvisable for a financial person to head the MCA initiative, because the project may be viewed as an accounting activity only and not as a managerial decision-making initiative.

- The project manager should report directly to a management steering committee on a regular basis. This will help to keep management's interest focused on the initiative and ensure that the organizational objectives are being followed.

- The project team should consist of individuals from all the functional areas affected by the MCA process, including those familiar with information systems, accounting, and operational (program) areas of the organization. These individuals may be full-time or part-time members depending on the needs of the team. Refer to Appendix C for an example of a cost accounting position description.

- Detailed cost management analyses require appropriate systems and expert support staff. This expertise must be developed/acquired, often with considerable time requirements. Appendix F contains a sample User Needs Questionnaire to help ascertain the organization's system needs, capabilities, and requirements.

- The utilization of outside consultants can be valuable to the team. Appendix E provides example Statements of Work that can be used in obtaining consultants. Their knowledge and experience can help the organization successfully meet its objectives. Consultants should facilitate management taking ownership of the MCA initiative. The project team should also ensure that an adequate amount of information is shared between the consultants and the team members. However, the team members should be cautious of consultants imposing solutions from previous client engagements rather than finding answers for the current engagement.

- The project team must also spend time educating its members on cost accounting concepts and methodologies. This will provide a basis for the team to evaluate which MCA process might be most appropriate for them. In making these evaluations, the team must keep the objectives of the initiative in mind. Computer-based training exercises can be utilized to help provide hands-on experience in the design requirements of various cost methodologies.

Step 5: Prepare an MCA Project Schedule

Once the MCA project team has been selected, the task of implementing an MCA process for the designated pilot should begin. Following are guidelines for the tasks to be performed by the project team:

- Develop a project schedule, which lists the tasks to be performed in sequential order, and the time requirements for each. This schedule may initially take the form of a team charter. Refer to Appendix B for a sample team charter.

- Collect financial and non-financial data on the activities of the various work sites, including the following:

a. organization's resources
b. organization's activities
c. how the resources relate to activities
d. cost drivers for the activities
e. organizational cost objects
f. relationship of activities to cost objects
g. performance measures for the organization
h. relationship of performance measures to activities
i. analysis of direct labor and materials
j. composition of overhead
k. activities driving the overhead

- In partnership with management of the pilot site, be responsible for designing the MCA model. The MCA process should assist management in making proper decisions and not just providing financial information.

- After development of the model, assign cost data to the activity classification, cost objects, or any other breakout for which the pilot study is being conducted.

- Have the business unit managers from the test site validate the results prior to analyzing the information developed in the cost assignment step.

- Have managers and employees, along with team members, conduct an analysis of the cost findings. This analysis may include product or service costs; cost associated with servicing different clients; cost-of-quality; and value analysis. However, it is recommended that any value analysis be conducted by individuals who possess cross-functional experience, special training, and extreme objectivity.

- Formally present the team’s findings. Ensure that the key players involved in the initiative are invited. This will allow those involved in the project the opportunity to view its results and will demonstrate to management how serious an undertaking the program actually was.

The team should remember that some of the findings may be quite surprising. To avoid items that may be too surprising or embarrassing for some individuals, it is recommended the items be shared with the corresponding business unit prior to the presentation. This will give the team another opportunity to validate its findings. It may also be advisable for the project team to brief all the unit managers involved in the project and the executive sponsors of the project on the highlights of the findings prior to the formal presentation.

Step 6: Consider Entity-Wide Implementation

Based upon the success of the pilot study, the benefits of an MCA process should be evident enough for management to expand its scope, hopefully toward a phased-in entity-wide implementation.
A phased-in approach is the converting of various program or work areas to MCA in a sequential order. It may be prudent not to convert the entire organization to MCA at the same time. This is especially true with large agencies. A phased-in approach will generally be less disruptive to ongoing operations and less taxing on limited resources of the organization. In Step 3 we briefly discussed how two separate corporations dealt with the internal resistance of implementing a new MCA process. They both elected to do the phased-in approach and realized success. This is not to say that an entity-wide implementation done without a pilot program and/or a phased-in approach would not be successful; however, such an approach is generally conducted by smaller organizations.

Assessing Current Environment

Conduct a User Needs Assessment

The Importance of a User Needs Assessment

It cannot be over emphasized that the basic purpose of managerial cost accounting in the federal government is to provide cost information to government managers at various levels. The information should help managers in making decisions and in improving operating efficiency and cost-effectiveness. SFFAS No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, identified government managers as the primary users of cost information, because:

> "They are responsible for carrying out program objectives with resources entrusted to them. Reliable and timely cost information helps them ensure that resources are spent to achieve expected results and outputs, and alerts them to waste and inefficiency."

Assessing user needs for cost information is an indispensable step in the very early stage of designing a managerial cost accounting (MCA) process. Knowledge of user needs obtained through the assessment should guide the design of an MCA process. Without a clear understanding of user needs, there is no assurance that the managerial accounting system will be properly designed to produce cost information to meet the information needs of government managers. The resources spent to develop the system will be wasted if the system fails to produce information that meets the needs of its users.

In the federal government, most entities are comprised of complex organizations and sub-organizations. They perform a variety of activities. The type of cost information needed by managers may differ among various types of organizations, programs, and activities. For example, the cost information useful to managers of a health care program may differ from information helpful to the manager of a loan guarantee program. The information needs may also differ among functional managers. For example, the information needs of budget and planning managers may differ from those of program managers.

Thus, only through user needs assessments, can the system designer acquire detailed knowledge about the operating processes of various components of the organization, the decision-making patterns used by managers at various levels, and the specific cost information that can guide the managers in making those decisions and in saving resources and improving operating results.

Objectives of a User Needs Assessment

The results of the cost information user needs assessment form a foundation for the design of an MCA process. Those who conduct the assessment should strive for the following objectives:

- Identify User Groups and Rank Their Priority - The assessment should identify managers and their staffs in various functions and at different levels who use cost information in performing their duties. However, it may not be feasible for an MCA process to satisfy the needs of all potential users. This would be true particularly in the early stages of system development. Thus, the designer may rank the users in terms of their priorities. In the initial phase, the system may be designed to meet the information needs of top priority users, and expand the clientele to other users as the system is further developed.

- Ascertain Specific Needs of Each User Group - For each group surveyed, the assessment should attempt to identify (a) users of cost information, (b) specific cost data needs, (c) how cost information will be analyzed and used, and (d) how timely or frequently cost data is needed. The assessment should gather information on performance measures being used and how managerial cost accounting can support and improve the performance measures. Information developed through the assessment can help in designing the format and contents of managerial cost reports that the MCA process will produce to meet the user's specific needs.

- Assess Capabilities of Users - The assessment should also gather information on user knowledge and experience in using cost information. This will include experience in operating computer software and hardware, the type of reports with which they are familiar, their knowledge about various cost concepts, and their experience in using cost information in measuring performance, setting prices, and making other managerial decisions. Results of this assessment will also help in determining training needs.

Scope and Approaches

The scope of an assessment depends on the scope of the system design. If an entity-wide system is designed, the user needs assessment would be entity-wide in scope. However, some federal organizations such as the U.S. Departments of Agriculture, Interior, and Transportation, are very large and complex. For those agencies, it would be very difficult to perform an entity-wide assessment of user needs and would be advisable to conduct a user needs assessment for a segment of the organization no bigger than a Bureau, Office, or Administration.

The user needs assessment may include a questionnaire, followed by an invitation to potential users to participate in interviews and group discussions. However, individual interviews remain the most effective approach in developing a detailed understanding of user needs.

The cost information developed from a potential user group through questionnaires, discussions, and interviews may include the following items:

- a description of the user group's mission, operating process, and specific activities;
- resources used in the user group's operations and expected outputs and outcomes;
- user perception of accountability for costs incurred, and ability to control the costs;
- typical decisions managers make in their operations and how cost information may be used as input in those decision-making processes;
- user plans to implement GPRA;
- user perception of how costs should be assigned to their operations and activities; and
- training needs.

The IRS used a questionnaire to survey user needs in its efforts to design an MCA process. The questionnaire is included as Appendix F of this Guide.

Examples of Potential Users

The following are some potential user groups within a typical federal entity.

- Top Management - may use cost information to (a) evaluate the overall performance of the programs they oversee, (b) assess future resource requirements in making department-wide financial plans and budgets, and (c) support their proposals to the President and Congress on resource allocations and program expansion, modification, or downsizing.

- Program Managers - may use cost information to (a) effect cost control, (b) make resource acquisition decisions, (c) evaluate and improve efficiency and cost-effectiveness of various program activities, and (d) make budget and planning proposals to agency heads and Congress.

- Financial Managers (including accountants and budget analysts) - may use cost information to help top management and program managers to better manage limited resources by (a) calculating unit costs of outputs and explaining how and why they increased or decreased, (b) formulating standard costs, (c) calculating and analyzing cost variances, (d) compiling period financial reports, and (e) analyzing the cost behavior to quantify variable, fixed, and/or incremental costs with respect to certain time periods which may influence managerial decisions on whether to contract-out, buy/lease, etc.

- Franchise Activity Managers - may use cost information for the same purposes as program managers. In addition, they will also use cost information to set prices or reimbursements for the goods or services they provide.

Perform a Financial Management System' Assessment

The Joint Financial Management Improvement Program (JFMIP) requires federal agencies to meet its *Core Financial Management System Requirements*, and to maintain the Standard General Ledger Accounts (SGL). It is a common belief that a good general financial accounting system provides a sound foundation upon which to develop a managerial cost accounting system. The design team should keep in mind that the MCA process is a part of the agency's financial management system, and it should interact with financial accounting, budgeting, and performance measurement. The ultimate goal is to integrate the MCA process with financial accounting, budgeting, and performance measurement systems (See page 15, SFFAS No. 4).

However, financial management systems of federal entities vary in completeness and sophistication. An analysis of an entity's system may find that the system falls into one of the following situations:

- It already has a managerial cost accounting system in operation that needs only minor modifications and improvements in order to meet user needs and SFFAS No. 4 requirements;

- It has a managerial cost accounting system which does not provide reliable cost information and thus requires major overhaul and reconstruction;

- It uses a traditional costing methodology, such as job order or process costing, which is no longer considered adequate, and needs to change to a new methodology such as Activity-Based Costing (ABC);

- It has a complete accounting system that supports general financial reporting, but does not include a managerial cost accounting system; or

- It has an incomplete general accounting system that does not meet *JFMIP Core Financial Management System Requirements*.

Each of these situations requires a different approach to a system's evaluation and assessment. The following discussion addresses two general situations.

Entities with Existing Managerial Cost Accounting Systems

Entities, which have a managerial cost accounting system, should assess the system to determine whether the system produces cost information that meets user needs, SFFAS No. 4 requirements, and JFMIP's *System Requirements for Managerial Cost Accounting*. From the standpoint of system output, the assessment may determine (a) whether the system provides the full costs of goods and services as required by SFFAS No. 4, (b) whether it provides unit costs or activity costs for performance measurement, (c) whether it supports cost control purposes, and (d) whether the cost information is responsive and timely for managerial decision-making. From the standpoint of system structure, the assessment may examine whether the system correctly correlates with the organization's responsibility segments, responsibility centers, operating processes, functions, or activities. The assessment should also examine whether the system is closely linked with the general financial accounting system and the budgeting systems.

From the standpoint of system methodology, the assessment should examine how cost data are collected (captured) and accumulated, and how the accumulated costs are assigned to cost centers, activities, and ultimate outputs (goods and services produced or mission tasks performed.) The designer should test the system to determine whether the methodology is appropriate in light of the organization's operating processes and whether it produces accurate and reliable cost information. The assessment will show whether the computer software or hardware, if used, need to be modified or improved in order to meet user information needs and the managerial cost accounting standards.

Entities with No Managerial Cost Accounting System

Some agencies may have a core financial system to satisfy their financial reporting needs, but not a managerial cost accounting system. In this situation, if an agency decides to develop a managerial cost accounting system to meet managerial needs, it should take steps to determine whether its core financial system can be linked or expanded to an MCA process. The assessment should determine (a) whether the system completely captures the costs of resources in accordance with federal accounting standards, (b) whether the expenses are properly classified according to SGL requirements, and most importantly, (c) whether it is feasible to make changes to the core financial system so that it can be expanded to an MCA process. It is important to note that the core financial system provides primary source data, particularly, the expense data that can be used in cost accounting.

Some organizations may need to: expand the existing core financial system; replace it with a new core financial system; or implement a new cost accounting module that is not part of the core financial system, but is integrated with it. In either case, they should be able to interface the new or expanded core with subsidiary financial and program systems without serious modifications to the software.

Develop Practical Requirements - A Summary

Both the user needs assessment and the system assessment discussed in Parts I and II of this chapter are necessary steps in designing and developing an MCA process. (Those assessments may be combined into one assessment project.) Results obtained from the assessments should guide the system design. Federal agencies should consult JFMIP's *System Requirements for Managerial Cost Accounting* as a starting point for developing requirements.

Organizational Analysis

Define Components/Responsibilities

Most federal entities can be segmented according to their principle missions, processes, products, or business activities. In the majority of cases, each of the segments is overseen by a manager who has the responsibility for decision-making within his segment and who must control costs according to delineated budget constraints. Managerial cost accounting should be performed at this level.

As indicated in FASAB's *Managerial Cost Accounting Concepts and Standards for the Federal Government*, "Segmentation can facilitate performance measurement since each segment is responsible for a mission, or a line of activity to produce a certain type of output. Information on costs, outputs, and outcomes related to each segment can be used to measure its performance against its goals."

Create the Activity/Output Dictionary

Government entities have entered into a new era by holding managers accountable for making cost effective decisions. Almost all government reforms have placed an emphasis on cost effectiveness. Of special note are the Chief Financial Officers Act of 1990 and the Government Performance and Results Act of 1993 as well as the *Managerial Cost Accounting Concepts and Standards for the Federal Government* (SFFAS No. 4). Within these mandates, managers are challenged and required to provide better cost information for a more cost-effective government. One method of providing this is through Activity-Based Management. Managers do not manage costs of their organizations directly, but instead manage the activities that consume the resources and thus produce desired outputs.

Organizations are hierarchies of many activities. Improvement happens when you change some part of an activity, such as its inputs, transformation components, or outputs. Therefore, it is critical that activities are carefully defined and analyzed. Even without cost figures, activity information shows the relationships of activities to each other, to outputs, and to customers. An activity dictionary is one of the building blocks of activity costing and management.

Activities

An activity is a unit of work that has an identifiable starting and ending point and that consumes *resources* (inputs) and produces *outputs*. Activities are essential to develop, make, sell, deliver, or support an entity's products and services. Analyzing activities is key to understanding how resources are consumed, how costs are incurred, and in improving the ways in which activities are performed. An activity dictionary lists and describes the different activities performed in an organization. Its purpose is to define each activity. Compiling activity dictionaries allows a manager the opportunity to assemble data needed to determine how the organization generates costs.

A dictionary is also referred to as a chart of activities. An activity dictionary lists activities in general terms; organizes them by process, department, or function; and defines each activity and process. It can also include other information about an activity. The activity dictionary is usually based on the following model:

I N P U T → **A C T I V I T Y** → O U T P U T

Outputs

Outputs are products, services, and or information produced as a result of the activities performed. There are two types of outputs--*external* and *internal*. External outputs affect customers and are directly related to the overall mission and objectives. Internal outputs are those that provide or support the creation of an output to an internal or external customer. When we focus on the output, we can analyze our effectiveness. After determining the effectiveness of the output, we can then focus on the efficiency of the activities that created the outputs. Outputs provide a useful indicator and measurement on the overall performance of the activity.

The Activity/Output Dictionary

In creating the activity/output dictionary it is critical to first focus on outputs, i.e., the desired products, services, or information needed to be produced by an entity. The *activity/output dictionary* will assist in defining the correct activities for each part of the organization. First define the outputs and interview employees to find out what they do. The outputs for an organization should be "significant" and homogeneous. "Significant" is defined as requiring more than five per cent of an individual's time or whatever percent the organization determines necessary. For each output, establish an activity/output dictionary. (Note: Because generic dictionaries are available, it is not always necessary to start from scratch to develop a dictionary such as the ***Activity Dictionary*** by Tom Pryor, Inc.)

Components of each section of the activity/output dictionary are as follows:

Activity:	A description of the activity of the function. (Examples - Process veteran's benefit claim, develop training program, create an external report, attend meeting.)
Function:	Perform a common purpose or mission. Functions are departments, cost centers, work centers or activity centers. (Examples - Accounting, Payroll, Security.)
Process:	The series of activities performed by more than one function.
Activity Definition:	A short description of the activity.

Inputs:	Physical documents, electronic data or any request that triggers an activity. An activity may have more than one input. (Example--a claim for veterans' benefits.)
Outputs:	The products, services, or information produced from an activity. An output is what internal or external customers receive and what the functional unit produces. (Example--a veteran's benefit check.)
Output Measure:	A quantifiable measure for the output of an activity. It describes how many times the activity is performed. (Example--the number of veterans benefit checks issued.)
Characteristics:	The classification of activities to facilitate comparison and analysis. • A Primary Activity contributes directly to the main purpose of a unit. • A Secondary Activity supports the performance of the unit's primary activities. Secondary activities are usually of an administrative nature. • A Value Added Activity contributes to the achievement of an entity's goals and objectives. • A Non-Value Added Activity represents waste. Non-Value Added Activities are not essential to achieve objectives. • Other possible activity classifications: Strategic or Non-Strategic, Life Cycle versus Non-Life Cycle, Discretionary versus Mandatory, and Repetitive versus Non-Repetitive.
Cost Drivers:	Factors that have a direct influence on the cost of activities and processes. Activities usually have more than one cost driver (cause). Cost drivers are frequently outside of the control of people who perform the activity. (Example--the accuracy of the submitted veteran's benefit claim. If the claim is not completed properly, it will take additional staff processing time.)

Two examples of entries in an Activity/Output Dictionary for an accounting office follow:

ACTIVITY	Process veteran's benefit claim
FUNCTION	Program Management Division
PROCESS	Accounting

ACTIVITY DEFINITION	The process of obtaining a request for veterans' benefits, reviewing the request, approving the request, processing the data, and issuing the check.
INPUTS	A veteran's benefit application claim form
OUTPUTS	A benefit check
OUTPUT MEASURE	The number of benefit checks issued
ACTIVITY CHARACTERISTICS	Primary Value Added Required
COST DRIVERS	Accuracy of completed veteran's benefit claim form

Reference Materials Used in This Chapter

Tom Pryor
Activity Dictionary

Kehoe, Dodson, Reeve & Plato
Activity-Based Management in Government

Department of the Treasury's Internal Revenue Service
Cost Management Desk Guide to Process Value Analysis

Various Costing Methodologies and Methods for Assigning Costs

Various Costing Methodologies

The following chapter of various costing methodologies is meant to give a brief overview of several of the more widely used costing methodologies. The intent is to provide information that will guide managers in choosing a specific methodology. Many books dealing with the implementation of each methodology have been published. It is recommended that these books be thoroughly reviewed prior to final selection and implementation. Several methods are available for costing goods and services. Four widely used methods, which are not mutually exclusive and can be used in combination, are described below.

Job Order Costing

Job order costing systems are used by organizations that produce unique products or special order products. Each product or service consumes a different amount of direct material, direct labor, and indirect costs. Job order costing may also be utilized for assignments that differ in duration, complexity, or input requirements. Costs are accumulated and assigned to the individual products or services.

In a job order costing system, different products with varying degrees of production time and different amounts of direct materials consumed are tracked separately by work orders. Indirect costs are first assigned to departments and then assigned to specific outputs often based upon a measure such as direct labor hours consumed. Examples of situations when job order costing is used in the federal sector include when the Federal Bureau of Investigation (FBI) does specific investigative work (with and without reimbursement agreements) for the Department of State, or when the Department of Veterans Affairs costs specific medical procedures such as open heart surgery. Job order costing could also be used in the following situations: General Counsel legal cases; Office of Inspector General (OIG) audit assignments; research projects conducted by the

Food and Drug Administration and Environmental Protection Agency; and law enforcement cases conducted by the Drug Enforcement Administration and Central Intelligence Agency.

Some of the Benefits[33] of a Job Order Costing System are:

- it works well with diverse product lines;
- product profitability determinations are possible by comparing actual cost with planned cost; and
- a lower investment in equipment is required.

An example of job order costing follows: (Note, in this example indirect costs are assigned to jobs based upon the number of direct labor hours spent on the particular job.)

[33],Charles T. Horngren, *Cost Accounting, A Managerial Emphasis*, p. 572.

Performance of a Specific OIG Audit Assignment:

Direct labor (400 hours at $30 per hour)	$12,000
Direct materials (supplies, travel)	2,200
Indirect costs (400 hours at $2 per hour)	800
Total cost of specific OIG audit assignment	$15,000

Process Costing

Process costing is a system used for a large volume of similar products that go through the same continuous processes. Costs are accumulated and assigned to processing divisions prior to the assignment to products or services. Often costs are assigned to products by dividing the department's total costs by the number of units produced by that department. Examples of federal entities that use process costing are VA's Veterans Benefit Administration (VBA), which processes thousands of benefit checks, and the FBI which does fingerprint and name checks for the 100,000 plus immigrant applications submitted by the Immigration and Naturalization Service.

Several of the Benefits of a Process Costing System are:

- it works well with a homogeneous product;
- product-profitability determinations are possible by comparing actual cost with planned cost; and
- there are lower labor costs.

The main differences between process costing and job order costing are that in process costing, costs are first assigned to departmental cost pools and then to products, whereas in job order costing, costs are first assigned to products. In process costing there is usually a greater number of units produced than in job order costing. An example of process costing is: (Note that direct and indirect costs are accumulated by department and then allocated to products.)

Production of VBA Benefit Checks:

Direct labor for check processing department	$800,000
Direct materials for check processing department	50,000
Indirect costs allocated to check processing department	25,000
Total costs for checks processing department	$875,000
Divided by 700,000 checks processed equals	
Unit cost per check processed	$1.25

Activity-Based Costing

Activity-Based Costing (ABC) is a management process that examines how an entity's activities consume resources and relate to its outputs. ABC is an approach used to break down an organization's processes into activities, and measure each activity's cost and performance effectiveness. This is accomplished by assigning costs to the related activities based on use of resources, and then by assigning costs to cost objects, such as products or customers, based on use of activities.

The costs that cannot be directly traced to activities or outputs are then assigned to outputs based on a cause-and-effect relationship or through cost assignment.

Many private sector and several federal sector entities that have implemented ABC have chosen to designate activities as either value added or non-value added activities. Value added activities are those activities that cannot be excluded without negatively affecting the quality of the output. Non-value added activities can be excluded without affecting the quality of the output. Resource costs are assigned to activities. Next, activity costs are assigned to outputs. The costs that can not be specifically traced to activities or outputs are then allocated to outputs.

<u>There are Many Benefits to ABC. It Enables Management to:</u>

- improve product costing, because all costs are reviewed to ensure proper assignment to cost objectives;
- see how activities correlate to one another and to outputs;
- identify the full cost of performing and non-performing activities and outputs;
- analyze value added and non-value added activities as an option;
- institute performance measures and gauge actual performance against these measurements;
- require a cross-functional look at resource consumption;
- integrate cost management with other initiatives, e.g., GPRA and CFO Act;
- see opportunities for business process improvement and re-engineering in accordance with NPR;
- provide external parties with cost information; and
- provide quantitative decision support information on timeliness, quality, and costs to assist management in evaluating program results and determining user fees/rates.

An example of ABC:

<u>The unit cost of a veteran's benefit check processed for the Compensation and Pension (C&P) Service by the Finance Department.</u>

- Direct labor incurred by the Fin. Dept. in processing 700,000 C&P checks $700,000
- Direct materials " " " " " " " " 20,000
- Indirect materials are assigned to C&P based upon C&P's share of total checks processed by the Finance Department. Assume that the Finance

Department processed 1,000,000 checks during the fiscal year, 700,000 of which belonged to C&P, and that total indirect expenses incurred by the Fin. Dept. during the current fiscal year were
500,000
Therefore, C&P's assignment of indirect costs is
350,000
Total expenses assigned to C&P for processing 700,000 checks are
$1,070,000
divided by 700,000 checks processed for C&P equals
Unit cost of one check processed by the Finance Dept. for C&P
$1.53

In traditional federal accounting, costs are accumulated by object class categories such as salaries and benefits, office supplies, travel, and equipment. With ABC, costs are calculated by activity or process such as conducting biennial user fee reviews, writing cost accounting policy, teaching cost accounting, and participating in cost accounting work groups.

Standard Costing

Standard costing can be used with job order, process, or activity-based costing. The purpose of standard costing is to have a standard cost per product, which can be viewed as a goal, e.g., an industry standard, to which actual costs can be compared. Standard costs can be useful for performance measurement because they enable the analysis of favorable and unfavorable variances between actual and standard costs. Standard costing can be done for such components as direct materials, direct labor, and indirect costs. It is important that these standards be reviewed periodically to ensure they are up-to-date.

In many situations, an entity adopts a hybrid of two or more of the costing methodologies mentioned above. For example, ABC may be used to assign direct costs whereas process costing can be used to assign indirect costs.

<u>Methods for Assigning Costs</u>

There are three methods available for assigning costs to products and services--direct tracing, cause-and-effect, and allocation. The choice of an appropriate method should be based upon the availability of information as well as the resources required to provide this data. Often, a cost-benefit analysis drives the decision of which assignment method to use. All these assignment methods can be used with any of the above costing methodologies.

Direct Tracing Method

Direct tracing is the process of assigning costs based upon a clear relationship between the costs incurred and the products/services that are produced. This is the most precise method of assigning costs to outputs. However, direct tracing can be time-consuming and necessitates that costs be charged to specific activities and outputs based upon a method such as transaction coding or counting. An example of direct tracing is General Counsel's tracking of the number of hours spent addressing issues for a specific department such as Human Resources.

Cause-and-Effect Method

The premise of the cause-and-effect method is that in order for outputs to be produced, certain activities need to be consumed. With this method, costs that cannot be directly traced to specific outputs are assigned to activities and then to the final outputs based on what causes the costs to be incurred. If ABC is used, costs must still be traced to an activity and then to an output. An example of this method is assigning costs to activities such as billing collection functions and next assigning these billing collection costs to the final outputs, e.g., insurance companies or Medicare, based upon the insurer's number of claims for health services.

Allocation Method

The allocation method is used when the cost or time to trace dollars to cost objects is more expensive than the benefits derived. This method is relatively easy to use but is not as accurate as the direct tracing method or the cause-and-effect method. Examples of costs that are often allocated are general and administrative costs. Costs are allocated based upon a common denominator such as direct labor hours or direct labor dollars. The following two methods can be used in conjunction with either the cause-and-effect method or the allocation method.

<u>Step-Down Method</u>

The step-down method is a method that accumulates costs by cost centers, departments, or activities. The cost centers, departments, or activities are ranked in descending order beginning with the department that provides the most service (both production and support departments). Next, the general and administrative costs for each department are assigned to the other departments that have been ranked below it according to the ratio of and combination of each department's general and administrative costs, along with the costs from the other departments that have been allocated to it, to the total of all remaining unassigned costs for all departments. This process continues until the costs for the support department that provides the least amount of service to the other departments have been assigned. Once a department's costs have been assigned, no costs from other departments are assigned back to it.

<u>Simultaneous Equation Method</u>

The simultaneous equation method, also called the reciprocal allocation method, is the most complex procedure for assigning costs. It takes into account the reciprocal activities between service departments. This method allows for the full reflection of interdepartmental relationships into the service cost allocations. The advent of computer programs to solve these simultaneous equations has greatly reduced the time required in utilizing this method.

Building a Managerial Cost Accounting Process

Introduction: Obtain Detailed Systems Requirements

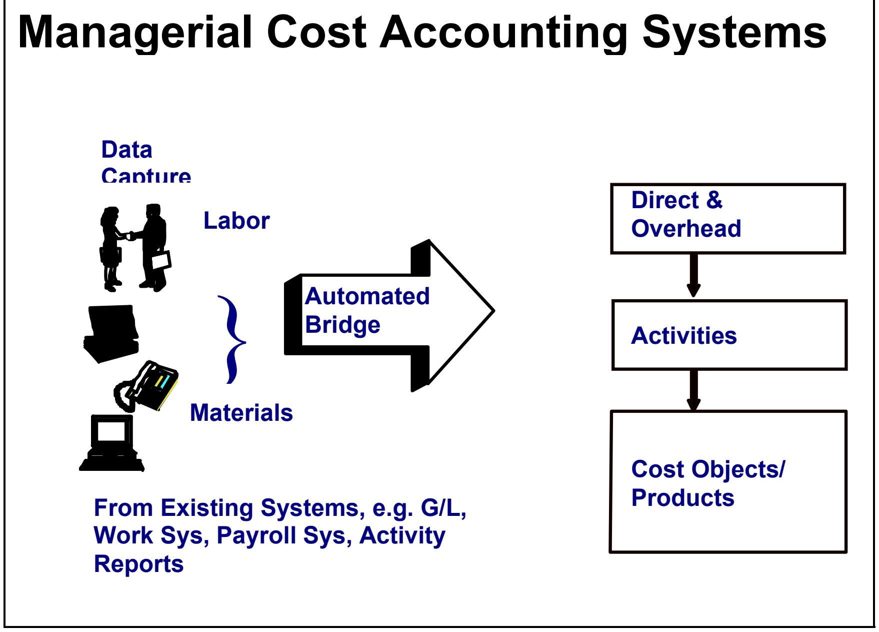
The focus of all managerial cost accounting (MCA) processes should be the information and reports made available for decision-making. Cost accounting software itself should not be the primary focus, but should be viewed as a facilitator for accumulating data and making it readily available. In recent years cost accounting software has gained new emphasis with the proliferation of personal computers and front-end mainframe/mini-computer applications. Software automates many of the time-consuming steps involved in implementing and using cost data. A good MCA process will greatly enhance the distribution of completed cost/process data accumulation and analysis; however, a great MCA process will not improve weak cost/process data accumulation and analysis.

As stated in Chapter 2, managerial/senior executive sponsorship is a key ingredient for successful managerial cost accounting implementation. This sponsorship will pay significant dividends in the attempt to implement a costing process. Implementation will require gaining down-loads and/or access to other organizational information systems (sometimes an internally sensitive issue), disseminating information through application mediums not owned by the sponsor, and collaborating to meet all the agency information technology and processing standards. In addition to the sponsor, educating the entire management chain (through classes, memos, newsletters, and electronic mail) about managerial cost accounting and the cost implementation process will prove to be valuable.

This Chapter is intended primarily for the team of program, finance, and information technology personnel implementing an MCA process. Detailed "process" requirements are discussed, at most, at a high-level. The Joint Financial Management Improvement Program (JFMIP) is in the process of issuing the *System Requirments for Managerial Cost Accounting* document, that provides the baseline requirements expected of an MCA process. The CASR builds upon various costing requirements in OMB circulars, CFO Act, Clinger-Cohen Act, and GPRA that have an impact on how and what to cost. The CASR specifies at a low-level the information and functional processing requirements needed to accumulate and assign cost/process data.

Chapter 3 of this Guide suggests two options for implementation; (1) the use of pilots to gain support and overall understanding on the way to entity-wide implementation, and (2)an entity-wide implementation (without pilots) that might be considered acceptable for smaller organizations. Predictably, most agencies fall into the first category and will use a phased approach for implementation. However, agencies in the second category will find this Chapter useful as well. As shown in Figure 1, implementation of an MCA process does not necessarily require new source data capture systems, unless those data capture systems are deemed inadequate or insufficient.

Figure 1



Getting Started: Conduct a Systems Requirements Analysis

All MCA processes start with acquiring data from, for example, the general ledger, labor distribution system, payroll interfaces, and program systems. (See Figure 1.) How you get data from your program systems is subject to your individual implementation. This Chapter describes the non-technical aspects of interfacing with general ledger and payroll interfaces and includes a brief mention of interfacing with program systems. Up-front time should be spent determining what cost information is needed, how it will be used, and what level of detail (precision of assignment) is appropriate. At a minimum, an information process that allows you to identify and track process/activity costs and performance measures, generate standard and ad hoc reports, and provide users with timely data that has the highest integrity possible is desireable.

Either with Chapter 4 of this Guide or separately, a systems requirements analysis must be conducted. This analysis helps determine the current hardware and software environment of users, data needs of users, and available capacity. The systems requirements analysis, together with JFMIP requirements, should significantly define the application needs of your organization. Requirements gathering should have three phases: project planning, analysis, and reporting. All of these phases require meeting with systems users to determine implementation alternatives and develop a feasibility report.

Incorporating the Necessary Data

Financial Data

Most entities have developed financial statements for the overall responsibility segment(s). In some situations sub-components of the segment may not have separate financials and therefore need additional analysis. Integrating with the system(s) that provides this financial data is critical to the successful development of an MCA process. The financial statements should provide all the labor, support, and facilities costs for each major segment and sub-component. Outside the sub-component's labor, facilities, and support costs, many expenses are paid at a national and/or regional level (e.g., telecommunication costs). To adhere to FASAB's doctrine of "full cost", all costs that are material, must be identified and included.

Based on the assignment methods you decide to employ, general ledger resources (dollars) are assigned or "driven" to activities/outputs. At a very high-level, this can be done by using cost center codes and assigning labor hours to the outputs produced in each respective division/function/program. Through process-analysis, costs can be further driven down to the process and ultimately to activities. Two key drivers are the number of times an activity is performed and the cycle time required to perform an activity. Cycle time is a primary activity driver in most government agencies because of labor intensive processes. Once labor has been assigned, facilities and support costs can be assigned through comparable analysis to establish cause-and-effect relationships between resources and outputs/products. The illustration below, based on ABC, reflects how costs flow through processes to measures. To see how this illustration applies to job order and process costing, simply replace activities with cost pools to accumulate resources, prior to product/service assignment.

Labor Data

In addition to including the most obvious salary expense, labor data should include unemployment compensation, workers compensation, and accrued leave liability. The full cost doctrine, as defined by FASAB, includes employee pension liability. After being entered into the cost software, all these resources categories must be assigned to activities/cost pools and then to outputs/products. Assignment of salary expense is discussed below. The other costs mentioned here should be assigned to the organizational units where employees worked.

Most entities do not track labor costs according to processes, activities, or completed outputs, i.e., through a labor distribution system. Many private sector businesses choose not to implement such costly source capture systems. Statistically valid sampling techniques are used to have employees complete detailed time sheets or use surveys to gather estimates on employee time by process, activity, or output. In either of these cases, a matrix can be generated to migrate labor hours from the functional view to the process/activity/output view. Since labor costs are the single highest line item for many federal agencies, the cost center codes will be a great source of data to assign labor resources to processes/activities/outputs. Again, questionnaires and surveys work well to gather data to use for resource and activity assignment.

Facilities and Support Data

The goal is to understand why costs for these resources are incurred and which outputs/products benefit from these costs. Inasmuch as each of these costs is treated according to its level of significance or materiality, you should spend more time analyzing resource and output relationships for the higher-impact items. In your software, you will establish assignment methods for each object and/or sub-object class.

Facility costs typically include rent, utilities, telecommunications, personal property, building alterations, and maintenance and repairs. Assignment examples for some facility items include allocation of rental costs by using square footage and call or line usage for telecommunications.

Support costs typically include program support costs, travel, moving and relocations, training, printing, postage, health services, supplies, software, and equipment rental. Assignment examples include direct tracing from support accounts to activities/processes/outputs. For example, a piece of equipment is rented to perform a specific activity/process and produce a specific output, so the support account is directly assigned to the activities/processes/outputs.

Performance Measures/Program Data

Incorporating program performance measures is the safest way to garner the support of program offices. Integrating cost information with program data is what makes modern day managerial cost accounting an improvement from the 1970s. This integration moves the cost accountants away from the traditional raw materials, work-in-process, and finished goods concept into an approach that identifies cost consumption by program-initiated work steps (activities). This sounds relatively simple, but in fact is the basis for moving costing information away from a historical reporting effort to a decision-making support process.

As the costing implementation team gathers data for process definitions and flowcharts, the desired results of the process, its products/services, customers, and customers' needs and values should have already been determined. One way to ensure that products and services meet the overall agency objectives, organizational, and customer needs, is to regularly measure how well the process meets those needs and the overall agency mission and objectives. Quality experts state that measurements serve two basic purposes: to keep score and to improve the score.

As measures have been developed over time, it is apparent that those imposed on employees have a substantial impact on the process and the customer. This is a natural opportunity to accomplish the requirements of GPRA while facilitating the construction of your MCA process.

Some sources of current performance measure information are agency strategic objectives, business master plans, concepts of operation, annual operating plans, local operating procedures (i.e., management memos, desk guides), internal manuals, and memoranda. The development of meaningful performance measures is directly on-target with the NPR goal of trying to improve government program efficiency and effectiveness. After taking an inventory of the current
process and resulting performance measures, this data will be loaded into the costing software and ultimately used to help provide dynamic reports for program personnel.

As current or proposed performance measures are loaded into the costing software, ensure that performance measures are aligned with the following key points:

- associated with overall entity objectives and tracked accordingly;
- tied to customer needs;
- readily identifiable in any process flowcharts;
- operationally definable;
- not too numerous or cumbersome, therefore losing their resourcefulness;
- quantifiable;
- obtainable from reliable sources; and
- indicative of progress or lack thereof.

Reporting the Results

Reporting will vary according to the needs of program and financial personnel in your organization. In addition to a host of standard reports, the costing process should allow for ad hoc reporting capabilities. Several guidelines published by FASAB, OMB, and JFMIP recommend what standard reports might include. By far, a unit cost report is most often suggested along with OMB's required Statement of Net Cost.

In order for cost information to assist in process improvement, current process measures must be developed and calculated to serve as a baseline. This baseline information can be accumulated in the costing software and reported with current cycle data for trend analysis, including comparisons to budget estimates. Additionally, this baseline information can be incorporated when developing "standard costs."

Summary: Steps in Building a Cost Model

Once a software application has been selected, the team of program, financial, and technology personnel will need to plan the specifics of how to build the software structure and how to load data. The software application is the primary tool that will be used to capture cost, resource, and activity information and provide the results to entity personnel. The above-mentioned financial and program data must be loaded into the costing software, using electronic file import and export interfaces where possible to minimize manual intervention.

Most costing applications require that the organizational or departmental structure be manually created within the software. Depending on the costing methodology you choose (ABC, process, or job order), process and activity information might be required. Many software applications permit user defined data attributes such as value added/non-value added activities, cost of quality, and root cause cost driver analysis. Additional data might be required if you plan to perform "what-if" modeling of the impact workload and staffing changes would have on capacity.

The following information summarizes the steps involved in building/using costing software. (These steps are intended to accommodate pilot software applications, but they also create the basis for a longer term entity-wide implementation.):

- enter basic information (i.e., chart of accounts, Department/Organizational structure, Output Profile/Core Business System structure, and functions);
- enter data according to the lowest organizational unit planned for data accumulation and analysis (typically office, branch, section, or unit);
- enter labor, facilities, and support resource information by the lowest organizational unit (can be loaded through automated interfaces);
- trace general ledger costs to resources categories;
- as required, enter activity/task information and other attributes (output, activity/task name, value added/non value added, volume, cost of quality, output measure, customer information, total cycle time, live processing time, activity notes, improvement opportunity notes, root cause information);
- develop assignment methods to drive resource dollars to activities or cost pools (for labor costs this could include developing a matrix of organizational position codes by cost object, activity, or output);
- develop assignment methods to drive activity or cost pool dollars to outputs/products (creating business process maps can be beneficial in linking activities, processes, and outputs); and
- prepare reports for organizational personnel; many applications today use a report writer or export data to spreadsheet/data base software for report generation (reports can then be produced that showing information on branch costs, process costs, volume of outputs, and cost per output).

(Following is a sample departmental cost accounting policy. It briefly summarizes the pertinent legislative mandates as well as the FASAB Managerial Cost Accounting Concepts and Standards for the Federal Government. In addition, this sample policy outlines many of the cost accounting roles and responsibilities within a federal department.)

Managerial Cost Accounting Policy

Purpose and Applicability

This report establishes departmental policy for managerial cost accounting. It applies to all offices within the department, which have a use for cost information, as described in the "Background" section below.

Background

Managerial cost accounting is the process of accumulating, measuring, analyzing, interpreting, and reporting cost information useful to both internal and external groups concerned with the way in which the organization uses, accounts for, safeguards, and controls its resources to meet its objectives.

Cost information is used for many different purposes that can be generally classified into five types: 1) performance measurement; 2) cost reduction and control; 3) determination of reimbursement and fee or price setting; 4) program authorization, modification, and discontinuation decisions; and 5) decisions to contract out work or make other changes in the methods of production or delivery of services.

The Office of Management and Budget (OMB) in conjunction with FASAB and the General Accounting Office (GAO) established managerial cost accounting concepts and standards to provide reliable and timely information on the full cost of federal programs, their activities, and outputs. Determining the cost of an agency's specific programs and activities is essential for effective management of government operations. Congress and the President have deemed cost accounting important and have enacted several mandates to insure effective cost accounting. These include:

- **The Chief Financial Officers Act of 1990**, which includes among the functions of the Chief Financial Officer (CFO) the development of an integrated financial management system which provides for the development and reporting of cost information, and the systematic measurement of performance;

- **The Government Performance and Results Act (GPRA***)*, which mandates performance measurement by the federal agencies;

- **The National Performance Review (NPR***)*, which includes a recommendation to require OMB to issue a set of cost accounting standards for all federal activities; and

- **The Clinger-Cohen Act**, which requires defining all technology, related activities, their costs, and measurements. This Act requires cost benefit analysis before IT acquisition decisions are made concerning building systems internally or pursuing commercial off-the-shelf options.

Users of Managerial Cost Accounting Information

Managerial cost accounting is intended for three primary user groups:

- **Government Managers**, who are responsible for carrying out program objectives with the resources entrusted to them. Cost information will help ensure that resources are spent to achieve expected results and outputs, and will help alert managers to waste and inefficiency.

- **Congress and Federal Executives**, who make policy decisions and authorize funding for federal programs. These officials use cost information to make the authorization decisions by assessing cost-benefits and program performance.

- **The Public**, who is concerned with the costs and results of federal programs affecting them.

Departmental Policy

The departmental policy for managerial cost accounting states that the agency must comply with FASAB's Cost Accounting Standards (Statement No. 4) issued by OMB. Assistant secretaries may institute additional cost accounting policy for their offices, provided they do not conflict with Statement No. 4.

Managerial Cost Accounting Standards

FASAB established and OMB issued five managerial cost accounting standards that provide specific guidance for all federal agencies. These standards, as they apply to the department, are described below.

1. **Requirement for Cost Accounting - For management information purposes, costs of the department's significant activities are to be accumulated and reported on a regular basis.**

   "On a regular basis" means that program offices, working in conjunction with the accounting office (where applicable), should establish procedures to accumulate and report costs continuously, routinely, and consistently for management information purposes. Consistency begins with the utilization of a common data source of information. The cost accounting practices in estimating or budgeting an activity must be consistent with the practices in accumulating its cost. Appropriate procedures and practices should be established to enable the collection, measurement, accumulation, analysis, interpretation, and communication of cost information. This can be accomplished through the use of a cost accounting system, cost finding techniques, and other cost studies and analyses.

A cost accounting system is a continuous and systematic cost accounting process. It may be designed to accumulate and assign costs to a variety of objects routinely or as desired by management.

However, a sophisticated system to perform detailed cost accumulation and assignments is not required. Costs can be determined and analyzed through special cost studies and analyses. Use of a combination of a formal cost accounting system supplemented by cost finding techniques and studies is acceptable. Each reporting entity should determine the appropriate detail for its cost accounting processes and procedures based on several factors. Some of these factors include the:

- nature of the reporting entity's operations;
- precision desired and needed in cost information;
- practicality of data collection and processing;
- availability of electronic data handling facilities;
- cost of installing, operating, and maintaining the cost accounting processes; and
- specific information needs of the reporting entity.

2. **Responsibility Segments - Management of each reporting entity should define and establish responsibility segments.**

A responsibility segment is a component of a reporting entity that is responsible for carrying out a mission, conducting a major line of activity, or producing one or a group of related products or services. In addition, a responsibility segment usually possesses the following characteristics: 1) its managers report directly to top management, and 2) its resources and results of operations can be clearly distinguished from those of other responsibility segments.

The purpose of dividing a reporting entity into responsibility segments is to determine and report the costs of services and products each segment produces and delivers, or contributes to (for outputs produced by other responsibility segments). For each segment, managerial cost accounting should:

- define and accumulate outputs, quantifying them in units or equivalent units if possible for work in process;
- accumulate cost and quantitative units of resources consumed in producing outputs; and
- assign cost to outputs, and calculate the cost per unit of each type of output.

Dividing entities into segments also helps facilitate cost control and management, as well as performance measurement.

3. **Full Cost - Reporting entities should report the full cost of outputs in general purpose financial reports.**

The full cost of an output produced by a responsibility segment is the sum of (1) the costs of resources consumed by the segment that directly or indirectly contributes to the output, and (2) the cost of identifiable supporting services provided by other responsibility segments within the reporting entity and by other reporting entities. Direct and indirect costs are defined as follows:

Direct costs are costs that can be specifically identified with an output. All direct costs should be included in the full cost of outputs. Typical direct costs in the production of output include:

- salaries and other benefits for employees who work directly on the output;
- materials and supplies used in the work;
- various costs associated with office space, equipment, facilities, and utilities that are used exclusively in the output; and
- costs of goods or services received from other segments or entities that are used to produce the output.

Indirect costs are costs of resources that are jointly or commonly used to produce two or more types of outputs. Typical examples of indirect costs include costs of general administrative services, general research and technical support, security, rent, and utilities.

4. **Inter-entity Costs - The full cost of a reportable entity's outputs should incorporate the full cost of goods and services that it receives from other entities.**

> The organization providing the goods or services has the responsibility to provide the receiving organization with information on the full cost of such goods or services either through billing or other advice.

All significant inter-entity costs should be recognized. This is especially important when the goods and services received from a providing organization may eventually be incorporated into an output (product) that is sold or provided to a non-federal entity. The costs of inter-entity goods and services need to be factored into the overall costs of products to determine an appropriate user fee or product price.

Materiality is another factor that must be considered when determining which inter-entity transactions are to be recognized. Inter-entity transactions must be evaluated individually rather than as a whole. Materiality is considered in terms of importance of the inter-entity transactions to the receiving entity. OMB proposes the following factors in judging materiality:

- Significance to the entity. The cost of a good or service is large enough that management should be aware of the cost when making decisions.
- Directness of relationship to the entity's operations. The good or service provided is an integral part of and necessary to the output produced by the entity.
- Identifiability. The cost of the good or service provided to the entity can be matched to the entity with reasonable precision.

Accounting for inter-entity costs requires that the entity providing the goods or services recognize the full cost of such services in its accounting records. The full cost of these services must also be reported to the receiving entity.

However, if such cost information is not provided, or is only partially provided, a reasonable estimate of the full cost may be used by the receiving entity. This estimate may be based on the perceived fair market value of the goods or services received. Should the reimbursement for the goods and services paid by the receiving entity be less than full cost, the receiving entity should recognize the difference in its accounting records as a financing source.

These inter-entity accounting transactions will be eliminated in any consolidated financial statements covering both entities.

5. Costing Methodology - Each reporting entity should utilize appropriate costing methodologies to accumulate and assign costs to outputs.

The cost of resources consumed by responsibility segments should be accumulated by the type of resource. Outputs produced by responsibility segments should be accumulated and, if practical, measured in units. The full cost of resources that directly or indirectly contribute to the production of outputs should be assigned to outputs through costing methodologies or cost finding techniques that are most appropriate to the operating environment of the segment and should be followed consistently.

Cost Assignment

Costs should be assigned to outputs in one of the following methods (listed in the order of OMB preference). No single methodology is required for all cost accounting applications.

1. *Directly Tracing Costs to Outputs* applies to resources that are directly used in the production of an output. These resources are also referred to as direct charges. The method of tracing direct costs usually relies on the observation, counting, and/or recording of the consumption of resource units.

   Direct cost tracing is a very accurate method of cost assignment. However, it can be relatively costly to establish and maintain. It should only be applied to resources that account for a substantial portion of an output, and only when economically feasible. The cost of accumulating and accounting for cost information should not exceed the expected benefit.
2. *Assigning Costs on a Cause-and-Effect Basis* is for those costs not directly traced to outputs. For those costs, intermediate activities/products that contribute to the outputs can be established. The costs can then be assigned to these intermediate products/activities.

   An example of an intermediate activity is that which is provided by a computer technology office to provide technical support to other offices inside an agency. This may be done on a two-step cause-and-effect basis. In the first step, costs are assigned to the various activities within the technology office (e.g., hardware installation and maintenance, software design and installation, or program adjustments). The second step involves the assignment of these costs to departments that actually utilize their technical service.

3. *Allocating Costs to Responsibility Segments or Outputs on a Prorated Basis* may be a preferable method of assigning costs when it is not economically feasible to directly trace costs, or assign them on a cause-and-effect basis. Allocated expenses include management and support costs, depreciation, rent, maintenance, security, and utilities associated with facilities commonly used by various responsibility segments.

   The ideal allocation of these costs should reflect the best correlation of cost to output. For example, personnel department costs can be allocated to a responsibility segment based on a percentage of the FTE costs of that responsibility segment versus the total FTE costs of the reporting entity.

   However, many times there is little correlation between an indirect cost and an allocation base. Default methods of cost allocation may then be developed. For example, the allocation of costs may be based on number of employees, square footage of office space, or the amount of direct costs incurred in segments. General administrative expenses (personnel department, security, office rent, depreciation, utilities, etc.) are often allocated in this manner.

   Cost allocation is a relatively simple method of assigning indirect costs to responsibility segments and outputs. Unlike the other cost allocation methodologies, however, it has the greatest potential for distorting product (output) costs due to arbitrary allocations.

<u>Costing Methodology</u>

Costing methodologies are systems used to accumulate and allocate costs to specific outputs. The cost accounting standards issued by OMB do not recommend which cost systems are best for specific types of operations. As the agencies become more experienced with the concept of cost accounting, they may find a preferred costing methodology for their operations. Input of program managers will be integral in selecting the type of costing system that will best meet the agency's needs. Chapter 6 of this Guide discusses several costing methodologies.

No one cost methodology is required for all operations. A costing system used for one type of operation may not be appropriate for others. However, once a system is selected for a particular operation, it is to be used consistently for that operation.

Roles and Responsibilities

Specific roles and responsibilities are set forth for the Office of the CFO, Assistant Secretaries, Comptrollers, and Program Managers as follows:

The Office of the Chief Financial Officer (CFO) is responsible for the following:

- oversight of the implementation of the departmental cost accounting policy;
- coordinating the development of a cost accounting reporting system, with the Assistant Secretaries;
- review of all cost accounting procedures developed or revised by each Assistant Secretary's organization for consistency with departmental policy;
- review of outputs identified by the agency's Assistant Secretaries (or their designees), for which costs should be accumulated, and assigned. Part of this review process may be to ensure a relationship between such outputs/activities, and the performance measures identified by the Program Assistant Secretaries for inclusion in the Presidential Performance Agreement, and the OMB Circular A-11 Budget submission;
- working with each assistant secretary's organization to identify the specific resources to be accumulated for each output and activity, and the proper assignment methodology; and
- identification of significant inter-entity costs to ensure that all significant costs of producing an output/activity are included.

Assistant Secretaries (or Designees) have overall responsibility for:

- the design and implementation of a cost accounting system for its designated responsibility center(s);
- identifying their outputs and activities for which this cost accounting standard is applicable;
- final approval of the identification of the resources applicable to their outputs/activities, and a proper cost assignment methodology;
- providing certain necessary management information (such as output information) not maintained by the CFO; and
- final determination of the scope (nature and frequency) of reporting cost accounting information applicable to their outputs/activities.

Comptrollers (or Designees) are responsible for implementing this policy within their respective organizations. Responsibilities include:

- serving as a technical source to the Assistant Secretaries in implementing cost accounting within their respective organizations;

- providing oversight on implementation of cost accounting within their respective areas;

- identifying information needed to effectively implement cost accounting within their respective organization, and taking the actions necessary to obtain this information;

- identifying, with program managers, the organization's outputs (activities, products, and services) for which this standard is applicable, and quantifying such outputs on a timely basis;

- determining whether the appropriate cost accounting procedures can be accomplished through the use of a cost accounting system, cost finding techniques, or other cost studies and analyses; and

- ensuring that the general ledger is the basis for cost data (when the comptroller has responsibility for general ledger maintenance).

Program Managers have the following responsibilities:

- taking partial if not full ownership of the cost accounting system and its related data information;

- identifying, in conjunction with the Assistant Secretaries, outputs/activities being produced by the organizations;

- ensuring that outputs and other management information are consistently quantified on a timely basis to their designated comptroller;

- informing the Comptrollers of the nature of the cost accounting reports they believe would be useful to them.

Team Charter

A team charter is a written document that describes the agreement between the appropriate oversight authority and the team's leadership regarding the management of the assignment or project. At a minimum, a team charter should establish the scope, objectives, deliverables, schedule, organization, responsibilities, funding, management milestones, and methods of operation of the team. All team members should participate in the development of the charter.

Reduced to its basics, a team charter is essentially a contract between the approving authority and the team which details the results-oriented expectations of the chartering authority and the commitments made by the team to produce the expected results. A description of the resources (time, money, and personnel) that the approving authority intends to provide to the team is also an integral part of the team charter.

What follows is a fairly typical list of items which comprises a complete team charter, as well as a sample managerial cost accounting project team charter. The sample charter is not intended to encompass all possible charter elements, but can be employed as a starting point for further development of a managerial cost accounting team charter which takes into account the particular circumstances and needs of the organization sponsoring a managerial cost accounting team.

Components of a Team Charter

Responsibility

The project team manager, with assistance from the members of the team, is responsible for preparing the team charter and for presenting it to the appropriate review board or panel for approval.

Objective

The team charter will encompass all of the documentation required to initiate the project including the necessary managerial approvals. Suggested project team charter elements follow. Not all requirements will apply in every situation.

Charter Components Outline:

1. Project title
2. Project personnel
3. Objectives
   a. Intent - a general statement of intent
   b. Objectives of the project
   c. Contents - what must be included in design considerations

4. Scope
   a. Installation requirements
   b. Functions included
   c. Functions excluded
   d. Other
5. References
6. General authorities and reporting relationships
7. Responsibilities and authorities of the Project Manager
8. Project management guidelines
   a. Development of methodologies and quality assurance requirements/standards

b. Management milestones/critical review points
c. Process for updates and modifications of charter
d. Process for resolution of disputes and technical questions

9. Project Analysis
    a. Project proposal
    b. Mission needs statement and priority analysis
    c. Relationships and interfaces to other projects
    d. Functional/data interfaces
    e. Cost/benefit analysis methodology
    f. Hardware/telecommunication interfaces
    g. Security requirements
10. Deliverables
11. Project Resources
    a. Funding
    b. FTE and skill types
    c. Contracting requirements
    d. Equipment
    e. Materials
    f. Facilities

Charter
Managerial Cost Accounting Team

Title

(Agency) Managerial Cost Accounting Team

Mission

To design and implement an agency-wide managerial cost accounting system that measures and reports on the (agency's name) cost of doing business. The outputs generated by the managerial cost accounting system will provide the means to measure and report on the efficiency with which scarce budgetary resources are consumed.

Objectives

The objectives of the managerial cost accounting system are to:

- improve the efficiency and effectiveness of the (agency's name) by furnishing program managers with cost-based performance information that is accurate, timely, meaningful, and most importantly, triggers a cycle of continuous improvement in the (agency's name).

- contribute analytical cost-based inputs to the strategic plans and performance reports required by the Government Performance and Results Act (GPRA) and the Chief Financial Officers Act (CFO).

The objectives of the team project are to:

- design and implement a cost accounting system that captures the full cost of doing business and that allows management to make cost-based resource allocating decisions.

- design and implement a cost accounting system which complies with the requirements of the Federal Accounting Standards Advisory Board's (FASAB) Statement of Recommended Accounting Standards No. 4*, Managerial Cost Accounting Concepts and Standards for the Federal Government*.

Project Guidelines/Principles:

Collaborative Leadership--The team will collaborate with internal customers and stakeholders in the development and implementation of entity-level cost measurements and ensure that effective collaboration is built into the process of developing cost measures at all other levels of the organization.

Cost Effectiveness--All cost measurements devised by this system will be developed within the confines of the existing agency accounting system. Every effort will be made to draw cost-based data from existing management reporting systems, and to hold any new field-based data collection requirements to a minimum.

Integration into Key Management Systems --The cost accounting system cannot function in isolation from other management systems that establish objectives and/or deal with results. The managerial cost accounting system will be integrated with other major management performance reporting systems and will form an effective link between and among major management control systems such as resource management planning, budgeting, and evaluation. The team will coordinate early and often with other teams seeking to improve these systems.

Approach

The initial mission-level strategic cost accounting objectives and associated measures will be developed by a sub-set of the (agency's) Executive Leadership Team working with the Managerial Cost Accounting Team. A facilitator will lead the groups through the process of identifying objectives and measures. At the completion of the exercise, the group will critique the results and discuss how they might be applied throughout the agency.

At a separate session, customers and stakeholders will be asked to review and comment on the proposed cost accounting objectives and measures and will also be asked to assist in designing the algorithms necessary to capture costs.

It is important that those who will be held accountable for the results be actively involved. Thus, the approach will be to have those being held accountable for achieving results define what those cost-based results should be. The team will supply the processes necessary to develop cost objectives and measures. Facilitation will be provided throughout the cost definition process as well as technical advice and assistance in identifying and understanding cost accounting concepts, terminology, and methodologies.

Deliverables

The project team will deliver:

- a process system for capturing costs. The process will be cyclical and will provide for systematic re-evaluation and refinement of cost-based objectives and measures.

- the means to perform cost/benefit analyses which report on the efficiency as well as the effectiveness with which management has allocated scarce budgetary resources to the performance of the agency's mission.

Timeframe

FASAB recommends that the cost accounting standards specified in FASAS Statement No. 4 become effective for fiscal periods beginning after September 30, 1997.

Contact

(Team leader's name, telephone/fax number(s), and e-mail address)

Cost Accounting Position Description

(Following is a sample position description for a cost accounting/management specialist at the GS-11/12/13 grade level. It outlines duties and responsibilities; knowledge required by the position; job complexity; and other rating factors.)

Position Description
Cost Accounting/Management Specialist GS-11/12/13
Cost Accounting/Management Office/Division/Branch/Section/Team

NOTE: This is a career ladder position. This position description covers each grade level in the career ladder. We understand that all incumbents will progress through the intermediate levels (GS-11/12) before reaching the full performance level of GS-13.

Introduction

The incumbent serves as a cost accounting/management specialist for the (Office/Division/Branch/Section/Team). The incumbent is responsible for the plan, design, coordination, development, implementation, and maintenance of all cost accounting/management related activities and any other cost related activities that may come under the purview of the (Office/Division/Branch/Section/Team), including policy and standards related to cost accounting/management. Further responsibility includes performing business process value analysis, utilizing system evaluation, cost management, and cost accounting techniques.

Duties and Responsibilities

At the full performance level, the incumbent functions as a cost accounting/management specialist. The incumbent also:

- formulates and recommends policies that affect the financial management components, e.g., management control, asset management, financial systems, and other financial priority programs within the agency.

- plans, develops, and coordinates the agency's managerial cost accounting policy and guidance for financial management improvements as required by the Chief Financial Officers (CFO) Act, Federal Managers' Financial Integrity Act (FMFIA), Cash Management Improvement Act, Deficit Reduction Act, Prompt Payment Act, Debt Collection Act, Government Performance and Results Act (GPRA), Government Management Reform Act (GMRA), Federal Acquisition Streamlining Act (FASA), and OMB Circulars related to these Acts. This includes development of criteria and procedures for assessing the effectiveness and efficiency of the organization's financial management systems.

- coordinates and assists in planning business process value analysis, activity-based processes, product costing, work measurement studies, and surveys that cross organizational lines and involve the interrelationship of work processes in several operating segments; performs analyses of operations to evaluate efficiency; observes actual work flow and processes; and provides technical advice and support to solve complex problems in assigned functional areas.

- coordinates and participates with central guidance agencies in the extremely complex process of implementing cost systems.

- recommends new or modified managerial cost accounting policies and procedures.

- seeks and defines improvements for cost systems that will increase the efficiency and effectiveness of the agency.

- develops procedures for monitoring, coordinating, and facilitating the implementation of governmentwide programs, objectives, policies, standards, and systems in assigned areas of responsibility.

- instructs and assists employees in the application of business process value analysis, work-flow analysis, activity analysis, cycle time analysis, financial analysis, root cause identification, improvement opportunity analysis, performance/process measure analysis, and activity-based costing.

- provides leadership as a change agent by marketing core organizational financial management systems, continuous business improvements, and cost accounting/management concepts as building blocks for organizational changes.

- reviews new cost accounting regulations issued by the General Accounting Office (GAO), OMB, and the Department of the Treasury, and provides comments to the issuing authority.

- researches, analyzes, interprets, and provides technical advice on new and pending legislation, regulations, GAO, OMB, and the Department of the Treasury guidelines and requirements.

- provides leadership in the formulation, coordination, guidance, and implementation of cost accounting policies, standards, and/or systems.

- provides liaison and coordinates with other organizations and the agency on matters related to managerial cost accounting.

- conducts orientation or training and prepares supplementary information that is necessary to facilitate implementation of the regulations in the agency.

- develops or revises user manuals, handbooks, and training materials relating to cost accounting/management techniques to insure effective implementation of programs and systems being designed/modified.

- prepares responses to requests for cost accounting/management information from the Office of the Chief Financial Officer or other internal and external sources.

- provides leadership in the conduct of reviews, analyses, and studies of obligations and revenue in user fee programs, and recommends corrective action when programs deviate from full cost recovery.

- assists procurement officials in selecting contractors by reviewing and evaluating proposals. Reviews work submitted by contractor to ensure that project objectives are completed in a timely manner. Keeps supervisors/procurement officials informed of progress and brings significant problems to their attention.

- performs other duties as assigned.

Factors

Factor 1 - Knowledge Required by the Position

The position requires the following knowledge, skills, abilities, and other characteristics:

- professional knowledge of the federal statues and governmentwide policies, rules and regulations, theories and concepts, principles and standards, processes, and precedent-making decisions affecting managerial cost accounting.

- comprehensive professional knowledge of the principles, standards, practices, concepts, rules, regulations, policies, theories, and procedures related to managerial cost accounting, including in-depth knowledge of financial management principles as applied to the federal government; and accounting principles, standards, and related requirements.

- comprehensive knowledge of cost accounting theories, principles, and standards and the ability to apply knowledge to establishing and managing new approaches in applications of cost accounting techniques.

- general knowledge of the organizational structure of federal departments, agencies, bureaus, and offices; their programs and administrations.

- expert knowledge of research and analytical techniques, continuous business improvement and business process value analysis concepts, objectives, and methods for assisting and training personnel in these activities.

- ability to accommodate/integrate rapid and unanticipated changes in programs, policies, legislative requirements, and regulations promulgated by Congress and other government agencies.

- comprehensive professional knowledge and skills in communication and public relations techniques to represent and serve as principal spokesperson for areas of responsibility with agency/bureau/office heads, other federal government agencies, and the private sector.

- ability to effectively present and discuss financial and operational information, issues, and proposals and to engage in negotiations regarding the cost of operations and ways to improve operational efficiency and effectiveness.

- ability to articulate policies, regulations, and procedures related to cost accounting to ensure that views of the organization are fully considered in any governmentwide efforts to establish changes, or eliminate such policies, regulations, and procedures. Many important decisions with respect to policy and strategy must be made at the incumbent's initiative under intense pressures, such as those prevailing during high-level meetings with top officials of the agency.

- comprehensive professional knowledge and ability to plan, coordinate, and direct projects to ensure efficient conduct of managerial cost accounting programs.

- expert professional knowledge of accounting, program analyses, and management techniques, concepts, and principles; ability and experience in planning, organizing, leading, controlling, and evaluating managerial cost accounting programs.

- excellent oral and written communication skills that are necessary to translate and present financial and technical findings in a clear and concise manner, using meaningful terminology to both financial and non-financial, program and non-program, and technical and non-technical personnel at all levels of the organization.

- knowledge of ADP equipment (PC, micro, mini, and mainframe) and software packages such as electronic spreadsheets and graphical presentation packages, to capture, restructure, and present data, etc.

- ability to identify problems, generate methods of improving operations, and ascertain the financial and operational implications of proposed improvement opportunities.

- ability to consider the various components of developing, implementing, and maintaining a core financial management system; generate potential solutions for problems; and communicate the recommendations clearly and precisely.

- ability to gather, assemble, interrelate, and analyze raw data, originating from financial and workload measurement systems and draw conclusions.
- ability to develop and conduct formal training classes on the use of financial and accounting systems and interpretation of financial and operational data, as well as various computer software tools.

- ability to function independently as a specialist and as a member of the staff/project team.

Factor 2 - Supervisory Controls (For supervisory position only.)

The incumbent works under the general administrative and broad policy guidance of the supervisor(s). At developmental levels, supervision will range from close to intermediate. At the full performance level, the incumbent will work independently on activities/projects for which methods are well established. The supervisor(s) will make assignments in terms of broadly defined missions, functional goals, and objectives.

At the full performance level, the incumbent is responsible for carrying out established program priorities, analyzing resource needs, and ensuring fulfillment of courses of action to achieve goals. The supervisor(s) is advised of controversial issues and matters having broad programmatic impact. The incumbent is expected to exercise initiative and judgment in solving day-to-day problems. The incumbent has full authority to make important decisions on matters relating to assigned functional areas. Guidance from the supervisor(s) comes in the form of policy objectives.

The incumbent assists in planning work assignments, determining the nature and extent of coordination needed, and advises the supervisor or management of progress and/or controversial issues.

Completed work is technically authoritative and accepted without significant change. Review by the supervisor(s) is concentrated on the accomplishment of program/project objectives.

Factor 3 - Guidelines

At the full performance level, the incumbent will use judgment to select and apply information from a variety of sources. The incumbent works under broad policy guidance, applicable statutes, agency regulations, and existing general operating standards. Guidelines include laws, rules, standards, requirements, and directives of Congress, the President, OMB, GAO, GSA, FASAB, JFMIP, the Department of the Treasury (hereafter referred to as Treasury), and other agencies of the federal government. Other sources of guidelines include various internal management and/or operational documents, handbooks, instructions, directives, and other nationally recognized cost accounting and management techniques.

Broad judgment and considerable ingenuity are required to interpret existing guidelines, and prepare policies and procedures not previously established for financial management activities.

Creativity is required to develop guidelines and policies for the diverse needs of an agency.

Factor 4 - Complexity

At the full performance level, assignments are extremely complex and require extensive professional knowledge, skills, and abilities in the areas of assigned functional responsibility (including accounting, budgeting, and financial systems). A significant variety of tasks, methods, functions, projects, and programs is required to successfully design, develop, and implement the agency's expanding management controls, asset management, and financial systems programs. The incumbent is responsible for planning and analyzing a wide range of activities and for recommending changes and improvements by various functional areas within the organization. Exceptionally close coordination and open lines of communication with agency staff spanning a wide range of programs must be continually maintained.

Assignments require performing a broad range of management duties involving program administration, development of unique policies and guidelines, evaluating program effectiveness, developing new and revised systems and techniques, and providing technical expertise to a diverse population of federal and non-federal officials with different and often conflicting viewpoints.

The incumbent provides innovative and creative solutions to highly complicated technical managerial issues. Initiative, originality, and sound judgment are required. The incumbent must formulate and recommend far-reaching proposals, many of which have no precedent. Policies are critical in their implications and are of major importance. Work is often performed under tight deadlines and stressful conditions.

Factor 5 - Scope and Effect

At the full performance level, the work will affect the quality and cost of financial management systems serving the organization. It involves planning, organizing, leading, controlling, analyzing, and evaluating the overall effectiveness, economy, and efficiency of the agency's programs in assigned functional areas to assure that they respond to the organization's needs, and comply with the policies of national and central guidance agencies (OMB, GAO, GSA, Treasury, OIG, FASAB, JFMIP, and Congress) on subjects related to assigned cost accounting/management responsibilities.

The assignments performed by the incumbent are essential to the mission, objectives, and programs of the agency. The work has a continuing and long-term effect on program activities, cost of operations, and morale of employees. They will increase effectiveness and efficiency of financial management systems, reduce costs, and increase productivity.

Factor 6 - Personal Contacts

At each of the three grade levels, contacts are made with employees at all levels of the organization. At the full performance level, personal contacts are made with a wide range of high-level policy officials and financial managers inside and outside the government. Contacts include Assistant Secretaries, agency heads, private contractors, and staff-level officials of OMB, GAO, GSA, Treasury, FASAB, JFMIP, and OIG.

Factor 7 - Purpose of Contacts

At all grade levels, the purpose of the contacts is to give or exchange information; gather facts; define, explore, and resolve problems; provide services; motivate or influence people; negotiate for approval of recommendations; or justify, defend, or settle highly significant, controversial, and often very sensitive issues, such as realignment of basic policies. Typically, those contacted have diverse viewpoints or opinions concerning significant policies, procedures, practices, precedents, and objectives of assigned responsibilities. Extensive negotiations are often required to achieve a mutually satisfactory conclusion. In some instances, the incumbent deals with people who, because of different viewpoints, goals, and/or objectives, are skeptical, uncooperative, and unreceptive.

Factor 8 - Physical Demands

At all grade levels, the work is typical "office" work, generally involving considerable desk time with attendant walking, bending, and carrying light items. There are no special physical demands. Changes in work priorities and deadlines produce situations that can result in a great deal of mental stress for the incumbent.

Factor 9 - Work Environment

The work takes place in a typical office setting. Travel to other offices is required.

Bibliography of Costing Literature

Standards and Principles

Cost Accounting Standards Board, "Statement of Objectives, Policies, and Concepts", Cost Accounting Standards Guide, July 1992.

Federal Financial Management Improvement Act of 1996, P.L. (104-208), Sept. 1996.

General Accounting Office, Survey of Cost Accounting Practices at Selected Agencies, GAO/AFMD 90-17, Feb. 1990.

Government Performance and Results Act of 1993, 31 USC 1101-1115, P.L. 103-62, Aug. 1993.

Joint Financial Management Improvement Program, Exposure Draft: Core Financial System Requirements, FFMSR-1, Dec. 1993.

National Association of Accountants, Statements on Management Accounting, Englewood Cliffs, New Jersey: Prentice-Hall, 1990.

National Association of Accountants, Supplement 1: Statements on Management Accounting, Englewood Cliffs, New Jersey: Prentice-Hall, 1990.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 1: Accounting for Selected Assets and Liabilities, March, 1993.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 2: Accounting for Direct Loan Guarantees, July, 1993.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 3: Accounting for Inventory and Related Property, July 1993.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 4: Managerial Cost Accounting Concepts and Standards for the Federal Government, July 1995.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 5: Accounting for Liabilities of the Federal Government, Sept. 1995.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 6: Accounting for Property, Plant and Equipment, Nov. 1995.

Office of Management and Budget, Statement of Federal Financial Accounting Standards No. 7: Accounting for Revenue and Other Financing Sources and Concepts for Reconciling Budgetary and Financial Accounting, May 1996.

Office of Management and Budget, Statement of Federal Financial Accounting Concepts No. 1: Objectives of Federal Financial Reporting, Sept. 1993.

Office of Management and Budget, Statement of Federal Financial Accounting Concepts No. 2: Entity and Display, June 1995.

Office of Management and Budget, Circular A-25: User Charges, July 1993.

Handbooks

Ernst & Young, The Ernst & Young Guide to Total Cost Management, New York: John Wiley & Son, 1992.

Kaplan, Robert S., Advanced Management Accounting, Englewood Cliffs, New Jersey: Prentice-Hall, 1982.

Keller, Donald E., James Bulloch, and Robert L. Shulties, eds., Management Accountants Handbook, 4th ed., New York: John Wiley & Sons, 1992.

Cost Accounting Systems

Bernheim, Richard C., "The Right Way to Design a Cost Accounting System", Management Accounting, Sept. 1983, pp. 63-65.

Cooper, Robin, and Robert S. Kaplan, The Design of Cost Management Systems, Englewood Cliffs, New Jersey: Prentice-Hall, 1991.

Gauntt, James E., and Grover L. Porter, eds., "Management Information Systems", Management Accounting, April 1985, pp. 74.

Grady, Michael W., "Is Your Cost Management System Meeting Your Needs?" Journal of Cost Management, Summer 1988, pp. 11-15.

Kaplan, Robert S., "One Cost System Isn't Enough", Harvard Business Review, Jan.-Feb. 1988, pp. 61-66.

Sourwine, Darrel A., "Does Your System Need Repair?", Management Accounting, Feb. 1989, pp. 32-36.

Cost Allocation

Blanchard, Garth A., and Chee W. Chow, "Allocating Indirect Costs for Improved Management Performance", Management Accounting, March 1983, pp. 38-41.

Bost, Patricia, “Do Cost Accounting Standards Fill a Gap in Cost Allocation?”, Management Accounting, Nov. 1986, pp. 34-36.

Brunton, Nancy M., “Evaluation of Overhead Allocations”, Management Accounting, July 1988, pp. 22-26.

Cardullo, J. Patrick, and Richard A. Moellenberndt, "The Cost Allocation Problem in a Telecommunications Company", Management Accounting, July, 1987, pp. 22-26.

Carman-Stone, Marie Sandra, "Unabsorbed Overhead: What To Do When Contracts are Canceled", Management Accounting, April 1987, pp. 55-57.

Cook, Ian, and Angela M. Burnett and Paul N. Gordon, "CMP and Managing Indirect Costs in the Eighties", Journal of Cost Management, Spring 1988, pp. 18-28.

Cornick, Michael, William Cooper, and Susan B. Wilson, "How Do Companies Analyze Overhead?”, Management Accounting, April 1988, pp. 41-43.

Johnson, Douglas, Steven Kaplan, and Bill B. Hook, "Looking for Mr. Overhead: An Expanded Role for Management Accountants", Management Accounting, Nov. 1983, pp. 65-68.

Schwarzbach, Henry R., "The Impact of Automation on Accounting for Indirect Costs," Management Accounting, Dec. 1985, pp. 45-50.

Activity-Based Costing

Anderson, Bridget M., "Using Activity-Based Costing for Efficiency and Quality," Government Finance Review, June 1993, pp. 7-9.

Brimson, James A., Activity Accounting, New York: John Wiley & Sons, Inc. 1991.

Brimson, James A. and John Antos, Activity-Based Management, New York: John Wiley & Sons, Inc. 1994.

Cooper, Robin and Robert S. Kaplan, "Activity-Based Systems: Measuring the Costs of Resource Usage”, Accounting Horizons, Sept. 1992, pp. 1-13.

Cooper, Robin and Robert S. Kaplan, Lawrence Maisel, Eileen Morrissey, and Ronald Oehm, Implementing Activity-Based Cost Management, Montvale, NJ: Institute of Management Accountants, 1992.

Harr, David J., "How Activity Accounting Works in Government", Government Accountants, Winter 1992, pp. 15-24.

Kaplan, Robert S., "In Defense of Activity-Based Cost Management", Management Accounting, Nov. 1992, pp. 58-63.

Keohoe, Joseph, William Dodson, Robert Reeve, and Gustav Plato, Activity-Based Management in Government, Coopers & Lybrand, 1995.

Keys, David E., "Tracing Costs in the Three Stages of Activity-Based Management", Journal of Cost Management, Winter 1994, pp. 30-37.

Rotch, William, "Activity-Based Costing in Service Industries", Cost Management, Summer 1990, pp. 4-14.

Staubus, George J., Activity Costing for Decisions, New York: Garland Publishing, Inc. 1988.

Other

Anthony, Robert N., and David W. Young, Management Control in Nonprofit Organizations 3rd ed., Homewood, IL: Richard D. Irwin, 1984.

Brinker, Barry J. ed., Emerging Practices in Cost Management, Boston: Warren, Gorham & Lamont, 1992.

DeBruine, Marinus, and Parvezz R. Sopariwala, "The Use of Practical Capacity for Better Management Decisions", Journal of Cost Management, Spring 1994, pp. 25-31.

Harr, David J. and James T. Godfrey, "The Total Unit Cost Approach to Government Financial Management", Government Accountants, Winter 1992, pp. 15-24.

Horngren, Charles T., and George Foster, Cost Accounting: A Managerial Emphasis. 7th ed., Englewood Cliffs, New Jersey: Prentice-Hall, 1991.

Shank, John K. and Vijay Govindarajan, "Transaction-Based Costing for the Complex Product Line: A Field Study", Journal of Cost Management, Summer 1988, pp. 31-38.

Example Statements of Work

Attached are three Statements of Work related to implementing cost accounting concepts, standards, and systems in federal agencies. The first relates to reviewing and/or developing a cost assignment plan. Many agencies have some sort of cost accounting for fees, services, and reimbursable agreements already in place. From time to time, each agency looks at how these costs are accumulated and calculated for reporting and pricing purposes. The first Statement of Work (SOW) provides an outline of what an agency might prepare in order to have its current cost accounting plan reviewed or a new cost assignment plan developed.

The second SOW relates to conducting process value analysis and cost accounting development of pilot products and processes. Several agencies have taken a pilot approach to implementing managerial cost accounting with current reengineering, process analysis, and Total Quality

Management (TQM) initiatives. This SOW attempts to blend CFO-initiated cost accounting implementation with other program improvement initiatives already or soon to be started in an agency. The goal is to support and help integrate program and financial management objectives.

The third SOW shows the development and implementation of an entity-wide managerial cost accounting system. While the cost of such an undertaking might be prohibitive in one procurement, some smaller entities should consider this a sound option. As stated in the SOW, this option promotes FASAB and JFMIP requirements while exercising the appropriate judgment in meeting specific agency mandated needs. Predictably, this SOW will include significant involvement from program, financial, and information systems personnel during the delivery of contractual services.

In summary, all three Statements of Work can and should be blended together as appropriate to meet the specific needs of an entity. Each federal agency's approach to implementing managerial cost accounting will and should vary. One of the most practical approaches includes blending the SOW on the Cost Assignment Plan with the pilot Process Value Analysis to form the foundation for entity-wide implementation (the third SOW).

The attached SOWs fall within the scope of GSA's TQM contract GS-22F-0000. This procurement vehicle will help incorporate managerial cost accounting initiatives with other agency initiatives and provide a reasonably ready medium for acquiring contractor services.

(NOTE: As your needs vary, so will your approach to implementing managerial cost accounting. It is recommended that you review this Appendix in its entirety and make appropriate modifications for your specific needs. Some duplication may exist between this Appendix and other chapter/appendices within this Guide. This occurred because the content of this Appendix is intended to be an example of how you might develop a Statement of Work for your agency.)

Statement of Work

Background

Presently, Department X provides administrative support to various U.S. Government entities. The current system used to account for the costs of these services is the Administrative Financial System (AFS). AFS was introduced in 1977 as a general ledger system to provide overall financial management services and help identify costs incurred by Department X for providing these administrative support services. AFS data has been criticized by personnel inside and outside Department X because of the complexity related to using the system, untimely management reports, and what is perceived as inaccurate cost and pricing data. Moreover, under AFS, the operating units within Department X have borne disproportionate shares of the cost of delivering the administrative support services to Department X's customers. Additionally, as part of NPR, the President's Management Council (PMC) and FASAB recommended that the concept of a full cost recovery system be implemented to streamline and reduce the overall government cost of providing administrative support services.

As a result, Department X is seeking to have its overall cost assignment plan reviewed. While the Department feels confident of several cost assignments, it recognizes the need to develop more precise cost assignment plans for several key production areas. This SOW is intended to review and improve Department X's cost assignment plan, through an inter-entity effort, to improve the delivery of administrative support services by:

- providing all entities the opportunity to influence support activity decisions in pursuit of higher efficiency and greater effectiveness;
- identifying and acting upon opportunities for cost management by bringing more competition and market pricing into service provision;
- providing an equitable distribution of costs among units within the Department with a simple, effective, transparent, and rational costing process;
- providing managers of all entities more accessible and transparent information about the cost of all support operations, to better inform them about their priorities and choices; and
- defining performance standards for support services.

Department X uses all three of the following cost assignment methods. The review of the Department's assignment plan must include an assessment of how and if our use of the methods is appropriate. Department X's goal is not to expend significant resources to develop an assignment plan that is so precise it accounts for pencils and paper, while the cost of developing such a plan exceeds the value to the Department's managers.

Purpose and Objectives

The contractor shall review all components of Department X that assist in providing administrative services. Under our current cost recovery system, these costs come from our operating/program units only. No cost is currently included for preparing and collecting bills. All of our costs are funded entirely by the budget for Department X. The major categories of costs are: (1) building operating expenses for government owned/long-term leased properties; (2) local guard programs (non-residential); (3) community liaison offices; and (4) core administrative support, e.g., photocopying. The Department is considering offering other support services to our customers.

Contract Requirements

The contractor will survey our three major customers and all internal components as to the level of satisfaction associated with AFS-related costing and management data. The survey should determine if our cost assignment system is easy to use and equitable, and whether it provides information to support fee for services charges to our customers.

The contract requirements are:

- review the concepts underlying and basis for the AFS cost accounting system and provide a report covering the following:

    - ❖ does AFS provide the cost information to support the bill given to customers for use in the budget process?;
    - ❖ does AFS provide a reasonable accumulation of costs from our internal operating units?; and
    - ❖ does the AFS cost assignment plan accurately distribute costs from the Department's activities and processes to our products?;

- develop any recommended changes to the AFS system and the cost assignment model;

- validate the costing for our three major customers' Departments X, Y, and Z; and

- compare the Department's cost assignment methodology to FASAB and related JFMIP requirements, and report areas of compliance and non-compliance.

Deliverables

The following is a proposed schedule for the consecutive completion of the tasks set forth within this Statement of Work. "X" denotes the date of the kick-off meeting. All numbers refer to business days. The Department has 5 business days to review all "Drafts", the contractor has 3 business days thereafter to incorporate the Department's comments into "Final" deliverables. The kick-off meeting must be held within 15 business days of the contract award date.

Date	Deliverable Product/Milestone	Task #	Deliverable #
x+20	Draft Report on A	A.1	1
x+28	Final Report on A	A.1	2
x+30	Draft Report on B	B.1	3
x+38	Final Report on B	B.1	4
x+25	Draft Report on C	C.1	5
x+33	Final Report on C	C.1	6
x+35	Draft Report on D	D.1	7
x+42	Final Report on D	D.1	8

Expertise

The contractor shall provide established, current technical expertise in cost assignment and accounting in similar large, labor intensive, service-oriented environments. Contractor representatives must have experience in the federal government's Standard General Ledger, FASAB's Managerial Cost Accounting Concepts and Standards, and JFMIP's *System Requirements for Managerial Cost Accounting*.

Work Locations

The primary on-site location is the departmental headquarters in Washington, DC. It is anticipated the contractor will provide at least two full-time on-site analysts during the length of the project.

Travel

No travel is anticipated.

Technical Contact

Mr. X
(202) 555-5555
Chief, Office of Cost Management
Business Support Office

First Street, NW
Washington, DC 00000

Statement of Work
(Process Value Analysis)

Background

Department Y launched a quality program in 1986 following a difficult 1984-5 production season and the acknowledged erosion of external confidence and internal morale. The Commissioner assembled a Quality Council for research purposes that same year. In 1987, full employee involvement was sought through coordination with the National Employees Union (NEU). The Joint Quality Improvement Process (JQIP) emerged from this collaboration. In the following years, Joint Quality Councils with the power to form JQIP Teams were established in each of our 80 field offices and each functional area in the National Office. Successful JQIP Teams in the ensuing years have focused on areas ranging from production processing in service centers, to enforcement in the district, to personnel systems in headquarters. JQIP Team efforts have resulted in millions of dollars in cost savings and increased revenue.

Despite the numerous successes of the original quality system, a need was identified by senior management of the Department to revise and reenvision the approach to quality. Greater emphasis was needed on cross-functional efforts and continuous improvement. As a component of the overall Total Quality Management implementation effort at the Department, and in preparation of establishing an environment of <u>continuous</u> quality planning, control, and business improvement, the CFO is facilitating the process analysis of *core business systems* in the field offices and developing decision-support business and costing information.

This element of the new quality initiative (to include all business systems identified from the customer's perspective) is estimated to require several years for full completion. This SOW is for contractor assistance in the implementation of process value analysis at the Baltimore District Office site. This analysis is being coordinated with the overall quality and core business process

<u>Purpose and Objectives</u>

The purpose of this Statement of Work is to obtain technical expertise and on-the-job training in the continuous development and implementation of a service quality initiative. Particularly, this SOW requests contractor assistance in providing the Baltimore District Office with business process value analyses of a portion of the core business systems. This contract, as with core business processes as a whole, is intended to develop a better focus within the Department on customer values.

It is anticipated that the contractor and Department personnel will work as a team in completing the process value analysis. This working relationship will provide the Department on-the-job process value analysis training while specifically completing a quality initiative that directly supports core business processes and the implementation of total quality. As described in the following section, the contractor deliverables and tasks have been outlined to better meet

Departmental needs in conveying contractor knowledge to the Baltimore Office. At the conclusion of this contract, the Baltimore District Office will be better able to complete quality initiatives like process value analysis.

This contract will include teaching the team assigned to the Baltimore project how to complete process definitions, block diagrams, activity analyses, system architecture, activity-based costing, process costing rates, identification of District products, and product costing. Through these tasks, the team will gain insight on how to identify departmental products. Product identification is a fundamental requirement for a total quality organization, and the Department continues to strive to develop a product catalog.

This contract will provide Baltimore Office managers and staff with a better understanding of total quality management concepts and their role, as employees, in quality improvement. A commitment to continuous business improvement will be further cemented, while management actions are identified to continue movement toward quality goals.

Deliverables

The following deliverable products are directly related to this process value analysis of the Department's total quality implementation. The purpose of these deliverables is to provide the contractor and the Department a forum that promotes project completion while simultaneously providing on-the-job training for the Department's process analysis team.

All written deliverable products will be submitted in draft and final versions. The Department shall review all deliverables in accordance with the following narrative and attached schedule. If a deliverable is not accepted, the contracting office's technical representative will notify the contractor in writing, within 10 business days, and provide an explanation of any deficiencies. The contractor will have 5 business days to resubmit the deliverable and still meet the due dates in the attached schedule.

The Department has up to 5 business days, after the date of acceptance, to provide the contractor comments to be incorporated in the final deliverable. The Department will canvass other locations to get comments on the draft deliverables, ultimately distributing final deliverables Department-wide.

Business Process Value Analyses

The contractor shall provide detailed business process analyses and costing of the business processes within the Department at the Baltimore District Office. These analyses will assist the Department in identifying District products and will recommend business improvement opportunities with their associated costs. In addition to providing the deliverables, the contractor will ensure the team's ability to complete future process value analyses with minimal outside support. Below is the outline of the business processes.

- **Develop Process Information Worksheets** - These worksheets will state process outputs, customers, high-level activities, impact, and sources. The draft process worksheets report will be reviewed by the Department within 5 business days after acceptance, at which time Department comments will be provided for inclusion in the final deliverable.

- **Prepare Block Process Diagrams and Flowcharts -** These diagrams and flowcharts must accurately map activities within the process and require interviewing District Office personnel, analyzing Departmental organizational/informational material, and validating these results with process walk-throughs. The draft block process diagram and flowchart reports will be reviewed by the Department within 5 business days after acceptance, at which time Departmental comments will be provided for inclusion in the final deliverable.

- **Perform Activity, Value, Cycle Time, Cost Driver and Improvement Opportunity Analyses** - These analyses include coordination with Department-wide efforts in the core business processes approach, performance measurement, activity-based costing, and cost of quality methodologies. The activity value analyses include identifying value added and non-value-added activities, providing recommendations for eliminating/minimizing non-value added cost drivers, and optimizing value added cost drivers. These analyses will include a matrix associating drivers, non-value added tasks, effects, improvement opportunities and their costs, and measures. Improvement opportunities will be identified in the short-term (implementation within 12 months) and long-term (longer than 12 months) categories. The draft activity analysis and improvement opportunity reports will be reviewed by the Department within 5 business days after acceptance, at which time Departmental comments will be provided for inclusion in the final deliverable.

- **Develop Activity-Based Costing Architecture -** A cost flow paper and personal computer (PC) based model is required as well as identification of activity cost pools. General ledger analysis must be performed to gather source data and consolidate/condition these accounts. The contractor will complete a high-level software comparison and evaluation and recommend cost accounting software to best fit the needs of the Department. It is expected that contractor owned software will be used to complete this project, while the Department pursues software acquisition. The draft costing architecture report will be reviewed by the Department within 5 days after acceptance, at which time Departmental comments will be provided for inclusion in the final deliverable.

- **Complete Activity-Based Costing Rates** - The contractor will identify activity drivers and availability of data on these drivers; the driver data will then be collected and activity-based costing relationships must be developed. The draft activity-based costing rates will be reviewed by the Department within 5 business days after acceptance, at which time Departmental comments will be provided for inclusion in the final deliverable.

- **Complete Product Costing** - The contractor will review the Department's core business process model, recommending appropriate changes, to identify activities and associated costs for selected products and related processes. Bills of activities will be created including itemized activities, related output measurements, cost per unit measure, and total activity-based costs, and will be coordinated with the above activity-based costing architecture. The draft costing will be reviewed by the Department within 5 business days after acceptance, at which time Departmental comments will be provided for inclusion in the final deliverable.

- **Consolidate Final Products** - At the conclusion of the project, the contractor will provide the Department 30 hard copies of the consolidation of all final deliverables. Additionally, one electronic copy of each final deliverable is to be provided to the Department. The contractor will participate in the presentation of the final deliverables to Department executives and managers.

Deliverable and Milestone Schedule

The following is a proposed schedule for the consecutive completion of the tasks set forth within this SOW. "X" denotes the date of the kick-off meeting. All numbers refer to business days. The kick-off meeting must be held within 15 business days of the contract award date.

Date	Deliverable Product/Milestone	Task	Deliverable #
	Business Process		
x+20	Draft Process Worksheets Reports	1.1	1
x+35	Final Process Worksheets Reports	1.1	2
x+20	Draft Block Diagram Process & Flowchart Reports	2.1	3
x+35	Final Block Diagram Process & Flowchart Reports	2.1	4
x+35	Draft Activity Analysis Reports	3.1	5
x+50	Final Activity Analysis Reports	3.1	6
x+35	Draft Activity-Based Costing Architecture	4.1	7
x+50	Final Activity-Based Costing Architecture	4.1	8
x+40	Draft Activity-Based Costing Rates	5.1	9
x+55	Final Activity-Based Costing Rates	5.1	10
x+45	Draft Product Costings	6.1	11
x+60	Final Product Costings	6.1	12
x+60	Consolidated Final Products	7.1	13

Expertise

The contractor shall provide established, current technical expertise in conducting process analysis/activity-based costing systems in similar large, labor intensive, department-oriented environments. Contractor representatives must have over two years experience in hands-on implementation of such analyses, including activity definitions; cycle time definition and analysis; activity value definition and analysis; cost driver definition and analysis; process improvement measurements; improvement opportunities; identifying best practices; identifying cost and process efficiencies; and general ledger conditioning.

The contractor is required to use the following software applications: Word Perfect, Lotus 123, Microsoft Access, and ABC Flowcharter.

Work Locations

The primary on-site location is the District Office in Baltimore, Maryland.

Travel

The project will entail extensive work in the Baltimore District Office with local contractor personnel support to minimize travel costs.

Technical Contact

Mr. X
(202) 555-5555
Chief, Office of Cost Management
Business Support Office
First Street, NW
Washington, DC 00000

Statement of Work
(Development and Implementation of Managerial Cost Accounting System)

Background

The agency was created in 1986 to be a centralized provider of administrative services for over 10,000 employees located at the three Washington headquarters buildings. Services provided include procurement, personnel management, worklife wellness, building management, printing, graphics, library, learning and development, security, space management, ADP systems development and information technology operations, and computer center and telecommunications.

Staffing consists of about 320 people and funding is about $115 million. Fund accounting is provided by another agency from Washington using the Departmental Accounting and Financial Information System (DAFIS), which is maintained in Oklahoma City. Most of the funding is done under a business capital fund with an annual limited appropriation. At the present time, some additional funding is provided through other appropriations.

Cost accounting and billing for most of the services are done on a simple assignment formula, and costs are totally recovered each month. Detailed cost accounting records are, however, maintained for the information technology operations. In addition, a very-simplified unit pricing system is being used for printing.

Purpose and Objectives

The scope of this SOW covers services that are required to identify DAFIS improvements and off-the-shelf managerial cost accounting system alternatives to satisfy the agency's requirements. The purpose of this SOW is to a have the contractor review the agency's current cost accounting practices, assignment, and ad hoc systems, and subsequently develop an action plan for agencywide implementation of a managerial cost accounting system. The objectives include complying with the requirements of appropriate governing bodies and corresponding regulations, e.g., FASAB, JFMIP, and OMB.

Specific Work Requirements

The agency was created as a self-financing business enterprise to deliver support services on a fee-for-service basis. While there are several service activities in the agency, only two now operate on a fee-for-service basis. They are the computer center and printing. All other services activities are billed to customers using a relatively simple cost assignment formula.

The computer center has a standalone cost and billing system that provides monthly billing detail to DAFIS for manual input. The in-house printing operation maintains a unit pricing system, which also interfaces with DAFIS. While DAFIS does have some cost accounting capability, it is presently used by the agency solely for financial accounting and billing purposes.
To satisfy its intended purpose, the agency must be accountable to its customers. Charges for services must be supportable, and should be allocated in a cost effective manner while providing the appropriate level of cost incentives for customers to use the services wisely. Accordingly, a needs assessment and market survey need to be completed so that managerial

cost accounting alternatives can be fully examined before any system investment decision is made. Ideally, the system decided will be implemented as close to October 1, 199X as possible.

The tasks to be completed under this contract are summarized in the following paragraphs.

Task 1--Survey and document the existing systems used to accumulate and assign costs and prepare bills. This is to be a general familiarization survey of the computer center and printing "systems." It is not intended to be a detailed and formal systems documentation effort. The contractor is expected to provide a briefing to the Contracting Officer's Technical Representative (COTR) on the results of this survey.

Task 2--Conduct managerial cost accounting needs assessment. Sources to be contacted include:

Need	**Contact**
Managerial ADP Systems	Agency Heads of "Lines of Business" The Office of Systems Development and Information Technology Operations
Executive Decision-making	Agency Director
Board of Directors Oversight	Secretary's Management Council
Generally Accepted Cost Accounting Principals	Department's Chief Financial Officer
Billing	Customers/Clients to include program, budget and finance officers
Interface with the Existing Agency Financial Accounting System	Administration

The contractor is not expected to do an extensive amount of research. Material will have already been gathered by the COTR from the sources noted above, and provided to the contractor. The contractor is expected to add its own list of needs for a managerial cost accounting system from JFMIP requirements as well other appropriate sources, and is expected to prioritize the needs into those "required" and those "desired." This information is to be presented to the COTR in writing along with any conditions and assumptions.

Task 3--Review of all the organization's activities to determine how they should be accounted for and billed. At issue is whether all activities should be "fee-for-service" and fully supported with detailed cost accounting, or only selected activities would warrant cost accounting with the remainder billed on a simple assignment formula. Extensive research and analysis are not required. The COTR will provide information and recommendations already gathered from the agency's customer organizations. The contractor shall report its recommendations and conclusions in writing to the COTR.

Task 4--Using the products generated in Tasks 1 through 3, the contractor shall review the DAFIS cost accounting system to determine whether it can satisfy all "required" needs. Each "required" and "desired" need shall be matched against the DAFIS cost accounting system to determine whether the system can satisfy the need. In all instances where the contractor determines the need cannot be satisfied, the contractor is requested to provide specific reasons. The contractor is also asked to offer suggested alternatives to satisfying the agency's requirements (still using DAFIS), including time and cost estimates.

Using the products generated in Tasks 1 through 3, the contractor shall perform a general survey of other federal cost accounting systems and off-the-shelf commercial systems. The contractor shall compare agency needs (both required and desired) with the capabilities of the systems selected for a representative market survey.

The contractor shall provide a report of its findings to the COTR. The report shall contain the contractor's assessment of whether DAFIS will satisfy each of the agency's managerial cost accounting needs, "required" and "desired." If the contractor considers DAFIS capable or potentially capable, the contractor shall provide time and cost estimates to incorporate the agency's managerial cost accounting within DAFIS. The report shall also contain the results of the survey. Alterative systems that can satisfy the agency's requirements shall be presented along with cost (one-time and recurring) and time estimates. No recommendations can be made for products or systems the contractor owns or markets.

Task 5--After the department decides on what managerial cost accounting system to implement, the contractor will provide an implementation plan and on-site support to manage implementation of the system.

<u>Deliverables and Schedule</u>

Required Tasks:

Task 1--A briefing of the contractor's assessment of the present means of accounting for and managing costs in the agency.

Due Date: 1 week after award

Task 2--A report listing detailed needs/requirements for a managerial cost accounting system. These requirements will be arranged in priority order under two categories--required and desired.

Due Date: 2 weeks after award

Task 3--A list of all the agency's activities with the contractor's cost accounting recommendations for each activity, specifically whether the activity should be "fee-for-service," a simple assignment, detailed cost accounting, or some variation or combination of the above.

<u>Due Date: 2.5 weeks after award</u>

Task 4--A report of: 1) Capability of DAFIS to provide managerial cost accounting for the agency; and 2) the results of the general market survey. The report shall contain cost and time estimates for each cost accounting alterative.

<u>Due Date: 8 weeks after award</u>

Task 5--If required, the contractor shall provide a detailed action plan for full implementation of the selected system.

<u>Due Dates</u>*:* Draft Implementation Plan*:* <u>2 weeks after task award</u>
Final Implementation Plan*:* <u>3 weeks after task award</u>

Progress reports*:* <u>Weekly</u>

<u>Roles and Responsibilities</u>

Business Support Office -- The COTR for this contract. This office provides for the planning, budgeting, and resource management of services and oversees the day-to-day financial management of the center.

Lines of Business -- will identify operational management cost accounting requirements. These offices are the actual providers of operational services.

Office of Systems Development and Office of Information Technology Operations -- will identify ADP systems interface requirements for the managerial cost accounting system.

Administration, Office of Budget and Financial Management -- will identify business process interface requirements with the existing financial accounting and billing systems. This office now provides financial accounting services to the agency.

Secretary's Management Council -- provides executive departmental oversight of the agency.

Financial Management Council -- provides guidance and recommendations on departmental financial and accounting systems.

Expertise

All contractor professional staff must have extensive knowledge and experience in managerial cost accounting, charge back, business process analysis, and business systems implementation. The team leader must have prior experience in conducting market surveys and implementing off-the-shelf managerial cost accounting systems and the integration of these systems with other corporate systems in a revolving fund environment.

Work Locations

Task performance shall be primarily at the Agency, First Street, NW, Washington, DC 00000. No travel outside the Washington, DC, metropolitan area is anticipated. The government will provide space and telephone for one (1) person identified as the team leader and two team members. The team leader must be resident at the agency for the duration of the contract.

Technical Contact

Mr. X
(202) 555-5555
Chief, Office of Cost Management
Business Support Office
First Street, NW
Washington, DC 00000

User Needs Questionnaire

(The following user needs questionnaire was developed by the Internal Revenue Service in its efforts to build a managerial cost accounting system. The names of individuals and organizational units have been deleted. It is provided here as an illustration of how a questionnaire can be used to assess user needs for cost information. For more discussion, please refer to Chapter 4, Assessing Current Environment.)

DEPARTMENT XYZ
WASHINGTON, D.C. 20224

MEMORANDUM FOR: All Board Covered Executives
Chief Counsel
Regional Counsel
Associate Chief Counsel

FROM: John Smith

SUBJECT: Managerial Cost Accounting System, "User Needs Questionnaire"

Enclosed is the cost management "User Needs Questionnaire." We are requesting your completion of this questionnaire. Additionally, we encourage you to make a copy of the questionnaire and distribute it to your managers for their simultaneous completion. All responses are requested by March 20, 199x.

Your responses to the questionnaire are sought as a critical step in developing an effective cost management system and are essential in identifying the need for cost management information. Upon return of all questionnaires from service-wide distribution, the results will be tabulated, and a "User Needs Report" will be prepared this summer for your distribution.

If you have any additional questions or comments, please do not hesitate to contact xxx (names and phone numbers provided).

Introduction

The Assistant Commissioner (Finance)/Controller is requesting your participation in an entity-wide survey of managers to determine user needs for a managerial cost accounting system. We are taking a "teamwork" approach toward developing this cost management system, and as a manager and user of cost information, your input is extremely important. The Financial Management Division in the Controller's organization manages this cost project. Cost management is a key portion of the current effort to implement improved financial management systems in our organization. All responses to the attached questionnaire will be used in developing the managerial cost accounting system. We are distributing the questionnaire directly to board-covered executives and counsel, requesting that copies of the questionnaire be given to managers within your organization for their simultaneous completion. Please return completed questionnaires to the address provided on the following page by March 20, 199x.

Objectives and Timetable

The primary objectives of a managerial cost accounting system are to: (1) gather financial and operational information that reflects the performance of activities; and (2) supply management with additional relevant information to plan, manage, control, and direct the activities of our business. Traditional cost systems emphasize the *cost* part of cost management; our objective is to focus on the *management* part. Our purpose is to provide management with relevant information needed to judge how well cost management efforts are working. Are we as an institution improving processes?

Our short-term goal is to test a prototype cost management system in the XYZ Regional Office by September 30, 199x. A second short-term goal is to develop a similar prototype for district offices in 199y. The ultimate goal is to start service-wide implementation of the managerial cost accounting system during fiscal year 199z.

We have contracted the consulting team of (names of consulting company) to assist in developing the managerial cost accounting system. Controller staff and the consulting team will be conducting interviews with a representative sample of the questionnaire respondents, evaluating all responses, and then issuing a summary report. Managerial cost information needs will be integrated with concepts employed by comparable public and private sector organizations. A resulting cost accounting methodology report will be issued in the summer of 199x. The consulting team will provide cost accounting support and guidance as we develop the XYZ Regional Office prototype. The resulting managerial cost accounting system will be integrated with the new general ledger and budget execution systems that are currently being installed by XYZ (name of a consulting company). In fact, we plan to use that firm's cost management module for our system.

Specific Instructions

- Please complete the questionnaire from the perspective of your immediate work group (the organizational unit you manage and the people you supervise).

- We recommend previewing the questionnaire in its entirety before responding to individual questions.

- Answers will be used only to assist in the development of a managerial cost accounting system; they will not affect you or your work group.

- We are seeking responses from a large cross-functional representation of managers; therefore please distribute questionnaires to your managers (e.g., division/office/branch chiefs) for their independent and simultaneous completion.

- Please answer all questions. If you have no opinion or relevant experience on a particular question, please indicate the "N/A" or "Not Sure" response.

Due Date: Friday, March 20, 199x

Mailing Instructions: Please complete the questionnaire as soon as possible, but not later than 3/20/9x, and return in the envelope provided to: XXX.

Questions/Comments: If you have questions concerning this questionnaire or the cost management project, please contact xxxxx, or xxxxx (names and phone numbers provided). As a final note, if you have remarks or comments concerning particular questions, space has been provided at the back of the questionnaire for this purpose.

<u>Thank you in advance for your assistance in completing this questionnaire</u>.

General Questions

1. What is your:

   Name (OPTIONAL)

   Title

   Phone Number (OPTIONAL)

2. What is your organizational level? Please check the appropriate box. Note: If you are responding to these questions in the place of another (action position), please check acting position or level and respond in that capacity to the questionnaire.

   National Level

   1. [ ] CIO, CFO, Assistant to the Commissioner, Assistant to the Deputy Commissioner, Chief Inspector, AREO, Program Manager (TSM)

   2. [ ] Chief Counsel, Deputy Chief Counsel, Associate Chief Counsel, National Director of Appeals

   3. [ ] Assistant Commissioner

   4. [ ] Division, Program, or Computing Center Director

   5. [ ] Branch or Office Chief

   6. [ ] Other____________________

   Regional Level

   7. [ ] Regional Commissioner, Assistant Regional Commissioner, Regional Inspector

   8. [ ] Regional Counsel, Deputy Regional Counsel, Assistant Regional Counsel, Regional Director of Appeals
   9. [ ] Division Chief
   10. [ ] Other____________________

District or Service Center Level

11. [ ] Service Center Director, Compliance Center Director

12. [ ] District Director

13. [ ] Division, Branch, or Office Chief

14. [ ] Other____________________

3. Estimate the following costs and percentages of your immediate work group:

Labor	$__________	__________%
Support	$__________	__________%
Not Sure	$__________	__________%
TOTAL	$__________	_______100%

4. How important is cost management to your performance evaluation?

Not Important	Somewhat Important	Extremely Important	N/A
1 2	3 4 5	6 7	8

5. Should cost management be important to your performance evaluation?

1. [ ] Yes
2. [ ] No
3. [ ] N/A

6. Should cost management be important in the performance evaluation of people you supervise?

1. [ ] Yes
2. [ ] No
3. [ ] N/A

7. A managerial cost accounting system can accumulate cost data based on predetermined products for which a separate measurement of costs is desired. What do you consider to be the primary products, programs, projects, or services of your immediate work group?

PRODUCTS:____

PROGRAMS:____

PROJECTS:____

SERVICES:____

OTHER:____

8. What percentage of the total work effort of your immediate work group is directed toward the following items?

1. Products	__________%
2. Programs	__________%
3. Projects	__________%
4. Services	__________%
5. Other	__________%
6. Not Sure	__________%
TOTAL	_______100%

9. Does your immediate work group currently use any guidelines to identify its products, programs, projects, or services?

1. [ ] Yes
2. [ ] No
3. [ ] N/A

If yes, please list the primary guidelines that come to mind:

____

10. Activities are aggregations of tasks (whether performed by people or machines) to satisfy the needs of internal or external customers. Please list five to ten <u>core</u> activities of your immediate work group:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________

Processing Questions

11. What activities of your immediate work group are performed in an assembly line or "pipeline" manner?

____
____
____

12. What activities within your immediate work group are infrequent and/or unique, but significant enough to cost manage? (Examples: special or reimbursable projects).

____
____
____

13. If you have cost information, how valuable is the information?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

14. If you do not have cost information, how valuable would it be?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

15. How valuable do you consider pre-established standards, by group, in assisting performance measurement and planning?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

16. What would be some useful bases upon which to develop standards for your immediate work group? Check ALL that apply.

1. [ ] Labor hours
2. [ ] Labor dollars
3. [ ] Total cost (i.e., cost of all related efforts)
4. [ ] Number of returns processed
5. [ ] Number of telephone calls satisfied
6. [ ] Number of cases completed
7. [ ] Number of service requests processed
8. [ ] Others:
9. [ ] Measurement standards would not be useful
10. [ ] N/A

Allocation Questions

The following paragraph relates to questions 17 through 19:

One concept of cost accounting is responsibility accounting. This approach provides activity and cost information by manager for those costs that directly impact their work group. Reports generated using this concept identify activities and costs that can be impacted by the managers' influence (controllable costs).

17. How would you rate the difficulty of holding decision-makers responsible for costs of their immediate work group?

Easy	Moderate	Difficult	N/A
1 2	3 4 5	6 7	8

18. How valuable would information about your immediate work group's controllable costs be?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

19. How clearly identifiable are controllable costs in your immediate work group?

Not Clearly	Somewhat Clearly	Very Clearly	N/A
1 2	3 4 5	6 7	8

20. How valuable do you consider budget reprogramming ability?

Not Valuable	Somewhat Valuable	Very Valuable	N/A
1 2	3 4 5	6 7	8

21. Do you agree or disagree that the costs of your immediate work group could be directly charged to its specific activities, and/or allocated based on pre-defined causal relationships?

1. [ ] Strongly Agree
2. [ ] Agree
3. [ ] Not Sure
4. [ ] Disagree
5. [ ] Strongly Disagree

22. Are you aware of any significant costs that are currently charged to your immediate work group that might more appropriately be charged to other units based on causal relationships?

1. [ ] Yes
2. [ ] No
3. [ ] N/A

If YES, please list the type of cost and the associated activities below.

____

____

____

23. Are you aware of any significant services provided to your immediate work group that are currently performed by other units that should be included in the direct costing of your unit?

1. [ ] Yes
2. [ ] No
3. [ ] N/A

If YES, please list the type of services provided below.

____
____
____
____

System Questions

24. What existing information systems or other sources of information, such as resource allocation and planning, do you primarily rely upon to support decision-making?

Please check ALL responses that apply in Column A, and rate the corresponding value of information in Column B.

COLUMN A	COLUMN B			
	Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1. [ ] WP&C	1 2	3 4 5	6 7	8
2. [ ] TIMIS	1 2	3 4 5	6 7	8
3. [ ] EMIS	1 2	3 4 5	6 7	8

Quality Questions

25. Would cost management information that integrates quality measures with quantity measures be valuable?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

26. What are the primary quality measures for the activities performed by your immediate work group? Check ALL that apply.

1. [ ] Timeliness
2. [ ] Accuracy/Error Rate

3. [ ] Customer Satisfaction
4. [ ] Reliability
5. [ ] Reduction of Taxpayer Burden
6. [ ] Voluntary Compliance
7. [ ] Productivity
8. [ ] Rework
9. [ ] Scrap
10. [ ] Other____________________

Reporting Questions

27. What are the relevant focuses and corresponding difficulty levels for reporting cost information relating to your immediate work group?

Please check ALL responses that apply in Column A and rate the corresponding difficulty of reporting in Column B.

COLUMN A		COLUMN B			
		Not Difficult	Somewhat Difficult	Extremely Difficult	N/A
1.	[ ] Products	1 2	3 4 5	6 7	8
2.	[ ] Programs	1 2	3 4 5	6 7	8
3.	[ ] Projects	1 2	3 4 5	6 7	8

28. Would a report presenting the costs by major subcategories of your immediate work group's activities be valuable?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

29. What would be the most useful reporting frequency for cost management information?

1. [ ] Daily
2. [ ] Weekly

3. [ ] Monthly
4. [ ] Quarterly
5. [ ] Yearly
6. [ ] N/A
7. [ ] Other____________________

30. The cost management system should identify activities down to what level of your organization? Check ONE.

1. [ ] Office level
2. [ ] Division level
3. [ ] Branch level
4. [ ] Section level
5. [ ] Group level
6. [ ] Post of Duty
7. [ ] N/A Other
8. [ ] Other____________________

<u>Supplemental Questions-National Office</u>

31. How similar are your cost management information needs when compared to those of other National Office organizational units?

Not Similar	Somewhat Similar	Extremely Similar	N/A
1 2	3 4 5	6 7	8

32. What differences in information needs do you anticipate as compared to other National Office organizational units? Check ALL that apply.

1. [ ] Frequency
2. [ ] Detail Level
3. [ ] Focus (i.e., product, geographic area, and appropriation)
4. [ ] Type of Report (i.e., budget vs. actual, variance)
5. [ ] No differences are expected
6. [ ] N/A

7. [ ] Other____________________

33. Please estimate the percentage of effort from your immediate work group that is directly related to supporting the activities of:

1.	National Office	____________%
2.	Regional Offices	____________%
3.	Service Centers	____________%
4.	District Offices	____________%
5.	Computing Centers	____________%
TOTAL		_________100%

34. Do you agree or disagree that your costs should be specifically identified and allocated to activities of the organizational units on the previous page?

1. [ ] Strongly agree
2. [ ] Agree
3. [ ] Not sure
4. [ ] Disagree
5. [ ] Strongly disagree

Please explain your response:

____

____

____

35. Are there any specific topics that should be addressed in a managerial cost accounting system relating to the information needs of outside stakeholders such as Congress, GAO, OMB, Treasury Department, etc.?

____

____

____

<u>Supplemental Questions-Regional Offices</u>

36. Please estimate the percentage of effort from your immediate work group that is directly related to supporting the activities of:

1. National Office __________%
2. Regional Offices __________%
3. Service Centers __________%
4. District Offices __________%
5. Computing Centers __________%
TOTAL _______100%

37. Do you agree or disagree that your costs should be specifically identified and allocated to activities of the above organizational units?

1. [ ] Strongly agree
2. [ ] Agree
3. [ ] Not sure
4. [ ] Disagree
5. [ ] Strongly disagree

Please explain your response:

____

____

____

Supplemental Questions-District Offices

38. Please estimate the percentage of effort from your immediate work group that is directly related to supporting the activities of:

1. National Office ____________%
2. Regional Offices ____________%
3. Service Centers ____________%
4. Your District Office ____________%
5. Other District Offices ____________%
6. Computing Centers ____________%
TOTAL _________100%

39. Do you agree or disagree that your costs should be specifically identified and allocated to activities of the above organizational units?

1. [ ] Strongly agree
2. [ ] Agree
3. [ ] Not sure
4. [ ] Disagree
5. [ ] Strongly disagree

Please explain your response:

____

____

____

Supplemental Questions-Service Centers

40. Please estimate the percentage of effort from your immediate work group that is directly related to supporting the activities of:

1.	National Office	___________%
2.	Regional Offices	___________%
3.	Service Centers	___________%
4.	District Offices	___________%
5.	Computing Centers	___________%
TOTAL		________100%

41. Do you agree or disagree that your costs should be specifically identified and allocated to activities of the above organizational units?

1. [ ] Strongly agree
2. [ ] Agree
3. [ ] Not sure
4. [ ] Disagree
5. [ ] Strongly disagree

Please explain your response:

____

____

____

42. How valuable would it be to develop complexity factors since product complexity may affect costs?

Not Valuable	Somewhat Valuable	Extremely Valuable	N/A
1 2	3 4 5	6 7	8

Ending Questions

43. How could cost information help you manage better (e.g., better financial reports, and performance bonuses/appraisals, critical success factors, retainage of savings, reprogramming ability)?

____
____
____

44. Do you have any comments concerning cost management or the implementation of a managerial cost accounting system?

____
____
____

45. Would you like to be part of our cost management prototype effort?

1. [ ] Yes (Please make sure we have your name and phone number)
2. [ ] No

46. Would you like to be interviewed as part of the User Needs Assessment phase?

1. [ ] Yes (Please make sure we have your name and phone number)
2. [ ] No

Conclusion

Thank you for taking the time to complete this questionnaire. Your contributions are highly valued. We will keep you informed of our progress throughout the project. If you have any questions or concerns in the meantime, please feel free to contact us.

Listing of Cost Accounting Software

(Following is a list of commercial off-the-shelf managerial cost accounting systems software that might meet your needs. This list is provided for informational purposes only and is not intended to be all inclusive. None of the following software applications are endorsed by either the Governmentwide Cost Accounting Committee or the CFO Council. The sources of this list are The Journal of Cost Management, which annually reviews cost accounting/ABC software; the 1997 GSA Financial Management Systems Software Schedule, and responses to the JFMIP Commerce Business Daily (CBD) announcement for parties interested in supplying cost accounting to the federal government.

NOTE: As your needs vary, so will your approach to implementing managerial cost accounting. It is recommended that you review this Appendix in its entirety and select several applications for further research to confirm that they meet your needs. All software evaluation should be conducted in accordance with the JFMIP System Requirements for Managerial Cost Accounting.)

Software Packages Evaluated in *The Cost Management Journal* (reviewed in 1995 or 1996)

ABC Management Budget Software	***Activa***
CASSO	CMS-PC
Cost Control	DaCapo
EasyABC Plus	HyperABC
NetProphet	Oros Version 1.1
Process Manager	Profit Manager

FMSS Multiple Award Schedule

American Management Systems, Inc.
Digital Systems Group, Inc.
KPMG Peat Marwick LLP
Oracle Corporation
Rel-Tek Systems & Design, Inc.
Computer Data Systems, Inc.
ICF Information Technology, Inc.
Keane Federal Systems, Inc.
Orion Microsystems, Inc.

JFMIP CBD Announcement (Firms not listed above. Please note some firms listed below offer only consulting services, not software.)

Advanced Solutions
ARIAS Technologies, Inc.
Bradson Corp.
Danial EKE and Assoc., PC
Federal Sources
Information Resource Associates
People Soft
Precision Analysis
7-C Software
Telstar Corp.
US Army Cost & Economic Analysis Center
AMD
Automation Counselors
Computer Associates International, Inc.
Data Pro
Hyperion Software
Lieber Corp.
Plato Computer Corp.
SAP America, Inc.
Source Diversified, Inc.
T. Curtis & Company. PC

Agencies Which Have Initiated Managerial Cost Accounting (as of Jan. 1, 1997)

Contact	Agency	Telephone	Type of Cost Methodology	Software
Jo Cohen-Langlois	U.S. Treasury's Customs Service	202-927-0310	ABC	HyperABC
Dave Rebich	U.S. Treasury's Financial Management Service	202-874-7073	ABC	HyperABC
Howard Katz	GSA	202-501-3348	ABC	HyperABC
Leonard Fique	SSA	410-965-8619	Direct Tracing	Homegrown
Steve Varholy	NASA	202-358-0978	Job Order	Currently Evaluating

Lessons Learned
Case Study of Agency Implementing Managerial Cost Accounting
General Services Administration

Overview

This report summarizes the U.S. General Services Administration's (GSA) efforts to date to improve its managerial cost accounting capabilities through the application of Activity-Based Costing (ABC) as well as cost management concepts and techniques.

GSA initiated its cost management efforts in January 1996. Since that time, GSA has completed an assessment of its short-term and long-term training needs, designed, and delivered cost management training to 1,000 of its executives and managers nationwide, identified its general-level cost information requirements, and initiated cost management pilot projects for several of its major organizational components. Additional cost management pilot projects are being planned for start-up and completion during 1997.

GSA has accrued significant benefits from its cost management initiatives. Cost training efforts have educated agency management about the importance and relevance of managerial cost accounting. Several managers have been transformed into cost management "champions" and have become actively involved in cost management pilot projects. In addition, the two initial cost management pilots yielded new kinds of relevant cost information to aid program managers.

For the future, GSA plans to continuously improve and add to its cost management capabilities and related financial and program management systems. Particular emphasis will be placed on continuing to provide immediate, short-term benefits for program managers while also supporting ongoing, longer-term efforts within the Office of the Chief Financial Officer (CFO) to upgrade and modernize GSA's automated financial management systems.

Introduction

GSA provides space, supplies, transportation, telecommunications, and other products and services for nearly every department within the federal government. GSA is headquartered in Washington, D.C., and is located in 11 regions nationwide. GSA currently employs about 15,700 employees and has an annual budget of nearly $13 billion.

However, only $155 million of GSA's budget - less than 1.5% - is provided by Congressional appropriations. More than 98% of GSA's budget comes from reimbursable funding, with the federal agencies that use GSA's products and services paying for these services directly. Because of how GSA is financed, it is critical that GSA obtain adequate funds from its customers to recoup all of its direct and indirect costs of doing business and maintain a sufficient level of working capital to pay for ongoing operations. More importantly, GSA needs to maintain customer satisfaction in terms of its price and performance, or the customers could conceivably seek alternative service providers. Emphasis on customer satisfaction is likely to become more critical in the future, given current trends toward increasing non-mandatory sourcing and outsourcing/cross-servicing within the federal government.

GSA is continuing to change its culture and ways of doing business to be more flexible and customer-focused, and has already become a leader in cutting red tape and reducing operating costs. To continuously improve and reengineer itself, GSA's strategic goals call for improving 1) customer service; 2) operating efficiency; 3) governmentwide policy and oversight; 4) cost-effectiveness of program activities; 5) security of federal facilities; and 6) partnerships with its unions and employees.

Another catalyst for change was provided by the National Performance Review (NPR). This initiative prompted GSA to reassess all of its 16 major business activities by using a specially developed review methodology, the Federal Operations Review Model (FORM). Each FORM review compared each of GSA's distinct business lines with appropriate private sector benchmarks to determine whether each business line should be continued, privatized, eliminated, or spun-off to another agency. These reviews required gathering considerable cost information.

As a by-product of FORM reviews and other cost reduction initiatives, GSA's senior management quickly acknowledged the business need to provide better and more relevant cost information for agency program managers. GSA's CFO also acknowledged the need to leverage and coordinate such efforts with other plans to upgrade and modernize GSA's financial management information systems. These collective experiences provided the impetus for GSA to initiate its cost management initiatives in early FY 1996.

Cost Management Goals and Strategies

GSA's primary cost management goals are to:

1. provide GSA program managers with relevant cost information that can be used to support GSA's strategic business goals;

2. enhance GSA's capabilities to recover the full cost of doing business, and use cost information to improve competitiveness, and customer satisfaction;

3. meet federal managerial cost accounting and related financial reporting requirements; and

4. identify business line cost information requirements and in so doing, provide the various inputs that are essential for improving and upgrading GSA's managerial cost accounting and financial management systems.

These goals clearly reflect GSA's strong commitment toward upgrading its managerial cost accounting and cost management capabilities. Moreover, GSA's cost improvement approach reflects the need to meet both internal and external cost information requirements by upgrading and more fully integrating GSA's financial and program management systems. The Agency's general strategy is to start identifying needed costing capabilities (e.g., labor distribution, better overhead allocation methods, and costing of services, etc.) while endeavoring to produce short-term improvements, which in turn can be leveraged to provide for more fully integrated and cost effective financial management systems for the future.

Cost Initiatives

To achieve these goals, GSA's CFO devised a set of strategies to place additional emphasis on improving managerial cost accounting and cost management within GSA. This approach called for several major cost initiatives to be implemented in a phased and incremental manner.

Major initiatives included assessing cost management training needs, providing cost management training, gathering internal and external general-level cost information requirements, initiating ABC Management (ABC/M) pilot projects, and leveraging the results of these pilots to improve GSA's financial management systems relating to managerial cost accounting and related financial reporting.

Cost Accounting History

Assessed Cost Management Training Needs (1/96 - 3/96)

To assess its needs for cost management training, GSA used contractor expertise to identify its short-term and long-term training needs and survey key GSA management officials to assess their cost training needs. To facilitate this process, representatives from each major GSA component and regional location were selected to provide essential input and coordination for their respective organizations.

As a result of their collective efforts, a consensus was reached regarding: whether to provide cost management training across the agency; who should attend the training, what kinds of cost management training should be provided, and when such training should be offered. The results of this training needs assessment were documented and clearly indicated that cost management training would benefit the agency by:

1. demonstrating to GSA employees that Agency management was serious about its commitment to change and its willingness to transform GSA's culture to a more customer-focused and cost-focused organization;

2. providing GSA employees with a better appreciation of how cost information can be used to enhance program management and support GSA's strategic business goals;

3. educating GSA employees about managerial cost accounting and its relevance to program management planning, analysis, and decision-making;

4. providing a needed forum for discussion about how the agency is changing and solicit essential feedback and input from GSA personnel regarding the current state of cost and performance information within the agency; and

5. obtaining needed input regarding GSA's internal cost information requirements so that these requirements could be addressed through subsequent financial management systems improvement efforts.

Accordingly, the decision was reached to provide cost management training first for senior managers and then for mid-level managers, senior program analysts, and other key program and financial staff. A target audience of about 1,000 GSA employees nationwide was identified.

It was also determined that short-term training needs (i.e., training to be provided over the next 6 months) should focus on promoting cost awareness; explaining basic managerial cost accounting and cost management concepts; educating GSA personnel about several planned initiatives to improve GSA's cost information and related financial management systems; emphasizing the importance and relevance of identifying the full cost of doing business; and illustrating how the latter information can improve operating efficiency and effectiveness, customer satisfaction, and operating performance.

The training needs assessment also recommended that any long-term training efforts (i.e., more than 6 months in the future) focus more fully on using ABC/M principles to benchmark against the competition and improve operating performance. However, the primary emphasis was placed on implementing a short-term training initiative and then assessing its results before proceeding to finalize any long-term training needs for the agency.

Provided Cost Management Training (5/96 - 8/96)

After the training needs assessment report was completed and reviewed within the Agency, management decided to offer two different short-term training courses on cost management. A half-day course was designed specifically to meet the training needs identified for GSA's senior executives (i.e., members of the Senior Executive Service and a few selected senior managers). This course focused primarily on explaining GSA's short-term and long-term plans to enhance its cost information capabilities and related financial management systems; presenting the basic managerial cost accounting and cost management concepts; illustrating the benefits of getting involved as a "champion" of ABC/M within the agency; and how such "champions" could begin an ABC/M pilot project within their organizations.

The second training course was designed to last 2 days and was tailored to meet the needs of senior, mid-level, and first line GSA managers and supervisors, as well as selected program and financial analysts. This course focused primarily on the same subjects noted above, but also included a special video presentation on ABC/M and a workshop where training participants could actually construct a preliminary step-by-step ABC model for their own organization(s). In addition, training class participants were surveyed regarding their functional requirements for cost information as they related to performance measurement, quality, accountability, reporting, future training needs, cost accumulation and allocation, and GSA's current and emerging cultural/environmental climate.

Training results clearly exceeded expectations. About 1,000 GSA personnel were trained. Over 92% of all training participants rated the training as being effective or better. The success of this training was also evident from the number of requests received to initiate cost management pilot projects for various GSA business lines. These requests were made by both headquarters and regional managers for GSA's various business lines.

Identified General-level Cost Information Requirements (5/96 - 12/96)

As noted previously, cost management training provided a convenient opportunity to solicit input from over 1,000 GSA officials regarding their business requirements for more relevant cost information. A key assumption incorporated into the cost training was that if GSA personnel could be more knowledgeable about managerial cost accounting and cost management concepts from the outset, they would be better able and more willing to identify their general functional requirements for better cost information. A related assumption was that if the training audience was kept better informed and educated regarding managerial cost accounting and cost management concepts and benefits, as well as GSA's plans to enhance its financial systems in this regard, they would do a better job in contributing various types of feedback required to support systems planning and development efforts.

These assumptions proved to be valid. A significant amount of information regarding cost requirements (e.g., work activities, desired cost objects, reporting needs, etc.) was gathered as a by-product of the cost management training efforts. This information was compiled as the last training class activity and required about 2 to 3 hours per class to gather, discuss and document. A separate report was prepared to summarize these information requirements, and the product was shared with several senior level GSA officials, including the CFO.

The internal cost requirements identified by training class participants clearly indicate that GSA's program and financial managers require more relevant cost information to help them manage their activities, programs, and organizations. Such information is needed to improve the pricing of goods and services provided to customers; enhance business performance; and exceed customer-servicing expectations. More specifically, particular types of cost information were deemed necessary to collect and report for internal use within GSA. These included the unit cost and profitability of business processes, products and customers; benchmarking and trend analysis; cycle time to perform business processes; value added analysis; responsibility accounting and assigning costs based on responsibility for cost/benefits received; providing additional "cuts" of cost information by desired cost object (e.g., building, square footage, business activity, customer, type of space utilized, etc.); strategic planning and price/rate setting; the allocation of indirect or overhead costs; the distribution of labor costs to specific activities and other cost objects (e.g., products/services, customers, etc.); and the identification of cost drivers that cause costs to be incurred by various activities (i.e., resource drivers) or cost objects (i.e., activity drivers).

Initiated Cost Management Pilot Projects (9/96 - Ongoing)

The successful cost training effort led to numerous requests from GSA managers or cost management "champions" to initiate cost management pilot projects for their own business lines and organizations. Lacking the resources to respond to all of these requests, it was determined that such requests needed to be prioritized in accordance with GSA's primary cost management goals, as stated previously. The primary objectives in initiating these pilots were to:

1. support GSA's strategic business interests while also addressing GSA's primary cost management goals;

2. maintain the organizational momentum for change generated by the initial training efforts;

3. demonstrate the applicability and practicality of cost management concepts to specific GSA business lines;

4. gather additional information regarding specific GSA business line requirements for relevant cost information;

5. determine the feasibility of using ABC software in conjunction with GSA's core accounting system;

6. expose GSA program and accounting professionals to the value of implementing ABC and ABC/M as program and financial management tools in support of business objectives;

7. support longer-term financial management system improvement efforts within GSA by identifying general-level cost information requirements while also serving as a catalyst to enhance GSA's current costing capabilities in the areas of labor distribution, overhead allocation, ABC/M, and performance measurement; and,

8. demonstrate some short-term results for GSA's program managers and provide some immediate help to them in addressing their identified needs for more relevant cost information.

To facilitate the start-up of these cost management pilot projects, several supporting actions were taken by GSA's CFO. One of these actions was to develop a boilerplate task order that could be easily tailored by any GSA business line to obtain needed contractor support. This support was intended to provide the necessary expertise to do the up-front ABC/M analysis of the business to identify all essential work activities, desired cost objects, and cost drivers. This information was then used to develop a working ABC model. Another important action taken by the CFO was to select a singular, off-the-shelf ABC software product to assist ABC model development throughout GSA. A third critical action taken was to develop an overall strategy and formulate priorities for each proposed cost management pilot project. In general, priorities were assigned based on several considerations, including the perceived degree of project importance to GSA and the business line, managerial support and feasibility from a technical standpoint, and value from a strategic and long-term viewpoint.

Another key in conducting the pilots was to form multi-disciplined project teams comprised of team members from various affected organizations. Typically, pilot teams included representatives from contractor, program, financial, union, and Office of Inspector General (OIG) to plan, coordinate and conduct all required project activities. This organizing approach helped to provide the sponsoring business line organization with a sense of project ownership and involvement. It also ensured that all points of view were considered in planning and constructing the ABC/M model for the affected GSA business line. Each pilot team was generally comprised of 2 to 3 business line representatives, 1 or 2 contractor personnel, 1 representative from the Office of the CFO, 1 or 2 representatives from the OIG, union representatives (as selected by each affected union), and additional liaison personnel from each region included within the scope of the pilot project.

Within GSA, the first two cost management pilots selected were for the Public Building Service's (PBS) Office of Property Acquisition and Realty Services (PARS) and its Office of Property Disposal. These business lines were selected for the first pilots primarily because of strategic business reasons, strong management support for doing cost management pilots, and because the results that were expected to be obtained from each pilot were expected to directly benefit both the business line as well as ongoing efforts to enhance GSA's financial management systems.

These two pilot projects were conducted in accordance with the following methodology:

1. assemble the team and prepare a project plan;

2. orient all business line managers and staff regarding the project;

3. identify all major work activities and tasks within the organization;

4. identify all desired cost objects to be included in the ABC model;

5. determine how labor time is to be captured and assigned to activities;

6. construct a time survey or appropriate labor distribution capability;

7. determine all resource costs to be included in the ABC model;

8. determine all resource cost drivers (to drive resource costs to activities);

9. determine all activity cost drivers (to drive activity costs to cost objects);
10. gather cost driver data and input this data into the ABC model;

11. use the ABC software to run the ABC model and evaluate results;

12. do value-added and cycle time analyses to identify improvement opportunities;

13. present the results to management and revise the model as needed;

14. ensure the model is sufficiently documented and plan for roll-out; and

15. identify additional opportunities for continuous improvement.

GSA's first pilot project teams were able to complete these steps within 4 months. The length of time required to complete a pilot generally depends on its defined scope of activities and cost objects, how precisely labor time information needs to be captured by activity and cost object, and how readily cost driver information can be identified and gathered for the ABC model. However, pilot project efforts can be expedited by leveraging available contractor expertise, training personnel on use of the ABC software prior to the start-up of the project, and using a cross-functional team of dedicated resources.

Results to Date and Future Plans (As of 1/97)

As a result of the cost management pilot projects completed to date, GSA has significantly improved the relevancy and quality of its cost information for two business lines. Perhaps, more importantly, the Office of the CFO has provided these business lines with critical financial information that can be used to achieve its business objectives and improve operating performance on an ongoing basis. This latter benefit represents the essence of cost management; namely, to first identify the true costs of doing business and then leverage this new cost information to streamline costs, maintain competitiveness, and improve customer performance. Cost management and ABC make all of these things possible by presenting cost information in new ways that enable managers to see their costs by work activities and other desired cost objects for the first time. But ABC/M concepts go much further. Namely, they integrate cost information with business process analysis and cycle time analysis techniques so that managers can more meaningfully analyze and improve their business processes and by so doing, increase customer satisfaction. Therein lies the real value and challenge in implementing ABC/M within both the public and private sectors.

Future cost management plans call for several more cost management projects to be conducted within each major organizational component of GSA. The primary goals of these efforts will be to more fully support the cost information needs of GSA business lines in the short-term while using this information to develop appropriate financial management system capabilities for GSA in the future.

> **For additional information regarding GSA's ongoing cost management initiatives, please contact Howard Katz, U.S. General Services Administration, Office of the Chief Financial Officer, at (202) 601-3348.**

Lessons Learned

Case Study of Agency Implementing Managerial Cost Accounting

U.S. Treasury's Customs Service

Introduction

In recent years, several factors have motivated the U.S. Customs Service towards developing and implementing a managerial cost accounting system. Extensive statutory and legislative guidance has been established mandating federal agencies to implement effective cost accounting systems. The Customs and Trade Act of 1990, the Chief Financial Officers' (CFO) Act of 1990, the National Performance Review (NPR), the Federal Accounting Standards Advisory Board (FASAB), and the Government Performance and Results Act of 1990 (GPRA) all provide guidance and/or mandate some form of cost accounting system within federal agencies. In addition, prior reviews and audits cited material deficiencies with regard to the lack of cost analyses and reporting of cost information on the operations of the Customs Service. Unanswered Congressional inquiries on user fees and tighter federal budgets also compelled the Service to develop and implement a managerial cost accounting system.

Two initial attempts to develop a cost management information system began in FY 1993, when the Service, assisted by contractors, developed a cost and user fee model to comply with the provisions of the Customs Trade Act of 1990, and to calculate the cost of certain inspectional services. This model was intended to meet the requirements of the CFO Act, resolve the cited material deficiencies, and provide cost information in support of GPRA. This effort provided considerable progress toward the development of cost accounting capabilities. However, it was directed toward meeting specific and immediate needs. There was no strategy or funding for coordinating and integrating existing capabilities to create a single managerial cost accounting system.

In FY 1995, Congress approved increases for initial improvements to financial management accountability and control, and directed the Service to provide a report on its financial improvement plans with the FY 1996 budget submission. Congress approved the FY 1996 budget submission making it possible for the Service to embark on the long-term project of designing a comprehensive approach to developing and implementing a full managerial cost accounting system. This system would be designed to capture full cost, which would provide managers at all levels with the decision-support information needed to optimize performance and meet all externally imposed requirements for tracking costs and performance data.

Also in FY 1995, the Service underwent a major reorganization, which steered away from management by organization to management by process. The Service wanted to select a costing methodology that would fit the newly formed process management and considerably expand the cost model developed in FY 1993. In addition to fitting well with process management, research showed that the Activity-Based Costing (ABC) methodology provides quantitative decision support information for resource use, full costing for managers throughout the organization, assistance in evaluating program results, compliance with legislative acts, and accurate cost information for external parties (i.e. Congress). This methodology also supplies baseline cost information for ascertaining user fees and preparing the annual budgets. Having decided on the ABC methodology, the Service selected the PC-based off-the-shelf software package HyperABC as its managerial cost accounting system software.

Constructing a Cost Management Information System - What's Been Done

The Cost Management Group (CMG) at the Customs Service has been given the responsibility of developing the Cost Management Information System (CMIS). The construction of this system has been based on three phases of implementation: (1) defining the requirements, (2) establishing a pilot or test program, and (3) expanding the pilot to a full cost management system.

Phase I - Requirements Definition

The CMIS will not succeed if its benefits are not identified and accepted by the primary users of its output. Therefore, it was critical that those users be involved in defining the requirements of the system. Information gathering sessions were conducted through interviews and group discussions with personnel in the field and headquarters areas. These sessions provided the opportunity to determine the expectations of the system users while also developing the functional and technical requirements needed for its design.

Phase 11 - Building a Pilot Program

During the information gathering sessions described above, an implementation approach was developed that identified the particular area for piloting the system. That area was the Commercial Air Passenger Process, part of the Core Passenger Process at Customs. This process was chosen for numerous reasons, which included its high-level of visibility, level of process definition, ability to provide immediate results, and support, by both management and the union. Upon selecting the particular area to pilot, a board of directors was established to provide guidance and oversight for the project. This board is made up of management officials from all levels of the process and convenes approximately every ten to twelve weeks to discuss the issues involved in development of the CMIS.

Designing the cost model for the pilot required the identification and definition of the sub-processes and activities performed in the Commercial Air Passenger Process. This was accomplished through discussions with managers and employees involved in the process. First the Passenger Process Owner identified the sub-processes, then an information gathering session was held with Chief Inspectors and Process Owners from twelve airport locations across the country to list and define the activities under those sub-processes. This session was critical not just for gathering information for the model, but for educating the potential users of the possible benefits to be derived from the CMIS.

Using the list of activities defined earlier, a survey was developed to gather data on time spent by inspectors performing those activities on the job. This manual means of capturing labor data was chosen for the short-term needs of the pilot. During FY 1997, the CMG began collecting this information using a statistical sampling method in which quarterly surveys were sent to a random group of employees for all locations where Passenger Processing activities are performed. To simplify this process, other methods of capturing labor data electronically through existing scheduling and time card systems are being researched.

The survey (page I-15) listed the activities and provided space for each employee to allocate their time by hours. All time in a regular eighty-hour work period had to be accounted for with another survey filled in for overtime. Surveying for overtime hours allowed us to identify those dollars paid to employees that regularly worked in another process, but worked overtime in the Passenger Process. Upon approval of the board to utilize the survey, it was then administered to inspectors during site visits to three airport locations chosen as the initial test sites for the pilot. Responses to the survey were entered into a spreadsheet, analyzed for reasonableness and completeness, then downloaded to a database for input to the model.

Allocating the costs of other types of resources (i.e., equipment, rent, data processing, etc.) required the identification of other types of drivers and a means of acquiring that information. Due to time constraints in establishing the pilot, many of these resources were allocated based on FTE levels within the organizations involved. The goal is to develop more accurate methods of spreading those costs back to the activities that use them, such as allocating rent based on square footage or charging ADP costs by usage. Research is being conducted to determine the best drivers for assigning these costs and from what systems this information will be acquired.

In addition to information on time usage and resource drivers, the HyperABC model required numerous other types of data to generate its output. This included information on organizational structures within the Service, revenue and expense data, and workload statistics for spreading activity costs to the Customs Service's outputs or products. All of this required downloading data files from various operational and historical databases owned and operated by different organizations within the Service. Coordination with those organizations is crucial to the success of the pilot and the expansion of the CMIS.

Revenue treatment was another important factor in developing the CMIS pilot. Some of the revenue generated by the Passenger Process was of a reimbursable nature and, therefore, was used to offset the related expenses. The remaining revenues will be identified with the processes that produce them, enabling the comparison of the costs of those activities with the revenues they generate.

The final step in constructing the pilot CMIS concerned the choice of a reporting tool. Pilot Lightship was chosen to fill this need. It is compatible with HyperABC and is already in use by other systems within the Service that would be linking to the CMIS. Although HyperABC contains very useful reporting features (pages I-16 – I-18), it was determined that they were not adequate to meet all the needs of the managers. It should be understood that the users of the CMIS would have access to the reporting tool only for drawing down cost information. Only members of the CMG will be permitted to access the cost model within HyperABC, therefore, controlling who can effect changes to the model and its components. Several screens have been designed in Lightship to be used for viewing cost data in various formats and at many organizational and process levels. Great care has been taken to make querying for cost data in the CMIS a user-friendly experience. The screens have been designed with click and go buttons and easy to read charts, graphs, and spreadsheet type reports that can be downloaded to other applications for additional analysis and printing. Pages I-19 – I-21 provide a glimpse of what the CMIS reporting tool looks like for the pilot program.

Phase III - CMIS Implementation

During Phase III of the CMIS Project, the ABC model constructed for the pilot will be expanded to incorporate the remaining Core Processes (i.e.: Trade and Outbound) and all other aspects of the Service. The goal is to formulate a system that encompasses all costs that the Service incurs. This will be accomplished in much the same manner as that for the pilot. Facilitated information gathering sessions will be held with representatives of the other processes and their supporting offices to identify their activities and outputs. Resources will then be mapped to these activities within the model using surveys and other methods to be defined later. The costs of performing all activities within the Service will be directly allocated to the three Core Processes to the fullest extent possible.

From a technical standpoint, Phase III will entail the development of new Lightship screens, development of automatic procedures for updating and testing the system, utilization of an ORACLE database for systems data storage, and integration with other systems being developed at the Service. In addition, appropriate user training will be provided.

Important Development Issues

There remain many issues yet to be dealt with during the CMIS development, some of which have already been discussed above, such as deciding upon the best method for collecting labor data and determining more accurate resource drivers to allocate the costs of resources to the activities under each process. Following is a brief listing of some of those issues.

- Many processes, strategies, and mission support functions lack a clear definition of their relationships--a problem that must be solved by management.

- All activities do not fit within the sub-processes identified; in some cases, there is overlap. In addition, many sub-processes and activities have not been fully defined for all remaining offices.

- Certain functions performed by the Service do not relate to the Core Processes at all. Functions of the Office of Investigations and the Office of International Affairs fall into this category.

- In the short-term, all costs will be captured and reported at the subprocess level, but a decision will have to be made as to when to begin collecting and reporting costs at a lower level. Inevitably, this means that CMIS will be required to capture information at a level that will meet the needs of all users. For example: Port Directors may wish to have activity-level data to track related overtime costs, Customs Management Center (CMC) Directors may want sub-process level data to analyze their costs, Process Owners at Customs' Headquarters could require sub-process and/or process-level costs to do comparative analysis, and the CFO's Office may need any one of these levels of data for reporting costs and preparing annual budget requests.

- Output/performance measurements need to be clearly defined and integrated into the cost model.

- The exact direction to take regarding how to expand the system from the pilot stage will need to be determined. Should we expand through each Core Process as a whole or take on smaller parts of the organization that include operations in all three of the Core Processes and some mission support functions as well?

- The method(s) of allocating certain intra-agency and overhead costs needs to be determined in order to capture full cost information (i.e., Department of the Treasury costs spread over each of its Bureaus, etc.)

Summary

Successful completion of this project will require an action plan that takes into account the priority needs of the Customs Service for cost information. There are a number of factors which will have to be considered in making these decisions, including deadlines that must be met, relevance of the data for management purposes, requirements for Activity-Based Budgeting, performance measurement objectives, etc. This will involve virtually all aspects of the Service and require working with numerous sites Servicewide. This is further complicated by high-level issues that must be resolved and by attempts to address multiple needs for cost information, both internal and external. It may not be possible to satisfy all requirements for cost information at the same time, and it may not even be practical to address all priority needs concurrently, but there is a common ground for everyone and, with proper development, this system will find it.

If you would like more information about the Custom Service's Management Information System, contact Ms. Jo Cohen-Langlois at (202) 927-0310.

Lessons Learned

Reporting Case Study
U.S. Treasury's Bureau of Printing and Engraving

Synopsis

Management reporting at the Bureau of Engraving and Printing has been a central aspect of the management planning, implementation, and control process for over twenty-five years. Managerial cost accounting reports are a critical component of the Bureau's budgeting, pricing, and performance measurement systems, in addition to their providing relevant and timely information to program managers. These reports, therefore, fulfill multiple purposes in meeting the needs of a diverse group of Bureau managers and technical staffs.

The Bureau's actual managerial cost accounting reports have undergone significant changes over the past twenty-five years to respond to new conditions and the increasingly different needs for information from Bureau managers and technical staffs. The requirement to continually update management reports will not change in the future, but will likely intensify to meet the challenges of a government that works better and costs less.

Background

The Bureau of Engraving and Printing is the component of the Department of the Treasury responsible for the production of government securities. It manufactures all United States paper currency, about 50% of U. S. Postage Stamps, and various other secure documents such as identification cards for the military, and naturalization and citizenship cards for the Department of Justice. Currency manufacturing operations, which began in 1862 and stamp operations which began in 1894 account for over 99% of the Bureau's workload.

The Bureau operates under authority of Public Law 81-656, which established the current revolving fund. This law, in addition to Public Law 95-81, directed the Bureau to be self-sustaining by charging customer agencies the total direct and indirect costs to produce their products, including administrative costs and amounts necessary to fund the acquisition of new equipment and technology. As a result, the Bureau does not receive an annual appropriation from Congress. In FY 1996, sales to customer agencies exceeded $450 million.

The Bureau of Engraving and Printing has prepared managerial cost accounting reports for use by internal managers for over twenty-five years. These reports are used to track actual cost performance to ensure that costs are in line with prices as well as to identify and prioritize situations that require prompt management attention. Managerial cost accounting reports are also used in budget formulation, pricing development, and performance measurement systems. To meet these and other needs that have arisen, the Bureau's reports have undergone a profound evolution over the past twenty-five years.

Late 60s to mid 1970

In the 1960s and early 1970s, the Bureau produced monthly actual cost reports for each responsibility segment in the production of currency, postage, and special products. These reports showed a six month comparison of total cost for each segment broken down by direct and indirect labor, benefits, direct and indirect materials, contract services, travel, training, rent, equipment depreciation, and allocated costs for utilities and services provided by other Bureau components. The major drawbacks in the usefulness of these reports were the inability to identify the effect of volume changes on segment costs, the exclusion of non-financial performance measures, the lack of identifying variances and their causes, and the lack of timeliness caused by reliance on the Bureau's largely manual accounting system.

Mid 70s to mid 1980

During the mid 1970s, the Bureau enlisted the aid of a major accounting and consulting firm to assist in designing, developing, and implementing an improved system of managerial cost accounting reports. The major outcome of this effort was the development of unit cost standards and a reporting system that compared actual unit cost to the standard unit cost. The following report is an example of the type of reporting provided by this system:

Figure 6

MONTHLY COST OF PRODUCING CURRENCY
MONTH OF JUNE 1979

	--- COST/1000 ---		- FAVORABLE (UNFAVORABLE) VARIANCE -				
OPERATION	STAND.	ACTUAL	TOTAL	EFFIC.	RATE	VOLUME	SPEND
PAPER	$3.37	$3.35	$0.02	$0.00	$0.02	$0.00	$0.00
BACK INK	1.02	0.95	0.07 0.05	0.02	0.00	0.00	
FACE INK	0.73	0.69	0.04 0.03	0.01	0.00	0.00	
PRINT BACK	0.98	0.94	0.04 (0.01)	(0.01)	0.07	(0.01)	
PRINT FACE	1.00	0.97	0.03 (0.02)	(0.01)	0.07	(0.01)	
	$7.10	$6.90	$0.20	$0.05	$0.03	$0.14	$(0.02)
EXAMINE	1.40	1.38	0.02	0.02	(0.01)	0.01	0.00
OVERPRT	1.96	1.75	0.21	0.06	0.00	0.08	0.07
VAULT	0.22	0.21	0.01	0.00	0.00	0.00	0.01
	$3.58	$3.34	$0.24	$0.08	$(0.01)	$0.09	$0.08
SPOILAGE	0.70	0.60	0.10	0.07	0.03	0.00	0.00
TOTAL	$11.38	$10.84	$0.54	$0.20	$0.05	$0.23	$0.06

As shown above, these reports provided variance analysis for the following variances: efficiency, material usage, rate/price, volume, and spending. Additionally, the implementation of this reporting system resulted in the institutionalization of monthly cost and production reporting meetings with the Bureau's senior staff, program managers, and resource managers. These meetings were held to discuss and evaluate actual cost results, and identify areas in which corrective actions were needed.

While this system was an improvement over the previous reporting system, it became apparent over time that there were still shortcomings to the system. The reliance of the system on detailed variance analysis, the exclusion of non-financial performance measures, and a continuing lack of timeliness were major shortcomings. Program managers found variance analysis difficult to understand, and even more difficult to use in identifying how to improve operating results. However, they determined that volume had a significant impact on total unit cost due to the high capital costs and indirect support costs of the Bureau. Thus, they were able to maximize individual performance results by concentrating on increasing the units of production, most often by working overtime. While this would reduce the reported unit cost of production, it also resulted in creating large inventories of in process and finished goods. Due to the intrinsic value of the Bureau's products, the large inventories resulted in high inventory carrying costs, including constructing and staffing additional vaults, adding additional accountability staffs, and costs of obsolescence. Thus, the reports reinforced dysfunctional behavior.

Mid 80s to mid 1990s

In order to address the above concerns, in the mid 1980s the Bureau departed from detailed variance analysis and began reporting on performance events that caused the major unit cost variances. Reports became more focused on non-financial performance measures, such as machine productivity, utilization of machine capacity, and production yield. Reports continued to provide a comparison of unit costs, but their major purpose was to provide a cost perspective to interpret performance results.

While the reports were an improvement over those provided in the early 80s, they did not provide trend information. Consequently, in 1995, the Bureau's cost reports were supplemented with charts and graphs depicting performance-related information. An example of the type of information reported is presented on the following pages.

The Bureau has found that the current reporting system, which combines financial and non-financial information, is much more useful for planning, controlling, and improving operations. Attention is focused primarily on the aspects of production that managers and first-line supervisors can address, and are meaningful to them. And, by focusing on these, the Bureau is better able to direct attention and resources to areas that need improvement.

Lastly, the Bureau has also learned that the real value of managerial cost accounting reporting is not just related to what is reported and how, but also to the timeliness of the information. A report showing costs that are 100% accurate, but is released 3 weeks after the fact is much less useful than a report showing a 95% accuracy level, but is released less than one week after the fact. Thus, being directionally correct, as well as relevant and timely, is viewed as much more important to managerial cost accounting reports than absolute accuracy. While this view does not apply to external, financial accounting reports, it is often one of the key culture changes to successful internal reporting of managerial cost accounting information.

Conclusion

Above all, effective managerial cost accounting reporting cannot be implemented with the objective that it will remain constant over time. Reports must be flexible if they are going to meet the ongoing needs of government managers. Thus, it can be said that at the Bureau of Engraving and Printing, managerial cost accounting reporting is a continually evolving part of the management process and will enable the Bureau to meet the changing needs of its executive staff, program managers, and technical staffs.

Managerial cost accounting reporting is also differentiated from external financial reporting due to fundamental differences in the needs of the targeted audience and the requirement for absolute accuracy. While external users of financial information are mostly concerned with accuracy, comparability and consistency, internal users are mostly concerned with timeliness, relevance, and directionally correct information.

Following are examples of several types of reports currently being used by the Bureau.

FINANCIAL REPORT FOR MONTHLY PRODUCTION AND COST MEETING
MONTH OF SEPTEMBER 1996

	FY 1996	SEP 96	SEP 95	YEAR TO DATE COST	
	STANDARD	ACTUAL	ACTUAL	FY 1996	FY 1995
DC: **$1.00 NOTES**	$16.00	$15.16	$15.07	$15.37	$15.27
HIGH DENOM.	$19.25	$18.97	$22.10	$19.68	$20.91
$100.00 NOTES	$37.61	$37.84	N/A	$36.00	N/A
WCF: **$1.00 NOTES**	$16.39 ytd $16.97 *	$16.77	$16.28	$16.44	$15.87
HIGH DENOM.	$19.67 ytd $20.05 *	$20.28	$21.59	$19.69	$20.89

PROGRAM HIGHLIGHTS

ITEM	COMMENTS	PAGE #
CURRENCY		
Spoilage	WCF - High Denomination Notes: Spoilage increased 1% to highest level for the year, (and above standards). DC - High Denomination Notes: Spoilage decreased over 1% to within standard, and close to lowest level for FYT 1996. DC - $100 Notes: Spoilage increased by about 7% due to start up associated with resumption of production for first time since June 1996.	5
Ink Mileage	Green ink mileage continued to increase for DC, to the highest level for the year.	6
Productivity per Machine Shift	All DC operations experienced a decline in September due to change over to $100 notes. WCF operations productivity increased.	7-8
Inventory	DC: In process inventory levels decreased to target ranges, meeting 1 to 3 day goal between operations. WCF: In process inventories continued to decrease, although slightly above target levels.	11 12
Productivity	Positive 3% BEP-wide, with gains in Currency production	24-26
FTE Usage	FTE usage continues downward trend	27

Lessons Learned

Reporting Case Study
U.S. Treasury's Financial Management Service

Introduction

The Financial Management Service (FMS) is a bureau of the Department of the Treasury. FMS' main businesses consist of making a majority of the federal government's payments, performing the federal government's central accounting, developing financial management policy and guidance for the federal government, and collecting debt owed to the federal government. In short, FMS is the federal government's financial manager.

FMS began implementing a bureau-wide Activity-Based Costing (ABC) model in May 1995. The initial model was completed in October 1995 and FMS is currently in the process of refining the activity dictionary, resource drivers, and the data capturing systems. The activity dictionary, resource drivers, and data capturing systems make up the "infrastructure" of the ABC system. We feel that it is essential to have a solid infrastructure in order to report timely, reliable, and consistent cost data to management.

At this time, most of the reporting capability is in the planning phase, because we have concentrated on the ABC system infrastructure. However, we have developed some standard reports that have been distributed throughout the organization. The following two reports provide some insight into the types of cost reports that FMS developed with the initial ABC model, and FMS' plans to report the cost data throughout the organization.

FMS' ABC System

FMS conducted two ABC/Business Process Analysis (BPA) pilot projects prior to the FMS-wide ABC project. One of the major benefits was that FMS gained the valuable knowledge and skills necessary to complete an ABC project. After the pilot projects were completed, FMS began the bureau-wide ABC project. FMS put an ABC Project Team together. The key is not that FMS used a team approach, but that the team was a cross-functional team made up of members from all of FMS' program areas, the Comptroller's Office, and contractors.

The ABC model was completed in the following phases: (1) develop activity dictionary; (2) rationalize and confirm activity dictionary; (3) labor costing of activities; (4) resource costing to activities; and (5) product costing. All of the data gathered during each phase was loaded into the HyperABC software package that FMS selected for the ABC system. HyperABC is the "engine" that provides all of the calculations necessary to allocate and reallocate resources based on the driver information loaded into the software. HyperABC's strong points are in the "engine" capacity. In addition to the HyperABC "engine" FMS also uses HyperLink, which provides the capability to download any data from HyperABC to lotus spreadsheets for customized reporting capabilities.

FMS' ABC Reports

FMS developed two reports using HyperLink with the initial ABC model. Those reports are the Core Business Process Report (page J-9) and the Organizational Cost Report (page J-10). These reports were distributed throughout the organization as each area was briefed on the results of the initial ABC model. The remainder of this section will describe both of the above reports.

Core Business Process Report

The Core Business Process Report provides the costs of each core business process in a hierarchical manner. The Core Business Process is the highest level in FMS' ABC system. Each core business process is broken down into a group of processes and each process is broken down into a group of activities. The activities are the lowest and most detailed level of cost data. FMS gathers all cost data at the activity-level. An Example of FMS' Core Business Process hierarchy is:

CORE BUSINESS PROCESS - CENTRAL ACCOUNTING

- Process - Perform Central Accounting
  - Activity - Verify Agency Data
  - Activity - Review Bank Data
  - Activity - Post Adjustments
  - Activity - Prepare Reports
  - Activity - Validate Opening/Closing Balances
  - Activity - Account Administration
- Process - Process Appropriations
  - Activity - Review Appropriation Legislation
  - Activity - Appropriation Control

The first page of the Core Business Process Report (page J-9) shows the full cost of the core business process and the full cost of each of the respective processes that make up the core business process. Along with the full cost of each process, the report provides the respective percentage of the core process costs for each process. The report also provides the total FTE for the core process and each process along with FTE percentages. The successive pages provide the same cost and FTE data for each process and the respective activities for each process.

Organization Cost Report

The Organizational Cost Report (page J-10) provides a comparison of costs for each organizational entity. For each entity, the left side provides expenses by each object classification. The left side also provides expense data that would not show up on reports provided by the administrative accounting system, but nonetheless are expenses of operating the organization. Some examples of these reallocated expenses are rent, utilities, and central account expenses. In these cases, the expenses are recorded at a central account level and thus do not show up on each branch's expense report. These costs are a cost of doing business so they have been reallocated down to the branch levels.

The right side of the report provides the activity costs and associated FTEs for each activity performed by the organization. The total amount is the same on either side of the report, but the left side provides traditional data available to each manager while the right side shows the cost of each activity performed by the branch.

HyperABC System

As mentioned earlier, HyperABC is especially strong in its capability to perform calculations. The software itself is user-friendly. We have provided the HyperABC software on FMS' LAN so managers may view the ABC data without the restrictions of our initial hardcopy reports. The system allows the user to view any organizational costs (down to the branch-level) as they relate to any activity, process, or core business process. In general it allows more flexibility to the user in viewing the ABC data. The user can also print a quick report from the HyperABC system, but the reports are lacking in style and modification capabilities.

FMS' Planned ABC Reporting Capabilities

FMS plans to provide a standard set of reports via our LAN system to all FMS employees. These standard reports will be developed in conjunction with the program managers so that we provide cost data that will be useful and relevant. Although we haven't yet discussed what data the standard reports will provide, our current reports will most likely be the basis of the standard set with some flexibility modifications. When we decide on the set of standard reports, the HyperABC software itself will only be accessible to the system administrator. However, the system administrator will provide customized reports at the request of management. This will provide consistent and reliable cost data to the organization without jeopardizing the cost system and data integrity. This will also make the same cost data accessible to everyone in the organization. Consistency and reliability are the two most important components of managerial data.

Glossary of Cost Accounting Terminology

(This glossary is intended to serve as a reference for accounting, finance, and budget terminology that is pertinent to managerial cost accounting in the federal environment. All terminology is FASAB and JFMIP compliant.)

ABSORPTION COSTING - Method in which all manufacturing costs, variable and fixed, are treated as product costs, while non-manufacturing costs (e.g., selling and administrative expenses) are treated as period costs. Absorption costing for inventory valuation is required for external reporting.

ACCESSORIAL CHARGES - Costs incurred for packing, crating, and handling related to sales or shipments of property.

ACCOUNTING CYCLE - A time period for the sequence of financial record-keeping; beginning with the recording of financial transactions as they occur and culminating in the preparation of financial statements.

ACCOUNTING PERIOD - The period of time which an organization designates for reporting purposes in which general ledger transactions are closed for posting of additional transactions, and results of operations are determined for the designated period of time for management review. The accounting period can be one month, six months, twelve months, or any time frame designated by the organization.

ACCRUAL METHOD - The accrual method of accounting recognizes the significant aspects of financial transactions as they occur. Under the accrual method, income and assets are recorded in the period in which earned or acquired, and expenses and liabilities are recorded in the period in which incurred. Accrual accounting emphasizes matching revenues and expenses. Generally, accrual accounting can contribute to effective financial control over resources and cost of operations and is essential to developing adequate cost information.

ACCRUED EXPENDITURE - PAID - The budgetary account that matches the proprietary account "funds disbursed." It represents the dollar value of goods and services received for which payment has been made.

ACCRUED EXPENDITURE - UNPAID - The budgetary account, which matches the proprietary account "accounts payable." It represents the dollar value of goods and services received for which payment has not been made.

ACCRUED EXPENDITURES - The term used for the credits entered into the budgetary accounts to recognize liabilities incurred for (1) services performed by employees, contractors, other Government accounting entities, vendors, carriers, grantees, lessors, etc.; (2) goods and other tangible property received; and (3) items such as annuities or insurance claims for which no current service is required. Accrued expenditures are categorized as either paid or unpaid.

ACCRUED EXPENSES - Expenses incurred during a reporting period for which payment is not made until a subsequent period. Although the expense is not paid for during the reporting period, it should be recognized in the period in which it occurred.

ACQUISITION COST - Consists of the amount, net of both trade and cash discounts, paid for property, including transportation costs.

ACTIVITY - The actual task or step performed in producing and delivering products and services. An aggregation of actions performed within an organization that is useful for purposes of activity-based costing.

ACTIVITY ANALYSIS - The identification and description of activities in an organization. Activity analysis involves determining what activities are done within a department, how many people perform the activities, how much time is spent performing the activities, what resources are required to perform the activities, what operational data best reflect the performance of the activities, and what customer value the activity has for the organization. Activity analysis is accomplished with interviews, questionnaires, observation, and review of physical records of work. It is the foundation for agency process value analysis, which is key to overall review of program delivery.

ACTIVITY ATTRIBUTES - Characteristics of individual activities. Attributes include cost drivers, cycle time, capacity, and performance measures. For example, a measure of the elapsed time required to complete an activity is an attribute.

ACTIVITY BASE - Application to the production activity used to relate overhead to production (e.g., units produced, direct labor hours, direct labor cost, machine hours).

ACTIVITY-BASED COSTING - A cost accounting method that measures the cost and performance of process related activities and cost objects. It assigns costs to cost objects, such as products or customers, based on their use of activities. It recognizes the casual relationship of cost drivers to activities.

ACTIVITY CAPACITY - The demonstrated or expected capacity of an activity under normal operating conditions, assuming a specified set of resources over a long period of time. An example of this would be a rate of output for an activity expressed as 500 cycles per hour.

ACTIVITY COST ASSIGNMENT - The process in which the cost of activities is attached to cost objects using activity drivers.

ACTIVITY COST POOL - A grouping of all cost elements associated with an activity.

ACTIVITY DRIVER - A measure of the frequency and intensity of the demands placed on activities by cost objects. An activity driver is used to assign costs to cost objects. It represents a line item on the bill of activities for a product or customer. An example is the number of part numbers, which is used to measure the consumption of material-related activities by each product, material type, or component. The number of customer orders measure the consumption of order-entry activities by each customer. Sometimes an activity driver is used as an indicator of the output of an activity, such as the number of purchase orders prepared by the purchasing activity.

ACTIVITY DRIVER ANALYSIS - The identification and evaluation of the activity drivers used to trace the cost of activities to cost objects. Activity driver analysis may also involve selecting activity drivers with a potential for cost reduction.

ACTIVITY LEVEL - A description of how an activity is used by a cost object or other activity. Some activity levels describe the cost object that uses the activity and the nature of the use. These levels include activities that are traceable to the product (i.e., unit-level, batch-level, and product-level costs), to the customer (customer-level costs), to a market (market-level costs), to a distribution channel (channel-level costs), and to a project such as a research and development project (project-level costs).

ACTIVITY-BASED COST SYSTEM - A system that maintains and processes financial and operating data on a firm's resources, activities, cost objects, cost drivers, and activity performance measures. It also assigns costs to activities and cost objects.

ACTIVITY-BASED COSTING - A cost accounting method that measures the cost and performance of process-related activities and cost objects. It assigns direct and indirect costs to cost objects, such as products or customers, based on their use of activities. It recognizes the causal relationship of cost drivers to activities.

ACTIVITY-BASED MANAGEMENT - A discipline that focuses on the management of activities as the route to improving the value received by the customer and the profit achieved by providing this value. This discipline includes cost driver analysis, activity analysis, and performance measurement. Activity-based management draws on activity-based costing as its major source of information.

ACTUAL COST - An amount determined on the basis of costs incurred, including standard costs properly adjusted for applicable variance.

ACTUARIAL COST METHODS - A recognized actuarial technique used for establishing the amount and the incidence of employer contributions or accounting charges for pension costs under a pension plan.

AGENCYWIDE - A reporting entity, which is generally assumed to be an Agency. If a large governmental department has organizational components that are themselves reporting entities, then the reporting components and their organizational equivalents would be the agency-wide level.

ALLOCATIONS - The amount of obligational authority transferred from one agency, bureau, or account that is set aside in a transfer appropriation account to carry out the purpose of the parent appropriation or fund.

ALLOTMENT AND SUBALLOTMENT - An authorization by an official in charge of an agency, or designee, to the head of any organizational unit to incur obligations within a specified amount; a formal distribution of an allocation or sub-allocation containing at least the same legal and other limitations applicable to the allocation or sub-allocation. A distribution of budget authority to an installation -level accounting entity.

ALLOWANCE - Acceptable reduction in quantity or quality such as normal spoilage in an operation.

ALTERNATIVE COST - 1. Cost that would pertain if an alternative set of conditions or assumptions were to prevail (as compared to a cost assumed or experienced under current conditions). 2. Choosing the next best or highest valued alternative, compared to the chosen alternative, will result in benefits forfeited, and thus an alternative cost.

AMORTIZATION - The gradual extinguishing of any amount over a period of time through a systematic allocation of the amount over a number of consecutive accounting periods such as the retirement of a debt by serial payments to a sinking fund.

ANALYSIS OF VARIANCE - Seeking causes for variances between standard costs and actual costs; also called variance analysis. A variance is considered favorable if actual costs are less than standard costs; it is unfavorable if actual costs exceed standard costs. Unfavorable variances need further investigation.

ANTI-DEFICIENCY ACT - Legislation enacted by Congress to prevent the incurring of obligations or the making of expenditures (outlays) in excess of amounts available in appropriations or funds; to fix responsibility within an agency for the creation of any obligation or the making of any expenditure in excess of apportionment or reapportionment or in excess of other subdivisions established pursuant to sections 1341 and 1517 of 31 U.S.C.; and to assist in bringing about the most effective and economical use of appropriations and funds.

APPLIED COST - One that has been assigned to a product, department, or activity. An applied cost does not have to be based on actual costs incurred. Overhead applied to a product is an example of an applied cost. To apply overhead, a predetermined overhead rate is developed; it is based on budgeted overhead and budgeted volume of activity.

APPRAISAL COSTS - A category of quality costs incurred to determine whether products and services are conforming to customer requirements, such as inspection and field testing costs.

APPROPRIATE COST - Those costs that are relevant to the particular situation.

APPROPRIATED FUNDS - Appropriated funds are monies made available to a federal entity by Congress. There are generally two types of appropriations: annual and multiyear. The appropriation acts approved by Congress specify the purpose for which the APFs can be used.

APPROPRIATION - In most cases, appropriations are a form of budget authority provided by law that permits federal agencies to incur obligations and make payments out of the Treasury for specified purposes. An appropriation usually follows enactment of authorizing legislation. An appropriation act is the most common means of providing budget authority, but in some cases the authorizing legislation itself provides the budget authority.

ATTRIBUTES - Characteristics of activities, such as cost drivers and performance measures.

ATTRIBUTION - The process of assigning pension benefits or costs to periods of employee service.

AVOIDABLE VARIABLE COST - The direct and cause-and-effect indirect costs of resources that could be eliminated or put to other uses if the stated function or process is discontinued within the specified organizational unit.

BACKFLUSH COSTING - 1. A costing method that applies costs based on the output of a process. The process uses a bill of material or a bill of activities explosion to draw quantities from inventory, through work-in-process, to finished goods; at any intermediate stage, using the output quantity as the basis. These quantities are generally costed using standard costs. The process assumes that the bill of material (or bill of activities) and the standard costs at the time of backflushing represent the actual quantities and resources used in the manufacture of the product. This is important, since no shop orders are usually maintained to collect costs. 2. A costing method generally associated with repetitive processes.

BASIC FINANCIAL STATEMENTS - The basic financial statements are those on which an auditor would normally be engaged to express an opinion. The term "basic" does not necessarily mean that other financial information not covered by the auditor's opinion is less important to users than that contained in the basic statements; it merely connotes the expected nature of the auditor's review of, and association with, the information. The basic financial statements in financial reports prepared pursuant to the Chief Financial Officers Act, as amended, are called the "principal financial statements." The Form and Content of these statements are determined by OMB.

BEST PRACTICES - A methodology that identifies an activity as the benchmark by which a similar activity will be judged. This methodology is used to assist in identifying a process or technique that can increase the effectiveness or efficiency of an activity. The source may be internal (e.g., taken from another part of the company) or external (e.g., taken from a competitor).

BILL OF ACTIVITIES - A listing of the activities required (and, optionally, the associated costs of the resources consumed) by a product or other cost object.

BOOK VALUE - The net amount at which an asset or liability is carried on the books of account (also referred to as carrying value or amount). It equals the gross or nominal amount of any asset or liability minus any allowance or valuation amount.

BREAK-EVEN ANALYSIS - Branch of cost-volume profit (cvp) analysis that determines the break-even point, which is the level of sales where total costs equal total revenue. Thus, zero profit results.

BREAK-EVEN EQUATION - Equation that helps determine break-even sales. For example:

$px = vx + FC$ where

p = unit selling price
v = unit variable cost
FC = total fixed cost
x = sales in units

BREAK-EVEN POINT - The unique sales-level at which neither a profit nor a loss occurs. It is the sales volume, in units or in dollars, where total sales revenue equals total costs.

BUDGET - 1. A projected amount of cost or revenue for an activity or organizational unit covering a specific period of time. 2. Any plan for the coordination and control of resources and expenditures.

BUDGET AUTHORITY - The authority provided by federal law to incur financial obligations that will result in immediate or future outlays.

BUDGET VARIANCE ANALYSIS - A comparison of budget to actual results and a review of favorable and unfavorable variances.

BUDGETARY ACCOUNTING - Budgetary accounting is the system that measures and controls the use of resources according to the purposes for which budget authority was enacted; and that records receipts and other collections by source. It tracks the use of each appropriation for specified purposes in separate budget accounts through the various stages of budget execution from appropriation to apportionment and allotment to obligation and eventual outlay. This system is used by the Congress and the Executive Branch to set priorities, to allocate resources among alternative uses, to finance these resources, and to assess the economic implications of federal financial activity at an aggregate level. Budgetary accounting is used to comply with the Constitutional requirement that "No Money shall be drawn from the Treasury, but in Consequence of Appropriations Made by Law; and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time."

BUSINESS TYPE ACTIVITY - Significantly self-sustaining activity which finances its continuing cycle of operations through collection of exchange revenue.

BY-PRODUCT - Item emerging from a single production process that has a relatively low sales value in comparison with the firm's main or joint products. Examples of by-products are sawdust or wood chips in lumber mill operations.

CAPACITY - Ability to produce during a given time period, with an upper limit imposed by the availability of space, machinery, labor, materials, or capital. Capacity may be expressed in units, weights, size, dollars, man-hours, labor cost, etc. Typically, there are five different concepts of capacity:

(1) IDEAL CAPACITY - Volume of activity that could be attained under ideal operating conditions, with minimum allowance for inefficiency. It is the largest volume of output possible. Also called theoretical capacity, engineered capacity, or maximum capacity.

(2) PRACTICAL CAPACITY - Highest activity level at which the facility can operate with an acceptable degree of efficiency, taking into consideration unavoidable losses of productive time (i.e., vacations, holidays, repairs to equipment). Also called maximum practical capacity.

(3) NORMAL CAPACITY - Average level of operating activity that is sufficient to fill the demand for the company's products or services for a span of several years, taking into consideration seasonal and cyclical demands and increasing or decreasing trends in demand.

(4) PLANNED CAPACITY - Similar to normal capacity except it is projected for a particular single year. Also called expected actual capacity.

(5) OPERATING CAPACITY - Similar to planned capacity except the time period is within a small portion of a single year (i.e., daily, monthly, quarterly).

CAPACITY COSTS - Fixed costs incurred to provide facilities that increase a firm's ability to produce such as those relating to space, equipment, and buildings. They include rents, depreciation, property taxes, and insurance.

CAPITAL ASSET - Asset purchased for use in production over long periods of time rather than for resale. It includes (a) land, buildings, plant and equipment, mineral deposits, and timber reserves; (b) patents, goodwill, trademarks, and leaseholds; and (c) investments in affiliated companies.

CAPITAL LEASES - Leases that transfer substantially all the benefits and risks of ownership to the lessee.

CAPITALIZE - To record and carry forward into one or more future periods any expenditure the benefits or process from which will then be realized.

CASH BASIS OF ACCOUNTING - The cash basis of accounting emphasizes the receipt and payment of cash. That is, revenue is recognized only when cash is received from a customer or client, and expenses are recognized only when cash is actually paid for an item or service received.

CASH DISCOUNT - A reduction in the amount due on a payable if paid within a stated period.

CHART OF ACCOUNTS - The list of general account numbers that subdivide basic accounting equations, with associated titles and definitions, used by an entity for posting to its general ledger.

CHIEF FINANCIAL OFFICERS ACT (CFO) OF 1990 (PUBLIC LAW 101-576) - Legislation to reform financial management in the federal government.

CLASSIFICATION STRUCTURE - The data elements defined to support a specific portion of an information architecture.

CLEANUP COSTS - The costs of removing, containing, and/or disposing of (1) hazardous waste from property or (2) material and/or property that consists of hazardous waste.

COMMON COST - The cost of resources employed jointly in the production of two or more outputs where the cost cannot be directly traced to any one of those outputs.

COMMON DATA SOURCE - all of the financial and programmatic information available for the budgetary, cost, and financial accounting processes. It includes all financial and much non-financial data, such as environmental data, that are necessary for budgeting and financial reporting as well as evaluation and decision information developed as a result of prior reporting and feedback.

COMPOSITE BREAK-EVEN POINT - Term used to designate break-even sales when more than one product or service is provided. A break-even point for all the products or services combined can be determined, based on the expected SALES MIX and the composite or weighted average unit contribution margin.

CONSTANT DOLLAR - A dollar value adjusted for changes in the average price level. A constant dollar is derived by dividing a current dollar amount by a price index. The resulting constant dollar value is that which would exist if prices had remained at the same average level as in the base period. Any changes in such constant dollar values would therefore reflect only changes in the real volume of goods and services, not changes in the price level. Constant dollar figures are commonly used to compute the real value of the gross domestic product and its components and to estimate the real level of federal receipts and outlays.

CONSTRUCTION-IN-PROGRESS - Inventory method whereas the inventory account reflects construction costs incurred using the completed contract method and the percentage of completion method.

CONSUMED COST - Measure of expired benefits. Examples include cost of goods sold and periodic depreciation expense of a fixed asset. Income statement expenses are consumed costs in the generation of revenue.

CONSUMPTION METHOD - A method of accounting for goods, such as materials and supplies, where the goods are recognized as assets upon acquisition and are expensed as they are consumed.

CONTRIBUTION (MARGIN) INCOME STATEMENT - Income statement that organizes costs by behavior. It shows the relationship of variable costs and fixed costs, regardless of the functions a given cost item is associated with. A contribution income statement highlights the concept of contribution margin (cm). This format provides data that are useful for internal management.

CONTRIBUTION MARGIN - Difference between sales and the variable costs of the product or service, also called *marginal income*. It is the amount of money available to cover fixed costs and generate profits. For example, if sales are $15,000 and variable costs are $6100, contribution margin is $8900 ($15,000 less $6100).

CONTRIBUTION MARGIN RATIO - Computation showing contribution margin as a percentage of sales.

CONTRIBUTION MARGIN VARIANCE - A measure of deviation from budget for the contribution margin. Specifically, it is the difference between the actual contribution margin and the planned contribution margin.

CONTRIBUTION MARGIN METHOD - Variation of the equation method. It is used in cost-volume-profit (cvp) analysis or break-even analysis. The approach centers on the idea that each unit sold provides a certain amount of contribution margin that goes toward the covering of fixed costs.

CONTRIBUTION MARGIN PER UNIT - The amount that the sale of one unit contributes toward recovering fixed costs and profit.

CONTRIBUTION RATE - The contribution margin per unit expressed as a percentage of the product's selling price.

CONTROLLABLE COST - A cost that can be influenced by the action of the responsible manager. The term always refers to a specified manager since all costs are controllable by someone.

CONVENTIONAL COST SYSTEM - A cost system that uses only unit- (or volume-) based cost drivers to apply overhead costs to products and services.

CONVERSION COST - Sum of the costs of direct labor and overhead.

COST - The monetary value of resources used or sacrificed or liabilities incurred to achieve an objective, such as to acquire or produce a good or to perform an activity or service. Depending on the nature of the transaction, cost may be charged to operations immediately, i.e., recognized as an expense of the period, or to an asset account for recognition as an expense of subsequent periods.

COST ABSORPTION - Application of the costs to the physical units or other measures of output that pass through the process. First, costs must be accumulated by processing departments before applying the department costs to the units. An application of overhead costs to processing departments (or jobs), using a predetermined overhead rate, is an example of cost absorption.

COST ACCOUNTING - Method of accumulating, classifying, summarizing, reporting, and interpreting information for the purposes of operational planning and control, special decisions, and product costing.

COST ACCOUNTING PRACTICE - Any disclosed or established accounting method or technique which is used for measurement of cost, assignment of cost to accounting periods, and assignment of costs to cost objects.

COST ACCOUNTING STANDARDS - A set of rules issued by any of several authorized organizations or agencies, such as the Federal Accounting Standards Advisory Board (FASAB), Governmental Accounting Standards Board (GASB), Cost Accounting Standards Board (CASB), American Institute of Certified Public Accountants (AICPA) or the Association of Chartered Accountants (ACA), dealing with the determination of costs to be allocated, inventoried, or expensed.

COST ACCOUNTING SYSTEM - A system of accounting for operations that uses perpetual inventory records.

COST ACCUMULATION - Collection of costs in an organized fashion by means of a cost accounting system. There are two primary approaches to cost accumulation: job order and process costing. Under a job order system, the three basic elements of costs, direct materials, direct labor, and overhead, are accumulated according to assigned job numbers. Under a process cost system, costs are accumulated according to processing department or cost center.

COST ALLOCATION - A method of assigning costs to activities, outputs, or other cost objects. The allocation base used to assign a cost to objects is not necessarily the cause of the cost. For example, assigning the cost of power to machine activities by machine hours is an allocation because machine hours are an indirect measure of power consumption.

COST ASSIGNMENT - A process that identifies costs with activities, outputs, or other cost objects. In a broad sense, costs can be assigned to processes, activities, organizational divisions, products, and services. There are three methods of cost assignment: (a) directly tracing costs wherever economically feasible, (b) cause-and-effect, and (c) allocating costs on a reasonable and consistent basis.

COST BEHAVIOR ANALYSIS - Separating mixed costs into their variable and fixed elements. Mixed costs are common to a wide range of firms. Examples of mixed costs include sales compensation, repairs and maintenance, and overhead in general. Mixed costs must be separated into the variable and fixed elements in order to be included in a variety of business planning analyses such as cost-volume-profit (cvp) analysis. There are several methods available for this purpose including the least-squared method.

COST BEHAVIOR PATTERN - Manner in which a cost will react to changes in the level of activity. Costs may be viewed as variable, fixed, or mixed (semi-variable). A mixed cost is one that contains both variable and fixed elements. For planning, control, and decision purposes, mixed costs need to be separated into their variable and fixed components, using such methods as the high-low method and the least-squared method. An application of the variable-fixed breakdown is a break-even and cost-volume profit (cvp) analysis.

COST BENEFIT ANALYSIS - Manner of determining whether the favorable results of an alternative are sufficient to justify the cost of taking that alternative. This analysis is widely used in connection with capital expenditure projects. An example of cost-benefit analysis is where the cost incurred to uncover the reasons for a variance outweigh the benefit derived.

COST CENTER - A logical or physical grouping of one or more similar services for the purpose of identifying obligations or developing the cost identification for the services. Services are grouped into cost centers in order to (1) normalize between services that use similar resources with different capabilities, (2) apply surcharges and discounts to services, (3) identify costs for different classes of the same service, or (4) identify obligations. This is the lowest level (that is, unit) or activity that is used to identify obligations or expend resources to produce a unit of work, and the lowest level of activity to segregate costs for management in order to assess efficiency, usage, examine trends, etc.

COST CONTROL - Steps taken by management to assure that the cost objectives set down in the planning stage are attained and to assure that all segments of the organization function in a manner consistent with its policies. For effective cost control, most organizations use standard cost systems, in which the actual costs are compared against standard costs for performance evaluation and the deviations are investigated for remedial actions. Cost control is also concerned with feedback that might change any or all of the future plans, the production method, or both.

COST DISTRIBUTION - Assignment of cost to activities, or other cost objects by either assignment based on cause and effect or the allocation of costs on a reasonable basis, consistent with SFFAS No. 4. The collective term for these two methods of cost assignment is used since, from a systems point of view, both require the development and use of specific distribution rules.

COST DRIVER - Any factor that causes a change in the cost of an activity or output. For example, the quality of parts received by an activity, or the degree of complexity of tax returns reviewed by the IRS.

COST DRIVER ANALYSIS - The examination, quantification, and explanation of the effects of cost drivers. Management often uses the results of cost driver analyses in continuous improvement programs to help reduce throughput time, improve quality, and reduce cost.

COST EFFECTIVE - Among decision alternatives, the one whose cost is lower than its benefit. The most cost-effective program would be the one with the lowest cost-benefit-ratio among various programs competing for a given amount of funds.

COST ELEMENT - An amount paid for a resource consumed by an activity and included in an activity cost pool. For example, power cost, engineering cost, and depreciation may be cost elements in the activity cost pool for a machine activity.

COST ESTIMATION - Measurement of past costs for the purpose of predicting future costs or decision-making purposes. For example, a cost volume formula (such as y = \$300 = \$5x) can be used to estimate a cost item y for any given value of volume x.

COST FINDING - Cost finding techniques produce cost data by analytical or sampling methods. Cost finding techniques are appropriate for certain kinds of costs, such as indirect costs, items with costs below set thresholds within programs, or for some programs in their entirety. Cost-finding techniques support the overall managerial cost accounting process and can represent non-recurring analysis of specific costs.

COST OBJECT - An activity, output, or item whose cost is to be measured. In a broad sense, a cost object can be an organizational division, a function, task, product, service, customer, or cost objective.

COST OBJECTIVE - An activity, operation, or completion of a unit of work to complete a specific job for which management decides to identify, measure, and accumulate costs. The cost objective must be discrete enough and described in writing to such a level of detail as to form a basis to establish cost centers and output products.

COST OF GOODS MANUFACTURED - The cost of producing goods during the accounting period. The cost of goods manufactured is an element of the income statement. It consists of the cost of producing goods: direct material, direct labor, and overhead. Also considered is the change in the work-in-process inventory.

COST OF GOODS SOLD - See COST OF SALES.

COST OF PREDICTION ERROR - Cost of a failure to predict a certain variable accurately.

COST OF PRODUCTION REPORT - Summary of the total cost of an item. It involves charges to a processing department and the allocation of the total cost between the ending work-in-process inventory and the units completed and transferred to the next department or finished goods inventory.

COST OF QUALITY - All the resources expended for appraisal costs, prevention costs, and internal and external failure costs of activities and cost objects.

COST OF SALES - Price of buying or making an item that is sold; also called *cost of goods sold.* The difference between sales and cost of sales is gross profit. For a retail business, the cost of sale is the purchase price of the item. For a manufactured good, the cost of sale includes direct material, direct labor, and overhead associated with producing it.

COST POOL - Grouping of individual costs. Subsequent allocations are made of cost pools rather than of individual costs. Costs are often pooled by departments, by jobs, or by behavior pattern. For example, overhead costs are accumulated by service departments in a factory and then allocated to production departments before multiple departmental overhead rates are developed for product costing purposes.

COST PREDICTION - Forecast of costs for managerial decision-making purposes. The terms *cost estimation* and *cost prediction* are used interchangeably. To predict future costs, a cost function is often specified and estimated statistically. The cost function may be either linear (i.e., $y = a + bx$) or nonlinear. The estimated cost function must pass statistical tests, such as having a high r-squared and a high t-value, to provide sound cost prediction.

COST-VOLUME FORMULA - Cost accounting formula used for cost prediction and flexible budgeting purposes. It is a cost function in the form of:

$$y = a+bx$$

Where y = the semi-variable (or mixed) costs to be broken up
x = any given measure of activity such as volume and labor-hours
a = the fixed cost component
b = the variable rate per unit of x

For example, the cost-volume formula for overhead is $y = \$200 + \$10x$ where y = estimated overhead and x = direct labor-hours, (i.e., the overhead is estimated to be $200 fixed, plus $10 per hour of direct labor).

COST-VOLUME-PROFIT (CVP) ANALYSIS - Analysis that deals with how profits and costs change with a change in volume. More specifically, it looks at the effects on profits of changes in such factors as variable costs, fixed costs, selling prices, volume, and mix of products sold.

CROSS-SUBSIDY - The improper assignment of costs among cost objects such that certain cost objects are overcosted while others are undercosted relative to the activity costs assigned. For example, traditional cost accounting systems tend to overcost high-volume products and undercost low-volume products.

CUSTOMER ORDER - An order received and accepted by the performing activity from a customer. It is written evidence that certain goods and services will be provided to the tenderer of the order for a specified amount. The order must contain an original signature or equivalent of both the ordering activity and the receiving activity.

DEPARTMENTAL CONTRIBUTION TO OVERHEAD - The amount by which a department's revenues exceed its direct costs and expenses.

DEPLETION - An accounting technique that allocates the cost of natural resources as an operating expense during the period of life which is normally considered reasonable for the natural resources to be consumed.

DEPRECIATION ACCOUNTING - The systematic and rational allocation of the acquisition cost of an asset, less its estimated salvage or residual value, over its estimated useful life.

DEVOLUTION - Management's decision to spin-off or discontinue some or all of the operations of an organizational component.

DIFFERENTIAL COST - The cost difference expected if one course of action is adopted over of another.

DIRECT ALLOCATION METHOD - Method of allocating the costs of each service department directly to production departments; also called *direct method.* Under this method, no consideration is given to services performed by one service department for another.

DIRECT COST - The cost of resources directly consumed by an activity. Direct costs are assigned to activities by direct tracing of units of resources consumed by individual activities. A cost that is specifically identified with a single cost object.

DIRECT LABOR - Work directly involved in making a product or in providing a service. Examples of direct labor costs are the wages of assembly workers on an assembly line and the wages of a machine tool operator in a machine shop. Direct labor is an inventoriable cost.

DIRECT MATERIALS - Materials that physically become part of a product or service and therefore are clearly identified with specific outputs or services.

DISCLOSURE - Reporting information in notes or narrative regarded as an integral part of the basic financial statements.

DISCOUNT - The difference between the estimated worth of a future benefit and its present value; a compensation for waiting or an allowance for returns from using the present value of these returns in other ways.

DISCOUNT RATE - An interest rate that is used in present value calculations to equate amounts that will be received or paid in the future, to their present value.

DISCOUNTED CASH FLOW - A technique used to evaluate the future cash flows generated by a capital investment to determine their present value.

DISCRETIONARY COST - Cost changed by management decision such as advertising, repairs and maintenance, and research and development.

DONATED CAPITAL - The amount of non-reciprocal transfers of assets or services from state, local, and foreign governments; individuals; or others not considered parties related to the Government.

DRAWBACKS - Refunds of all or part of duties on imported goods that are subsequently exported or destroyed. Typically these arise when imported materials are used to manufacture a product that is later exported. In such cases, most of the duties originally paid are refundable when the finished product is exported.

ECONOMIC LIFE - The period during which a fixed asset is capable of yielding services of value to its owner.

EFFICIENCY VARIANCE - A measure of how effectively an organization utilized inputs in the production of goods and services. Inputs can be in the form of materials, labor, or variable overhead. It is the difference between the quantity of inputs that were actually used and the standard quantity planned for that level of production, multiplied by the standard price per unit of input.

END USER - Any component of a reporting entity that obtains goods or services for direct use in its normal operations. The component may also be a contractor.

ENTITLEMENT PERIOD - The period (such as monthly) at which benefits become due.

ENTITLEMENT PROGRAM - A program in which the federal government becomes automatically obligated to provide benefits to members of a specific group who meet the requirements established by law.

ENTITY - A unit within the federal government, such as a department, agency, bureau, or program, for which a set of financial statements would be prepared. Entity also encompasses a group of related or unrelated commercial functions, revolving funds, trust funds, and/or other accounts for which financial statements will be prepared in accordance with OMB annual guidance on Form and Content of Financial Statements.

EQUIVALENT UNITS - Number of partially completed units considered to be equivalent to a number of fully completed units. For example, if 1000 units are in work-in-process at the end of the period and are considered 80% complete, the equivalent production is 800 units. The equivalent unit cost of an item equals the total cost divided by the equivalent units. If the total cost of the item was $2400, the unit cost would be $3 ($2400/800). Equivalent units are determined separately for direct material and conversion cost. If 3000 units in ending work-in-process are 70% complete as to direct material and 90% complete as to conversion, the equivalent units are 2100 for direct material and 2700 for conversion.

ESTIMATED ACTUAL CHARGES - A systematic and documented estimate of actual cost. The procedure is used in the absence of an established cost accounting system, and the procedure is sometimes referred to as a cost finding technique.

ESTIMATED COST - The process of projecting a future result in terms of cost, based on information available at the time. Estimated costs, rather than actual costs, are sometimes the basis for credits to work-in-process accounts and debits to finished goods inventory.

EVENT - A happening of consequence to an entity. It may be an internal event that occurs within an entity, such as the transforming of raw materials into a product. It may be an external event that involves interaction between an entity and its environment, such as a transaction with another entity, an act of nature, theft, vandalism, a tort caused by negligence, or an accident.

EXCHANGE REVENUE - Inflows of resources to a governmental entity that the entity has earned. They arise from exchange transactions, which occur when each party to the transaction sacrifices value and receives value in return.

EXCHANGE TRANSACTION - A transaction that arises when each party to the transaction sacrifices value and receives value in return.

EXECUTORY COST - Those costs such as insurance, maintenance, and taxes incurred for leased property, whether paid by the lessor or lessee.

EXPENDITURE - A term that has the same definition as outlay, with respect to provisions of the Antideficiency Act (31 U.S.C. 1513-1514) and the Congressional Budget and Impoundment Control Act of 1974 (2 U.S.C. 622(i)).

EXPENSE - Outflows or other depletion of resources or incurring liabilities (or a combination of both), the benefits from which apply to an entity's operations for the current accounting period, but do not extend to future periods.

FACILITIES - Industrial property (other than material, special tooling, special test equipment, and military property) for production, maintenance, research, development, or testing, including real property (other than land) and rights therein, buildings, structures, improvements, and plant equipment (including capital leases).

FEDERAL MISSION PROPERTY, PLANT, & EQUIPMENT (PP&E) - Items used to meet a federal government mission in which the specific PP&E used is an integral part of the output of the mission.

FINANCIAL ACCOUNTING - 1. The accounting for assets, liabilities, equities, revenues, and expenses as a basis for reports to external parties. 2. A methodology that focuses on reporting financial information primarily for use by owners, external organizations, and financial institutions. This methodology is constrained by rule-making bodies such as the Financial Accounting Standards Board (FASB), the Securities Exchange Commission (SEC), and the American Institute of Certified Public Accountants (AICPA).

FINANCIAL EVENT - Any occurrence that requires the generation of a transaction having financial consequences necessitating a posting to the proprietary and/or budgetary general ledger accounts related to the receipt of appropriations or other financial resource; acquisition of goods or services; payments or collections; recognition of guarantees, benefits to be provided, or other potential liabilities; or other reportable financial activities.

FINANCIAL MANAGEMENT - That aspect of management that provides direction, guidance, and control of financial operations for achieving program objectives through the application of planning, budgeting, accounting, and reporting; management of resources, contracts and investments; auditing, analysis and evaluation. Financial management includes the process of acquiring, allocating, and controlling the use of resources, especially fiscal, and generally those impacting manpower, methods, and materiel.

FINANCIAL MANAGEMENT PROCESS - The financial management process begins upon the creation of a business transaction which results in the recording of a financial event at the transaction level, and includes transaction details recorded in mixed systems, such as inventory and property systems, which are aggregated for posting to general ledger control accounts. The financial management process ends with the preparation of the financial statements.

FINANCIAL MANAGEMENT SYSTEMS - The financial systems and the financial portions of mixed systems necessary to support financial management.

FINANCIAL SYSTEM - An information system comprised of one or more functions that is used in accounting, finance, or budget execution for any of the following: collecting, processing, maintaining, transmitting, and reporting data about financial events; supporting financial planning or budgeting activities; accumulating and reporting cost information; or supporting the preparation of financial statements. A financial system encompasses automated and manual processes, procedures, controls, data, hardware, software, and support personnel dedicated to the operation and maintenance of financial system functions. A financial system also provides budget execution capability when it records the funding and related budget execution documents, establishes and tracks the use of funds against limitations assigned, tracks the use of these funds through operating or financial plans, maintains current information on commitments and obligations according to the classification structure on a fund by fund basis, and/or provides for certification of funds availability prior to the issuance of a commitment, obligation, or expenditure.

FINANCING INTEREST - Interest charged as a cost of extending credit as opposed to interest charged because of delinquency.

FINISHED GOODS INVENTORY - Products that have completed the process and are ready to be sold by the manufacturer.

FIRST-IN, FIRST-OUT (FIFO) - A cost flow assumption; the first goods purchased or produced are assumed to be the first goods sold.

FIXED ASSETS - A category of property consisting of those items used in the production of other assets or services and have a useful life of two years or more.

FIXED COST - A cost that does not vary in the short term with the volume of activity. Fixed cost information is useful for cost savings by adjusting existing capacity, or by eliminating idle facilities. Also called a Non-Variable Cost or Constant Cost.

FIXED OVERHEAD - Portion of total overhead that remains constant over a given time period without regard to changes in the volume of activity. Examples of fixed overhead are depreciation, rent, property taxes, insurance, and salaries of supervisors.

FIXED OVERHEAD SPENDING (BUDGET) VARIANCE - That portion of the fixed overhead variance that results from the difference between the actual fixed overhead incurred and the budgeted amount of fixed overhead.

FIXED OVERHEAD VARIANCE - Difference between actual fixed overhead incurred and fixed overhead applied to production. The total fixed overhead variance is divided into two specific variances: volume variance and fixed overhead spending (budget) variance.

FIXED OVERHEAD VOLUME (DENOMINATOR) VARIANCE - A measure of the impact of operating at a higher or lower level of capacity than planned. The component of the fixed overhead variance that measures the difference between budgeted fixed overhead and applied fixed overhead based on the standard hours. More specifically, it is the difference between the actual activity level and the budgeted activity level, multiplied by the standard fixed overhead rate.

FIXED PRICE - Price that serves as a standard for the valuation of certain inventory accounts (i.e., raw material, work-in-process, and finished goods) in standard costing.

FLEXIBLE (VARIABLE) BUDGET - One based on different levels of activity. It is an extremely useful tool for comparing the actual cost incurred to the cost allowable for the activity level achieved. It is dynamic in nature rather that static. By using the cost-volume formula (or flexible budget formula), a series of budgets can be developed easily for various levels of activity. A static (fixed) budget is geared for only one level of activity and has problems in cost control. Flexible budgeting distinguishes between fixed and variable costs, thus allowing for a budget that can be automatically adjusted (via changes in variable cost totals) to the particular level of activity *actually* attained. Thus variances between actual costs and budgeted costs are adjusted for volume ups and downs before differences due to price and quantity factors are computed. The primary use of the flexible budget is for accurate measure of performance by comparing actual costs for a given output with the budgeted costs for the *same level of output*.

FOREIGN CURRENCY FLUCTUATIONS - The difference between estimated rates approved for execution and actual foreign currency exchange rates in effect at time of payment that cause changes in obligations or contractual liabilities. Obligations are recorded using the estimated rate, and payments are made using the current foreign currency exchange rate.

FULL ABSORPTION COSTING - A method of costing that assigns (absorbs) all labor, material, and service/facilities and support costs to products or other cost objects. The costs assigned include those that do and do not vary with the level of activity performed.

FULL COST - The sum of all costs required by a cost object including the costs of activities performed by other entities regardless of funding sources. More specifically, the full cost of an output produced by a responsibility segment is the sum of (1) the costs of resources consumed by the responsibility segment that directly or indirectly contribute to the output, and (2) the costs of identifiable supporting services provided by other responsibility segments within the reporting entity and by other reporting entities.

FULL-COST-PLUS PRICING - Method in which the cost base is the full cost per unit. Selling and administrative costs are provided for through the markup that is added to this base.

FUNCTION COST - Classification showing the nature of the output for which costs are incurred, such as product packaging, sales promotion, or other such specific activities.

FUNCTIONAL CLASSIFICATION - (In a Cost Accounting Sense) - System under which costs are classified according to the function they perform within the business; for example, selling, general and administrative, or financial costs. The traditional approach to the income statement, which is required for external reporting, uses this classification of costs. There are different ways of classifying costs. For example, costs are classified by behavior as variable or fixed, according to their response to changes in levels of activity.

GENERAL AND ADMINISTRATIVE COSTS (G&A) - Labor and non-labor costs that cannot be reasonably associated with any single output or group of outputs and are, therefore, allocated over all outputs.

GENERAL LEDGER - The core of an accounting system which is a chronological record of accounting transactions. It shows the names of accounts, the amounts that are to be debited and credited to each account, and descriptions of the transactions. Also see U.S. Standard General Ledger (U.S.S.G.L.).

GENERAL PURPOSE FINANCIAL REPORTS - Reports intended to meet the common needs of diverse users who typically do not have the ability to specify the basis, form, and content of the reports they receive.

GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP) - Guidelines that accountants follow in observing and communicating financial data. Authoritative sources of GAAP are: Financial Accounting Standards Board (FASB) Statements of Financial Accounting Standards and Interpretations; Accounting Principles Board (APB) Opinions; and American Institute of Certified Public Accountants (AICPA) Accounting Research Bulletins. Other sources include: FASB Technical Bulletins; AICPA Industry Audit and Accounting Guides; and AICPA Statements of Position. The phrase "generally accepted accounting principles" (GAAP) is a technical accounting term which encompasses the conventions, rules, and procedures necessary to define accepted accounting practices at a particular time. It includes not only broad guidelines of general application, but also detailed practices and procedures. Those conventions, rules, and procedures provide a standard by which financial presentations are measured.

GOOD - A tangible product produced for a customer.

GOODS IN PROCESS INVENTORY - Products that are in the process of being manufactured, but that are not yet complete.

GOVERNMENT-FURNISHED EQUIPMENT (GFE) - Property provided to a contractor by the federal government to use in producing an end product. It is not consumed, but is returned in the same form at the end of the contract.

GOVERNMENT-FURNISHED MATERIAL (GFM) - Property provided to a contractor by the federal government which may be incorporated into an end item (a change in form) or may be consumed in the performance of a contract.

GOVERNMENT-FURNISHED PROPERTY (GFP) - Property acquired directly by the government and made available to a contractor.

GOVERNMENT-ACKNOWLEDGED EVENTS - Events that are not a liability in themselves, but are "of financial consequence" to the federal government because it chooses to respond to the event.

GOVERNMENT MANAGEMENT REFORM ACT OF 1994 (GMRA) (PUBLIC LAW 103-356) - Legislation, which expands the CFO Act's requirement for audited financial statements to all 24 CFO agencies. Also, requires strategic plans and vision statements for each agency.

GOVERNMENT PERFORMANCE AND RESULTS ACT OF 1993 (GPRA) (PUBLIC LAW 103-62) - Legislation which provides for the establishment of strategic planning and performance measurement in the federal government.

GOVERNMENT-RELATED EVENTS - Non-transaction-based events that involve interaction between federal entities and their environment.

GOVERNMENTWIDE - The entire federal government, inclusive of all costs incurred in the government and reported in the consolidated financial statements of the federal government.

GRANTS - Monetary assistance awarded by the government for which no substantial involvement is anticipated between the government and the recipient during performance of the contemplated activity. Grants are not expected to be repaid by the grantee.

HISTORICAL COST - Initially, the amount of cash (or its equivalent) paid to acquire an asset.

HOLDING COST - A financial technique that calculates the cost of retaining an asset (e.g., finished goods inventory or a building). Generally, the calculation includes a cost of capital in addition to other costs such as insurance, taxes, and space.

HOMOGENEOUS COST POOL - A group of overhead costs associated with activities that can use the same cost driver.

HUMAN CAPITAL - Expenses incurred for education and training programs financed by the federal government for the benefit of the public and designed to increase or maintain national economic productive capacity.

IDLE CAPACITY - Unused capacity.

IDLE TIME - Cost of direct labor for employees unable to perform their assigned tasks because of machine breakdowns, shortage of materials, power failure, production scheduling, and the like. The cost of idle time is treated as part of overhead -- that is, as part of indirect costs that should be spread over all the production of a period.

IMPUTED COST - Cost that is implied, but not reflected in the financial reports of the firm; also called *implicit cost.* Imputed costs consist of the opportunity costs of time and capital that the manager has invested in producing the given quantity of production, and the opportunity costs of making a particular choice among the alternatives being considered.

INCOME - 1. Money earned during an accounting period that results in an increase in total assets. 2. Items such as rents, interest, gifts, and commissions. 3. Revenues arising from sales of goods and services. 4. Excess of revenues over expenses and losses for an accounting period (i.e., net income). See also gross income; income realization; net income; revenue.

INCREMENTAL ANALYSIS - Decision-making method that utilizes the concept of relevant costs; also known as relevant cost approach or differential analysis.

INCREMENTAL COST - The increase or decrease in total costs that would result from a decision to increase or decrease output level, to add a service or task, or to change any portion of operations. This information helps in making decisions such as to contract work out, undertake a project, or increase, decrease, modify, or eliminate an activity or product.

INDIRECT COST - A cost that cannot be identified specifically with or traced to a given cost object in an economically feasible way.

INDIRECT EXPENSES - Expenses that are not easily associated with a specific department; they are incurred for the benefit of more than one department.

INDIRECT LABOR - Labor *not* directly involved in production but essential to the process, such as supervisory personnel.

INDIRECT MATERIALS - Materials that are used in support of the production process but that do not become a part of the product or service and are not directly traceable to the output.

INFORMATION SYSTEM - The organized collection, processing, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual.

INTENSITY - The cost consumed by each unit of the activity driver. It is assumed that the intensity of each unit of the activity driver for a single activity is equal. Unequal intensity means that the activity should be broken into smaller activities, or that a different activity driver should be chosen.

INTEGRATION - The use of common processes and standardized data to effectively and efficiently manage and report on the use of financial resources, and track the financial implications of activities of the federal government.

INTER-ENTITY - A term meaning between or among different federal reporting entities. It commonly refers to activities or costs between two or more agencies, departments, or bureaus.

INTER-AGENCY ALLOCATIONS - Distributions of an agency's budgetary resources to another agency, separately identified in the accounts to ensure that the receiving agency is responsive to the allocating agency. Such allocations may be non-expenditure transfers, which establish transfer appropriation accounts, or subdivisions of an agency.

INTEREST - The service charge for the use of money or capital, paid at agreed intervals by the user, commonly expressed as an annual percentage of outstanding principal.

INTEREST METHOD - Under the interest method of amortization, an amount of interest equal to the carrying amount of the investment times the effective interest rate is calculated for each accounting period. This calculated interest is the effective interest of the investment (referred to as "effective yield" in some literature). The effective interest is compared with the stated interest of the investment. (The stated interest is the interest that is payable to the investor according to the stated interest rate.) The difference between the effective interest and the stated interest is the amount by which the discount or the premium should be amortized (i.e., reduced) for the accounting period.

INTEREST PENALTY - A payment of money by the government to a contractor when a payment for goods or services is not made by the payment due date.

INTEREST RATE - The price charged per unit of money borrowed per year, or other unit of time, usually expressed as a percentage.

INTERNATIONAL BUDGET COSTS - Costs which are normally accepted into the budgets of the international organizations.

INTRA-ENTITY COSTS - Costs from organizational components within the reporting entity that provide support for the responsibility segment's programs, projects, or activities. These costs include the direct and indirect costs of other organizational components of the reporting entity.

INVENTORY - Inventory is a category of property consisting of those items held for sale or issue.

INVESTMENT - As a budget term, investment refers to equipment financed with procurement appropriation accounts. As an accounting term, investment is an asset that meets prescribed capitalization criteria established by the Comptroller General.

JOB (ORDER) COST SHEET - Subsidiary record for work-in-process inventory under a job order cost accounting system. A separate cost sheet is kept for each identifiable job, accumulating the direct materials, direct labor, and overhead assigned to that job as it moves through production. The form varies according to the needs of the company.

JOB - A unique product or service that is produced to meet the demands of a particular customer.

JOB LOT - A group of unique products or services that is produced for a particular customer.

JOB ORDER COST ACCOUNTING SYSTEM - A cost accounting system that is designed to determine the cost of producing each job or job lot, and that accumulates costs by job.

JOB ORDER COSTING - A method of cost accounting that accumulates costs for individual jobs or lots. A job may be a service or manufactured item, such as the repair of equipment or the treatment of a patient in a hospital.

JOB ORDER MANUFACTURING - A type of manufacturing that produces unique products (or services) for each customer.
JOINT COST - A single cost incurred in producing or purchasing two or more essentially different products.

JOINT PRODUCTS - Items that have a relatively significant sales value when two or more types are produced simultaneously from the same input by a joint process. For example, gasoline, fuel oil, kerosene, and paraffin are the joint products produced from crude oil.

JUST-IN-TIME (JIT) - An approach to managing inventories and production operations such that units of materials and products are obtained and provided only as they are needed.

LABOR EFFICIENCY VARIANCE - A measure that captures the cost impact between the amount of labor time that was actually used and the planned amount for a given level of output. More specifically, it is the difference between the actual amount of labor time and the standard labor time allowed, multiplied by the standard labor rate.

LABOR RATE (PRICE) VARIANCE - A measure that captures the cost impact between the actual and standard rate paid to employees. More precisely, it is the difference between the actual labor rate paid to workers and the standard labor rate, multiplied by the actual hours used.

LABOR VARIANCE - A measure of the difference between the actual costs of labor and the standard costs for labor. This represents the total of labor rate (price) variance and labor efficiency variance.

LAST-IN, FIRST-OUT (LIFO) - A cost flow assumption; the last goods purchased are assumed to be the first goods sold.

LATEST ACQUISITION COST (LAC) METHOD - A method that provides that all like units held be valued at the invoice price of the most recent like item purchased, less any discounts, plus any additional costs incurred to bring the item to a form and location suitable for its intended use.

LIFE-CYCLE COSTING - An acquisition or procurement technique which considers operating, maintenance, and other costs in addition to the acquisition cost of assets.

LOSS - Any expense or irrecoverable cost, often referred to as a form of non-recurring charge, an expenditure from which no present or future benefit may be expected.

LOWER OF COST OR MARKET - A valuation rule that recognizes impairment of asset values but avoids anticipated gains. The rule is typically applied to individual items or groups of like items, such as inventory or marketable securities. In this rule, "cost" refers to historical cost and "market" refers to the current replacement cost by purchase or production.

MACHINE-HOUR ALLOCATION BASE - Cost allocation base that provides a systematic and contemporaneous method of applying overhead costs to work-in-process inventory. An overhead rate of cost per hour of work expended by a machine is applied to the work-in-process.

MAINTENANCE - The act of keeping fixed assets in useable condition. It includes preventive maintenance, normal repairs, replacement of parts and structural components, and other activities needed to preserve the asset so that it continues to provide acceptable services and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, those originally intended.

MANAGERIAL (MANAGEMENT) ACCOUNTING - Process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information that is used by management to plan, evaluate, and control within an organization. It is the accounting method/process used for the planning, control, and decision-making activities of an organization. Managerial accounting is concerned with providing information to internal managers who are charged with directing, planning, and controlling operations and making a variety of management decisions. Managerial accounting can be contrasted with financial accounting, which is concerned with providing information, via financial statements, to stockholders, creditors, and others *outside* the organization.

MANAGERIAL COST ACCOUNTING SYSTEM - An information system that supports the appropriate collection, measurement, accumulation, analysis, interpretation, and communication of cost information. This information should be provided in such a way that it helps the user determine the cost of providing specific programs and activities and the composition of, and changes in, these costs. The organization and procedures, whether automated or not, and whether part of the general ledger or stand-alone, that accumulates and reports consistent and reliable cost information and performance data from various agency feeder systems. The accumulated and reported data enable management and other interested parties to measure and make decisions about the agency's/segment's ability to improve operations, safeguard assets, control its resources, and determine if mission objectives are being met.

MANUFACTURING COSTS - Expenses associated with manufacturing activities. They consist of three categories: direct materials, direct labor, and overhead.

MARGIN OF SAFETY - The excess of expected sales over the sales at the break-even point.

MARGINAL COST - Calculation showing the change in total cost as a result of a change in volume. For example, if one more unit of output causes an increase in total cost of $40, the $40 is the marginal cost.

MARGINAL REVENUE - Change of the total revenue of a business resulting when an extra unit is sold.

MARKET VALUE - 1. The estimated amount that can be realized by disposing of an item through arm's length transactions in the marketplace; the price (usually representative) at which bona fide sales have been consummated for products of like kind, quality, and quantity in a particular market at any given time. 2. For investments in marketable securities, the term refers to the value of such securities determined by prices quoted on securities exchange markets multiplied by the number of bonds or shares held in an investment portfolio.

MATERIALS PRICE VARIANCE - A measure of the difference between the actual price paid for materials and the standard price, multiplied by the actual quantity of material purchased. Materials price variance is the component of materials variance, which captures the dollar impact of deviations in actual prices for material from the predetermined standard prices.

MATERIALS QUANTITY (USAGE) VARIANCE - A measure of the difference between the actual amount of raw material and the standard amount of raw material allowed, multiplied by the standard price. Materials quantity variance is the component of materials variance, which captures the dollar impact of deviations in actual quantities of raw materials, used in production from the predetermined standard quantities.

MATERIALS REQUISITION - A source document used to request materials and used to assign materials cost to specific jobs or to overhead.

MATERIALS VARIANCE - A measure of the difference between the actual cost and the standard cost of materials. This represents the total of materials price variance and materials quantity variance.

MEASURABLE - Can be determined with reasonable certainty or is reasonably estimable.

MINIMUM LEASE PAYMENTS - The payments that the lessee is obligated to make or may be required to make in connection with leased property.

MIXED COST - A cost that can be separated into fixed and variable components.

MOVING AVERAGE - An inventory costing method used in conjunction with a perpetual inventory system. A weighted average cost per unit is recomputed after every purchase. Goods sold are costed at the most recent moving average cost.

MULTIPLE OVERHEAD RATES - Manner of measuring product costs. A different predetermined overhead rate is set for each department of an organization, rather than having a single predetermined rate. When products are heterogeneous, receiving uneven attention and effort as they move through various departments, departmental rates are necessary to achieve more accurate and equitable product costs.

NET PRESENT VALUE - A method that evaluates the difference between the present value of all cash inflows and outflows of an investment using a given rate of discount. If the discounted cash inflow exceeds the discounted outflow, the investment is considered economically feasible.

NET REALIZABLE VALUE - The estimated amount that can be recovered from selling, or any other method of disposing of an item less estimated costs of completion, holding and disposal.

NOMINAL DOLLAR - The dollar value assigned to a good or service in terms of prices current at the time the good or service is required. This contrasts with the value assigned to a good or service measured in constant dollars.

NON-VALUE-ADDED ACTIVITY - An activity that is considered not to contribute to customer value or to the organization's needs. The designation "non-value-added" reflects a belief that the activity can be redesigned, reduced, or eliminated without reducing the quantity, responsiveness, or quality of the output required by the customer or the organization.

NONCONTROLLABLE COST - Cost not subject to influence at a given level of managerial supervision. For instance, a manager's salary is not within the control of the manager himself. Rent of the building is another example. See also controllable cost.

NONEXCHANGE REVENUE - Inflows of resources to the Government that the Government demands or that it receives by donations. The inflows that it demands include taxes, duties, fines, and penalties.

NONEXCHANGE TRANSACTION - A transaction that arises when one party to a transaction receives value without giving or promising value in return, or when one party to a transaction gives or promises value without receiving value in return.

NONFEDERAL PHYSICAL PROPERTY - Physical properties financed by grants from the federal government, but owned by state and local governments.

NON-PRODUCTION COST - Costs incurred and recognized that are linked to events other than the production of goods and services. Examples include other post employment benefits (OPEB) costs recognized as expenses when an OPEB event occurs, certain property acquisition costs that are recognized as expenses at the time of acquisition, reorganization costs, and non-recurring cleanup costs resulting from facility abandonments that are not accrued. Since these costs are recognized for a period in which a particular event occurs, assigning these costs to goods and service produced in that period would distort the production costs. In special purpose cost studies, management may have reasons to determine historical output costs by distributing some of these costs to outputs over a number of past periods.

OBLIGATED BALANCES - The net amount of obligations in a given account for which payment has not yet been made.

OBLIGATIONAL AUTHORITY - The sum of a) budget authority provided for a given fiscal year; b) balances of amounts brought forward from prior years that remain available for obligation; and c) amounts authorized to be credited to a specific fund or account during that year, including transfers between funds or accounts. (See "Budget Authority.") For FMS, represents total authority received through use of the DD Form 2060, or use of the Service automated funds distribution systems. Includes column 11 authority to incur commitments and obligations directly against the Trust Fund and column 10 reimbursable orders.

OBLIGATIONS - Amounts of orders placed, contracts awarded, services received, and other transactions occurring during a given period that would require payments during the same or a future period.

OBSOLESCENCE - A product or service that has lost its value to the customer due to changes in need or technology.

OPERATING LEASE - An agreement conveying the right to use property for a limited time in exchange for periodic rental payments.

OPPORTUNITY COST - The value of the alternatives foregone by adopting a particular strategy or employing resources in a specific manner. Also called Alternative Cost or Economic Cost.

OTHER FINANCING SOURCES - Inflows of resources that increase net position of a reporting entity but that are not revenues or gains. Borrowing is not included as other financing sources, since it does not increase the net resources of the reporting entities.

OTHER POSTEMPLOYMENT BENEFITS (OPEB) - Forms of benefits provided to former or inactive employees, their beneficiaries, and covered dependents outside pension or Other Retirement Benefits (ORB) plans.

OTHER RETIREMENT BENEFITS (ORB) - Forms of benefits, other than retirement income, provided by an employer to retirees. Those benefits may be defined in terms of specified benefits, such as health care, tuition assistance, or legal services, which are provided to retirees as the need for those benefits arises, such as certain health care benefits. Or they may be defined in terms of monetary amounts that become payable on the occurrence of a specified event, such as life insurance benefits.

OUTCOME - The results of a program activity compared to its intended purposes. Program results may be evaluated in terms of service or product quantity and quality, customer satisfaction, and effectiveness.

OUTLAY - The issuance of checks, disbursement of cash, or electronic transfer of funds made to liquidate a federal obligation. Outlays also occur when interest on the Treasury debt held by the public accrues and when the Government issues bonds, notes, debentures, monetary credits, or other cash-equivalent instruments in order to liquidate obligations. Also, under credit reform, the credit subsidy cost is recorded as an outlay when a direct or guaranteed loan is disbursed.

OUTPUTS - Any product or service generated from the consumption of resources. It can include information or paper work generated by the completion of the tasks of an activity.

OVERAPPLIED OVERHEAD - The amount by which the overhead applied to jobs during a period with the predetermined overhead application rate exceeds the overhead incurred during the period.

OVERHEAD - Costs that are incurred but are not clearly associated with specific units of a product or service; includes all costs other than direct material and direct labor. In addition to indirect materials and indirect labor, it includes such items as depreciation, fringe benefits, payroll taxes, and insurance.

OVERHEAD BUDGET - Schedule of all expected costs except for direct material and direct labor. Overhead items include indirect material, indirect labor, rent, and insurance. Overhead may be variable, fixed, or a combination of both.

OVERHEAD RATE - The rate determined by performing organizations to allocate operating costs not directly identifiable to the work order. Includes supervisory and general and administrative expenses as well as miscellaneous material and supplies.
PACKING, CRATING, AND HANDLING (PCH) COSTS - A subset of accessorial costs that are incurred for sales, or shipments of property. (See "accessorial charges.")

PAYROLL COSTS - Employer cost incurred for employees' services. Payroll costs consist of the actual cash paid to the employees and the withheld amounts (liabilities) for employee's federal income taxes, FICA, and various voluntary health and benefit plans. Employer's payroll costs also consist of its matching share of employee's FICA taxes and contributions to the state and federal unemployment insurance programs.

PERFORMANCE MEASUREMENT - A means of evaluating efficiency, effectiveness, and results. A balanced performance measurement scorecard includes financial and non-financial measures focusing on quality, cycle time, and cost. Performance measurement should include program accomplishments in terms of outputs (quantity of products or services provided, e.g., the number of items efficiently produced) and outcomes (results of providing outputs, e.g., whether outputs are effectively meeting intended agency mission objectives).

PERFORMANCE MEASURES - Indicators of the work performed and the results achieved in an activity, process, or organizational unit. Performance measures may be financial or non-financial. An example of a performance measure of an activity is the number of defective parts per million. An example of a performance measure of an organizational unit is return on sales.

PERIOD COSTS - Costs that are charged to expense because their benefits appear to expire as the costs are incurred.

PLANTWIDE OVERHEAD RATE - Single predetermined overhead rate used in all departments of an organization, rather than having a separate rate for each department. If the company's departments are homogeneous, the use of a single plant-wide rate may be adequate as a means of allocating overhead costs to production jobs.

POOL RATE - The overhead costs for a homogenous cost pool divided by the appropriate cost driver associated with the pool.

PORT LOADING AND UNLOADING COSTS - A subset of accessorial costs. The costs incurred for loading, unloading, and handling at the ports of embarkation and debarkation.

PREDETERMINED OVERHEAD APPLICATION RATE - The rate established prior to the beginning of a period that relates estimated overhead to another variable such as estimated direct labor, that is used to assign overhead costs to jobs.

PREMIUM DEFICIENCY - A condition under which a liability for future policy benefits using current conditions exceeds the liability for future policy benefits using contract conditions. In such cases, the difference should be recognized as a charge to operations in the current period.

PRESENT VALUE (PV) - The value of future cash flows discounted to the present at a certain interest rate (such as the reporting entity's cost of capital), assuming compound interest.

PREVENTIVE COSTS - A category of quality costs incurred to prevent defects of products and services, such as quality training programs and quality circles.

PRICE VARIANCE - A measure of the difference between actual and standard prices multiplied by the actual quantity. This is a component of total variance.

PRIME COST - Consists of direct material and direct labor.

PRO RATA - Basis for allocating an amount proportionately to the items involved.
PROCESS - The organized method of converting inputs (people, equipment, methods, materials, and environment) to outputs (products and services). The natural aggregation of work activities and tasks performed for program delivery.

PROCESS COSTING - A method of cost accounting that first collects costs by processes and then allocates the total costs of each process equally to each unit of output flowing through it during an accounting period.

PROCESS VALUE ANALYSIS - Tools and techniques for studying processes through customer value analysis. Its objective is to identify opportunities for lasting improvement in the performance of an organization. It provides an in-depth review of work activities and tasks, through activity analysis, which aggregate to form processes for agency program delivery. In addition to activity-based costing, quality and cycle time factors are studied for a complete analysis of performance measurement. Each activity within the process is analyzed, including whether or not the activity adds value for the customer.

PRODUCT - Any discrete, traceable, or measurable good or service provided to a customer. Often goods are referred to as tangible products, and services are referred to as intangible products. A good or service is the product of a process resulting from the consumption of resources.

PRODUCT COSTS - Costs that are capitalized as inventory because they produce benefits that are expected to have value in the future.

PRODUCT LINE/FAMILY - A group of products or services that have a defined relationship because of physical and production similarities.

PRODUCT LIFE CYCLE - The period that starts with the initial product specification and ends with the withdrawal of the product from the marketplace. A product life cycle is characterized by certain defined stages, including research, development, introduction, maturity, decline, and abandonment.

PRODUCTION BUDGET (FORECAST) - Schedule for expected units to be produced. It sets forth the units expected to be manufactured to satisfy budgeted sales and inventory requirements. Expected production volume is determined by adding desired ending inventory to planned sales and then subtracting beginning inventory.

PRODUCTION COST - The sum of all costs required to produce an output, including direct and indirect costs from within the entity and costs of resources provided by other entities.

PRODUCTION DEPARTMENT - An organizational unit that has the responsibility for partially producing a product or service.

PRODUCTION MIX VARIANCE - A measure of the cost impact of differences between the actual production mix and the standard or budgeted mix. This situation typically occurs when an organization has multiple products or inputs. The mix variance explains the portion of the quantity variance caused by using inputs in ratios different from standard proportions.

PRODUCTION YIELD VARIANCE - A measure of the difference between the actual yield and the standard or budgeted yield.

PROGRAM - A mission program, whose products or services the Agency delivers as part of its strategic plan.

PROGRESS BILLINGS - Interim billings for construction work or government contract work.

PROJECT - A planned undertaking, usually related to a specific activity, such as the research and development of a new product or the redesign of the layout of a plant.

PROJECT COSTING - A method that collects information on activities and costs associated with a specific activity, project, or program.

PROPERTY - Anything that is owned by the government. As used in the military establishment, the term is usually confined to tangible property, including real estate and material. Property consists of two major categories: fixed assets and inventory. Fixed assets are those items purchased for use at the established dollar threshold for capitalization of assets and with a useful life of more than two years. Inventory are those items held for sale or issue.

PROPRIETARY ACCOUNTING - Also known as financial accounting, a process that supports accrual accounting and financial reporting that attempts to show actual financial position and results of operations by accounting for assets, liabilities, net position, revenues, and expenses.

PRORATION - Allocating or assigning an amount in proportion to some base to an activity, department, or product. Service costs are frequently allocated to user departments based on the base allocation formula/procedure (e.g., number of employees, machine hours spent). See also allocation.

PURCHASES METHOD - A method of accounting for goods, such as materials and supplies, in which the acquisition cost is recognized as an expense upon purchase of the goods rather than upon their use.

RAW MATERIALS - Materials that are purchased for use in making products; most are used as direct materials but some are used as indirect materials.

REAL PROPERTY - Fixed assets that are comprised of land and the rights to land; buildings, to include capitalized additions, alterations, improvements, and rehabilitations; and other structures and facilities.

RECIPROCAL ALLOCATION METHOD - Process of allocating service department costs to production department, where reciprocal services are allowed between service departments; also known as the reciprocal method, the matrix method, the double-distribution method, the cross-allocation method, and simultaneous equation method. The method sets up simultaneous equations to determine the allocable cost of each service department.

RECOGNITION (OR RECOGNIZE) - Recognition is the process of formally recording or incorporating an item into the financial statements of an entity as an asset, liability, revenue, expense, or the like.

RECORD - To give expression to a transaction on (or in) the books of account; to enter.

REDISTRIBUTED COST - Reassignment of a cost. For example, rent of the computer department is first assigned to it. Then the total service cost of the computer department is redistributed on some rational basis (such as space occupied) to other service departments and to production departments. See also probation.

REESTIMATE - Refers to estimates of the subsidy costs performed subsequent to their initial estimates made at the time of a loan's disbursement.

REIMBURSEMENTS - Sums received as payment or advance payment for goods or services furnished either to the public or to another federal government account. If authorized by law, these sums are credited directly to specific appropriation and fund accounts. These amounts are deducted from the total obligations incurred (and outlays) in determining net obligations (and outlays) for such accounts. Reimbursements are offsetting collections. (See offsetting collections.)

RELEVANT COSTS – Those cost elements that are necessary for particular management analyses and/or decision-making purposes when full cost is not appropriate. Relevant costs may include expected or potential costs that differ among alternative courses of action.

RELATIVE SALES VALUE METHOD - Manner of allocating joint costs in proportion to relative sales values of joint products. For example, joint products X and Y have joint costs of $1200 and X sells for $70 while Y sells for $50. Then X would be allocated $1200 X ($70/$120) = $700 of the joint costs while Y would be allocated $1200 X ($50/$120) = $500 of the joint costs.

RELEVANT RANGE OF OPERATIONS - A business's normal operating range; excludes extremely high and low volumes that are not likely to be encountered.

REPAIRABLE - An inventory item that is expected to be repaired when broken or worn out.

REPETITIVE MANUFACTURING - The manufacture of identical products (or a family of products) in a continuous flow.

REPLACEMENT COST - The cost to be incurred at a future time to procure equipment or material in place of items, which have been sold or transferred. In lower cost or market computations, the term "market" means replacement cost, subject to ceiling and floor limitations.

REPLACEMENT COST ACCOUNTING - Valuing assets and liabilities at their cost to replace. It is a departure from historical cost accounting. The effect of inflationary changes on items bought and sold is considered. Holding gains and losses arises from a change between the historical cost and the replacement cost.

REQUIRED SUPPLEMENTARY STEWARDSHIP INFORMATION (RSSI) - The category defined by the Board for reporting information required by the stewardship standards. Stewardship information may be presented as RSSI, in the financial statements, or in the notes to them. Stewardship information will be necessary for a fair presentation of financial position and results of operations.

RESALE INVENTORY - The aggregate of those items of tangible government property which a) are held as a stock of goods for sale in the ordinary course of business; b) are in process of production for such sale; or c) are to be currently consumed, combined, or transferred in the production of goods or services sale.

RESEARCH AND DEVELOPMENT - Federal investment in research and development refers to those expenses incurred in support of the search for new or refined knowledge and ideas and for the application or use of such knowledge and ideas for the development of new or improved products and processes with the expectation of maintaining or increasing national economic productive capacity or yielding other future benefits. Research and development is composed of basic research, applied research, and development.

RESERVATION - An administrative reservation of funds based on procurement directives, requests, or equivalent instruments that authorize preliminary negotiations, but require that funds be certified by the official responsible for the administrative control of funds before incurring obligations. Initiations are entered into memorandum accounts to help keep pre-commitment actions, such as approved procurement programs and procurement directives, within the available subdivision of funds.

RESERVES - Portions of budgetary resources set aside by OMB to (1) provide for contingencies or (2) effect savings made possible by or through changes in requirements or greater efficiency of operations.

RESIDUAL VALUE - Residual value is the estimated value remaining at the end of a capital asset's useful life or the amount that can be expected to be recovered from the asset's disposal when it is removed from service.

RESOURCE - An economic element that is applied or used in the performance of activities. Salaries and materials, for example, are resources used in the performance of activities.

RESOURCE COST ASSIGNMENT - The process by which cost is attached to activities. This process requires the assignment of cost from general ledger accounts to activities using resource drivers.

RESOURCE DRIVER - A measure of the quantity of resources consumed by an activity. An example of a resource driver is the percentage of total square feet of space occupied by an activity. This factor is used to allocate a portion of the cost of operating the facilities to the activity.

RESPONSIBILITY ACCOUNTING - Collection, summarization, and reporting of financial information about various decision centers (*responsibility centers)* throughout an organization; also called *activity accounting* or *profitability accounting.* It traces costs, revenues, or profits to the individual managers primarily responsible for making decisions about the costs, revenues, or profits in question and taking appropriate actions. Responsibility accounting is appropriate where top management has delegated authority to make decisions. The idea being that each manager's performance should be judged by how well he or she manages those items under his or her control.

RESPONSIBILITY CENTER - An organizational unit headed by a manager or a group of managers who are responsible for its activities. Responsibility centers can be measured as revenue centers (accountable for revenue/sales only), cost centers (accountable for costs/expenses only), profit centers (accountable for revenues and costs), or investment centers (accountable for investments, revenues, and costs).

RESPONSIBILITY SEGMENT - A significant organizational, operational, functional, or process component which has the following characteristics: (a) its manager reports to the entity's top management; (b) it is responsible for carrying out a mission, performing a line of activities or services, or producing one or more products; and (c) for financial reporting and cost management purposes, its resources and results of operations can be clearly distinguished, physically and operationally, from those of other segments of the entity.

REVENUE - Increase in the assets of an organization or the decrease in liabilities during an accounting period, primarily from the organization's operating activities. This may include sales of products (sales), rendering of services (revenues), and earnings from interest, dividends, lease income, and royalties.

REVENUE ADJUSTMENT - A contra revenue account that is used to report reduction in revenue when realization is not probable (less likely than not). It includes returns, allowances, and price re-determinations, but not credit losses (due to the inability of the debtor to pay the established or negotiated price).

REVENUE CENTER - Unit within an organization responsible for generating revenues. It is a profit center since for all practical purposes there is no revenue center that does not incur some costs during the course of generating revenues. A favorable variance occurs when actual revenue exceeds expected revenue.

REVOLVING FUND - A fund consisting of permanent appropriation and expenditures of collections, from both the public and other Governmental agencies and accounts, that is earmarked to finance a continuing cycle of business-type operations.

RISK - The subjective assessment of the possible positive or negative consequences of a current or future action. In a business sense, risk is the premium requested or paid for engaging in an investment or venture. Often, risk is incorporated into business decisions through such factors as hurdle rates or the interest premium paid over a prevailing base interest rate.

SALES MIX - The ratio of the volumes of the various products sold by a company.

SEIZING AGENCY - An agency that seizes property as a part of its law enforcement activities.

SELLING EXPENSE (COST) - Expenses incurred in selling or marketing; e.g., salaries, commissions, and promotion expenses.

SEMIVARIABLE COST - One that varies with changes in volume, but unlike a variable cost, does not vary in direct proportion; also called *mixed cost.* In other words, this cost contains both variable and fixed components.

SERVICE - An intangible product or task rendered directly to a customer.
SERVICE CHARGE - An amount of money automatically added to a customer's bill for products sold or services rendered.

SERVICE DEPARTMENT - An organizational unit of a facility that has the responsibility for providing support for the work of the production departments. Examples are purchasing, building and ground personnel, and power departments. All of these activities are necessary parts of the production process and primarily supportive of production departments. Service department costs must be allocated to production departments before *overhead rates* are determined.

SERVICE DEPARTMENT COSTS - Costs incurred in rendering service to production departments and to other service departments. Service department costs are overhead costs. Since the production departments are directly benefited by service departments, the costs of a service department should be allocated to the appropriate production departments (as part of overhead costs).

SETUP COST - Expenses incurred each time a batch is produced. It consists of the engineering cost of setting up the production runs or machines, the paperwork cost of processing the work order, and ordering cost to provide raw materials for the batch.

STANDARD COST - Production or operating cost that is carefully predetermined. A standard cost is a target cost that *should* be attained. The standard cost is compared with the actual cost in order to measure the performance of a given costing department or operation. *Variances*, which are the differences between actual costs and standard costs, may indicate inefficiencies that have to be investigated. Corrective action may have to be taken.

STANDARD COSTING - A costing method that attaches costs to cost objects based on reasonable estimates or cost studies and by means of budgeted rates rather than according to actual costs incurred. The anticipated cost of producing a unit of output. A predetermined cost to be assigned to products produced. Standard cost implies a norm, or what costs should be. Standard costing may be based on either absorption or direct costing principles, and may apply to all or some cost elements.

STANDARD HOURS ALLOWED - Time that should have been used to manufacture actual units of output during a period. It is obtained by multiplying actual units of production by the standard labor time.

STANDARD LABOR RATE - Direct labor rate that should be paid for each hour of labor time. It includes not only base wages earned but also an allowance for fringe benefits and other labor-related costs.

STANDARD MATERIAL PRICE - Per unit price for direct materials that should be paid for a single unit of materials. It reflects the final, delivered cost of the materials, net of any discounts taken.

STANDARD PRICE - The unit price of an item, as it is recorded in the Standard Catalog for use in financial and accountable records of the holding Service or Agency. An item not included in the appropriate Service or Agency pricing catalog, shall be priced at original cost, if available, or if it is not known, at fair market value.

STANDARD QUANTITY - Amount of materials that should have been used to manufacture units of output during a period. It is obtained by multiplying actual units of production by the standard material quantity per unit.

STEP COSTS - Costs that are approximately fixed over a small volume range, but are variable over a large volume range. For example, supervision costs are fixed for a given range of production volume, but increased production often requires additional work shifts leading to added supervisory costs in a lump sum fashion.

STEP-VARIABLE COST - A cost that remains constant over limited ranges of volumes, but increases by a lump sum when volume increases beyond maximum amounts.

SUBSIDIARY LEDGERS - Records that provide detailed information about amounts recorded in the general ledger accounts.

SUNK COST - Costs incurred in the past whose total will not be affected by any decision made now or in the future. Such costs are usually past or historical costs. For example, if a machine acquired for $50,000 three years ago has a book value of $20,000, the $20,000 book value is a sunk cost that does not affect a future decision involving its replacement.

SUPPORT COSTS - Costs of activities not directly associated with production. Typical examples are the costs of automation support, communications, postage, process engineering, and purchasing.

SURCHARGE - A supplemental fee charged to a customer in addition to the normal price assessed for goods or services.

SURROGATE ACTIVITY DRIVER - An activity driver that is not descriptive of an activity, but is closely correlated to the performance of the activity. The use of a surrogate activity driver should reduce measurement costs. The number of production runs, for example, is not descriptive of the material disbursing activity, but the number of production runs may be used as an activity driver if material disbursements coincide with production runs.

SUSTAINING ACTIVITY - An activity that benefits an organization at some level (e.g., the company as a whole or a division, plant, or department), but not any specific cost object. Examples of such activities are preparation of financial statements, plant management, and the support of community programs.

TANGIBLE ASSETS - Depreciable property, plant, equipment, and software developed, manufactured, transferred, or acquired at a specific point in time for a determinable cost; are used over some period (useful life), the length of which is estimated to be 2 years or greater; and generally, become economically worthless (except for residual value) at the end of their estimated useful lives.

TARGET COST - A cost calculated by subtracting a desired profit margin from an estimated (or a market-based) price to arrive at a desired production, engineering, or marketing cost. The target cost may not be the initial production cost, but instead the cost that is expected to be achieved during the mature production stage.

TARGET COSTING - A method used in the analysis of product and process design that involves estimating a target cost and designing the product to meet that cost.

TAX EXPENDITURE - A revenue foregone attributable to a provision of the federal tax laws that allows a special exclusion, exemption, or deduction from gross income or provides a special credit, preferential tax rate, or deferral of tax liability.

TAX GAP - An estimate of taxes (including duties) unpaid because of non-compliance with existing laws and regulations.

TECHNOLOGY COSTS - A category of cost associated with the development, acquisition, implementation, and maintenance of technology assets. It can include costs such as the depreciation of research equipment, tooling amortization, maintenance, and software development.

THROUGHPUT - The rate of production of a defined process over a stated period of time. Rates may be expressed in terms of units of products, batches produced, dollars turned over, or other meaningful measurements.

TOTAL COST - Sum of the various costs incurred. For example, total costs are the sum of direct materials, direct labor, and overhead. By management function, total costs are the sum of costs and selling and administrative expenses. By behavior in relation to fluctuations in activity, total costs are the sum of variable costs and fixed costs.

TOTAL COST METHOD - An accounting method that includes the actual acquisition cost of each item held plus the costs of any additions, improvements, alterations, rehabilitations, or replacements that extend the useful life of an asset.

TRACEABILITY - The ability to assign a cost directly to a specific activity or cost object by identifying or observing specific resources consumed by the activity or cost object.

TRACEABLE COST - One directly assigned to a given item or function.

TRACING - The assignment of cost to an activity or a cost object using an observable measure of the consumption of resources by the activity or cost object. Tracing is generally preferred to allocation if the data exist or can be obtained at a reasonable cost.

TRADE DISCOUNT - A reduction in price, usually varying in percentage with volume of transactions, and made by vendors to those engaged in certain businesses and allowable regardless of when the account is paid.

TRANSACTION - A particular kind of external event involving the transfer of something of value concerning two or more entities. The transfer may be a two way or one way flow of resources or of promises to provide resources.

TRANSFERRED-IN COSTS - Costs of processing a product or performing a service from a prior department to the current department. The costs usually occur under a process costing system.

TRANSPORTATION COSTS - The costs incurred for shipment of materials, personnel, or goods.

TRIAL BALANCE - A financial report showing the accumulated balances in the general ledger accounts of an entity at a certain point in time. The account balances may include balances in the assets, liabilities, equity, revenue, cost, budget and statistical accounts.

UNAVOIDABLE COSTS - Costs to be incurred regardless of the decision to make or buy a certain part or keep or drop a certain product line; these costs cannot be recovered or saved. Much or all of fixed costs in those cases are unavoidable costs, e.g., property taxes and rent.

UNCONTROLLABLE COST - The cost over which a responsible manager has no influence.

UNDELIVERED ORDER(S) - Contracts or orders issued by the ordering entity for goods and services which have not yet been received and accepted, and for which the liability has not yet been accrued.

UNDERAPPLIED OVERHEAD - The amount by which overhead incurred during a period exceeds the overhead applied to jobs with the predetermined overhead application rate.

UNDISTRIBUTED COST - A cost or disbursement to a budget authority which has not been allocated to a specific case.

UNEARNED REVENUE - Revenue from customers collected in advance of earnings and prior to delivery of goods or services.

UNFAVORABLE VARIANCE - Excess of actual costs over standard costs. Unfavorable variances typically require further investigation for possible causes.

UNFILLED CUSTOMER ORDERS - The amount of orders accepted from ordering entities within the U. S. Government for goods and services to be furnished on a reimbursable basis; or, in the case of transactions with the public, amounts collected in advance for which the entity has not yet performed as requested.

UNFUNDED COST - Costs not financed by the performing activity's current appropriations or fund accounts. Applicable types of costs include depreciation, interest on investment, and civilian retirement amounts funded by Office of Personnel Management.

UNIT COST - The cost of a selected unit of a good or service. Examples include dollar cost per ton, machine hour, labor hour, or department hour.

UNITED STATES GOVERNMENT STANDARD GENERAL LEDGER (U.S.G.S.G.L.) - A uniform chart of accounts and pro forma transactions used to standardize federal agency accounting and to support the preparation of standard external reports required by central agencies. OMB and Treasury Financial Management Service regulations require agencies to use the SGL to accumulate and report standard financial data. The SGL chart of accounts identifies and defines budgetary, proprietary, and memorandum accounts to be used in agencies' accounting systems. The SGL is generic for the federal government, and is not intended to reflect any single federal agency's accounting system. The Federal Financial Management Improvement Act of 1996 requires agency financial management systems to comply with the SGL at the transaction level.

UNOBLIGATED BALANCES - Balances of budgetary resources that have not yet been obligated. Unobligated balances expire (cease to be available for obligation) 1) at the end of the fiscal year for year accounts; at the end of the period specified for multiple year accounts and for no year accounts only when they are rescinded by law, 2) when their purpose is accomplished, or (3) when disbursements against the appropriation have not been made for 2 full consecutive years.

USEFUL LIFE - The normal operating life in terms of utility to the owner.

VALUATION ACCOUNT (ALLOWANCE) - An account that partly or wholly offsets one or more other accounts; for example, accumulated depreciation is a valuation account related to specific depreciable assets and allowance for bad debts is a valuation account related to accounts receivable. If a valuation account is deducted from the related asset or liability it is sometimes referred to as a contra-asset or contra-liability account.

VALUE ANALYSIS - A cost reduction and process improvement tool that utilizes information collected about business processes and examines various attributes of the processes (e.g., diversity, capacity, and complexity) to identify candidates for improvement efforts.

VALUE-ADDED ACTIVITY - An activity that is judged to contribute to customer value or satisfy an organizational need. The attribute "value-added" reflects a belief that the activity cannot be eliminated without reducing the quantity, responsiveness, or quality of output required by a customer or organization. Value-added activities should physically change the product or service in a manner that meets customer expectations.

VARIABLE OVERHEAD - Portion of total overhead that varies directly with changes in volume. Examples of variable overhead are indirect materials, supplies, indirect labor, fuel, and power.

VARIABLE COST - A cost that varies with changes in the level of an activity, when other factors are held constant. The cost of material handling to an activity, for example, varies according to the number of material deliveries and pickups to and from that activity.

VARIABLE OVERHEAD EFFICIENCY VARIANCE - A measure of the difference between standard hours allowed and actual hours incurred multiplied by the standard variable overhead rate. Variable overhead efficiency variance is the component of the variable overhead variance that is caused by differences in operating efficiency.

VARIABLE OVERHEAD SPENDING VARIANCE - A measure of the difference between the actual variable overhead rate and the standard variable overhead rate multiplied by the actual hours of the activity base used. Variable overhead spending variance is the component of the variable overhead variance that is caused by differences in the variable overhead rate.

VARIABLE OVERHEAD VARIANCE - A measure of the difference between actual variable overhead incurred and the variable overhead applied. This represents the total of variable overhead spending variance and variable overhead efficiency variance.

VARIANCE - (1) The amount, rate, extent, or degree of change, or the divergence from a desired characteristic or state, (2) the difference for a year or less between the elements (direct material, direct labor, factory overhead) of standard cost and actual cost. The term applies to (a) money difference or (b) changes in the character or purpose of amounts expended.

WAREHOUSING COSTS - Costs normally incurred for labor, materiel, or services in packing item(s) that are removed from storage, to prepare item(s) for shipment; and processing related materiel release documents.

WASTE - Resources consumed by unessential or inefficient activities.

WEIGHTED AVERAGE COSTING - Procedure for computing the unit cost of a process. Beginning work-in-process inventory costs are added to the costs of the current period, then a weighted average is obtained by dividing the combined costs by equivalent units. Thus there is only one average cost for goods completed.

WEIGHTED-AVERAGE - A periodic inventory costing method where ending inventory and cost of goods sold are priced at the weighted-average cost of all items available for sale.

WORK CELL - A physical or logical grouping of resources that performs a defined job or task. The work cell may contain more than one activity. For example, all the tasks associated with the final assembly of a product may be grouped in a work cell.

WORK CENTER - It consists of one or more resources where a particular product or process is accomplished.

WORK IN PROCESS - Costs of the materials, labor, and indirect costs used in producing an end item (real property or personal property) or service, whether fabricated by a governmental business operation fund, or by a non-governmental organization under contract.

WORK TICKET - Form used to charge jobs for direct labor used.

WRITE-OFF - An action to remove an amount from an entity's assets or financial resources.

Reference Materials Used in This Section:

Tierney, Cornelius E., *Handbook of Federal Accounting Practices*, Reading Massachusetts: Addison-Wesley, 1982:122.

Draft Glossary, *DoD Financial Management Regulation*, DoD FMR 7000.1-R

Cooper W. Ijiri, *Kohler's Dictionary for Accountants*, 6th ed., Englewood Cliffs, NJ: Prentice-Hall, 1983.

The CAM-I Glossary of Activity-Based Management, Edited by Norm Raffish and Peter B. B. Turney, (Arlington: CAM-I, 1991).

Joel G. Siegel, Ph.D., CPA; Jae K. Shim, Ph.D., Dictionary of Accounting Terms, Second Edition, Hauppauge, NY: Barron's Educational Series, Inc.

Draft Consolidated Glossary - a compilation of terms in the Statement of Federal Financial Accounting Standards.

Larson, Kermit D. & Miller, Paul W., *Fundamental Accounting Principles*, 13th edition.

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Gary Reisner, Office of Management and Budget
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Linda Dornisch, Customs Service
Richard Mayo, FASAB
Anita Byrd, Dept. of Labor
Vivian Lu, Dept. of Agriculture

Unofficial Advisor
Clif Williams, Coopers and Lybrand

Special Contributor
David Rebich, Dept. of the Treasury, Financial Management Service

Reporting of Managerial Cost Information Subgroup

Members
De Ritchie, Chair, Dept. of Defense
Sonya Smith, Dept. of Veterans Affairs
David Rebich, Dept. of the Treasury
Robert Lee, Dept. of the Treasury

Stephen Smith, Federal Aviation Administration
Norm Caulder, Environmental Protection Agency
Nancy Perkins, Environmental Protection Agency
Robert Manuse, General Services Administration
Carol Israel, Dept. of the Treasury
Howard Katz, General Services Administration
Greg Boutin, Bureau of Engraving & Printing
Ed Cox, General Services Administration
Raymond Kidd, Dept. of Defense (OIG)
Barbara Sauls, Dept. of Defense (OIG)
Sharon Fratis, Dept. of Defense
Bill deBardelaben, Dept. of Defense
Ken Bode, Internal Revenue Service
Blair Staley, Department of Labor
James Short, Dept. of Army
John Glover, Dept. of Defense
Jo Cohen-Langlois, Customs Service
Linda Dornisch, Customs Service
Jerry Ross, Customs Service

Unofficial Advisors:
Carrie Hug, Grant Thorton (formerly of DOT)
Joe Donlon, Grant Thorton