Cost Allocation

Cost Allocation
In
Tribal Child Support Enforcement Systems

Cost Allocation

Purpose

The workshop's purpose is to present a simple, consistent, and objective cost allocation methodology to:

- Help States and Tribes determine equitable distributions of software development costs to Federal, State and Tribal benefiting programs over the system development lifecycle.
- Help expedite the Federal approval process for State and Tribal Cost Allocation Plans.

Cost Allocation

Audience

This Toolkit is designed for those who are typically responsible for cost allocation planning and implementation for State and Tribal automated systems supporting Federal, State and Tribal public assistance program.

- **National office (Federal) financial staff who review and approve State Cost Allocation Plans**
- **Regional office staff (Federal) who review State Cost Allocation Plans**
- **State and Tribal agency financial and information technology (IT) staff who help prepare Cost Allocation Plans based on system development needs.**
- **Contractors who provide data to support State cost allocation methodologies.**

Cost Allocation

Purpose

State agencies incur system costs throughout the system lifecycle. These costs fall into five categories:

- **System planning**
- **Software development**
- **Hardware**
- **Operations**
- **Maintenance**

Cost Allocation

Challenges

During fact-finding interviews held in 2003, a stakeholder group of Federal and State agency representatives identified three types of cost allocation challenges:

- Lack of cost allocation knowledge
- Need for a defined cost allocation process
- Specific issues with cost allocation implementation, for example, timeframes for Cost Allocation Plan approval and guidance for small programs' cost allocation
- Sporadic/infrequent needs for performing cost allocation
- Loss of cost allocation experience due to staff turnover

Cost Allocation
Opportunities

The group proposed the following solutions:

- Create a cost allocation training resource that could be a refresher for experienced State, Tribal and Federal workers and a primer for new staff
- Define and model a cost allocation process, with automated tool support, to promote consistent and objective cost allocation outcomes for benefiting programs
- Encourage cost allocation best practices and the use of lessons learned among the States and Tribes

Cost Allocation

Why Cost Allocation

- Increasingly, as new technologies and new approaches like enterprise architecture have become available, States and even Tribes are integrating their systems to administer several Federal, State and Tribal programs simultaneously.

- Equitable cost sharing is very important because system integration and modernization costs are substantial, with software development usually the single largest cost item at over 50% of total system costs. Federal law requires equity in cost sharing.

Cost Allocation

Key Concepts

- **Cost allocation** is a procedure that State agencies use to identify, measure, and equitably distribute system costs among benefiting State and Federal public assistance programs.

- **Benefiting program** means a State, Tribal or Federal public assistance program that uses capabilities in a State's automated system to help its personnel perform a program function.

- *For example, the State of Arizona's AZTECS system helps caseworkers determine an applicant's eligibility for multiple programs' services, including Temporary Assistance to Needy Families (TANF), Food Stamps, and Medicaid. In this example, TANF, Food Stamps, and Medicaid are all "benefiting programs" of the AZTECS system and share its costs.*

Cost Allocation

Cost allocation involves identifying:

- **Direct costs** (for system functions benefiting a single Federal, State or Tribal program)

- **Shared costs** (for system functions benefiting two or more Federal, State or Tribal programs)

- *Direct costs are charged only to the single benefiting program. Shared costs must be allocated, or fairly distributed, among all the benefiting programs.*

Cost Allocation

Terms

- **Cost allocation methodology** means the specific method, or approach, the agency uses to determine each benefiting program's portion of the shared system costs. There is no "right" cost allocation methodology. For each system development, stakeholders in the State or Tribal agency and Federal benefiting programs work together to develop a mutually agreeable cost allocation methodology. Using this methodology, they determine the proportionate percentage and dollar amount of cost sharing for each benefiting program.

- **Cost allocation methodology for system planning** is generally a simplified allocation based on "any reasonable method." For example, when allocating shared costs for planning a State or Tribal system upgrade, the agency may simply **allocate equal cost shares** to major benefiting programs.

Cost Allocation

Terms

- **Cost allocation methodology for software development** is generally a more complex allocation based on "Benefit Received" Benefit Received takes into account the benefiting programs' overall and specific usage of system capabilities, and the level of effort involved to create or modify these system capabilities, adjusted for complexity.

- **NOTE:** Benefit Received as used in cost allocation methodology should not be confused with benefits such as cash assistance or Food Stamps distributed to recipients eligible for public assistance.

Cost Allocation

Terms

- **Cost Allocation Plan (CAP)** is the document that State agencies submit to Federal benefiting programs for approval during the Advance Planning Document (APD) process to obtain Federal funding for a portion of State system costs for system planning and software development.

  The Cost Allocation Plan documents the State agency's cost allocation methodology and shows the proposed Program Share of Cost (%) and Share Amount ($) for each benefiting program. Each Federal benefiting program must approve the State agency's Cost Allocation Plan.

Cost Allocation

Two Types of CAPS

CAP for Systems Planning

CAP for Systems Development

Cost Allocation

CAP For Systems Planning

Cost Allocation

CAP for Systems Planning

In the APD and grant application process, State and Tribal agencies are required to submit a CAP for approval as part of their Planning APD (PAPD) or grant application when:

- Total acquisition costs (Federal, State or Tribal funds) are anticipated to be $5M or more. (This amount is based on the total anticipated outlay, including costs both for planning and subsequent development.); and

- The system will benefit two or more Federal programs.

These are the minimum requirements for a State or Tribal agency request for Federal Financial Participation. The Cost Allocation Plan will also need to take State or Tribal programs into account if the system will benefit one or more State or Tribal programs.

Cost Allocation

CAP for Systems Planning

- **Systems development of less than $5 million total cost does not require submittal of a Cost Allocation Plan to Federal agencies. However, according to Federal cost accounting standards, some allocation method must be in place to equitably share costs that benefit two or more agencies. See <u>OMB Circular A-87</u>, "Cost Principles for State, Local, and Indian Tribal Governments."**

Cost Allocation

CAP for Systems Planning

- The amount of the estimated system planning budget determines the type of cost allocation methodology required for the Planning APD or grant application.

- If the estimated system planning budget is less than $5M, the cost allocation methodology can be based on "any reasonable method."

- If the estimated system planning budget is $5M or more, the cost allocation methodology must be based on "Benefit Received."   This type of cost allocation methodology is the same one required for the Implementation APD.

Cost Allocation

CAP for Systems Planning

- **Each benefiting Federal program approves its Share of Cost (%) and Share Amount ($) based on the proposed cost allocation methodology.**

- **Federal Financial Participation begins when all Federal benefiting programs approve. When one or more Federal funding agencies does not approve the methodology, costs cannot be charged to that Agency. In order to claim costs, the State agency must revise its submittal to receive concurrence with its methodology from all participating Federal agencies.**

Cost Allocation

CAP for Systems Planning

The Cost Allocation Plan (CAP) should contain:

- A narrative section identifying the benefiting State, Tribal and Federal programs and describing the cost allocation methodology to be used to allocate their shared system costs

- An exhibit (in table format) showing each State, Tribal and Federal program's Share of Cost (%) and Share Amount ($) that results from applying the proposed cost allocation methodology.

Cost Allocation

CAP for Planning – *An Example*

The estimated system planning budget is $300,000.

The three major benefiting Federal programs are Food Stamps, Medicaid, and Child Welfare.

No State or Tribal public assistance programs are included in this cost allocation.

The State or Tribe's proposed cost allocation methodology is to allocate equal planning cost shares to the three major benefiting programs (e.g., a 33.3% share to each program).

Because it is based on data from previous system planning efforts, this methodology follows the **"any reasonable method"** guideline for cost allocation for system planning.

Cost Allocation

CAP for Planning – *An Example*

Table 3 illustrates this example's cost allocation exhibit required as part of the Planning APD Cost Allocation Plan. The exhibit shows each benefiting program's Share of Cost (%) and Share Amount ($) resulting from applying the equal cost shares cost allocation methodology.

PLANNING APD COST ALLOCATION - System planning budget					$300,000
Federal/State Program	Program Share of Cost (%)	Share Amount($)	Match Rate	Federal Share($) FFP	State Share($)
Food Stamps	33%	$100,000	0.5	$50,000	$50,000
Medicaid	33%	$100,000	0.5	$50,000	$50,000
Child Welfare	33%	$100,000	0.5	$50,000	$50,000
Total	100%	$300,000		$150,000	$150,000
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6

Cost Allocation

CAP For Systems Development

Cost Allocation

CAP for System Development

As in the Planning process, State and Tribal agencies are required to submit a Cost Allocation Plan (CAP) for approval as part of their Implementation APD (IAPD) when:

- Total acquisition costs (Federal, Tribal and State funds) are anticipated to be $5M or more; and
- The system will benefit two or more Federal programs

These are the minimum requirements when a State or Tribal agency is requesting Federal Financial Participation. The Cost Allocation Plan will also need to take State and Tribal programs into account if the system will benefit one or more of these programs.

Cost Allocation

CAP for System Development

The **Division of Cost Allocation (DCA)** resides in the U.S. Department of Health and Human Services, Office of the Secretary.

Federal benefiting programs use the DCA's service to review and approve Cost Allocation Plans for the following system-related costs:

- Operations costs only
- Maintenance costs only

All other costs, such as for planning, procurement, design, development, test and installation of an automated system must be submitted by States and Tribes in a CAP to the cognizant Federal benefiting programs for funding.

Cost Allocation

CAP for System Development

Here are three basic guidelines:

- When direct costs (benefiting a single Federal, Tribal or State program) are more than 50% of system costs, apply the direct cost percentages to remaining system costs. For example, if the direct costs to Program A were 60% of system costs, the Program A's share of remaining system costs would also be 60%.

- When software development costs are **less than 50%** of system costs, apply a **reasonable** cost allocation methodology, for example, based on time and expense (T&E) reporting.

- When software development costs are **more than 50%** of system costs, apply a cost allocation methodology based on **"Benefit Received."**

Cost Allocation

CAP for System Development

What are Software Development Costs?

Software development costs mean the costs for the engineering and management activities needed to analyze, design, and test software application programs. For purposes of cost allocation, software development costs include:

- **Project management**
- **Requirements**
- **Design**
- **Development**
- **Testing (unit testing through user acceptance testing)**
- **Training (cost of training, but not for staff time in training)**
- **Pilot (vendor staff but not state/tribal staff)**
- **Deployment/rollout (vendor staff but not state/tribal staff)**

Cost Allocation

CAP for System Development

What is the Benefits Received methodology?

"Benefit Received" is the name of the cost allocation methodology preferred in the APD and grants process when software development costs are more than 50% of system costs. The goal of the Benefit Received cost allocation methodology is to distribute shared software development costs equitably among the benefiting programs.

The **Benefit Received methodology is not based on client usage,** i.e., recipient or caseload counts. Instead, **Benefit Received is based on** the State, Tribal and Federal public assistance programs' **usage of specific system functions** and thus their equitable sharing of the software development costs required to produce those shared system functions.

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CAP for System Development

The "Benefit Received" methodology is:

- It assigns a numeric value to the work required to develop specific system functions, for example, a system-generated report.

- It factors in a level of effort to indicate the relative complexity of the software development work. The more complex the work, the higher the level of effort required.

- Every program that uses this specific program function benefits, i.e., gets a "Benefit Received" from its use of that function.

- Counting up these "benefits received" by each program and comparing them to the total "Benefit Received" by all programs provides an objective methodology for assessing programs their fair share of the software development costs.

Cost Allocation

System Development CAP's
An Example

A System Development CAP requires:

- An **Allocation Structure** (system components and functions)

- An **Allocation Base** (method of measurement)

- The **Allocation Type** of systems components as providing either a **Direct** or **Shared** benefit

- **Weighting** of systems components as to their level of complexity

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System Development CAP's
An Example

An Allocation Structure is:

When developing a system with all its required program functions, Information Technology personnel organize their solution within a technical structure. One typical technical structure is a ranking with different levels of detail about system functions and the technical work needed to develop those functions.

For example: The system will have a Reporting Function. Within the Reporting Function will be categories of report types (e.g., management, fiscal, accounting, statistical) This breaking down of the system into discrete components provides the allocation structure.

Cost Allocation

System Development CAP's
An Example

An Allocation Base is:

The allocation base is the cost allocation measurement you select to track and calculate the cost allocation for all benefiting programs. You can select one or more of the following allocation bases:

- **Software development hours**
- **Storage/database size**
- **Lines of code**
- **Function points**
- **Screens**
- **Other (to be described)**

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System Development CAP's
An Example

An Allocation Type is:

An Allocation Type means defining whether a system, component or function provides a direct or shared benefit to the State, Tribal and Federal programs involved.

- **Direct** means only one Federal or State program uses the program function;

- **Shared** means two or more Federal or State programs use the program function.

Cost Allocation

System Development CAP's
An Example

A Weighting factor is:

Weighting indicates the relative complexity of the work. The more complex the work, the higher the level of effort required.

You can use a weighting system of 1-5, where 1 is low complexity/low effort, and 5 is high complexity/high effort.

You document your weighting system as part of your cost allocation methodology so that benefiting programs' allocated share takes into account software development level of effort.

Cost Allocation

CAP for System Development

Creating the Benefits Received Methodology:

Now we create the CAP by bringing the four factors of allocation structure, allocation base, allocation type and weighting together.

Function	Sub-function	Allocation Type	Weight	Lines of Code	Allocation
Reporting	Management	D (D)	2	500	1000
	Fiscal	S (M,F,T)	3	1200	3600
	Accounting	S (M,F,T)	3	3200	9600

Cost Allocation

CAP for System Development

Creating the Benefits Received Methodology:

After all of the allocations by function are identified, they are sorted and summed by direct or shared type.

Direct allocations are taken out of the total of all allocations and billed directly to the benefiting program.

Each shared allocation is then allocated amongst the programs that use that particular function.

Finally, everything is totaled by benefiting program to create the overall percentages to be used in allocating the system's cost.

Cost Allocation

CAP for System Development

The estimated system implementation budget is $15,000,000. The three major benefiting Federal programs are Child Support Enforcement, Food Stamps, and Medicaid. One State-only public assistance program is also included in this cost allocation. Because software development costs are anticipated to be 70% of the system costs, the State's cost allocation methodology is Benefit Received.

IMPLEMENTATION APD COST ALLOCATION BUDGET					$15,000,000
Federal/State Program	**Program Share of Cost (%)**	**Share Amount($)**	**Match Rate**	**Federal Share($) FFP**	**State Share($)**
Child Support Enforcement	32%	$4,800,000	0.66	$3,168,000	$1,632,000
Food Stamps	29%	$4,350,000	0.5	$2,175,000	$2,175,000
Medicaid	26%	$3,900,000	0.5	$1,950,000	$1,950,000
State Only Program	13%	$1,950,000	0	$0	$1,950,000
Total	100%	$15,000,000		$7,293,000	$7,707,000
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6

Column 1   Column 2   Column 3   Column 4   Column 5   Column 6