

# **FREIGHT TRANSPORTATION FORECASTING, BUDGETING, AND TRANSPORTATION WORKING CAPITAL FUND STUDY**

REPORT LG701M1

Kathryn L. Connor  
Robin L. Farley  
Charles D. Guilliams  
John S. Newton  
John C. Pirmann  
Peter R. Raymond  
Kenneth L. Stombaugh



FEBRUARY 2008

NOTICE:

THE VIEWS, OPINIONS, AND FINDINGS CONTAINED IN THIS REPORT ARE THOSE OF LMI AND SHOULD NOT BE CONSTRUED AS AN OFFICIAL AGENCY POSITION, POLICY, OR DECISION, UNLESS SO DESIGNATED BY OTHER OFFICIAL DOCUMENTATION.

LMI © 2008. ALL RIGHTS RESERVED.

## Freight Transportation Forecasting, Budgeting, and Transportation Working Capital Fund Study

LG701M1/FEBRUARY 2008

### Executive Summary

The U. S. Transportation Command (USTRANSCOM), the single manager for defense transportation, manages the Transportation Working Capital Fund (TWCF). USTRANSCOM's components—the Air Mobility Command (AMC), Military Surface Deployment and Distribution Command (SDDC), and Military Sealift Command (MSC)—are TWCF-funded service providers. These commands either use government organic equipment and personnel or contract with commercial transportation suppliers to deliver airlift and sealift services.

LMI was tasked by the Assistant Deputy Under Secretary of Defense for Transportation Policy (ADUSD[TP]) to analyze and explain the forecasting, budgeting, and funding methods and processes used by the military services and defense agencies to develop their peacetime freight transportation requirements. We also were tasked to analyze the process by which USTRANSCOM formulates its customer billing rates for TWCF services and what factors influence those rates. For each of these two tasks, we were asked to identify areas for improvement. Last, we were asked to document how much DoD spends on the various transportation service categories.

### TWCF RATE SETTING PROCESS

Working capital funds like the TWCF are a financing mechanism, just as appropriated funds are a financing mechanism. Unlike appropriated funds, however, the TWCF uses a revolving fund concept: The fund delivers transportation services at its expense in return for reimbursement from its customers. The criterion for establishing a working capital fund activity emphasizes a TWCF supplier's role as an informed and efficient manager of output costs, and the customer's role as a selective consumer who makes purchasing decisions based on transportation service availability, quality, and price.

Although the TWCF ensures budget stability for its customers by selling transportation services at predetermined rates, the costs and workload vary by business area; therefore, the allocation of costs within a business area contributes significantly to the development of the rates.

---

The TWCF rate-setting formula is shown below:

$$TWCF \text{ rate} = \frac{\text{forecasted fixed costs} + \text{forecasted variable costs} - \text{accumulated operating result}}{\text{forecasted workload}} \quad [\text{Eq. ES-1}]$$

Although the formula is simple, forecasting the applicable costs and workload 2 years in advance can be difficult, especially without good cost accounting data or accurate predictions of future requirements.

TWCF workload has increased significantly in support of the Global War on Terror (GWOT).<sup>1</sup> Because of this dramatic growth, it is very difficult to assess what the peacetime workload of the TWCF would be if GWOT workload ended. Adjusting costs in response to changing workload—the major factor influencing TWCF rates—is essential to keeping TWCF rates competitive, especially when workload is declining. But there is a limit to how rapidly and by how much the TWCF commands can reduce fixed costs (such as facility and equipment maintenance costs) if the workload decreases.

## SUSTAINING TWCF WORKLOAD

As workload increases, overhead costs are spread across a larger TWCF business base and to more customers, thus lowering rates. Conversely, as workload decreases, fixed costs are restricted to a smaller business base, resulting in higher TWCF rates for the customer. It is critical to sustain TWCF workload to maintain rates that are competitive with alternative sources of transportation services.

Prime vendor, performance-based logistics, and other product support methods that rely on commercial vendors are sources of considerable concern for the future of TWCF workload. These support methods rely on commercial contractors that are shifting much of their transportation workload from the TWCF to commercial transportation providers. With the significant growth in TWCF workload since 2001, we cannot assess the effect of losing a large portion of TWCF workload to these new logistics support methods. If the trend toward commercial-sourced transportation services continues, however, TWCF transportation rates will surely increase as the GWOT workload declines. USTRANSCOM will not be able to shed its fixed costs as quickly as it loses its workload.

Although commercial product support could increase logistics efficiencies during peace and wartime; uncoordinated supply chains that support multiple weapon systems and service providers complicate the transition to war. The Government Accountability Office observed<sup>2</sup> that DoD logistics support contractors used during Operation Iraqi Freedom were not always effective because some were unable to provide the door-to-door delivery of supplies to in-theater units—a requirement of

---

<sup>1</sup> TWCF costs have grown 97 percent since 2001. The principal driver of the workload increase is airlift costs and orders.

<sup>2</sup> Government Accountability Office, *Preliminary Observations on the Effectiveness of Logistics Activities during Operation Iraqi Freedom*, GAO-04-305R, December 18, 2003.

their contracts. If those contractors had used the defense transportation system (DTS) during peacetime, their transition to war would have been easier.

As public law recognizes,<sup>3</sup> it is essential for national defense that DoD maintain a core government-owned and government-operated logistics capability that includes government personnel, equipment, and facilities. This core logistics capability ensures a ready and controlled source of technical competence and the resources necessary to ensure an effective and timely response to mobilization, national defense contingencies, and other emergency requirements. Preserving portions of the DTS and TWCF from workload erosion by developing more public-private partnerships could be vital to maintaining an effective mobilization capability, providing a more capable alternative than solely private alternatives.

## CUSTOMER SATISFACTION

In conducting our analysis and formulating our findings and recommendations, we found that some USTRANSCOM customers are not fully cognizant of TWCF principles and objectives. The less customers know about the TWCF rate setting process and the cost elements driving those rates, the less value they assign to TWCF services.

Many customers are also dissatisfied with TWCF costs for the services they receive, especially for the port-to-port channel airlift service. Although channel airlift rates are set equal to commercial rates, TWCF customers consider the port-to-port airlift costs too high and the service not commensurate with the services typically provided by commercial carriers (FedEx, DHL, and UPS). This dissatisfaction has led to efforts to expand the use of commercial airlift, thus undermining the TWCF business base.

## ACCOUNTING SYSTEMS

Beyond sustaining workload, service levels, and competitive rates, many TWCF customers complained about insufficient billing detail, multiple billings, and problems with reconciling them.<sup>4</sup> While the Defense Enterprise Accounting and Management System (DEAMS) is intended to correct many of these deficiencies, it will rely on data from legacy feeder systems. Accordingly, some of the billing and information problems will likely persist.

## RECOMMENDATIONS

The TWCF remains the most effective and viable option for funding DoD transportation requirements. Based upon our analysis of the budget and rate setting

---

<sup>3</sup> 10 United States Code, Section 2464, *Core Logistics Capabilities*

<sup>4</sup> We found AMC does not currently have an effective accounting system, which is essential for the efficient operation of the airlift portion of the TWCF. Without an effective system, AMC rate development is reduced to a manual process of pulling data from disparate systems.

---

processes, and in consideration of TWCF workload trends, we offer the following recommendations:

- ◆ We recommend channel airlift rates be set lower than prevailing commercial rates when the scope of channel airlift services is less than or commensurate with the services provided by commercial carriers. The TWCF customer is supporting hidden mobilization costs, which should be supported through a direct appropriation.
- ◆ We recommend the Office of the Secretary of Defense pursue legislative approval to create industrial centers of excellence for transportation to encourage USTRANSCOM to pursue transportation partnerships. This should include logistics service contract provider movements in support of deployed forces.
- ◆ We recommend USTRANSCOM continue implementation of DEAMS. The owners of legacy feeder systems can contribute to the ultimate success of the DEAMS implementation by ensuring their systems provide accurate, complete, and compliant data.
- ◆ We recommend USTRANSCOM expand its customer outreach by providing online information and periodic outreach briefings for its financial and functional transportation customers on the TWCF rate setting process, its limitations, and the major cost drivers behind each of the principal business areas.

## SUMMARY

If the expected drop in TWCF workload can be abated through more competitive rates and public-private partnerships, USTRANSCOM could moderate the trend toward commercial transportation and keep DoD transportation costs from increasing beyond affordable limits. Cargo that can be diverted from commercial carriers to military airlift may reduce transportation costs, especially if the military airlift service offers the same level of support and if the military capability is underused—especially as the GWOT workload decreases.

To be successful and fulfill DoD's mission as distribution process owner, USTRANSCOM will need to improve or develop new delivery methods that equal or exceed private sector offerings. Moreover, integrated transportation services could reduce the pipeline time and the magnitude of the requirement for DoD materiel inventories.

Finally, greater integration and expansion of the DTS, including commercial logistics provider movements during peacetime, will support the main objective: preparation for war.

# Contents

---

- Chapter 1 Introduction..... 1-1
  - STUDY TASKS AND APPROACH ..... 1-2
  - THE DEFENSE TRANSPORTATION SYSTEM..... 1-3
    - U.S. Transportation Command and Its Components ..... 1-3
    - DTS Financing..... 1-5
    - DTS Compared with Commercial Industry ..... 1-6
  - REPORT STRUCTURE..... 1-7
  
- Chapter 2 Working Capital Fund Structure and Operations.....2-1
  - REVOLVING FUND CONCEPT OF OPERATIONS..... 2-1
  - ORIGINS OF THE TWCF ..... 2-2
  - DEFENSE BUSINESS OPERATIONS FUND ..... 2-3
  - DEFENSE WORKING CAPITAL FUND ..... 2-3
    - DWCF General Criteria ..... 2-4
    - DWCF Charter ..... 2-5
    - DWCF Corpus ..... 2-5
    - DWCF Cash Management ..... 2-6
  - THE DWCF MANAGER’S BALANCING ACT ..... 2-6
  - WORKING CAPITAL FUND OPERATIONS ..... 2-7
    - DWCF Total Costing..... 2-8
    - Mobilization Capability ..... 2-9
    - Cost Allocation..... 2-10
  - DWCF OPERATING BUDGET ..... 2-11
    - Capital Budget Formulation ..... 2-11
    - Rate Setting..... 2-12
    - Budget Review ..... 2-12
  - DWCF FUNDING AUTHORITY ..... 2-13
  - MANAGEMENT INITIATIVE DECISION 903..... 2-14

---

APPROPRIATED FUNDS .....	2-14
SUMMARY .....	2-15
<b>Chapter 3 Budgeting for Cargo Transportation .....</b>	<b>3-1</b>
O&M TRANSPORTATION .....	3-1
O&M Transportation Funding Categories .....	3-2
First Destination Transportation.....	3-3
Second Destination Transportation .....	3-3
Effect of the Global War on Terror on Transportation Costs.....	3-4
TRANSPORTATION BUDGET DEVELOPMENT OFFICES .....	3-4
TRANSPORTATION BUDGET FORMULATION PROCESS .....	3-5
HISTORICAL WORKLOAD DATA COLLECTION .....	3-6
WORKLOAD DATA CALL .....	3-7
AUTOMATED TRANSPORTATION BUDGET DEVELOPMENT SYSTEMS.....	3-8
CALCULATE BUDGET REQUIREMENT .....	3-9
REVIEW, SUBMISSION, AND APPROVAL.....	3-10
SUMMARY .....	3-11
<b>Chapter 4 Military Sealift Command .....</b>	<b>4-1</b>
COMMAND RELATIONSHIPS .....	4-2
MSC STAFFING.....	4-2
FUNDING .....	4-2
TWCF WORKLOAD .....	4-3
Afloat Pre-Positioning Force.....	4-4
Tanker Project .....	4-5
Dry Cargo Program .....	4-5
Surge Program .....	4-6
MSC FINANCIAL AND BUDGET DEVELOPMENT SYSTEMS .....	4-7
MSC TWCF RATE CATEGORIES .....	4-7
MSC BUDGET FORMULATION PROCESS.....	4-8
Develop Baseline.....	4-8
Update the Baseline .....	4-9



Formulate Budget.....	4-9
Review, Submit, and Approve .....	4-9
SUMMARY .....	4-9
Chapter 5 Air Mobility Command .....	5-1
AMC STAFFING.....	5-2
AMC ORGANIZATION .....	5-2
AMC TWCF WORKLOAD.....	5-2
Channel Cargo and Channel Passenger .....	5-3
Chartered Missions.....	5-4
AMC FINANCIAL AND BUDGET DEVELOPMENT SYSTEMS .....	5-5
AMC BUDGET FORMULATION PROCESS.....	5-6
Develop Baseline.....	5-6
Update the Baseline .....	5-7
Formulate the Budget .....	5-7
Review, Submit, and Approve .....	5-7
SUMMARY .....	5-7
Chapter 6 Surface Deployment and Distribution Command .....	6-1
SDDC STAFFING .....	6-2
SDDC ORGANIZATION.....	6-2
SDDC TWCF BUSINESS AREAS .....	6-2
Fee-for-Service Enterprises.....	6-3
Traffic Management.....	6-5
Cost Reimbursable .....	6-5
Charter Cargo.....	6-6
SDDC FINANCIAL AND BUDGET DEVELOPMENT SYSTEMS .....	6-6
BUDGET FORMULATION PROCESS.....	6-6
Develop Baseline.....	6-7
Update the Baseline .....	6-7
Formulate the Budget .....	6-7
Review, Submit, and Approve .....	6-7
SUMMARY .....	6-7

---

Chapter 7 TWCF Obstacles .....	7-1
COMPETITORS FOR TWCF WORKLOAD.....	7-1
Prime Vendor.....	7-1
Performance-Based Logistics.....	7-2
TWCF FINANCIAL SYSTEMS.....	7-2
Systems DEAMS Will Replace .....	7-3
Legacy Feeder Systems and Data Integrity.....	7-4
Chapter 8 Findings and Recommendations.....	8-1
CONTINUE TO USE THE TWCF .....	8-1
IMPROVE DOD’S TRANSPORTATION ACCOUNTING SYSTEMS .....	8-2
PRESERVE AND EXPAND TWCF WORKLOAD .....	8-3
Develop Public-Private Partnerships for PBL and Prime Vendors.....	8-4
Identify Core Logistics Capabilities for Selected TWCF Business Areas.....	8-5
IDENTIFY AND REMOVE ALL MOBILIZATION COSTS FROM THE TWCF .....	8-6
REVISE AMC CHANNEL AIRLIFT RATES.....	8-7
UPDATE SDDC’S BASELINE .....	8-8
EXPAND CUSTOMER OUTREACH.....	8-8
Appendix A Foundation for the Working Capital Fund	
Appendix B DWCF Business Areas	
Appendix C Anti-Deficiency Act	
Appendix D Transportation and Related Operational Costs	
Appendix E Abbreviations	
 Figures	
Figure 1-1. USTRANSCOM and the Transportation Component Commands .....	1-4
Figure 2-1. Revolving Fund Concept of Operations.....	2-1
Figure 2-2. The Working Capitol Fund Balancing Act .....	2-6
Figure 3-1. FY2007 TWCF Orders by Appropriation and Fund.....	3-1
Figure 3-2. Army SDT Categories.....	3-3

Figure 3-3. Transportation Budget Formulation Process ..... 3-5

Figure 3-4. Navy O&M Transportation Budget Database Architecture..... 3-9

Figure 3-5. Alternative Responses to TWCF Rate Increase ..... 3-10

Figure 4-1. MSC FY2006 Operating Costs (in millions) ..... 4-1

Figure 4-2. MSC Chain of Command..... 4-2

Figure 4-3. MSC Budget Formulation Process ..... 4-11

Figure 5-1. AMC FY2006 Operating Costs (in millions) ..... 5-1

Figure 5-2. AMC Chain of Command..... 5-2

Figure 5-3. AMC’s Competing Objectives ..... 5-8

Figure 5-4. AMC Channel Airlift Budget Formulation Process ..... 5-9

Figure 6-1. SDDC FY2006 Operating Costs (in millions) ..... 6-1

Figure 6-2. SDDC Chain of Command..... 6-2

Figure 6-3. Ocean Cargo Booking and Payment Process ..... 6-4

Figure 6-4. SDDC GPC Budget Formulation Process..... 6-9

Figure 8-1. TWCF Costs and Orders ..... 8-4

Tables

Table 1-1. DTS and TWCF Versus Direct Commercial Support ..... 1-6

Table 3-1. O&M Transportation Budget by Organization (in millions) ..... 3-2

Table 3-2. O&M Transportation by Category (in millions) ..... 3-2

Table 3-3. Transportation Budget Development Offices ..... 3-5

Table 3-4. Army MACOM and PEO SDT Requirements Data ..... 3-7

Table 3-5. NOLSC O&M Transportation Budget Database Inputs ..... 3-8

Table 4-1. MSC Programs ..... 4-3

Table 4-2. MSC Workload History and Forecast (in ship days) ..... 4-3

Table 4-3. Military Sealift Command Rate Categories ..... 4-8

Table 5-1. AMC’s Mission Area and Rate Basis ..... 5-3

Table 6-1. SDDC Business Areas and Cost Allocation Methods ..... 6-2



# Chapter 1

## Introduction

---

The Assistant Deputy Under Secretary of Defense for Transportation Policy (ADUSD[TP]) is responsible for Department of Defense policy that ensures the efficient, effective, safe, and secure worldwide movement of defense materiel and personnel. The military services and defense agencies are responsible for carrying out that policy. Each service and defense agency has its own method for identifying transportation requirements and preparing transportation budgets. These organizations have difficulty forecasting accurate peacetime movement requirements. Projecting movement requirements 3 to 5 years in advance and translating such requirements into transportation budgets that adequately fund movements has been problematic, as well.

The U.S. Transportation Command (USTRANSCOM), the Department's single manager for transportation and the designated distribution process owner (DPO), is responsible for providing transportation services to meet the requirements of the military services and defense agencies, which are its principal customers. USTRANSCOM provides or arranges these services through its three transportation component commands (TCCs)<sup>1</sup> using a combination of organic transportation assets and commercial transportation contracts. USTRANSCOM must determine the best mix of service offerings to ensure wartime capacity is available, to meet customers' requirements, and to optimize limited and valuable transportation resources. Accurate forecasts of customer requirements are essential to ensure the right mix of commercial and organic transportation capacity is available.

Many, but not all, of the transportation services used by DoD are industrially funded under the Transportation Working Capital Fund (TWCF). Transportation services may be provided on a strictly reimbursable basis, or they may involve a fee-for-service cost recovery model. USTRANSCOM determines which transportation services should be offered under the TWCF. If the provided service will generate TWCF revenue, USTRANSCOM must determine customer billing rates<sup>2</sup> for that service. The military services and defense agencies use these rates and workload forecasts to formulate their transportation budgets.

---

<sup>1</sup> USTRANSCOM's transportation component commands are the Air Mobility Command (AMC), Military Sealift Command (MSC), and Military Surface Deployment and Distribution Command (SDDC).

<sup>2</sup> Rates must cover variable and fixed costs and contribute to overall USTRANSCOM cost recovery within the business area.

---

USTRANSCOM also estimates the cost of directly reimbursable services<sup>3</sup> that are provided to customers as fee-for-service. In addition, the military services and defense agencies must budget for non-TWCF transportation support, which is acquired from commercial carriers using appropriated operations and maintenance (O&M) funds.

## STUDY TASKS AND APPROACH

The ADUSD(TP) tasked LMI to analyze and explain the forecasting, budgeting, and funding methods and processes used by the military services and defense agencies to develop peacetime freight transportation requirements, referred to as “shipper services.” Within each military service and defense agency, we contacted the offices responsible for transportation budgeting and funding to document their transportation-related processes and identify the costs to execute and maintain those processes, and then developed recommendations for improving those processes. We found each organization has its own method for identifying transportation requirements and preparing transportation budgets, but there are similarities.

The ADUSD(TP) also tasked LMI to analyze the process by which USTRANSCOM formulates its customer billing rates for TWCF services, and to document how much DoD spends on the various transportation service categories. We contacted USTRANSCOM and the TCCs to assess the TWCF freight rate formulation process, the decisions associated with identifying and quantifying the fixed and variable costs included in TWCF rates, and the processes for determining what services USTRANSCOM should offer in the TWCF. We also identified ways USTRANSCOM and its components can improve their service offerings to better meet their customers’ requirements at more reasonable rates, and we outlined the costs and benefits of our proposed changes. Lastly, we analyzed shipment data from U.S. Bank’s PowerTrack™ database to identify costs by transportation mode and service. This cost breakout is provided in Appendix D.

Interviews with the Office of the Under Secretary of Defense (Comptroller), Program and Budget Revolving Funds, helped us understand how the funding process works and inspired our ideas for potential process improvements.

---

<sup>3</sup> Directly reimbursable services include freight traffic management, personal property services, and related systems managed by SDDC.

# THE DEFENSE TRANSPORTATION SYSTEM

The Defense Transportation System (DTS) is

that portion of the nation's transportation infrastructure which supports DoD common-user transportation needs across the range of military operations. It consists of those common-user military and commercial assets, services, and systems organic to, contracted for, or controlled by the DoD.<sup>4</sup>

As the single manager for defense transportation, USTRANSCOM manages and optimizes the DTS.

## U.S. Transportation Command and Its Components

USTRANSCOM was established in 1987 as DoD's single wartime manager for common-user lift. USTRANSCOM's role was modified in February 1992 by a Secretary of Defense memorandum (which was superseded by DoD Directive 5158.4 on 8 January 1993)<sup>5</sup> that designated the Commander in Chief, U.S. Transportation Command, as the single manager for defense transportation during peace and war. This "charter" transferred combatant command authority over AMC, MSC, SDDC, and all common-user transportation assets of the military departments (except service-unique or theater-assigned assets) to USTRANSCOM. USTRANSCOM became the DoD focal point for all common-user organic and commercial lift.

To carry out its mission, the USTRANSCOM provides or arranges the capabilities to move passengers and materiel via air, sea, surface, and intermodal transportation using organic assets or commercial services. The command also provides traffic management—the direction, control, and supervision of cargo and passenger transportation services.

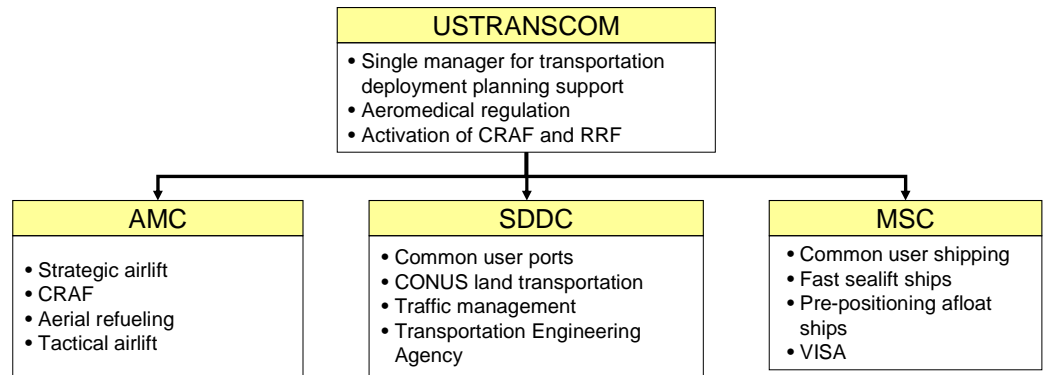
Partnering with customers and the transportation industry, USTRANSCOM strives to deliver the units, equipment, and supplies warfighters need around the globe. USTRANSCOM executes its peacetime and readiness missions through the TCCs (see Figure 1-1), the reserve components, and its commercial partners. Three readiness programs link industry to national defense: Civil Reserve Air Fleet (CRAF), Voluntary Intermodal Sealift Agreement (VISA), and Contingency Response Program.

---

<sup>4</sup> Joint Publication 1-02, *DoD Dictionary of Military and Associated Terms*, 12 April 2001 (as amended through 17 October 2007)

<sup>5</sup> This charter was reissued, effective July 27, 2007.

Figure 1-1. USTRANSCOM and the Transportation Component Commands



## AIR MOBILITY COMMAND

AMC is a U.S. Air Force major command headquartered at Scott Air Force Base, Illinois. AMC provides common-user and exclusive-use airlift and passenger services, air refueling, and aeromedical evacuation services to support deployment, employment, sustainment, and redeployment of U.S. and coalition forces wherever they are needed worldwide. AMC, the worldwide aerial port manager, also operates common-user aerial ports.

As the single point of contact with the commercial airline industry for procurement of DoD domestic and international airlift services, AMC administers and executes the CRAF program, which commits aircraft and crews to the DoD during contingencies.

AMC's organic fleet of aircraft is augmented by commercial contract air carriers to deliver cargo and personnel anywhere in the world in a matter of hours. Its unique suite of airlift capabilities includes frequency—and demand-based airlift channels using organic or chartered flights, dedicated Air Mobility Express channels supporting contingency operations, international commercial express freight service (World Wide Express and International Heavyweight Express for packages up to 300 pounds), Category A (less than planeload air freight) services, and Category B (less than planeload passenger movement) services. AMC also is responsible for consolidating DoD requirements and assisting in the negotiation of General Services Administration (GSA) City Pairs passenger air fares, GSA Domestic Small Package express service rates, and commercial air tenders. AMC provides or arranges exclusive-use air service through special assignment airlift missions (SAAMs) as well.

## SURFACE DEPLOYMENT AND DISTRIBUTION COMMAND

SDDC is responsible for surface movements, but it owns no assets. SDDC is a U.S. Army major command that, until recently, was headquartered in Alexandria, Virginia. The headquarters element moved to Scott Air Force Base in August 2007,



with the remainder of the command scheduled to relocate by 2010—a recommendation of the 2005 Base Realignment and Closure Commission.

SDDC is the DoD’s single manager for traffic management, land transportation, common-user ocean terminals, and common-user intermodal containers during peacetime and war. SDDC enables the worldwide movement of surface freight and personal property shipments and is responsible for group passenger movements. SDDC also manages a common-user rail fleet along with some service-unique rail assets.

To support daily operations of DoD installations, and to ensure the ability to expeditiously transport troops and materiel to ports of embarkation, SDDC provides the necessary interface between DoD shippers and the commercial trucking, rail, barge, bus, and personal property carrier industries. On a global basis, SDDC coordinates force movements to seaports, prepares the ports for ships and cargo, and arranges and supervises loading operations. SDDC solicits and maintains tenders or arranges contracts with surface and air carriers for freight movement within the continental United States, operates common-user water terminals throughout the world, operates the Defense Freight Railway Interchange Fleet of more than 1,000 special use railcars, and administers DoD’s Highways and Railroads for National Defense programs. SDDC also monitors the status of the nation’s transportation infrastructure system, including key ports, inland waterways, pipelines, and air facilities.

## MILITARY SEALIFT COMMAND

MSC is a U.S. Navy major command with headquarters in Washington, DC. It has Navy- and USTRANSCOM-specific missions. As the naval component of USTRANSCOM, MSC provides and supports common-user sealift transportation services to deploy, sustain, and redeploy U.S. forces around the globe. MSC also provides sealift with a fleet of government-owned and chartered U.S.-flagged commercial ships. MSC executes the VISA contracts for these chartered vessels.

MSC’s fleet of government-owned and chartered commercial ships provides the bulk of USTRANSCOM’s cargo carrying capability. The unique suite of sealift capabilities includes dry cargo operations, a petroleum tanker fleet, a contingency surge support fleet, and other transportation provider agreements.

## DTS Financing

The DTS is financed principally, but not totally, by the Transportation Working Capital Fund. The TWCF links costs and performance through total cost visibility and full cost recovery. Under this financial structure, the distortion between the cost of support and the price charged for support, theoretically, should be eliminated, thus revealing the “true cost” of services.

The TWCF is financed through customer reimbursement rather than direct appropriation of funds, with the exception of Air Force and Army readiness costs, which are funded through military service appropriations.

## DTS Compared with Commercial Industry

It is DoD policy that the military services and defense agencies procure their transportation services using the DTS, which can be organic or commercial lift, or a combination of the two, and can be funded through either the TWCF or direct appropriations. When the cost of USTRANSCOM-managed lift is too high or it does not meet service requirements, the services and agencies may go directly to the commercial transportation industry. This decision results in lost business to the TWCF and can contribute to higher TWCF rates.

Having both options—DTS and commercial support—can have distinct advantages and disadvantages to the services and agencies. Table 1-1 provides a comparison of DTS and direct commercial transportation industry capabilities and services.

*Table 1-1. DTS and TWCF Versus Direct Commercial Support*

Comparison category	DTS/TWCF	Direct commercial
Limitations on destinations	Anywhere in the world. Expandable, including hard lift, austere, and hostile locations.	Limited to established hubs and networks.
Restrictions on cargo	None. Cargo sizes can range from an Abrams tank to small packages. Includes ammunition and hazardous cargo.	Restrictions for size, weight, shape, and hazardous content.
Response to peak demand	Surge capacity for national requirements on short notice (12 hours).	Responds to routine seasonal peaks, such as Christmas, etc.
Latitude	Limited. Must move all cargo to respond to peacetime and wartime customer requirements.	Can refuse unprofitable orders or shipments to destinations outside their network.
Required infrastructure	Must maintain wartime capacity during peacetime when it may not be required.	Can shed unprofitable infrastructure based on market trends.
Service level	Full range, from port-to-port to door-to-door.	Generally door-to-door.
Electronic data interchange	Numerous DoD systems that must be integrated.	Single carrier system used by all customers.
Tracking data	Customer-provided location and content data; carrier-provided location data.	Carriers provide shipment status. Customers only provide location and estimated arrival data.

Neither the DTS nor direct commercial lift (operating outside the DTS) offers capabilities and services that can satisfy all DoD customers. Direct commercial providers are often limited to their established hubs, whereas the DTS can expand its services worldwide, including to austere and hostile locations. On the other hand, DTS may only offer the customer port-to-port service or limited delivery schedules. Table 1-1 provides a comparison of DTS and direct commercial transportation industry capabilities and services.

## REPORT STRUCTURE

In the next chapter, we describe the principles guiding the TWCF and how those principles help it operate efficiently while remaining responsive to drastically changing customer demands. In Chapter 3, we describe the budget processes the military services and defense agencies use to estimate peacetime cargo transportation requirements.

Chapters 4–6 provide detailed process information for each of USTRANSCOM’s component commands: Military Sealift Command (Chapter 4), Air Mobility Command (Chapter 5), and Military Surface Deployment and Distribution Command (Chapter 6).

In Chapter 7, we identify TWCF obstacles and possible solutions to offsetting TWCF workload erosion.

In Chapter 8, we summarize our analysis findings and offer recommended changes to improve budgeting and TWCF processes.



## Chapter 2

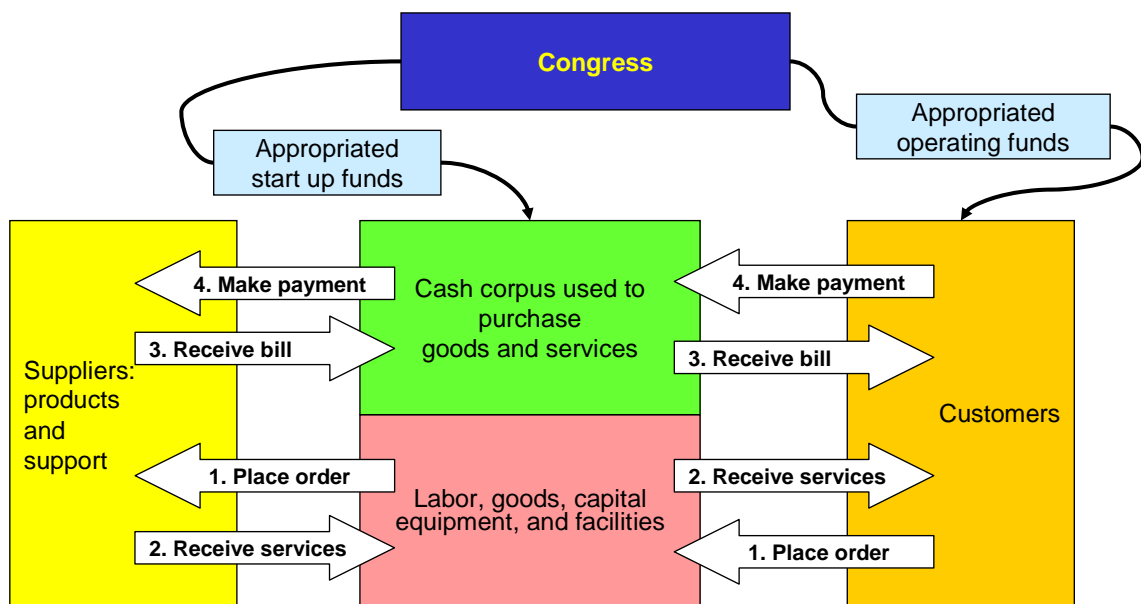
# Working Capital Fund Structure and Operations

The working capital funds support business-like government operations so those operations can be managed with a focus on efficiency and customer satisfaction similar to commercial businesses. Working capital funds are a financing mechanism, just as appropriated funds are a financing mechanism. Unlike appropriated funds, however, working capital funds use a revolving fund concept of operations, in which the fund delivers goods or services at its expense in return for later reimbursement from its customers. Collecting revenue from customers to reimburse a fund's expenses allows the fund to circulate its resources through the business cycle. This places working capital funds a category often called revolving funds.

## REVOLVING FUND CONCEPT OF OPERATIONS

Figure 2-1 illustrates the basic concept of revolving funds. The process begins when Congress establishes a cash account, known as a "corpus," which is used to initially finance the costs of producing goods and services. Using this cash corpus, the revolving fund business area purchases materials, labor, and services to produce a salable product, often referred to as an output. Some working capital funds purchase goods or services from each other.

Figure 2-1. Revolving Fund Concept of Operations



---

The revolving fund cash corpus does not expire; but appropriated funds do. The total value of a revolving fund business area is the sum of the cash corpus, its infrastructure, and the goods that it holds for sale.

Congress appropriates funds to working capital fund customers, which enables those customers to order and pay for revolving fund goods and services. When a revolving fund sells its goods and services, it collects revenue from the sale to replenish the cash corpus and allow the cycle to begin again.<sup>1</sup>

Revolving fund activities fall into two categories: stock funds and industrial funds. Stock funds procure materiel in volume from commercial sources and hold it as inventory ready for sale to customers who need it to maintain weapon system readiness, sustain personnel, and fulfill similar support requirements. Industrial funds provide goods and services, such as depot maintenance and transportation. DoD printing plants were the first activities to be placed under industrial funds. Shortly thereafter, such industrial activities as arsenals, shipyards, transportation service providers, depots, and research laboratories were included under the industrial fund concept. Both stock and industrial funds are financed with customer reimbursements, usually from appropriated funds; however, there are inter-fund reimbursements, too.

## ORIGINS OF THE TWCF

DoD issued an initial directive on the use of industrial funds on July 13, 1950. Contained in the directive were the general criteria for the application of industrial funds, including the following requirements:

- ◆ An installation must be an industrial-type activity producing goods or providing services that are common to requirements of more than one military service, agency, or ordering activity.
- ◆ A buyer-seller or contractual relationship must exist between the providing activity and the activities requiring its products or services.

Each of the three transportation operating agencies—the Military Sealift Command, the Military Traffic Management Command (MTMC, later SDDC), and the Military Airlift Command (MAC, later Air Mobility Command, or AMC)—were placed under an industrial fund. MSC was positioned under the Navy Industrial Fund in 1951, MTMC was brought under the Army Industrial Fund over a 2-year period (1955 and 1956), and MAC was placed under the Airlift Service Industrial Fund in 1958.

---

<sup>1</sup> The military components have used revolving funds for some time. For example, Congress passed the Navy Supply Fund Act in 1893, which established a corpus of \$200,000 for the procurement of “ordinary commercial supplies.” The National Security Act of 1947 (Section 405, Title IV), as amended by Title 10 U.S.C. Section 2208, is the contemporary authority for revolving funds. Appendix A contains the latest version of this law.

MAC, MSC, and MTMC were the principal single-mode managers of transportation within the DoD. Other industrially funded DoD activities, such as Navy public works centers, were not major transportation providers; their transportation responsibilities were limited to local deliveries and services.

## DEFENSE BUSINESS OPERATIONS FUND

On October 1, 1991, DoD combined nine revolving funds, including the transportation funds, into a single revolving fund, the Defense Business Operations Fund (DBOF). Five other business areas previously funded by direct appropriations were added: the Defense Finance and Accounting Service, the Defense Commissary Agency, the Defense Technical Information Center, the Defense Reutilization and Marketing Service, and the Defense Industrial Plant Equipment Center.

All business activities under the DBOF were issued annual operating budgets with official management cost goals and capital budget limitations that previously had not existed. Instituting a single revolving fund to finance all DoD stock and industrial activities produced several business practice improvements, including full cost visibility, stabilized rates, and application of standard policies across the business functions. Unfortunately, the DBOF was capitalized at a level significantly lower than the sum of the stock and industrial revolving funds it replaced which produced chronic cash flow problems.

## DEFENSE WORKING CAPITAL FUND

Recognizing the deficiencies of the DBOF, Congress passed the *FY1997 Defense Authorization Act*, requiring DoD to conduct a comprehensive study of the DBOF and present its findings and a proposed improvement plan to Congress for approval. In December 1996, the Under Secretary of Defense (Comptroller) reorganized the DBOF and created the Defense Working Capital Fund, which included four working capital funds: Army, Navy, Air Force, and DoD-wide. In December 1997, a fifth working capital fund was established for the Defense Commissary Agency; it became effective in FY1999.

The business areas of the Defense Working Capital Fund (DWCF) provide a wide range of goods and services. Each business area may contain one or more activity groups managed by the DoD components. Some of the business areas are unique to a service, while others may cross several services and the defense agencies. For example, the supply management business area contains activity groups for the Army, Navy, Air Force, Marine Corps, and the Defense Logistics Agency (DLA). Budgets, operating results, and overall management roll up to the activity group level.<sup>2</sup>

---

<sup>2</sup> Appendix B contains a list of the DWCF business areas and the activities within them.

---

After the reorganization, a principle objective of the working capital funds was total cost visibility. The components were responsible for business operations and strengthening their management of the respective activity groups. The Army, Navy, Air Force, DLA, and USTRANSCOM were responsible for managing cash. They must maintain positive cash balances, or violate the *Anti-Deficiency Act*.<sup>3</sup>

## DWCF General Criteria

The DoD Financial Management Regulation identifies four criteria that distinguish a business area as suitable for a working capital fund:<sup>4</sup>

- ◆ A measurable output in terms of a product or service
- ◆ Identifiable customers to whom resources for products or services can be allocated
- ◆ An accounting system that is capable of collecting costs and assigning them to outputs
- ◆ A buyer-seller relationship in which the customer can influence cost by changing demand.

The Office of the Secretary of Defense (OSD) applied the first three criteria when it implemented the DBOF business areas in 1991. These criteria align customer requirements with the costs of producing outputs, and they make visible the support costs involved in mission readiness. In addition, OSD can use the criteria to assess whether funding a business on a revolving fund basis is financially viable.

In 1993, the DBOF Improvement Plan recommended adding the fourth criterion for all business areas. This last criterion calls for an assessment of the marketplace in which the customer and provider operate, an examination of the extent to which customers can control or influence the provider's costs, and an exploration of the dynamics of fluctuating demand on provider behavior. If the customer lacks sufficient influence, or if there is insufficient competition, a business area may not be suitable for the DWCF.

If a business area successfully meets all four criteria, it may be a candidate for incorporation into the DWCF. Conversely, if a DWCF business area fails to meet these criteria, it may be a candidate for removal.

Full cost recovery is the ultimate objective of working capital funds. Therefore, a cost accounting system is necessary to allocate all costs associated with an activity across all the products and services sold. In principal, the DWCF supports

---

<sup>3</sup> 31 U.S.C. § 1517(a) prohibits making obligations or expenditures either in excess of an apportionment or reappropriation, or in excess of the amount permitted by agency regulations. Additional information on the *Anti-Deficiency Act* is provided in Appendix C.

<sup>4</sup> *DoD Financial Management Regulation*, Volume 11B, Chapter 2, paragraph 0202.



the conservation of resources by exposing costs that previously were not reflected in the view of how goods and services were provided. Once the providers increase the visibility of costs associated with their products, customers can make a fully informed comparison of alternative sources for goods and services, and then decide if they want to use the DWCF provider. This exemplifies the foundation of the private market, a system that allows consumers to choose the providers they desire at the price they can afford. If the price is too high or if the quality of the good or service is not sufficient, the customer can find another supplier.

Although choice based upon price is the foundation of supply-and-demand economic theory, TWCF customers do not have the flexibility to use commercial sources without seeking permission from USTRANSCOM. For example, the military services must request USTRANSCOM approval to extend the limits on commercial transportation of World Wide Express (WWX) packages from 150 pounds to 300 pounds.

## DWCF Charter

A chartering process formally establishes DWCF business areas and identifies their organizational structure, as well as their assets and liabilities. But the DWCF charter does not provide budgetary resources or authorizations to incur costs for the purchase of goods and services. DoD components can propose the establishment of new business areas to the Office of the Under Secretary of Defense (Comptroller) (OUSD[C]) by preparing documentation for supplemental provisions.

Each fiscal year, DoD components are required to review their DWCF operations to ensure the supplemental provisions are current. All changes are submitted as a charter amendment request to the OUSD(C). Existing charters are cancelled or amended after approval by the OUSD(C).

## DWCF Corpus

A DWCF activity receives its initial “working capital” through an appropriation or a transfer of resources from existing appropriations, and it uses those resources to finance the cost of its operations. The DWCF financial strategy uses competition in the free market and establishes clear customer and provider relationships. The DWCF adopts private-sector techniques for resource management, consolidates various functions, and uses activity-based accounting principles to display full costs. This gives management access to better cost and performance data to make effective and efficient decisions, and to compete with other DWCF business areas or commercial vendors for DoD business. The DWCF builds upon the principles embodied in the free-market system to facilitate better business practices and budget decisions.

## DWCF Cash Management

A working capital fund manager must maintain a sufficient supply of cash to meet day-to-day operational requirements and disbursement requirements to support the capital investment program. DWCF managers strive to manage their operations and finances to ensure they take in enough cash from collections to cover expenditures, as noted in the following equation.

$$\text{Current cash balance} = \text{prior cash balance} + \text{collections} - \text{disbursements} . \quad [\text{Eq. 2-1}]$$

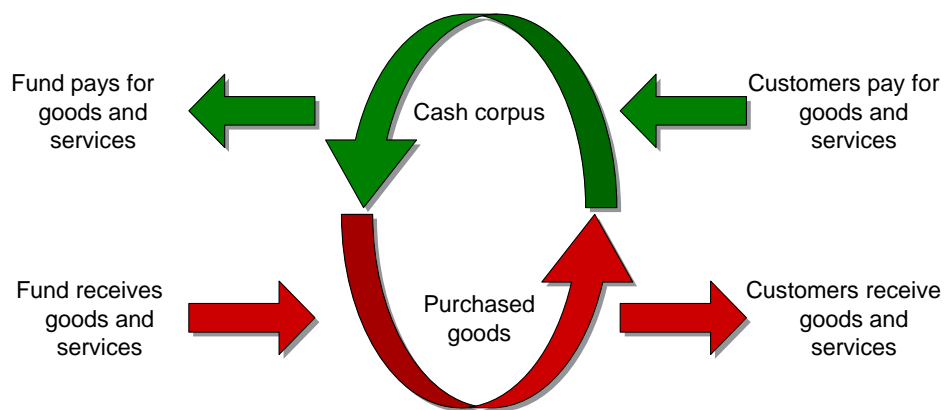
DWCF business areas should maintain enough cash to cover 7–10 days of operational costs and meet 6 months of capital program disbursements. The ability to generate cash depends upon how well the business area sets customer billing rates to recover the full costs of operation (including any prior-year losses), accurately projects and receives work or materiel orders, and meets established operational goals. Negative balances or insolvency is an adverse consequence for DWCF managers because they result in violations of the *Anti-Deficiency Act*.

## THE DWCF MANAGER'S BALANCING ACT

DWCF business areas have a profit goal of zero. They charge their customers only the amount necessary to recover all the costs associated with providing the goods and services. In the budget process, DWCF business areas set their prices to recover total costs over the long run, and recover no more. This means prices are set to achieve a net operating result (NOR) or an accumulated operating result (AOR) of zero in the budget.

Figure 2-2 illustrates how the DWCF process works to maintain a balance between expenses (the funds expended to meet customer requirements) and revenue.

*Figure 2-2. The Working Capital Fund Balancing Act*



Because the DWCF is not profit-oriented, a successful business outcome of disbursements and collections is an NOR of zero. To balance its sales income with the expenditure of resources (costs) and achieve an NOR of zero, the DWCF activities must

- ◆ accurately project customer requirements;
- ◆ accurately project and obtain the resources required to meet customer demand; and
- ◆ receive customer orders as anticipated, then deliver quality products and services on-schedule and within budget.

DWCF managers must work with their customers to determine the nature and scope of the business base. By obtaining their customers' projected requirements, DWCF managers can size their infrastructure and budget to meet the customers' operational needs. If DWCF customers inaccurately project their requirements for goods and services, DWCF managers will likely overstate or understate their internal resource requirements. When DWCF activities use these incorrect or incomplete projections of sales, their calculations of budgets and unit costs are wrong, which leads to erroneous price structures and misaligned customer billing rates.

Some factors make it extremely difficult for the DWCF to achieve an NOR of zero within the budget year. These factors include variations in planned versus actual workloads, changes in labor and material costs (versus budgeted costs), and emergent overhead costs (i.e., unplanned operating costs). Consequently, the NOR for a single year may be either positive (overall collections or reimbursements exceed expenditures) or negative (costs exceed revenues). A positive NOR normally results in a reduction in DWCF billing rates for the following year to allow the surplus to be absorbed. In the case of a negative NOR, rates are increased to recover the deficit.

## WORKING CAPITAL FUND OPERATIONS

DWCF business area managers and their customers have a symbiotic relationship, each depending upon the other for valid planning information. DWCF managers set prices and rates based on the costs of production at a level of activity estimated by the customers. The DWCF customers develop their budgets using the projected rates and prices published by the DWCF business areas. If customers inaccurately state their requirements for the DWCF goods and services, they may receive insufficient appropriated funds to buy the goods or services from the DWCF to meet mission requirements.

On the other hand, customer workload has a controlling influence on the size of the DWCF business areas. DWCF managers need accurate and reasonable notice of declining or increasing workload to properly resize their infrastructure. For example, if customers overstate their workload, DWCF business managers

---

may keep too many people on the payroll, buy too much equipment, or purchase material in excess of their business needs. All of the related costs will affect the NOR, but the effects can be mitigated when a DWCF business manager is given sufficient time and accurate information. For example, the manager may implement a freeze on new hires or conduct a reduction-in-force to reduce the number of people on the payroll.

The OSD Comptroller plays an important role during the final process of DWCF budget formulation. It is the comptroller's responsibility to balance the budgets of DWCF business areas with the appropriated budget requirements of their customers.

## DWCF Total Costing

Since 1991, revolving funds have employed a "total costing" concept. Total costing identifies all the operating costs incurred to produce a product or service. These costs include the total annual operating costs and expenses incurred by a DWCF activity to accomplish its assigned workload, including military personnel, management headquarters, and depreciation or amortization costs for all capital assets that benefit the business area. Furthermore, operating costs reflect all maintenance and repair projects for existing facilities as an expense. Consequently, the prices the DWCF business areas charge for their products or services should include all the costs incurred when producing them.

## MILITARY PERSONNEL COSTS

Military personnel may be assigned to working capital fund activities for mobilization, sea-to-shore rotation flexibility, or career progression. However, military personnel are subject to duties and responsibilities that do not apply to civilian employees and may not directly benefit a DWCF activity. Such duties include short-term military training, guard duty, inspections, and other military-related tasks.

Before the DWCF was established, military personnel were assigned to a revolving fund activity as a "free good." In effect, the cost of military personnel was not paid for by the revolving fund, nor was the cost included in reimbursable billings to the fund's customers.

After the DWCF was created, the process was changed to include the cost of military personnel in the total cost of operations of DWCF activities. The new method includes two separate processes.

- ◆ Payment to military personnel appropriations by the DWCF business area for the budgeted number of military personnel for a business area, regardless of the actual number of personnel assigned.
- ◆ Costing of military personnel at civilian-equivalent rates for work performed at the business area activity. The civilian equivalency policy recognizes that, if the military requirements did not exist, some positions

now staffed by military personnel could be staffed with civilians at a lower cost.

During the budget process, a DWCF activity covers the cost of military personnel—at the civilian equivalent rates—in its stabilized customer billing rates. The cost recovery amount is based upon the total military personnel planning factor used during budget formulation, regardless of the number and grade of military personnel subsequently assigned to the DWCF activity.

The two-phase process produces duplicate transactions; however, it also ensures military personnel appropriations are not under-funded because of variances between budgeted and actual numbers of military personnel assigned to DWCF activities. The two-phase process ensures customers are charged through working capital fund rates only for the number of military personnel budgeted for a DWCF activity, and it provides a tool to identify the actual cost of work performed.

## MANAGEMENT HEADQUARTERS COSTS

Costs for discrete DWCF management headquarters, such as USTRANSCOM, and parts of organizations that perform DWCF management headquarters functions should be funded directly by the DWCF, if feasible, or reimbursed *pro rata* by the DWCF. Significant costs for common support (e.g., legal counsel or personnel management) at organizations partially funded or reimbursed by DWCF (i.e., organizations that have direct DWCF management responsibilities) should be allocated as well.

## Mobilization Capability

Each DWCF activity group must plan for and maintain the capability to expand or alter operations, or provide extraordinary supply or other functional area support necessary to satisfy mobilization activities when required.

The agency or command assigned management responsibility for DWCF activities must budget and provide appropriated funds for the costs of maintaining otherwise unutilized plants and facilities that are held for mobilization purposes. Such costs include labor, materials, contractual services, and overhead. Retention of facilities in excess of what is necessary for current or planned workload must be in accordance with DoD Directive 4275.5, *Acquisition and Management of Industrial Resources*. The acquisition, retention, or disposal of unutilized plants and facilities at transportation activities must be approved by the Deputy Under Secretary of Defense.

---

Because USTRANSCOM must maintain a capability to expeditiously transport personnel or materiel that is required to satisfy a mobilization condition, direct appropriation funding may be provided to the AMC and SDDC as follows:

- ◆ The airlift flying hour program and the associated costs are based on the requirement to maintain the capability of the airlift system, including crew training and concurrent mobilization. DoD attempts to recover costs for training missions by flying revenue-generating airlift channel or SAMM using crews in training; however, DoD cost recovery rates for channel and SAAM do not cover the full cost of airlift operations. (For example, current policy requires channel rates to be priced competitively with commercial air freight carriers for similar cargoes.) Contingency mobilization requirements add significantly to the total cost of airlift operations. The balance of the mobilization requirement costs not covered through revenue generation are funded through a direct appropriation from the Air Force (Airlift Readiness Account).
- ◆ SDDC must plan for and maintain a reserve industrial capacity (RIC) to transport personnel, materiel, and other elements required to satisfy a mobilization requirement. Army funds the costs of RIC through an operation and maintenance appropriation.

## Cost Allocation

An understanding of the nature of costs—direct, indirect, and general and administrative costs—is necessary to calculate and allocate costs among products and services:

- ◆ Direct costs are attributable directly to the end product or output. An example would be the direct labor hours and fuel expended while delivering air transport services in an overseas air channel. Direct costs are allocated to specific output units.
- ◆ Indirect costs cannot be tied directly to the output, and normally are allocated over a select number of outputs. Examples include indirect labor and indirect materials. The salary of a supervisor who is responsible for employees who contribute to multiple product lines (or customers) is an indirect labor cost. Indirect material costs apply to material that is part of the end product, or is consumed when producing it, but is not economical to account for individually, such as lubricating oil or small fasteners purchased in bulk quantities. Indirect costs are often referred to as production overhead costs. They are allocated on a percentage basis across groups of outputs.
- ◆ General and administrative (G&A) costs do not contribute directly to a specific product or output, but they contribute to the overall operation. These costs are overhead costs and remain relatively constant. Some

examples include force protection and custodial costs and the salaries of some personnel, such as a comptroller and purchaser. G&A costs are allocated across all output units.

It is important to understand the behavior of these costs. Some costs are variable; they increase or decrease in relation to the amount of work being performed. Direct material and most direct labor falls into this category. Other costs are fixed or, at least in the short term (a given fiscal year), behave as if they are fixed. Most infrastructure costs, all G&A, and most labor are fixed costs that remain constant as production goes up or down. Over the long run, all costs should be considered variable. In the short run, it may cost more to dispose of a fixed cost (e.g., move from one building to another or divest a portion of the activity); therefore, such costs should be considered when planning and budgeting for future years.

## DWCF OPERATING BUDGET

Each DWCF activity submits two budgets: an operating budget for operating expenses and a capital budget for capital investments. Identifying operating costs and capital investments increases management's visibility of all the costs the DWCF business area incurs.

DWCF managers start the budget formulation process (which is similar to the appropriated fund budget process) about 2 years in advance. The DWCF business areas typically develop their budgets by aggregating—from the bottom up—their individual cost center or department budgets. The operating budget contains and represents the annual operating costs of an activity, including civilian and military labor, depreciation expenses (except for major military construction), materials, supplies, utilities, real property maintenance, payroll support, contracts, and equipment purchases less than \$250,000 (the current capitalization threshold).

## Capital Budget Formulation

The capital budget is used to budget for capital investments and improvements (i.e., purchases of \$250,000 or more) with a useful life of 2 years or more. Capital investments are grouped into four categories: automated data processing (ADP) equipment and telecommunications equipment, non-ADP equipment, software development, and minor construction projects. Components may reprogram capital funds between activity groups up to \$10 million for each of the four investment categories approved in the President's Budget.

Before budgeting for capital investments, an economic analysis must be conducted for projects that will cost \$1,000,000 or more; that analysis must account for workload, costs, alternatives, and benefits derived from such investments. A simpler cost analysis is conducted if the project cost is less than \$1,000,000. A post-investment analysis is also required for recurring project investments of \$1,000,000 or more.

---

Capital assets are depreciated on a straight-line basis, unless approval is obtained to use an alternative evaluation method. The depreciation expense is included in the operating budget and charged as a cost element in the customers' rates.

Military construction costs (i.e., costs of \$750,000 or more) are funded by direct appropriation. Other costs funded by direct appropriation include general-purpose passenger vehicles, mobilization costs, war reserve materiel, and unutilized and underutilized plant capacity costs.

## Rate Setting

Using guidance from OUSD(C) and the respective DoD components, managers of DWCF business areas must set their rates and prices to recover all operating and capital costs associated with their products or services. Rates and prices for a budget year are set to recover the cost of products or services<sup>5</sup> to be provided in that year. This means rates and prices are set to achieve an AOR of zero in that budget year.

DoD components develop and propose rates and prices in their budget estimate submissions. Once approved, the rates and prices remain fixed (stabilized) during the year of execution. The stabilized rate policy protects DWCF customers from unforeseen cost changes, such as large increases in the price of aviation fuel, that would otherwise deplete their funds before the end of the fiscal year, with serious mission implications. Final approved rate changes are established and approved by the OUSD(C) and recorded in Program Budget Decision (PBD) documents.

The budget process also ensures adequate resources are budgeted in the customer's appropriated fund accounts to pay the established rates. It enables customers to accurately plan and budget for DWCF support requirements. In turn, this policy also reduces disruptive fluctuations in planned DWCF workload levels, permitting more effective utilization of DWCF resources.

Gains or losses in the NOR may occur as a result of variations in program execution. Realized gains or losses are generally reflected in offsetting adjustments to stabilized rates established in subsequent fiscal years.

## Budget Review

Once compiled by activity group managers, the budgets are forwarded to the component's financial manager. Each component reviews the proposed rate structures and all projected costs (based on workload), including new work or any work carried over from past fiscal years. The component then adjusts the proposed rates to account for

---

<sup>5</sup> Customer rates are established on an end-product basis whenever feasible. The term "end product" means the item or service requested by and delivered to the customer (output) rather than the processes or other inputs used to achieve the requested output. For example, the delivery of materiel to a destination is an end-product cost; the direct labor hours and equipment use costs expended to provide that service are not.



inflation, pay raises, prior-year losses or gains, and any PBDs or other directives. The components try to balance the appropriated fund budget and working capital fund budget. Finally, the proposed rates and costs are forwarded to OUSD(C) as part of the annual Budget Estimate Submission (BES).

OUSD(C) reviews each component's costs and proposed rates, making adjustments to bring the AOR for each activity group to zero. These composite rates are published in PBD 426 in late December or early January, approximately 10 months before they become effective. PBD 426 accounts for final DoD costs and program levels, and makes adjustments to the customers' appropriated fund accounts.

Although a composite rate is published, components are authorized to develop and use subsidiary rates as long as those rates can be "rolled up" into the activity group's composite rate. For example, depot maintenance composite rates can be broken into different rates based on the type of ship or aircraft being repaired.

## DWCF FUNDING AUTHORITY

DWCF business areas obtain their funding authority far differently than an appropriated fund activity. They operate under the unit cost (or cost per output) concept:

$$\text{average unit cost} = \frac{\text{total costs}}{\text{total output}}. \quad [\text{Eq. 2-2}]$$

Instead of receiving a funding document that provides fixed budget authority for a specified period, the amount or value of customer orders determines the "earned cost authority" of a DWCF business area.

The DWCF activity has control over the costs, while customer orders determine the demand. Because both costs and demand can vary, DWCF managers must pay close attention to both internal cost controls and the scope of their customer base.

To determine a unit cost, the output must be identified. An output must be measurable and separate from all others so that costs can be allocated across the outputs. Outputs can be either products or services. Normally, the output for a product is the product itself. Services are often reflected in an output measure, such as the movement of a short ton of cargo via air from one location to another. Other services are priced based upon usage.

The DWCF activity must decide, for each unit of output, how the direct, indirect, and G&A costs are to be allocated. These are critical decisions because the activity budget and rates are based on this allocation. Poor allocation techniques will distort the true cost of producing an output, and the DWCF activity may end up marketing unprofitable products when it should be pricing them properly.

---

The OUSD(C) establishes unit cost goals, and USTRANSCOM passes those goals to each TWCF activity. OUSD(C) calculates the unit cost goal by dividing the budgeted total costs by the budgeted workload.

OUSD(C) uses unit cost goals as a control mechanism and indicator of business efficiency. This cost-oriented approach encourages management to consider all costs, including overhead, in terms of the output of the business. The unit cost goal is the maximum cost that TWCF managers should incur when producing their output, but it is not a legal limitation. Consequently, TWCF managers have a clearly defined goal to achieve with the flexibility to make trade-off decisions to minimize costs and maximize output.

## MANAGEMENT INITIATIVE DECISION 903

In 2000, the Secretary of Defense established the Defense Business Practice Implementation Board (DBB) to accompany other transformation efforts within DoD. The chairman of the DBB assigned topics to specific task groups. One such group was the DWCF Task Group, which was tasked to develop recommendations for improving the management of the DWCF. Among the task group's suggestions was the recommendation to support Management Initiative Decision (MID) 903<sup>6</sup> rate structure initiatives.

MID 903 directed DLA to realign its costs to provide additional visibility and accountability of its costs, and to recognize military-unique readiness costs (such as wartime reserve, surge contingency planning, and support costs) by removing them from the rates and then funding the costs through direct appropriations. This action was designed to stabilize rates over the long-term, improve cash asset management, make prices more predictable, and operate more like a business. MID 903 also directed DLA to finance its over-ocean transportation costs on a direct reimbursement basis, rather than include those costs in its rates.

## APPROPRIATED FUNDS

Until the early 1950s appropriated funds were used to finance transportation operations. The shift to a revolving fund was meant to increase efficiency; some advocate the use of appropriated funds because the funds are perceived as being simpler to manage.

An objective economic analysis would be required to fully compare the use of appropriated funds with revolving funds. This analysis is beyond the scope of this study; however, a 2004 study of organic airlift operations identified the advantages and disadvantages of appropriated funds as they apply to airlift

---

<sup>6</sup> *DoD Financial Management Regulation*, Volume 2A, Chapter 1, Paragraph 010107, pp. 1–6. A management initiative decision is a decision document similar to a PBD, but it is designed to institutionalize management reform decisions. A MID may be issued at any time during the year. The comptroller incorporates any funding adjustments into the next President's Budget Estimate.

operations.<sup>7</sup> The “pros” and “cons” for appropriated funds are generally applicable to all transportation operations, as summarized below:

- ◆ Pros
  - Transportation service providers receive their funding upfront and do not depend upon customer requirements to fund the execution of their programs.
  - The demand for government-owned transportation operations, a “free good,” may see an increase in customer demand while commercial services may see a reduction in demand, which may reduce total transportation cost to the taxpayer.
  - Reduces the need for personnel and information systems to manage customer billing.
- ◆ Cons
  - All transportation dollars held by the military services would be transferred to transportation service providers. All transportation services would become a free good, and transportation consumers would no longer have responsibility for holding down transportation costs.
  - The incentive to provide good customer service may be reduced because transportation service providers would control all transportation funds.
  - Transportation service providers lose the flexibility to expand transportation funding support for contingencies and other emergencies that is currently found in the TWCF.

## SUMMARY

In summary, USTRANSCOM has all cash, functional, and cost responsibilities for its working capital fund. USTRANSCOM also is responsible for setting prices for the outputs produced in its business areas. These prices are published as stabilized rates and set to recover costs over the long term. Individual business managers concentrate on controlling these costs rather than on the level of the cash available. Profits, when they occur, are returned to customers through adjusted lower rates in following years; losses are recouped through increased rates.

---

<sup>7</sup> Lockheed Martin, *Efficient Organic DoD Airlift System Operations*, January 15, 2004.

---

The following are among the advantages of the TWCF:

- ◆ Identifies the total or “true” cost of DoD goods and services to Congress, military users (buyers), and those who provide goods and services (sellers); thereby promoting more efficient and effective resource allocation and utilization.
- ◆ Underlines the cost consequences of certain choices and allows purchases to be made in anticipation of future funded orders.
- ◆ Provides managers with the financial authority and flexibility to procure and use labor, materials, and other resources more effectively.
- ◆ Improves cost estimates and cost controls through a comparison of estimates and actual costs.
- ◆ Places customers in the position to critically evaluate purchase prices and the quality of goods and services ordered.
- ◆ Allows for greater flexibility and security in decision making, as there are no fiscal-year limitations.
- ◆ Establishes standard prices or stabilized rates and unit prices for goods and services furnished by DWCF business areas, enabling customers to plan and budget more confidently.
- ◆ Stabilized rates and prices protect customers from unplanned price increases due to widely fluctuating costs involved in the production of products or services.

The following are among the disadvantages of the TWCF:

- ◆ Requires an automated financial management system capable of capturing accurate cost data.
- ◆ Even with a capable financial system, it is highly vulnerable to inaccurate feeder systems, which may be under the control of non-TWCF organizations.
- ◆ TWCF managers must regularly update their cost baselines to maintain accurate pricing.
- ◆ The complex structure can make it difficult for customers to understand TWCF operations and trust the fairness of TWCF pricing.
- ◆ Complexity places greater demands on TWCF managers to communicate with their customers, which goes well beyond TWCF financial personnel communicating with customer financial personnel.

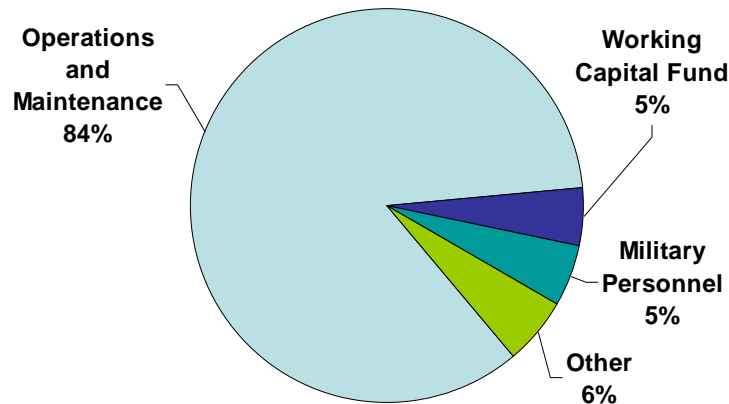
## Chapter 3

# Budgeting for Cargo Transportation

---

TWCF managers use customer orders as the measure of customer requirements. Figure 3-1 is a display of TWCF orders, by appropriation, for FY2007. The TWCF receives customer orders from a variety of appropriations and funds, but the operations and maintenance (O&M) appropriation is the principal source of customer orders. Most of the military personnel appropriation pays for SDDC's global, privately owned vehicle (POV) shipment and storage service contract. The 6 percent of customer orders grouped into the "other" category include procurement appropriations, the military exchanges, and the Defense Commissary Agency.

*Figure 3-1. FY2007 TWCF Orders by Appropriation and Fund*



In this chapter, we describe the processes and methods used by the military services and DLA to formulate peacetime cargo transportation budgets. The DLA uses the working capital fund for its transportation purchases. The military services use appropriated and working capital funds to purchase transportation services. Because O&M funding is such a significant source of TWCF orders, we concentrate our attention on the military services' transportation budgeting for the O&M appropriation and specifically second destination transportation.

## O&M TRANSPORTATION

The O&M transportation budget funds the movement of materiel from contractors' plants and among military depots, logistics centers, and field activities throughout the world. The military components purchase transportation through the TWCF and from commercial sources. In addition to DoD military supplies and equipment, other major commodities shipped with O&M include overseas mail, subsistence items, and base exchange stock from the Army and Air Force Exchange Service (AAFES), Navy Exchange Command (NEXCOM), and

Marine Corps Exchange System (MCX). Supplies and equipment may be shipped overland, by sea, or by air. Table 3-1 is a summary of the O&M transportation budget by DoD organization.

*Table 3-1. O&M Transportation Budget by Organization (in millions)*

DoD Organization	FY2006 <sup>a</sup>	FY2007	FY2008
Army	\$1,974.4	\$371.0	\$686.8
Navy	\$211.0	\$218.0	\$237.0
Marine Corps	\$295.5	\$24.0	\$81.5
Air Force	\$129.1	\$167.7	\$274.8
Army Reserve	\$3.7	\$7.0	\$9.9
Navy Reserve	\$3.3	\$7.5	\$8.1
Marine Corps Reserve	\$0.3	\$1.1	\$1.1
Air Force Reserve	\$3.2	\$2.0	\$2.2
Army National Guard	\$9.8	\$7.8	\$18.3
Air National Guard	\$20.9	\$15.9	\$15.2
DoD Dependents Education	\$15.3	\$15.8	\$15.6
Defense Threat Reduction Agency	\$3.0	\$2.8	\$4.7
Joint Staff	\$192.8	\$204.5	\$258.7
<b>Total O&amp;M:</b>	<b>\$2,862.3</b>	<b>\$1,045.1</b>	<b>\$1,613.9</b>

Source: OSD Operations and Maintenance Overview, FY2008 President's Budget Estimates, February 2007.

<sup>a</sup> FY2006 includes supplemental funding; FY2007 and FY2008 do not.

## O&M Transportation Funding Categories

The OSD *Operations and Maintenance Overview* for the FY2008 President's Budget Estimates divides O&M funding into two categories: first and second destination transportation (see Table 3-2).

*Table 3-2. O&M Transportation by Category (in millions)*

Category	FY2006	FY2007	FY2008
First destination transportation	\$28.7	\$32.7	\$32.9
Second destination transportation	\$2,833.6	\$1,012.4	\$1,581.0
<b>Total O&amp;M</b>	<b>\$2,862.3</b>	<b>\$1,045.1</b>	<b>\$1,613.9</b>

Source: OSD Operations and Maintenance Overview, FY2008 President's Budget Estimates, February 2007.

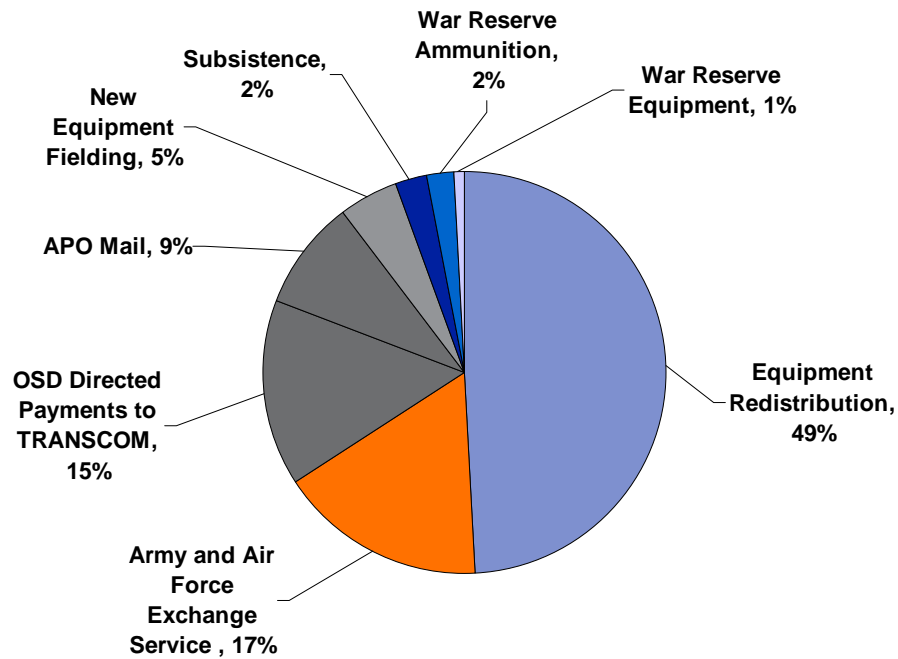
## First Destination Transportation

First destination transportation (FDT) is the transportation required to deliver production items from the manufacturer’s plant or source of procurement to the first point of delivery, where the military service or defense agency takes possession and ownership of that item.<sup>1</sup>

## Second Destination Transportation

Second destination transportation (SDT) finances the movement of government owned equipment and materiel among depots, logistics centers, and field activities, including retrograde cargo, mail, ammunition, support of classified and special programs, and spare parts and other cargo. Figure 3-2 illustrates Army’s allocation of SDT in its FY2008–2013 Program Objectives Memorandum.

Figure 3-2. Army SDT Categories



SDT pays to ship equipment and materiel by either military airlift and sealift worldwide, commercial surface transportation, or commercial air carriers operating daily flights over regular routes within the continental United States (CONUS) and Alaska. SDT costs also include accessory transportation services, such as vessel per diem and retention charges.

<sup>1</sup> Department of Defense Financial Management Regulation, Volume 2A, Chapter 1, pp. 1-17–1-18.

---

## Effect of the Global War on Terror on Transportation Costs

Deploying and sustaining military units as part of military operations, training, and redeployment constitutes the majority of the total transportation budget. It is the segment of the program that has grown most dramatically since the United States launched military operations in Afghanistan in FY2002 and Iraq in FY2003. Most of the funding for Afghanistan and Iraq has been budgeted through supplemental appropriations. To illustrate the significance of these supplemental requests, the FY2006 column in Table 3-1 and Table 3-2 include supplemental funding, whereas the FY2007 and FY2008 columns do not. Because our objective is to describe peacetime budget development, we do not address the processes used to develop supplemental budget requests.

## TRANSPORTATION BUDGET DEVELOPMENT OFFICES

Military service transportation budget developers must have a thorough knowledge of the transportation process, automated billing and budgeting systems, and the funding requirements of major transportation users. Therefore, all the transportation budget developers must be transportation subject matter experts who reside within a logistics organization of the military service. The location of these organizations in the hierarchy of the military service varies, however. For example in the Army and Marine Corps, this organization is located at the headquarters level. For the Navy and Air Force, field logistics organizations perform the transportation budget formulation.

Table 3-3 contains a listing of the transportation budget development offices of the military services and the approximate number of work years used to formulate the transportation budget. The budget development offices are responsible for the centralized management of SDT funds. Some SDT funds are distributed to other organizations for specific purposes, but the bulk of SDT funds are managed centrally. These centralized budgets are executed in a decentralized fashion using transportation account codes (TACs) that have funds allocated to them for specific applications. A transportation officer (TO) in the field charges shipping costs for an item using a TAC. The shipping costs for this item are subsequently decremented from the funds allocated to that TAC in the centrally managed SDT funds.



Table 3-3. Transportation Budget Development Offices

Budget development office	Budget development		Budget management	Budget execution
	Work years	Estimated labor cost <sup>a</sup>		
Army Headquarters, Deputy Chief of Staff (G-4), Transportation Division	~ 2-3	\$235,000	Centralized	Decentralized
Naval Operational Logistics Support Center (NOLSC)	1	\$94,000	Centralized	Decentralized
Headquarters, Marine Corps, Logistics Distribution Policy Branch, SDT Transportation of Things Section	1	\$94,000	Centralized	Decentralized
Headquarters, Air Force Materiel Command, Logistics Directorate, Logistics Support Office (HQ AFMC/LSO)	~ 4-5	\$423,000	Centralized	Decentralized
DLA Headquarters (J-8)	1	\$94,000	Decentralized	Decentralized

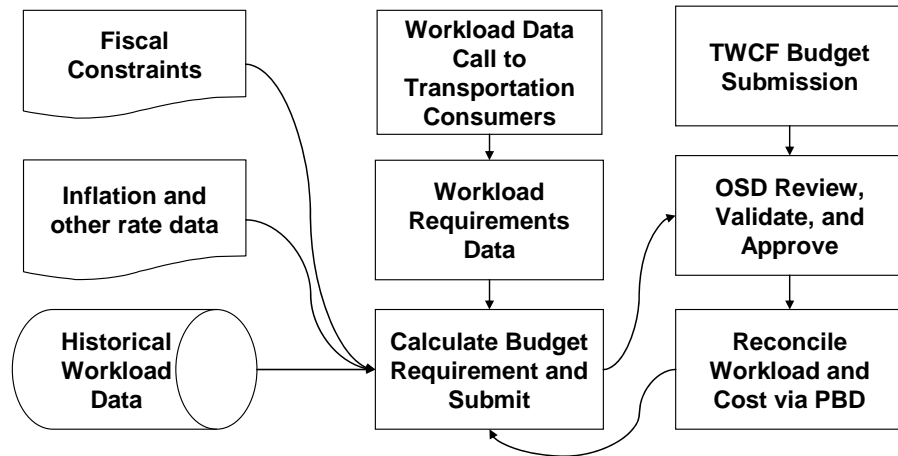
<sup>a</sup> Labor rate used for these estimates is based upon a GS-13, step 5, employee in the Washington, D.C. area.

Budget development is one of many functions for these offices. Other duties include TAC assignment management, billing reconciliation, and budget execution.

## TRANSPORTATION BUDGET FORMULATION PROCESS

Figure 3-3 is a generalized model of the O&M transportation budget formulation process used by the military services and defense agencies. Instead of describing each of their processes, which are very similar, we employ this model as the framework for describing the budget process, using representative examples from among the services.

Figure 3-3. Transportation Budget Formulation Process



---

All of the services and defense agencies begin with a fiscally constrained process in which transportation competes with other requirements for O&M funds. OSD provides inflation and TWCF rate data that are combined with workload data to compute budget requirements.

DLA uses the same process shown in Figure 3-3 to develop its transportation budget. The inventory control points of DLA and the military services are solicited for transportation forecast data, but the inventory control points developing this data are even further removed from the operational commands than the military transportation budget development offices. Accordingly, they are of very limited use. Historical transportation data is the principal source of transportation information. Once DLA has assembled its transportation forecasts, it adjusts them for inflation.

## HISTORICAL WORKLOAD DATA COLLECTION

Budget formulators gather detailed budget baseline information from transportation accounting systems. Historical data from the previous year serves as the starting point for budget building. For example, the military services budget for FY2007 provides baseline source data for FY2009.

Historical workload data originates from TWCF and PowerTrack systems, but we encountered serious questions about the validity of TWCF data. Discussions with the transportation budget development offices portrayed TWCF systems, such as SDDC's Cargo and Billing System (CAB),<sup>2</sup> as antiquated with poor data integrity. These systems create significant work for transportation budget offices as they execute their budgets. The poor data integrity of transportation systems was underscored during our interview with AMC accounting personnel, who stated that 20 percent of the transactions they process require manual correction because the transactions are assigned to invalid TACs.

Transportation budgets typically are developed as peacetime budgets, not wartime budgets. The GWOT has not only supplemented transportation funding, it also has affected how the military services distribute materiel and execute their transportation program, especially the Army. In peacetime, Army depot issues and returns rise (they are down significantly), new equipment fielding to deployed units decreases (it has increased), in some cases war reserve equipment is fully stocked (it has been depleted, with no new stocks distributed), and training ammunition distribution increases (it has decreased). Furthermore, the DLA has established forward stocks of materiel, which have affected Army SDT requirements. The Marine Corps has seen similar effects on its peacetime baseline. The Navy and Air Force have experienced far fewer effects upon their peacetime transportation programs.

---

<sup>2</sup> CAB prices out cargo data for cost and revenue purposes based on SDDC contract rates and stabilized customer billing rates. This data are passed to the Transportation Financial Management System (TFMS), which makes the payment to the vendor and creates the customer bill.

Another risk for the military services is the use of GWOT funding to cover peacetime operating costs. The short-term benefit of these actions could eventually make it very difficult to defend against budget cuts when GWOT supplementals are significantly reduced or terminated. The military service representatives we spoke with recognize this risk, and they are striving to avoid it.

## WORKLOAD DATA CALL

The major transportation consumers are a valuable resource for identifying future budget requirements. Therefore, the budget formulation process should begin with the collection of data from the organizations responsible for generating transportation requirements within the military services. These consumers can identify recurring and non-recurring events that should be included in the budget forecast.

Army G-4, for example, generates a data call to all program executive officers (PEOs) and major commands (MACOMs). Table 3-4 lists the principal requirements data submitted by Army PEOs, MACOMs, and other organizations responsible for providing data used in transportation requirements development.

*Table 3-4. Army MACOM and PEO SDT Requirements Data*

Submitting organization	Requirements data
MACOM or PEO	Fielding schedules, internal redistribution projections, or scheduled overhaul by system.
Joint Munitions Command	Overall tonnage requirements by theater. All conventional ammunition costs are programmed via sealift.
Army Field Support Command	All war reserve equipment requirements based on current and projected Army pre-positioned stock (APS) redistribution needs.
Army G-1	Estimated outside the continental United States (OCONUS) troop strength to develop subsistence requirements.

Source: Army Directorate for Force Projection and Distribution (HQDA G-4)

The following data were requested in a similar Marine Corps data call:<sup>3</sup>

- ◆ Table of Authorized Materiel Control Number (TAMCN)
- ◆ National stock number (NSN)
- ◆ Nomenclature
- ◆ Origin (ship from)
- ◆ Destination (ship to)
- ◆ Quantity per fiscal year

<sup>3</sup> Headquarters, Marine Corps, Logistics Distribution Policy Center, *Second Destination Transportation Program Financial Management Support: As-Is/Interim Process Guide*, August 2006.

- ◆ Weight (lbs)
- ◆ Length (in)
- ◆ Width (in)
- ◆ Height (in)
- ◆ Size in cubic feet.

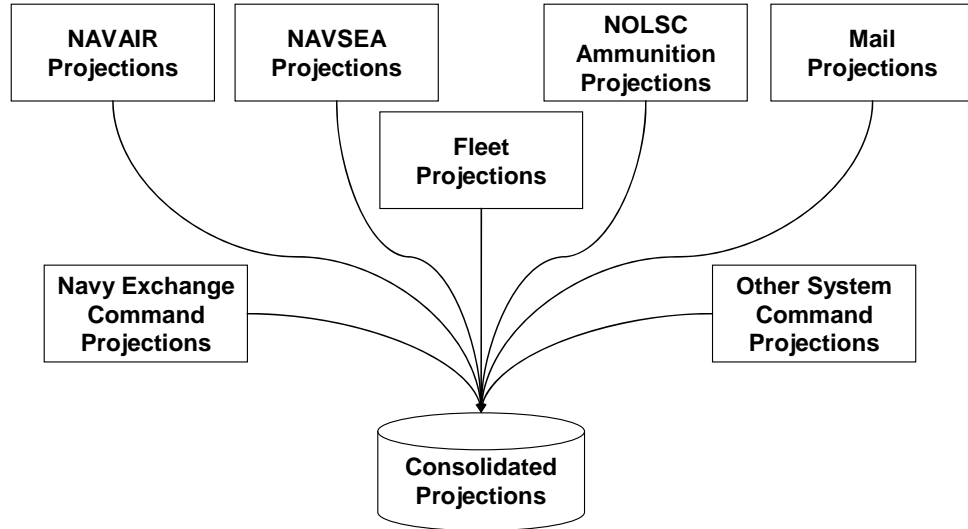
## AUTOMATED TRANSPORTATION BUDGET DEVELOPMENT SYSTEMS

The military services and DLA develop their transportation budgets using spreadsheets. At the time we conducted our interviews, neither the services nor DLA had an automated system devoted to the development of transportation budgets; however, NOLSC was automating the O&M transportation budget projection process with a Microsoft Access database. The database stores transportation requirements projections for mail, ammunition, materiel, and Navy Exchange sales. Table 3-5 lists some of the key data sources for the budget database. Figure 3-4 illustrates the database's architecture.

*Table 3-5. NOLSC O&M Transportation Budget Database Inputs*

Submitting organization	Requirements data
Naval Air Systems Command (NAVAIR)	First destination requirements for aircraft procurement material. Shipment requirements for downed, unable to fly to repair facility.
Naval Sea Systems Command (NAVSEA)	First destination requirements for ship's procurement material.
Fleet	Shipments to and from fleet units.
NOLSC Ammunition	Overall tonnage requirements by theater.
Naval Personnel	Personnel strength for mail shipment requirements
Cost and Visibility Tracking System (CAVTS)	CAVTS is a web-tool process used to identify flying hour program (FHP) cost drivers, track actual execution, and improve the feedback mechanisms in order to better prepare and forecast future FHP budgets.

Figure 3-4. Navy O&amp;M Transportation Budget Database Architecture



## CALCULATE BUDGET REQUIREMENT

During our discussion with military service budget formulators, we concluded the budget requirements calculation requires careful review and validation.

Before forecasting recurring requirements, the historical data must be scrubbed of any non-recurring requirements and deficiencies. For example, historical data may contain transportation requirements for contingencies, and the contingency data must be removed before developing the budget forecast. Conversely, historical data may not contain information on unfunded requirements that were not executed because of a budget shortfall. If that shortfall is a recurring requirement, it must be added to the budget forecast.

Budget formulators must be cautious of double counting recurring requirements when combining historical requirements and customer requirements; both data may contain the same requirements.

Once budget estimators have a reasonable workload projection, a budget estimate is produced by applying projected transportation rates. The actual rates that will be presented in the President's Budget submission are not known until the end of the joint OSD and Office of Management and Budget (OMB) budget review, which occurs every fall. Working capital fund rates are finalized in late December as one of the last steps in the annual budget review.

When rate changes are finalized, their effect on customer budgets is uncertain. A change in the average unit cost may result in either a reduction in the amount of services procured (to keep within existing budget ceilings), or, if the workload is not reduced, other activities may be cut back to make up the difference.

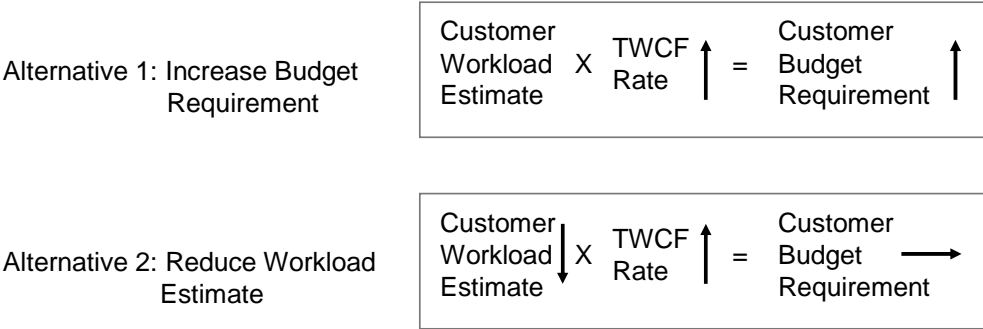
# REVIEW, SUBMISSION, AND APPROVAL

During budget formulation, each of the military services and USTRANSCOM develops a proposed budget and submits it as a budget estimate submission (BES) to the Office of the Under Secretary of Defense (Comptroller) for review. The OUSD(C) and the OMB jointly review all submissions to ensure DoD’s programs and dollars correctly align. After a series of budget reviews, OSD approves final decisions through a series of numbered PBDs. The military services are given very little time to adjust their budgets to accommodate the changes directed in the PBDs; it is almost impossible for the military services to align their budgets. The adjustments also have secondary effects through the budget justification materials.

OSD uses PBD 426 to announce the final rate changes in the latter part of December and to direct TWCF customers to adjust their budgets to accommodate TWCF rate changes. OSD also uses PBD 410 to make transportation-related budget changes for such areas as traffic management and contingency operations. For example, if the PBD announced a TWCF rate increase, the military service customers have several alternatives: Increase the amount budgeted for transportation by taking funds from another area, reduce their estimate of the amount of TWCF workload they will require, or a combination of the two. Because these changes come at the very end of the budget cycle, the transportation functional managers within the military services consider them disruptive to overall planning. Moreover, transportation functional managers often have difficulty discerning with satisfactory clarity the basis for these final adjustments.

Figure 3-5 illustrates the effect the first two alternatives have on a budget.

*Figure 3-5. Alternative Responses to TWCF Rate Increase*



The military services are developing their budget estimates within resource constraints. Consequently, if they choose Alternative 1, they must take funds away from another program to increase their transportation program. If the military services choose Alternative 2 and reduce their workload forecast, they risk not having sufficient funds to purchase their transportation requirements during budget execution because Congress will not have appropriated sufficient funds to satisfy their needs.

The Planning, Programming, Budgeting, and Execution System (PPBES) process was designed to force this type of decision making and resource allocation. But if the resource constraints are so severe they do not allow the military services to purchase all they require to meet their operational commitments, eventually they will have to under-execute at least one program.

If customers continually choose to underestimate their workload (Alternative 2), they will create a potentially negative consequence for the TWCF and themselves. USTRANSCOM will be forced to lower its workload estimates in response to customer forecasts, which would drive up rates, as seen from the TWCF rate-setting formula below.

$$TWCF \text{ rate} = \frac{\text{forecasted fixed costs} + \text{forecasted variable costs} - AOR}{\text{forecasted workload}}. \text{ [Eq. 3-1]}$$

## SUMMARY

From the perspective of the TWCF, the most valuable outcome from the customers' budget formulation is budgets balanced with the TWCF business areas.

The development of budgets relies heavily on the use of historical data, but the TWCF's major customers do not have confidence in the integrity of the data they receive from TWCF financial systems. We believe this is a serious weakness in the budget development process.<sup>4</sup>

When workload forecasts of TWCF and its customers are balanced, TWCF managers can control the size of their business areas. Therefore, it is essential for TWCF customers to identify and submit accurate workload estimates with their budget requests. If customers inaccurately state their requirements for TWCF services, they may receive insufficient appropriated resources to meet mission requirements. Furthermore, inaccurate customer requirements data could cause TWCF managers to inappropriately "size" their business area operations and incorrectly estimate their requirements for costs, such as personnel, overhead, material, contracts, and capital investments.

Because TWCF business areas cannot rapidly resize their infrastructure to accommodate significant changes in customer orders, having stable, accurate requirements projections enables TWCF business managers to successfully meet their customers' needs in a timely manner.

In recent years, OSD's use of supplemental budget requests for GWOT has threatened to undermine the development of peacetime budget projections. Because these supplemental budget requests were developed outside the PPBES

---

<sup>4</sup> In later chapters, we discuss efforts that are presently underway to improve the major financial systems of the TWCF.

---

process, USTRANSCOM could not develop budget estimates that were balanced with customer requirements.



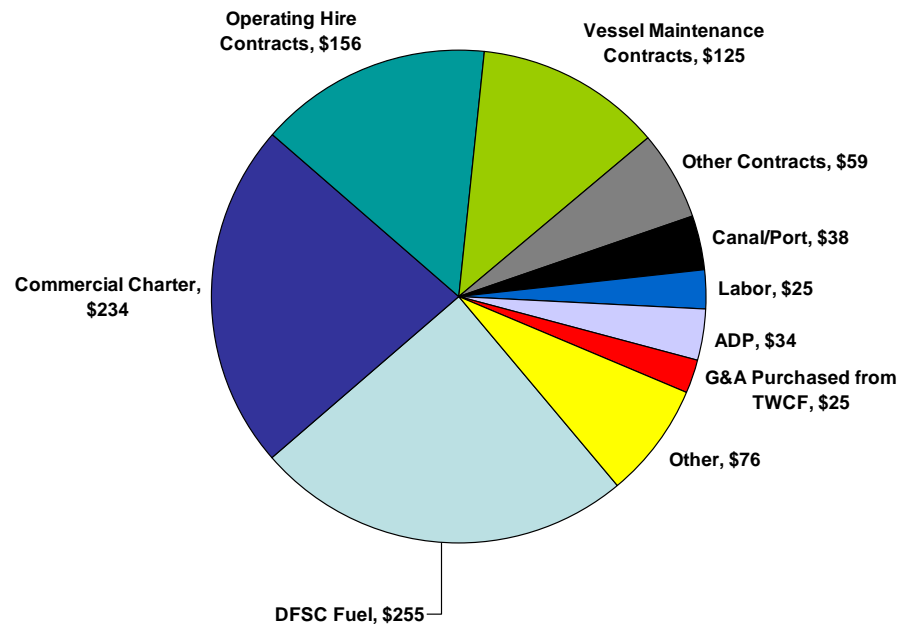
## Chapter 4

# Military Sealift Command

---

In FY2006, MSC accounted for about \$1 billion (about 10 percent) of the total reported operating costs of the TWCF. Costs associated with providing sealift capability include fuel, commercial charters, operating hire contracts, vessel maintenance, canal and port charges, labor, ADP, and TWCF G&A. Figure 4-1 provides a breakdown of the major costs for FY2006.

Figure 4-1. MSC FY2006 Operating Costs (in millions)



MSC provides ocean transportation of equipment, fuel, supplies, and ammunition to sustain U.S. forces worldwide during peacetime and in war for as long as operational requirements dictate. During a war, more than 95 percent of all equipment and supplies (by weight) needed to sustain the U.S. military is carried by sea. It operates ships that provide combat logistics support to U.S. Navy ships at sea; special mission support to U.S. government agencies; pre-positioning of U.S. military supplies and equipment at sea; and ocean transportation of DoD cargo in both peacetime and war.

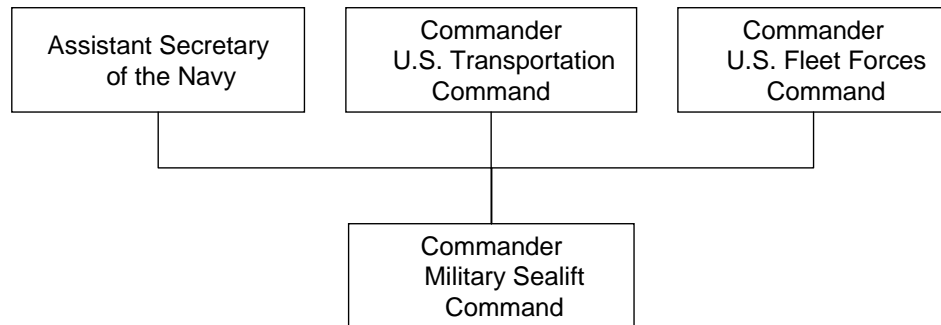
MSC has a wide array of ocean transportation resources and highly trained personnel to perform worldwide missions as the sea transportation component of the USTRANSCOM.

---

## COMMAND RELATIONSHIPS

MSC reports within the DoD through three distinct and separate chains of command, which are show in Figure 4-2.

*Figure 4-2. MSC Chain of Command*



MSC is one of USTRANSCOM three component commands. For research, development, and acquisition for procurement policy and oversight matters, MSC reports to the Assistant Secretary of the Navy. For Navy transport matters, MSC reports to U.S. Fleet Forces Command (FFC), which organizes, maintains, staffs, and equips all U.S. naval forces. FFC reports to the Chief of Naval Operations.

## MSC STAFFING

MSC has more than 10,800 employees worldwide, about 80 percent of whom serve at sea. Approximately 5,100 employees are federal civil service, 660 are military personnel, and another 4,600 are employed by MSC contractors. MSC is the largest employer of merchant mariners in the United States.

MSC has access to 1,000 selected reservists in MSC reserve units across the United States. When mobilized, these reservists quickly take charge of establishing MSC port offices to assist with sealift operations wherever needed.

## FUNDING

MSC receives no appropriated funds to support its operations. It operates under two separate working capital funds. In its Navy-support capacity, MSC supports the fleet commanders and other DoD activities by providing unique vessels and programs. The Navy Working Capital Fund (NWCF) funds this support.

In its common-user transportation provider capacity, MSC provides sealift support for movement of DoD cargo in peacetime and during contingency operations. Sealift support is funded through the TWCF.

MSC is organized around four programs. Table 4-1 defines the funding sources for these four programs. As the table shows, programs that directly support the U.S. Navy only are funded through the NWCF, and those programs that support a wide range of customers, including the Navy, are funded through the TWCF.

Table 4-1. MSC Programs

Program	Fund
Naval Fleet Auxiliary Force (NFAF)	NWCF
Special Mission	NWCF
Afloat Pre-Positioning Force	NWCF and TWCF
Sealift	TWCF

With the exception of vessel charters, at the beginning of the fiscal year, MSC customers typically provide funds to MSC to prepay for transportation services provided by MSC during the year. Throughout the year, MSC charges against the customers' funding documents to obtain reimbursement for the direct and indirect costs are associated with those services.

## TWCF WORKLOAD

MSC workload is measured by ship days, and many of its customers require ships for a full year, or 365 ship days. Table 4-2 summarizes MSC workload history for FY2006 and the workload forecast for FY2007–FY2009.

Table 4-2. MSC Workload History and Forecast (in ship days)

MSC workload	FY2006	FY2007	FY2008	FY2009
Petroleum tankership	3,196	2,600	2,606	2,600
Surge (FSS & LMSR) full operating status	1,464	1,785	1,497	1,495
Surge (FSS & LMSR) reduced operating status	6,935	6,935	6,954	6,935
Army afloat pre-positioning	3,446	3,650	3,660	4,015
Air Force afloat pre-positioning	1,412	1,460	1,407	1,444
DLA afloat pre-positioning	730	730	732	730
Chartered cargo	3,469	3,025	2,444	2,444

Source: FY2008–FY2009 President's Budget Estimates, February 2007.

Note: FSS = fast sealift ship; LMSR = large, medium speed roll-on/roll-off.

---

## Afloat Pre-Positioning Force

MSC's Afloat Pre-Positioning Force was established in the early 1980s to provide inter-theater mobility and reduce response time for the delivery of urgently needed U.S. military equipment and supplies to a theater of operations during a war or contingency.

MSC operates 35 ships in its pre-positioning program. These ships are loaded with military equipment and supplies needed for a war or other contingency. The ships are strategically positioned in key ocean areas, making it possible to deploy on short notice the vital equipment, fuel, and supplies necessary to initially support our military forces whenever needed.

All pre-positioning ships are under the operational control of MSC area commands directly supporting the Navy's fleet commanders.

### VISA PROGRAM—TRANSITION FROM PEACE TO WAR

The VISA program is an agreement between the U.S. government and the maritime industry. This agreement was introduced in the mid-1990s to provide assured access to commercial shipping at pre-agreed rates during a national emergency and to support joint planning. The agreement makes it possible for DoD to use the ships and shore-based transportation systems of ocean shipping companies in time of war. In return, the companies receive a subsidy from the federal government or are awarded peacetime defense cargo movement contracts.

Pre-positioning ships are usually the first to respond to a contingency. They can quickly move their loads of military cargo and fuel from their strategic locations around the world to a combat area. The Sealift Program operations can expand significantly to move massive amounts of heavy armored combat equipment and other warfighter supplies from U.S. bases to the theater of operation. MSC first seeks to implement the VISA program by going to the commercial market to charter suitable U.S.-flagged ships. If required, foreign-flagged ships may be used. MSC also may activate government-owned surge sealift ships that are normally kept in reduced operating status (ROS).

## CATEGORIES OF PRE-POSITIONING SHIPS

Pre-positioning ships are divided into three categories, which are based upon the military service customers they support:

- ◆ 10 Army Pre-Positioned Stocks-3 (APS-3)<sup>1</sup> ships carry equipment and supplies for a U.S. Army heavy brigade, combat support, and combat service support elements.
- ◆ 16 Maritime Pre-Positioning Force (MPF) ships carry equipment and supplies for the U.S. Marine Corps.
- ◆ 9 ships support the Navy, DLA, and Air Force (NDAF) ships (mostly tankers and dry cargo ships). They are loaded primarily with DLA fuel, Air Force ammunition, Marine Corps aviation support equipment, and Navy munitions.

## Tanker Project

MSC's Tanker Project works closely with the Defense Energy Support Center (DESC) to transport petroleum products to DoD storage and distribution facilities around the world. MSC operates four government-owned tankers and one long-term chartered tanker to meet the over-ocean transportation needs of DESC. It augments this organic lift capacity with short-term commercial charters when necessary. The four government-owned tankers and the long-term chartered ship are capable of conducting underway replenishment with Navy fleet oilers to provide additional logistics support to the fleet whenever it is needed.

In addition to the primary mission of providing transportation of fuel for DESC, MSC's chartered tankers perform unique missions, such as refueling the National Science Foundation's McMurdo Station in Antarctica and providing fuel for the Thule Air Base in Greenland. MSC also operates a shallow-draft shuttle tanker between Korea and Japan.

In FY2006, the Tanker Project moved a total of 1.92 billion gallons of petroleum products in support of DoD operations worldwide.

## Dry Cargo Program

MSC's Dry Cargo Project Office handles all DoD cargo requirements that cannot be accommodated by regularly scheduled ocean liner service. Nearly all peacetime DoD cargo is shipped via U.S.-flagged contracted or government-owned

---

<sup>1</sup> APS-3 ships are typically LMSRs, built to expand sealift capacity into the 21st century. The LMSRs offset the shortage of militarily useful cargo ships in the commercial sector, which is a growing concern as U.S. overseas bases close and its military forces increasingly depend on power projection.

---

ships. During a military contingency, additional vessels may be chartered to expand sealift capabilities to meet additional demand.

Nearly 90 percent of the cargo sent to support U.S. warfighters in Operation Enduring Freedom was deployed aboard more than 160 MSC ships, including 88 chartered commercial vessels.

The Dry Cargo Project Office makes every attempt to use as many U.S.-flagged vessels as possible to support the U.S. maritime industry. When needed, the Project Office may charter foreign-flagged vessels.

## Surge Program

A robust and responsive surge sealift fleet is a critical element of U.S. national security strategy. The ability to move forces and military equipment enables the United States to defend and promote vital interests anywhere in the world. This is especially true as the nation continues to draw down its shore-based infrastructure overseas.

The Surge Program manages strategic sealift ships that can be activated from ROS to support the U.S. military in exercises, contingencies, and war. More than 50 surge sealift ships have been activated for Operation Enduring Freedom.

MSC's LMSRs are among the largest cargo ships in the world. They carry up to 380,000 square feet of combat cargo at speeds up to 24 knots. LMSRs are equipped with on-board ramps and cranes to assist in loading oversize cargo. MSC operates 11 surge LMSRs using commercial operating companies to crew and maintain the ships. The LMSRs can be ready to sail within 96 hours after notification.

FSSs are the fastest cargo ships in the world. With speeds in excess of 30 knots, these ships can sail from the east coast of the United States to Europe in less than 6 days. The FSSs assure U.S. warfighters the quick delivery of needed equipment and supplies. Together, MSC's eight FSS can deliver nearly all the equipment needed to outfit a full U.S. Army mechanized division.

Ready Reserve Force (RRF) ships are owned and maintained by the U.S. Department of Transportation's Maritime Administration at strategic locations around the U.S. coasts near Army loading ports. Normally kept in 4-, 5-, 10- or 20-day ROS, the 59 militarily useful ships come under MSC control when activated. Ships may be activated for humanitarian operations, military exercises and contingencies, and war. The RRF includes tankers, crane ships, roll-on/roll-off ships, heavy lift ships, lighter-aboard-ship vessels, and modular cargo delivery system ships. Thirty-three RRF ships were directly involved in Operation Iraqi Freedom, delivering more than 9 million square feet of combat cargo for U.S. forces in Iraq.

## MSC FINANCIAL AND BUDGET DEVELOPMENT SYSTEMS

The Military Sealift Command Financial Management System (MSCFMS) is a DFAS migratory system. Based on Oracle Federal Financials, MSCFMS includes a federalized general ledger using the U.S. Standard General Ledger (USSGL) along with federalized modules for accounts receivable, accounts payable, and purchasing. Oracle commercial modules supporting project costing, project billing, inventory, and fixed assets have been implemented as well.

MSCFMS captures all obligation, expense, revenue, disbursement, and collection data by program, information that is essential for accurate rate development. Data are recorded at the ship and expenditure level, and then accumulated to include all ships supported for each customer. All customer data are then summarized to reflect the accumulated revenues, expenses, and other USSGL account data at the customer level. Since MSC has reporting responsibilities as a TWCF and NWCF service provider, data are identified, captured, and reported for each working capital fund.

MSC has further developed a financial data mart (FDM) for internal reporting and presentation of decision-making information. MSC uses a Budget Preparation System (BPS) for its budget development process. BPS does not contain budget execution data; however, final cost and workload data are transferred from the FDM to BPS at the end of a fiscal year. This transfer enables budget analysts to use actual workload and cost data as they develop their cost, rate, and revenue estimates for the next budget.

## MSC TWCF RATE CATEGORIES

MSC develops its TWCF rates and workload forecasts. USTRANSCOM, however, develops the rates for AMC and SDDC.

MSC structures its rates by ship program using ship days as the unit cost metric. Direct costs for fuel, commercial charters, operating hire contracts, vessel maintenance, canal and port charges, and labor, and indirect costs are prorated to each program based on its total cost are divided by 365 to produce the cost per ship day. Accordingly, the MSC rate setting process and the rates are fairly straight forward. Table 4-3 lists the rate categories.

*Table 4-3. Military Sealift Command  
Rate Categories*

Petroleum tanker ship days
Surge full operating status ship days
Surge reduced operating status ship days
Army afloat pre-positioning ship days
Air Force afloat pre-positioning ship days
DLA afloat pre-positioning ship days
Chartered cargo ship days

## MSC BUDGET FORMULATION PROCESS

Figure 4-3 is a foldout that illustrates MSC's budget formulation process. To analyze that process, we divided it into four segments:

- ◆ Develop the historical cost baseline.
- ◆ Update the baseline with budget year assumptions and customers' current workload estimates.
- ◆ Formulate the budget.
- ◆ Review, submit, and approve the budget.

In the following sections, we describe the major elements of these segments in the budget formulation process for FY2009.

### Develop Baseline

MSC develops its baseline costs using historical costs that are collected in MSCFMS and transferred to FDM for daily program management. Final cost and workload data are transferred from FDM to BPS at the end of a fiscal year. The costs of operations in FY2007 include the cost baseline data for the FY2009 budget; that data is updated to include known changes in workload and pricing.

Revenue minus cost is the net operating result for FY2007. If the revenue is higher than the costs, the NOR will be positive; if the costs are higher than the revenue, the NOR will be negative. The NOR is added to the balance of the accumulated operating results from prior years. Finally, expected workload data, projected revenue and costs, and the AOR are used to compute the FY2009 rates.



## Update the Baseline

After the FY2009 budget baseline is established, MSC updates it with budget assumptions that include inflation rates; currency exchange rates; workforce changes, including growth, reduction, or changes in workforce mix, productivity rates; and changes in service delivery throughout the budget cycle.

The offices responsible for managing each program contact MSC's customers to obtain their forecasts for FY2009 workload. The project offices also apply their experience and data obtained from other sources to further develop the TWCF and NWCF workload forecasts.

## Formulate Budget

FY2009 costs are estimated for the amount of forecasted workload and added to the AOR. The sum of costs and AOR equal the amount of revenue required, which is divided by the workload to develop the FY2009 stabilized rate.

## Review, Submit, and Approve

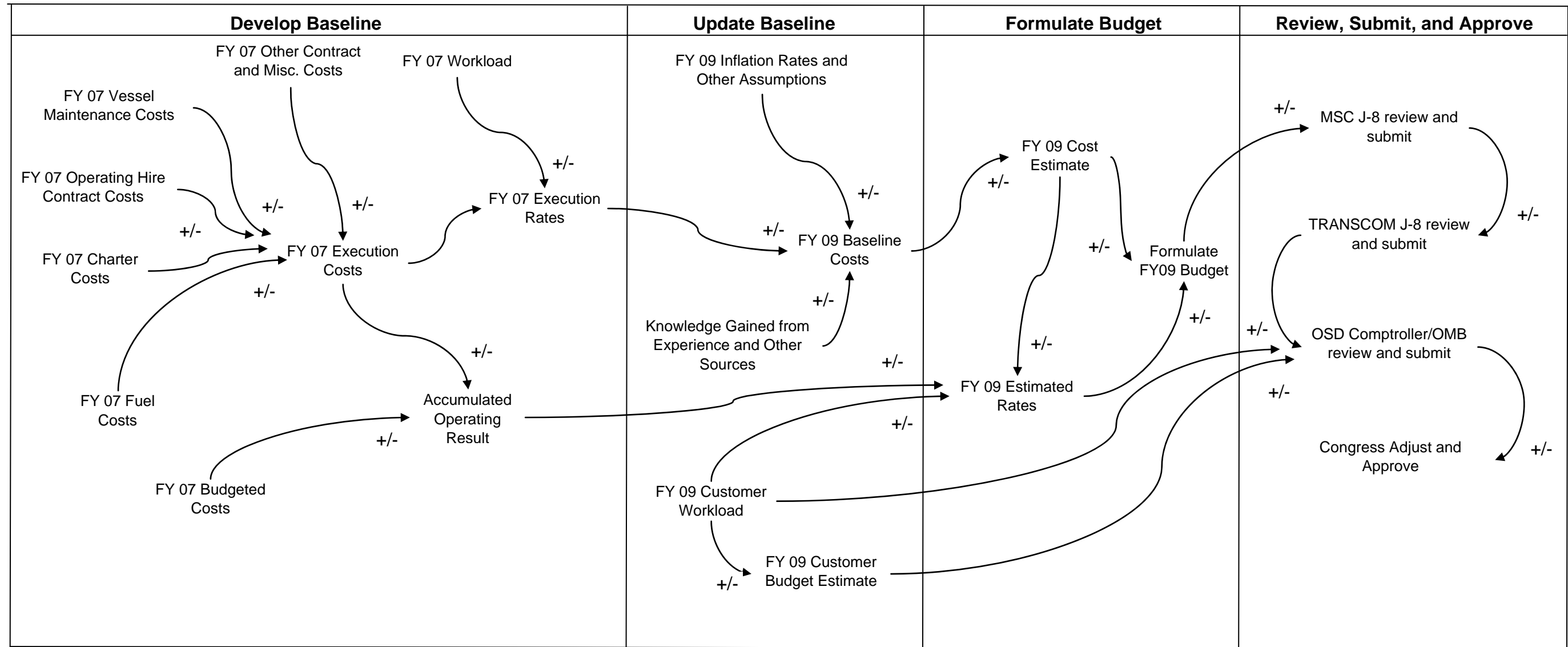
The estimate of operating costs, workload, and stabilized rates are submitted, in succession, to the MSC Comptroller (Code N8), USTRANSCOM J-8, Navy Comptroller (Code FMB 42), OSD Comptroller and OMB, and Congress for review, adjustment if necessary, and approval.

## SUMMARY

We began with MSC to identify the automated systems and processes used in TWCF budget formulation because MSC has the most stable workload, the best automated financial systems, and a rate setting and budget formulation process that comes closest to meeting the criteria set forth for working capital fund operations. In the next two chapters, we describe the AMC and SDDC budget formulation processes.



Figure 4-3. MSC Budget Formulation Process





# Chapter 5

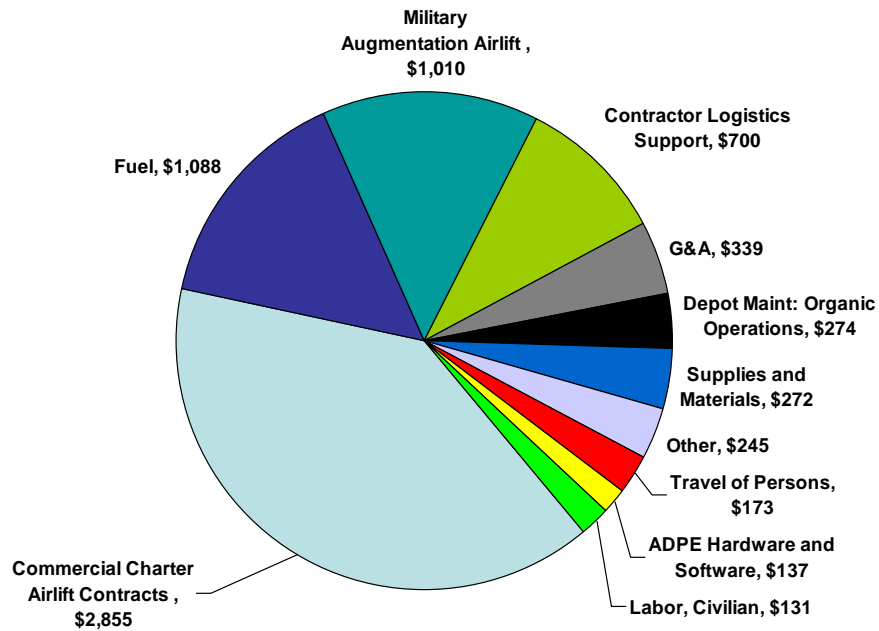
## Air Mobility Command

---

AMC owns and operates organic aircraft (such as the C-5 and C-17) and contracts for commercial aircraft to satisfy DoD airlift needs.

In FY2006, AMC accounted for about \$7.3 billion, or about 73 percent, of the total reported operating costs of the TWCF. Costs associated with providing airlift capability include aviation fuel, depot maintenance, civilian pay, supplies and materials, travel and per diem, facility maintenance, aerial port operations, G&A expenses, and depreciation. Figure 5-1 provides a breakdown of the major AMC costs for FY2006.

Figure 5-1. AMC FY2006 Operating Costs (in millions)



Source: FY2008–2009 President's Budget Estimates, February 2007.

AMC's TWCF budget is an estimate of the cost of its Flying Hour Program (FHP) and projected military and commercial augmentation. Military augmentation costs are based upon agreements between the TWCF and the commands that provide the airlift services and typically cover the variable operating costs. Commercial augmentation costs are based upon contractual agreements with commercial air carriers.

---

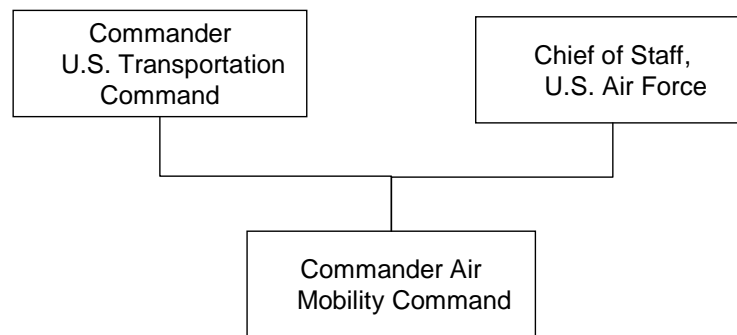
## AMC STAFFING

AMC's mission authorizes more than 140,000 active-duty and Air Reserve Component military and civilian personnel, including approximately 47,000 active duty, 8,000 civilian, 38,000 Air Force Reserve, and 46,000 Air National Guard personnel.

## AMC ORGANIZATION

AMC reports within DoD through two distinct chains of command. These are shown in Figure 5-2.

*Figure 5-2. AMC Chain of Command*



## AMC TWCF WORKLOAD

USTRANSCOM develops AMC's TWCF rates and workload for five types of missions:

- ◆ Channel passenger and cargo
- ◆ Channel cargo
- ◆ Special assignment airlift
- ◆ JCS exercises
- ◆ Training, test, and ferry.

USTRANSCOM calculates a different rate for each type of mission. Table 5-1 illustrates how the TWCF rates vary by category, product line, and business area. The underlying rate basis may be either directly or indirectly funded. Direct funding collects revenue on an hourly basis. Indirect funding collects revenue on a different basis, such as by passenger or weight and cube.

Table 5-1. AMC's Mission Area and Rate Basis

Mission area	Rate basis
Channel airlift	
Channel passenger	Passenger—62% (commercially competitive)
Channel cargo	Weight and cube—62% (commercially competitive)
Charter airlift	
SAAM	Hourly—91% for military; 110% for commercial aircraft
JCS exercise	Hourly—91%
Joint airborne and air transportability training	Hourly—100%
Training and test ferry	Hourly—100%

Some aspects of developing TWCF rates are fairly straightforward because the estimated costs are simply divided by the projected workload. However, the rate development process recognizes that the rates must be commercially competitive to keep customers from using other sources of airlift.

The percentages in the rate basis column in Table 5-1 reflect the difference between AMC estimated costs and the prevailing commercial competitive rate. Thus, TWCF rates are not developed on a true total cost recovery basis. Different rates are also developed for DoD and non-DoD customers.

## Channel Cargo and Channel Passenger

Channel airlift delivers point-to-point transportation of DoD passengers and sustainment cargo for forces deployed around the world. Channel airlift provides scheduled or on-demand service over published international routes. AMC is prohibited from establishing domestic scheduled common-user service;<sup>1</sup> therefore, its channel airlift is international only. Channel cargo and channel passenger missions are normally flown over well-established, frequently traveled worldwide routes, such as from Dover Air Force Base, Delaware, to Ramstein Air Base, Germany, and back.

AMC charges customers for channel passenger and channel cargo missions according to the number of passengers and the weight or volume of cargo. It matches commercial rates for channel airlift instead of developing the full costs of missions. For example, AMC uses a rate slightly under the GSA rate on an international airlift route for which the GSA has negotiated a government rate with civil carriers. AMC uses a standard commercial rate for routes without government-negotiated rate. These standard rates are adjusted annually for inflation.

While channel airlift rates are comparable to commercial billing rates, the level of service is generally less than commercial service. Commercial service frequently

<sup>1</sup> DoD Directive 4500.9E, *Transportation and Traffic Management*, 11 September 2007.

---

offers door-to-door service for cargo; AMC provides port-to-port service. Thus, the customer is responsible for the movement from the point of origin to the port of embarkation and the movement from the point of debarkation to the final destination. AMC has moved toward providing more complete service.

In addition to satisfying customer requirements, channel airlift offers air transportation and system readiness training for aircrews and other components of the airlift system. Because this mission area supports readiness training and the full cost of that training exceeds its revenue, AMC receives funding from the Airlift Readiness Account (ARA) to cover the difference.<sup>2</sup>

## Chartered Missions

Charter missions are used when the customer leases an entire aircraft. Charter missions include special assignment airlift, JCS exercises and contingency missions, and training missions.

On special assignment airlift, exercise, and training missions, AMC charges its customers for the entire aircraft by flight hour for military aircraft and by flight length in miles and capacity used for civil aircraft. The hourly and mileage charges vary by aircraft type. Airlift rates for SAAMs are set to recover 91 percent of AMC's recorded costs for military aircraft and 110 percent of AMC's recorded costs for commercial aircraft. The lower recovery rate for military aircraft reflects the ARA contribution to operate these aircraft.

### SPECIAL ASSIGNMENT AIRLIFT

SAAM flights are chartered when the user requires the dedicated use of the aircraft and is willing to pay for sole use. Generally, the user is billed for the flying hours to position the aircraft at the desired onload point, the flight to the specified destination (and possibly the return), and the hours needed to either return the aircraft to home station or to its next designated point to re-enter the airlift system. More than one user may split the cost of the SAAM flight if their missions overlap.

SAAMs are normally required for missions when point-to-point transportation cannot be met by scheduled service. SAAMs may involve DoD, other government agencies or departments, and U.S.-sponsored customers, such as foreign military sales customers. International group movements by charter air are treated as SAAMs, as well. SAAMs are validated using the JCS priority system, and are normally higher priority than more-routine operations; therefore aircraft may be pulled from channel missions to fly higher priority SAAMs.

---

<sup>2</sup> In FY2003, the ARA subsidized approximately 9 percent of the costs in the SAAM, contingency and JCS exercise categories and approximately 38 percent of the costs for channel airlift. FY2003 President's Budget Estimates, February 2002.



For SAAMs, the user provides payment using a specific appropriation, fund cite, or a TAC that is mapped to a line of accounting. SAAMs are provided along infrequently traveled routes when AMC must meet customer airlift requirements for special pickup or delivery at points other than along established routes or for special considerations (e.g., the number of passengers, weight or size of the cargo, and urgency or sensitivity of the movement).

## JCS SUPPORTED EXERCISES AND CONTINGENCIES

JCS exercise and contingency missions are supported with a combination of organic military and commercial chartered aircraft. C-5 and C-17 aircraft move cargo, while commercial airliners offer greater passenger capacity. This category of airlift entails both point-to-point deployment and redeployment, and sometimes includes personnel and cargo airdrops. Airlift rates for exercise missions are set to recover 91 percent of AMC's recorded costs for military aircraft and 110 percent of AMC's recorded costs for commercial aircraft.

## JOINT AIRBORNE AND AIR TRANSPORTABILITY TRAINING

Joint airborne and air transportability training between AMC, military services, and some allies requires dedicated airplanes and aircrews training for specific in-air events (air drop, low level, and assault landing) and on the ground (engine running on loads and offloads and loading outside specialized cargo).

## TRAINING, TEST, AND FERRY

Missions using training, test, and ferry (TTF) flying time carry no passengers or cargo. Training missions give the pilots, aircrews, and airborne troops the necessary training to meet technical proficiency warfighting qualifications. TTF flying time is used to maintain or upgrade aircrews' flying proficiency—usually over a 6-month training period—in support of testing equipment, or to ferry aircraft to and from maintenance facilities. Training events include low-level flying, assault landings, and other special operations-related tactics. TTF hours also support reserve associate aircrews and the weapons instructor course. Rates for training missions are set to recover 100 percent of AMC's recorded costs.

## AMC FINANCIAL AND BUDGET DEVELOPMENT SYSTEMS

One of AMC's principal barriers to computing cost-based rates is the lack of integrated systems to support airlift operations. AMC relies on standalone systems and processes, many of which involve manual operations.

Locating and relating history, cost, and revenue records is time consuming, and the relationships among records are often uncertain or unknown. Some records are manual and others are automated, still others are maintained on separate data

---

systems. Because the systems are not linked, information cannot be shared easily or analyzed.

There is an expectation that DEAMS will correct this deficiency. As a financial management initiative, DEAMS is designed to transform business and financial management processes and systems to provide accurate, reliable, and timely business information to support effective business decision making for the U.S. Transportation Command, Defense Finance and Accounting Service (DFAS), Air Force, and other agencies within DoD.

## AMC BUDGET FORMULATION PROCESS

Figure 5-4 is a foldout that illustrates the budget formulation process that USTRANSCOM uses to formulate AMC's channel cargo budget. To analyze the AMC budget formulation process, we divided it into four segments:

- ◆ Develop the historical cost baseline.
- ◆ Update the baseline with budget year assumptions and customers' current workload estimates.
- ◆ Formulate the budget.
- ◆ Review, submit, and approve budget.

In the following sections, we describe the major elements for these segments in the budget formulation process for FY2009.

### Develop Baseline

The costs of operations in past years do not form the cost baseline data for the future budget; instead, USTRANSCOM develops channel cargo baseline costs using commercial carrier rates. During peacetime, this approach will lead to a loss because AMC's channel airlift expenses exceed the revenue garnered from using lower rates set to match those charged by commercial carriers. The difference between actual and budgeted costs is the net operating result for FY2007. If the cost of operations is less than budgeted costs, the NOR will be positive; if it is greater, the NOR will be negative. The NOR is added to the balance to the accumulated operating result from prior years to update the AOR. If the FY2007 rates remain competitive with commercial rates, they form the budget baseline for the forecasting of rates.

## Update the Baseline

After the budget baseline is established, USTRANSCOM updates it with budget assumptions, including inflation rates, currency exchange rates, workforce changes (growth, reduction, or changes in workforce mix), productivity rates, and changes in service delivery.

USTRANSCOM coordinates with AMC customers to develop workload forecasts for air channel cargo. USTRANSCOM also applies its experience with and data obtained from other sources to further develop the AMC air channel workload forecast.

## Formulate the Budget

Future year costs are estimated for the amount of forecasted workload and added to the AOR. This sum of costs and AOR are divided by the workload to develop the stabilized rate.

## Review, Submit, and Approve

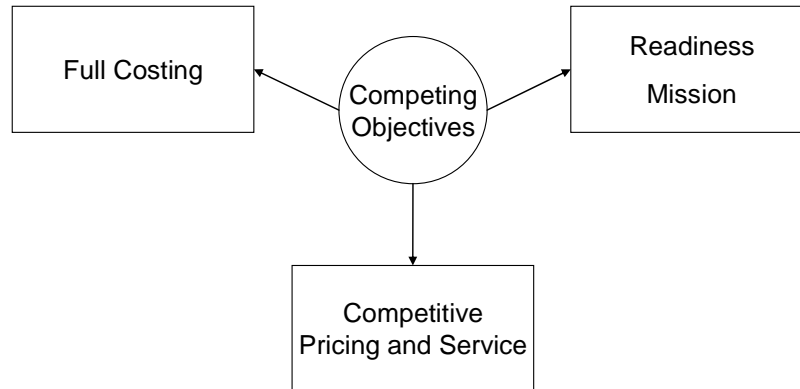
The estimate of operating costs, workload, and stabilized rates are submitted in succession to USTRANSCOM J-8, the OSD Comptroller and OMB, and Congress for review, adjustment if necessary, and approval.

## SUMMARY

AMC customers expect competitive prices and services. The focus on full costing is designed to motivate a working capital fund manager to closely manage costs to satisfy the customers' desire for competitive prices; however, DoD's Financial Management Regulation (FMR) gives AMC some relief for this full costing by allowing mobilization costs to be funded by the ARA.

Figure 5-3 illustrates AMC's three contradictory objectives: maintaining readiness, performing full costing, and satisfying customers with competitive rates and services.

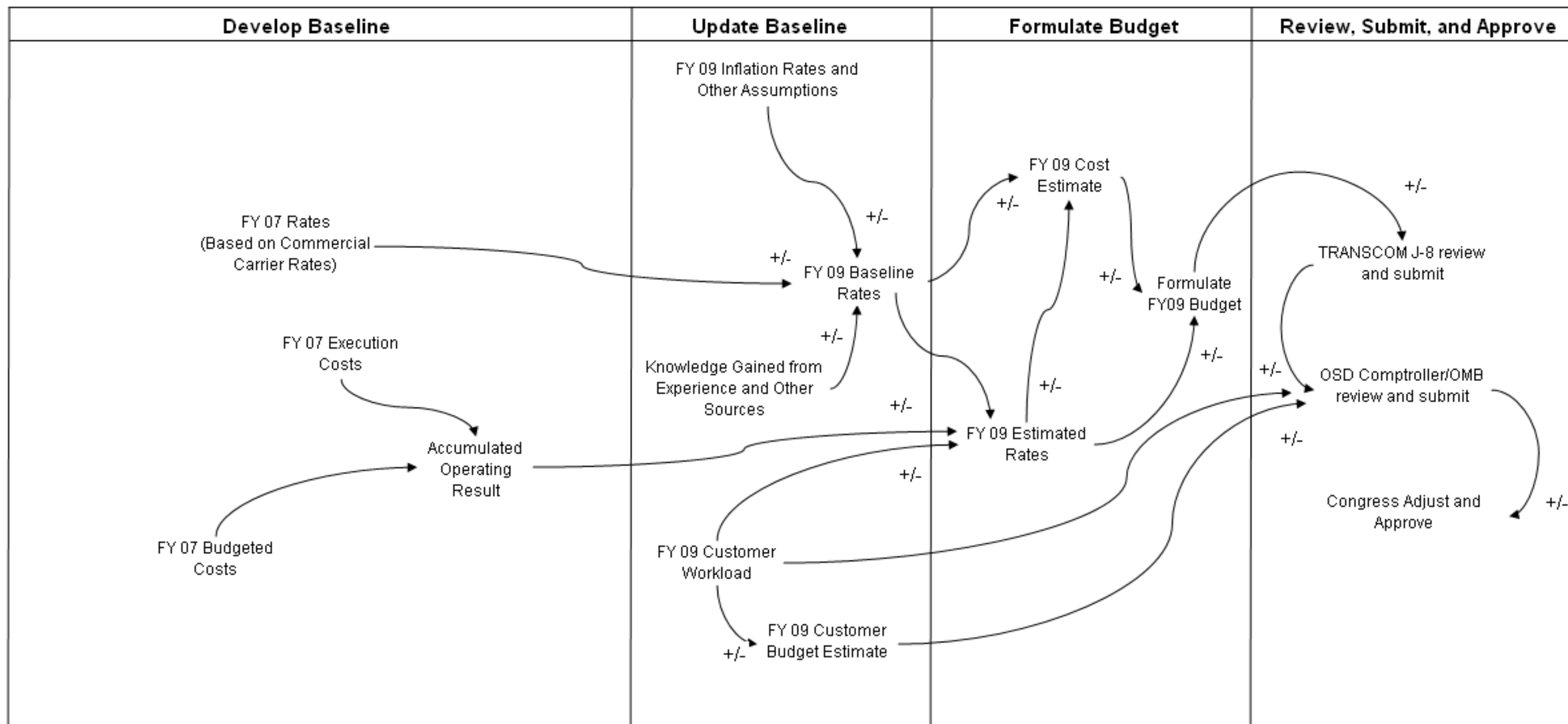
Figure 5-3. AMC's Competing Objectives



According to the DoD FMR, AMC should recover 100 percent of its airlift operating costs, excluding the costs of maintaining readiness. Because of deficient financial systems, the actual costs of airlift missions are not being accumulated reliably. Therefore, when AMC rates are set, USTRANSCOM concentrates more on setting a commercially competitive rate than a rate that would recover peacetime airlift operating costs from customers.

If AMC had better information systems, offered comparable levels of service, and developed cost-based rates, it would exceed commercial rates, especially during peacetime when workload levels are lower. To offset the difference between commercial rates and actual costs, AMC must continue receiving supplemental funding through the ARA.

Figure 5-4. AMC Channel Airlift Budget Formulation Process





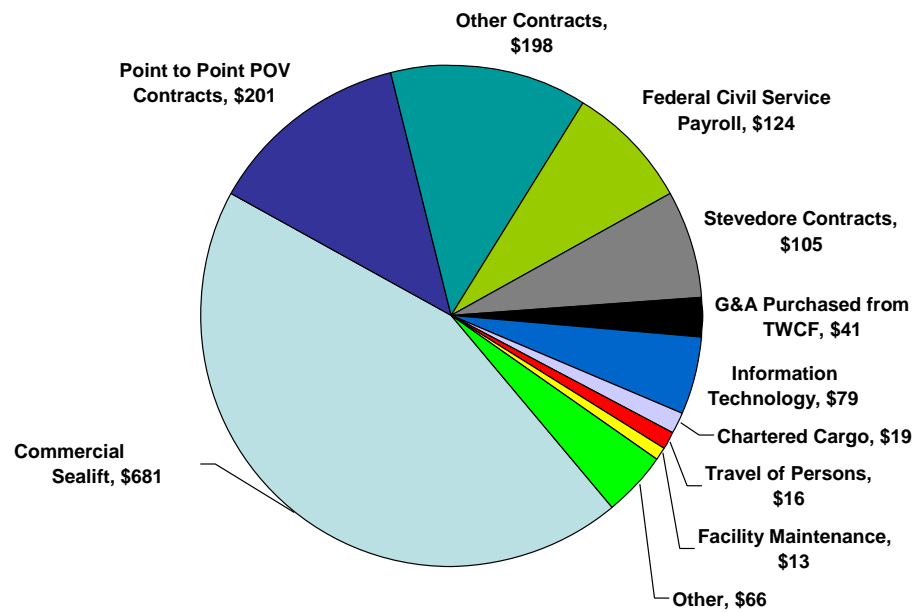
# Chapter 6

## Surface Deployment and Distribution Command

SDDC is responsible for providing worldwide single port management, transportation, and traffic management services, including ocean container booking and domestic freight and household goods management. SDDC has a permanent presence in 25 ports worldwide. In each port, SDDC stages cargo, plans and directs loading and unloading, and documents cargo movements. In overseas ports, SDDC plays a key role in customs processing for import and export cargo. SDDC's contingency mission includes the capability to rapidly expand U.S. port operations to support out-load of major Army units, and the opening and operation of reception ports OCONUS to receive forces and sustainment cargo.

In FY2006, SDDC accounted for about \$1.6 billion, or about 16 percent, of the total reported operating costs of the TWCF. Costs associated with providing traffic management, port operations, and other services include commercial charter sealift (returned to MSC in FY2007), contracts for point-to-point movement and storage of POV contracts, other contracts, federal civil service payroll, stevedore contracts, G&A purchases from TWCF, information technology, chartered cargo, travel of persons, facility maintenance, and other functions. Figure 6-1 provides a breakdown of the major costs for FY2006.

Figure 6-1. SDDC FY2006 Operating Costs (in millions)



Source: FY2008–2009 President's Budget Estimates, February 2007.

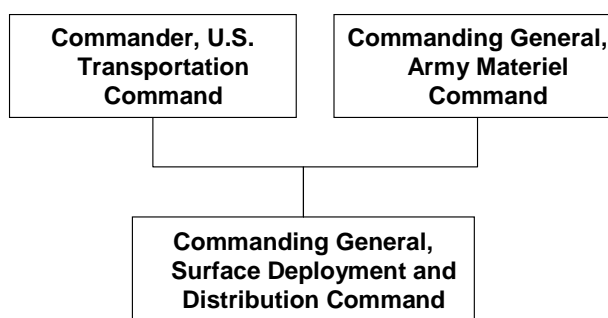
## SDDC STAFFING

SDDC's mission authorizes more than 2,022 personnel plus 2,800 reservists.

## SDDC ORGANIZATION

In addition to being a subordinate command of USTRANSCOM, SDDC is a major subordinate command to the U.S. Army Materiel Command, which has its headquarters at Fort Belvoir, Virginia (see Figure 6-2).

*Figure 6-2. SDDC Chain of Command*



## SDDC TWCF BUSINESS AREAS

SDDC's five TWCF business areas are shown in Table 6-1. SDDC transferred chartered cargo, a sixth business area, to MSC in FY2007.

*Table 6-1. SDDC Business Areas and Cost Allocation Methods*

Business area	Unit of measure or cost allocation method
Port operations	Metric tons
Global privately owned vehicles	Number of vehicles or amount of storage area occupied
Liner ocean transportation	Metric tons
Traffic management	Percentage of government bills of lading
Cost reimbursable	Various allocation method

Source: FY2008–2009 President's Budget Estimates, February 2007.

The first three business areas are fee-for-service enterprises in which customers pay for service based upon the number of units they consume. OSD approves customer rates for these units of measure using the process described in Chapter 2.

In the traffic management and cost reimbursable areas, customers pay for costs that are directly attributed to them (either because the function supports a particular



customer or because the costs support a set of customers), and customer charges are computed using an allocation specific to those costs.

## Fee-for-Service Enterprises

### PORT OPERATIONS

SDDC operates the Worldwide Port System (WPS) to aid cargo management and port operations. In overseas locations, SDDC also operates ocean cargo booking and cargo clearance offices, aiding shippers with international movements. Port operations cost recovery is billed on cargo volume, expressed in measurement tons (MTons).<sup>1</sup> In FY2006, SDDC contracted for the loading and unloading of 10 million MTons of cargo, mostly military equipment and materiel.

### GLOBAL PRIVATELY OWNED VEHICLE CONTRACT PROGRAM

The Global Privately Owned Vehicle Contract Program (GPC) supports the shipment or storage of vehicles that belong to U.S. military personnel and DoD-sponsored civilians. GPC levels of service range from full-service door-to-door shipment into and out of the continental United States, to simple long-term storage. SDDC negotiates the GPC contract and manages the program. The GPC contractor operates multiple worldwide vehicle processing centers, where military service members can turn in or collect their vehicles. The contractor also maintains an online system that individual customers can use to track the movement of their vehicles.

GPC cost recovery rates are based upon the contract cost for services provided to the military service member or civilian. Additional costs include SDDC's cost to negotiate the contract and manage the program. In FY2006, the GPC contractor processed more than 71,000 vehicles, and SDDC collected \$236.8 million in revenue.

### OCEAN LINER

SDDC develops worldwide and regional transportation contracts or agreements, and container-leasing agreements to support the intermodal and over-ocean movement of containerized cargo, unit equipment, and vehicles worldwide. SDDC negotiates rates with the carrier industry for lanes of traffic and solicits rates for one-time-only movements.

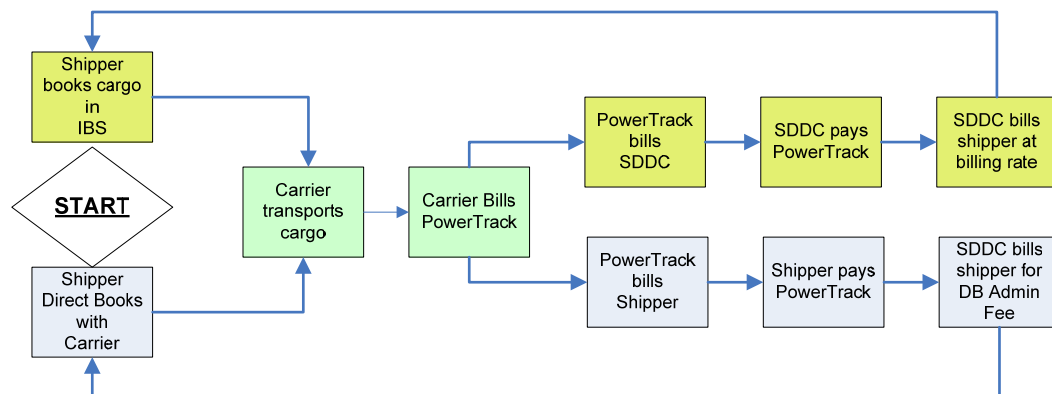
---

<sup>1</sup> DoD, *Dictionary of Military Terms*: The unit of volumetric measurement of equipment associated with surface-delivered cargo. Measurement tons equal total cubic feet divided by 40 (1MTon = 40 cubic feet). Also called M/T, MT, MTON.

## FEE-FOR-SERVICE COST RECOVERY

Cost recovery for port operations (as well as GPC and ocean liner agreements) is billed in two ways, depending on how the cargo is booked with the carrier. Figure 6-3 shows the difference in assisted booking and direct booking processes.

Figure 6-3. Ocean Cargo Booking and Payment Process



For assisted booking, the shipper uses SDDC's Integrated Booking System (IBS). SDDC pays the carrier based on over-ocean rates it negotiated through contracts with the carriers. Cost recovery is billed through SDDC's Cost and Billing (CAB) system based on the cargo volume (MTons) moved over the traffic lanes. USTRANSCOM has assumed the responsibility for calculating the over-ocean billing rates, and uses actual cost data that SDDC provides from its Transportation Financial Management System—MTMC.<sup>2</sup> The aggregate of all billing rates for IBS-booked cargo for FY2006 was 34.8 percent, according to USTRANSCOM's J8 directorate.

Some larger-volume shippers are authorized to bypass IBS and go directly to the carrier's booking system to reserve space on ships. For these transactions, the shipper pays the carrier directly, at the over-ocean contract rates negotiated by SDDC. SDDC then charges the shipper an administrative fee or surcharge for the transaction, based upon the use of SDDC-provided capabilities. This administrative fee is at a discounted rate<sup>3</sup> because SDDC does not provide the IBS-assisted booking, and the transaction requires less direct SDDC involvement.

<sup>2</sup> Military Traffic Management Command, SDDC's former name.

<sup>3</sup> According to data obtained from USTRANSCOM, the discount for cargo directly booked in FY2006 was approximately 31 percent.

## Traffic Management

SDDC's traffic management services include developing all of the surface freight tariffs and tenders, tailored transportation contracts, and rail rates and agreements used to move freight by surface (truck and rail). SDDC maintains these, plus domestic air freight tenders, in the Global Freight Management (GFM) system, which is accessed by transportation officers of the military services and defense agencies.

The GFM system creates bills of lading (government and commercial) and tracks the shipment history of the users. The administrative and system costs associated with providing these capabilities are included in this business area. The traffic management business area also includes the costs of the Transportation Engineering Agency and its studies and SDDC labor to assess commercial carrier performance.

Traffic management costs are recovered via reimbursement of direct and indirect costs. In 1994, SDDC gathered data on the number of surface bills of lading initiated by the military services to develop a ratio for apportioning traffic management costs to each service, and those ratios are still in use today. SDDC sends a letter to the services at the beginning of each fiscal year telling them how much they should pay, and the services make quarterly lump sum payments directly to SDDC for traffic management.<sup>4</sup>

## Cost Reimbursable

This business area comprises two major reimbursable charges and numerous smaller ones. The two major charges are the reserve industrial capacity (RIC) and base operations for mobilization. RIC is an Army reimbursable charge that covers about 76 percent of the base operations support costs for SDDC's military ocean terminal at Sunny Point, North Carolina, a major ammunition port supporting customers in the Atlantic. The other 24 percent is categorized as port operations costs and collected as a reimbursable charge from port operations customers outside the port operations rates.

Base operations for mobilization relates to SDDC support for major units preparing or mobilizing for deployment. In FY2006, military service customers were charged approximately \$15 million for base operations for mobilization. Other small reimbursable costs include the Global Combat Support System, force protection, combatant commander, and information security training. For FY2006 the total reimbursable charges were about \$25.4 million.

---

<sup>4</sup> USTRANSCOM expects to review these percentages soon to determine if they are still accurate.

---

## Charter Cargo

Before FY2007, charter cargo was a fee-for-service business area, but it was returned to MSC for management under the sealift TWCF. SDDC established stabilized per diem billing rates for ocean-going vessels, tugs, or barges that were contracted on a yearly basis to provide charter transportation services to DTS shippers. The vessel's sponsors were billed on a per diem basis at the applicable billing rate for each day of service they required the cargo movement. In FY2006, charter cargo accounted for \$21.9 million in costs and \$25.1 million in revenue.

## SDDC FINANCIAL AND BUDGET DEVELOPMENT SYSTEMS

SDDC uses the Transportation Financial Management System–MTMC (TFMS-M), an Oracle accounting and financial system. TFMS-M uses the USSGL along with federalized modules for accounts receivable, accounts payable, and purchasing. The system provides audit trails by tracking transactions to their source and provides accurate information on a near real time basis.

The CAB system supports SDDC's non-core financial business functions. CAB's primary function is to collect TWCF billing and cargo cost, and workload transaction data. CAB data include operational transportation data and edits, contract rates, and cost and sales files. CAB supports transaction-based inquiries pertaining to all DTS ocean cargo movement and handling. It helps integrate the cost and revenue aspects of ocean transportation and cargo services into the TFMS-M accounting system and supports transaction-level visibility.

## BUDGET FORMULATION PROCESS

Figure 6-4 is a foldout that illustrates SDDC's budget formulation process. To analyze the SDDC budget formulation process, we divided the process into four segments:

- ◆ Develop the historical cost baseline.
- ◆ Update the baseline with budget year assumptions and customers' current workload estimates.
- ◆ Formulate the budget.
- ◆ Review, submit, and approve the budget.

In the following sections, we describe the major elements for these segments in the budget formulation process for FY2009.

## Develop Baseline

SDDC develops its baseline costs using historical costs. The costs of operations in FY2007 comprise the cost baseline data for the FY2009 budget; they are updated to include known workload and pricing changes.

Revenue minus cost is the net operating result for FY2007. If the revenue is higher than the costs, the NOR will be positive; if the costs are higher than the revenue, the NOR will be negative. The NOR is added to the balance of the accumulated operating results from prior years. Finally, FY2009 workload data, projected revenue and costs, and AOR are used to compute the FY2009 rates.

## Update the Baseline

After the FY2009 budget baseline is established, USTRANSCOM updates it with budget assumptions, including inflation rates, currency exchange rates, workforce changes (growth, reduction, or changes in workforce mix), productivity rates, and changes in service delivery throughout the budget cycle.

The offices responsible for managing each program contact SDDC's customers to obtain their forecast for FY2009 workload. The offices also apply their experience with and data obtained from other sources to further develop the TWCF workload forecast.

One of the concerns expressed by military service budget developers was the accuracy of TWCF charges, both reimbursable and rate-based. During the course of this study, we became aware of an audit of SDDC pricing, so we asked to be notified when SDDC's cost baseline was updated. We were told it not been updated for a very long time, and SDDC personnel could not recall the date of the last update.

## Formulate the Budget

FY2009 costs are estimated for the amount of forecasted workload and added to the AOR. The sum of costs and AOR equal the amount of revenue required. This total is divided by the workload to develop the FY2009 stabilized rate.

## Review, Submit, and Approve

The estimate of operating costs, workload, and stabilized rates are submitted in succession to the USTRANSCOM J-8, the OSD Comptroller and OMB, and Congress for review, adjustment if necessary, and approval.

## SUMMARY

SDDC provides essential port operations and a range of other services. Those services fall under four major categories: fee-for-service enterprises, cost-reimbursable

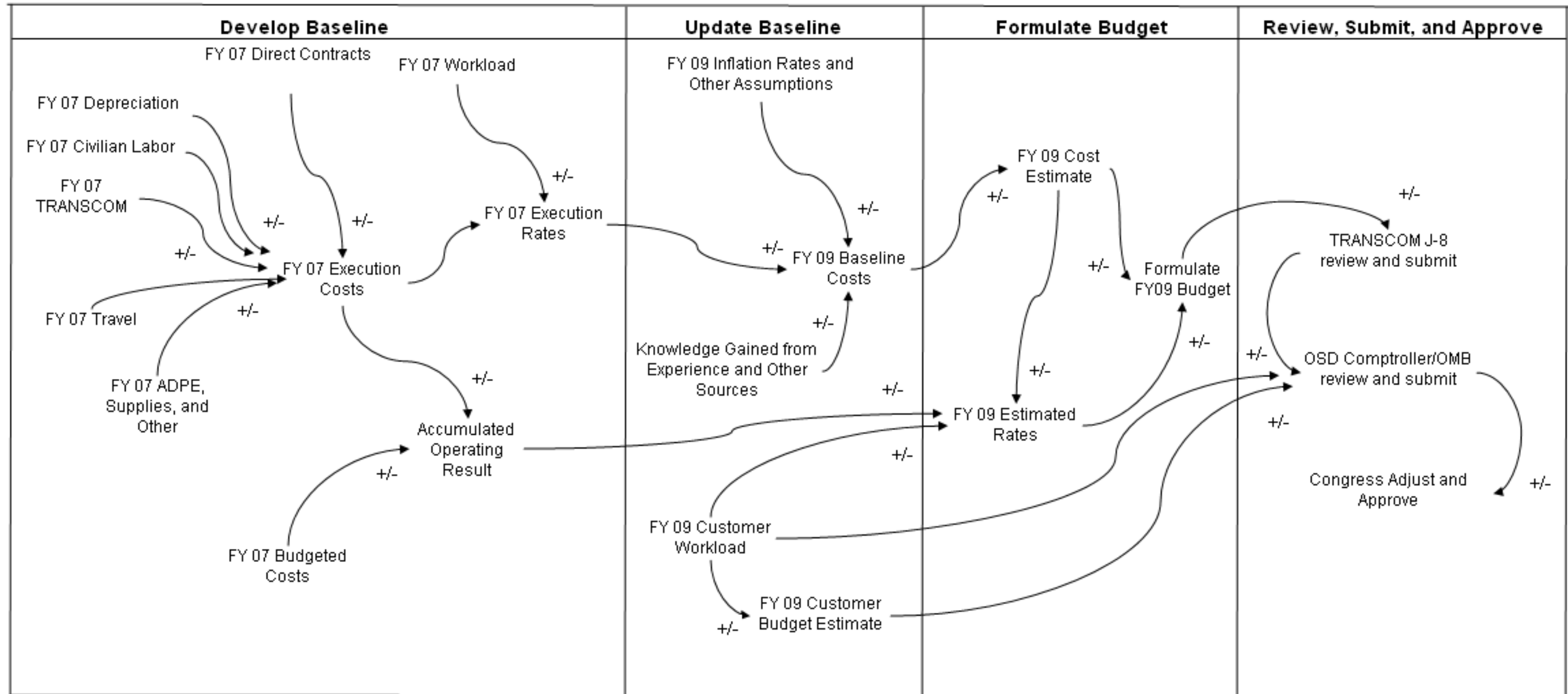
---

services, traffic management, and charter operations (although chartered cargo was transferred to MSC and is no longer under SDDC management).

Many SDDC customers have complained about insufficient billing detail, multiple billings, and problems with reconciling billing issues. The financial system SDDC uses, TFMS-M, is capable of collecting and reporting sufficient cost data for TWCF rate setting.

It has been some time since SDDC personnel updated its cost baseline to reflect current trends and help develop customer confidence in TWCF charges. Because it is difficult to distinguish GWOT costs from peacetime costs in the baseline, updating that baseline will be difficult.

Figure 6-4. SDDC GPC Budget Formulation Process







## Chapter 7

# TWCF Obstacles

---

TWCF workload has increased significantly in support of the GWOT. Because of this dramatic growth, it is very difficult to assess what the peacetime workload of the TWCF would be if GWOT workload ended. Adjusting costs in response to changing workload—the major factor influencing TWCF rates—is essential to keeping TWCF rates competitive. But there is a limit to how rapidly and by how much USTRANSCOM and its component commands can reduce fixed costs (such as facility and equipment maintenance costs) if the workload decreases.

As workload decreases, fixed costs must be spread across a smaller business base, resulting in higher TWCF rates for the customer. Therefore, sustaining sufficient TWCF workload is important to maintaining rates that are competitive with alternative sources of transportation services. Absent the ability to sustain its TWCF workload, USTRANCOM must increase its rates or shed infrastructure and costs to maintain competitive rates. As a result, a reduction in workload could adversely affect USTRANSCOM's ability to preserve and sustain a robust and effective mobilization capability.

## COMPETITORS FOR TWCF WORKLOAD

During our interviews, USTRANSCOM J-8 personnel identified prime vendor, performance-based logistics (PBL), and other product support methods that rely on commercial vendors as areas of significant concern for the future of TWCF workload. Because these support methods rely on commercial contractors, they tend to shift transportation workload from the DTS to commercial transportation providers. If this trend is significant and continues, TWCF transportation rates will increase in the near term because USTRANSCOM will not be able to shed its fixed costs as rapidly as it loses its workload.

### Prime Vendor

The use of a prime vendor is one of DLA's key concepts to capture and adapt commercial business practices into its operations. Under the prime vendor concept, DoD relies on a distributor of a commercial product line to provide that product line and incidental services directly to customers in an assigned region or area of responsibility. Prime vendors are required to deliver products or services within a specified period after an order is placed.

The prime vendor provides the product either at the cost paid to obtain it or at a price agreed upon in advance with DLA, plus a handling fee. The prime vendor program puts customers in direct contact with the vendor and eliminates the

---

inventory control point and DLA warehousing as intermediaries, which significantly shortens response time.

In FY2006, prime vendor sales accounted for approximately \$7.25 billion, or 20 percent, of DLA's total sales and service.<sup>1</sup> We were unable to determine how much of this material transitioned from the DTS to commercial transportation outside the DTS, but as more DLA products are transitioned to prime vendors, they will likely move via commercial transportation and without a contribution to TWCF overhead.

## Performance-Based Logistics

Service program managers are the single point of accountability for meeting the program objectives for total lifecycle systems management, including sustainment.<sup>2</sup> Accordingly, program managers are encouraged to develop and implement PBL strategies that optimize total system availability while minimizing cost and logistics footprint. A program manager's sustainment strategies should include the best use of public- and private-sector capabilities through government and industry partnering initiatives, in accordance with statutory requirements.

The purchase of logistics support as an integrated performance package is intended to bring higher levels of system readiness at reduced cost. Under the PBL approach, a program manager purchases product support in conjunction with an end item from a public or private logistics provider. Product support typically includes the full range of logistics requirements, and these requirements are assigned specific performance outcomes that must be achieved when the provider delivers logistics support.

The intent of PBL contracts is not necessarily to totally outsource the entire lifecycle of a weapon system. As such, the DTS should be considered a viable transportation source during the development of PBL and direct vendor contracts. A PBL provider has the latitude to acquire support from public or private vendors; but, with the exception of depot maintenance, private vendors typically acquire their logistics support, including transportation, from private sources.

## TWCF FINANCIAL SYSTEMS

The federal government recognizes the importance of having high quality financial systems to improve government operations and provide financial and related information to program and financial managers. The Chief Financial Officers (CFO) Act of 1990 requires audited financial statements. Similarly, the Federal Financial Management Improvement Act of 1996 and OMB Circular Number A-127<sup>3</sup> mandate

---

<sup>1</sup> GAO-07-396R, *DLA Has Made Progress in Improving Prime Vendor Program, but Has Not Yet Completed All Corrective Actions*, February 26, 2006.

<sup>2</sup> DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003.

<sup>3</sup> OMB Circular A-127, *Financial Management Systems*, 23 July 1993.

improved financial management and require enhanced financial systems to support the generation of auditable financial statements.

OMB Circular A-127 sets general policies for federal financial management systems. Each agency is required to establish and maintain a single, integrated financial management system, and must comply with uniform federal accounting standards promulgated by the Federal Accounting and Standards Advisory Board. In addition, the circular requires financial management systems to reflect an agency-wide financial information classification structure that is consistent with the U.S. Standard General Ledger. It provides for tracking of specific program expenditures, and covers financially related information that supports the agency budget, accounting, and financial management reporting processes.

USTRANSCOM and the U.S. Air Force proposed the Defense Enterprise Accounting and Management System to improve upon outdated and unreliable financial management processes and systems. The intent of the initiative was to develop a modern financial system that was integrated and provided reliable, accurate, and timely information to decision makers at all levels. The DEAMS initiative will be an important step toward CFO Act compliance.

DEAMS will serve as the financial management system for TWCF and general fund operations for the Air Force and USTRANSCOM. All DFAS users at locations that process USTRANSCOM and Air Force transactions will be affected by this effort. MSC will continue to use its Oracle-based financial system for NWCF operations.

## Systems DEAMS Will Replace

At a minimum, DEAMS will replace the following systems:

- ◆ Airlift Services Industrial Fund Computer System
- ◆ Air Force General Accounting and Finance System
- ◆ Integrated Accounts Payable System
- ◆ Automated Business Services System
- ◆ Surface Deployment and Distribution Command Financial System
- ◆ SDDC Billing System
- ◆ MSC Financial Solution (TWCF operations only).

---

## Legacy Feeder Systems and Data Integrity

DEAMS will connect with many legacy feeder systems. One of the mandates this initiative is to leave those systems alone. The bulk of the development effort will be on how to manage information received from the legacy systems. That effort will develop the interface between DEAMS and the legacy systems, convert legacy data, and identify legacy data workflows; however, DEAMS can only receive what the legacy systems send. DEAMS will not be able to track, verify, and make legacy data compliant after it enters the system. Consequently, if the legacy systems are not compliant, the validity of the data will remain questionable.

Ensuring there is sufficient discipline in the data entry and data editing process is critical to DEAMS' success. Other complimentary efforts, such as development of the Transportation Global Edit Table (TGET), should go a long way to providing effective edits that ensure valid transportation account codes are used in legacy systems and DEAMS, thereby eliminating a leading cause of irreconcilable TWCF invoices and customer complaints.

# Chapter 8

## Findings and Recommendations

---

In the preceding chapters, we reviewed the TWCF rate-setting processes for AMC, MSC, and SDDC, and the budget formulation process for TWCF customers. In Appendix D, we provide the transportation expenditures and projected revenue data that we collected. Throughout our data collection and research, we assessed each of these areas to identify any possible opportunities for improvement.

Our discussions and analysis revealed several issues associated with the use of the TWCF, and the layers and types of costs associated with the current working capital fund structure. Many of these issues centered on customer belief that TWCF billing rates were too high and TWCF transportation services do not offer sufficient value for the price charged. This is particularly problematic for a financial structure designed to encourage a business-like, buyer-seller relationship. Dissatisfied customers have a strong motivation to find other sources of transportation services, which can undermine the TWCF if large numbers of customers actually pursue services outside the TWCF.

In this chapter, we recommend how to best address the issues highlighted in earlier chapters.

- ◆ DoD should continue the use of the TWCF, with possible modifications.
- ◆ The budget formulation and TWCF rate-setting processes cannot be significantly improved upon without better visibility over financial transactions and costs.
- ◆ Customer discontent with TWCF cost recovery rates has and, barring any changes, will continue to erode the TWCF revenue base.
- ◆ Lowering rates will involve some combination of cutting costs, increasing the revenue business base, and altering the funding structure to separate readiness and mobilization costs from day-to-day operational business.

### CONTINUE TO USE THE TWCF

We assessed different approaches for funding DoD transportation, including the use of direct appropriations and variations of the current TWCF process. Although we found areas in which the TWCF could be improved, from a policy and strategic perspective, it remains the most viable approach for funding and executing DoD's day-to-day transportation requirements.

---

Many advantages accrue from the revolving fund: stabilized rates, an ability to rapidly support customer requirements, and cost visibility. But customers remain concerned with the recovery of readiness costs and the resultant billing rates for fee-for-service business areas. Many customers do not believe the transportation services provided under the TWCF represent a good value. The primary reason for this is the customer is burdened with readiness costs.<sup>1</sup>

We recommend DoD continue using the TWCF for the following reasons:

- ◆ The TWCF ensures DoD is financially able to respond to surge requirements or endure unforeseen cost increases without having to curtail or cease operations while additional funds are appropriated or reprogrammed.
- ◆ The customer-provider relationship makes USTRANSCOM, its transportation component commands, and decision makers at all levels more concerned with the costs of goods and services. This focus on cost helps DoD conserve resources by setting and enforcing priorities when transportation investment alternatives are considered.
- ◆ The stabilized rate policy allows customers adequate time to budget for and justify their future transportation requirements.

The current rate-setting processes are largely founded on the use of historical workload data obtained from field units. Headquarters subject matter experts then add known or anticipated workload requirements. According to the general consensus from the military services and agencies, there currently is no better way to obtain and aggregate workload data. We also found a number of problems in seeing transportation financial cost and transaction data because of the number of nonintegrated legacy systems, data quality issues, and business processes that do not support data capture.

The advantages of the TWCF make it a highly useful and effective financing mechanism for DoD; however, the TWCF can be improved. We address needed improvements in the following recommendations.

## IMPROVE DoD'S TRANSPORTATION ACCOUNTING SYSTEMS

Many TWCF customers (especially customers of AMC and SDDC) complained about insufficient billing detail, multiple billings, and problems with reconciling those issues. The financial systems used by MSC and SDDC are capable of collecting and reporting sufficient cost data for TWCF rate setting. AMC does not have an effective accounting system, which is essential for the efficient operation

---

<sup>1</sup> One exception is the Defense Commissary Agency (DECA), which has congressional relief from paying readiness costs in its fee structure. DECA believes the commercial-equivalent fee it pays represents good value for the services it receives.

of the airlift portion of the TWCF. Without an effective system, AMC rate development is reduced to a manual process of pulling data from disparate systems.

USTRANSCOM is collaborating with the Air Force to implement DEAMS. If it is implemented as planned, DEAMS will replace antiquated systems and provide an effective accounting system. Moreover, it will replace the systems used by MSC and SDDC for TWCF financial management. But a serious vulnerability for the DEAMS implementation is the mandate for it to leave legacy feeder systems alone. The DEAMS implementation plan does not call for modifying these legacy feeder systems to track, verify, and make legacy data compliant before it enters DEAMS. Consequently, if the legacy feeder systems are not compliant, the validity of DEAMS data will be questionable, and current TWCF invoice reconciliation issues will persist.

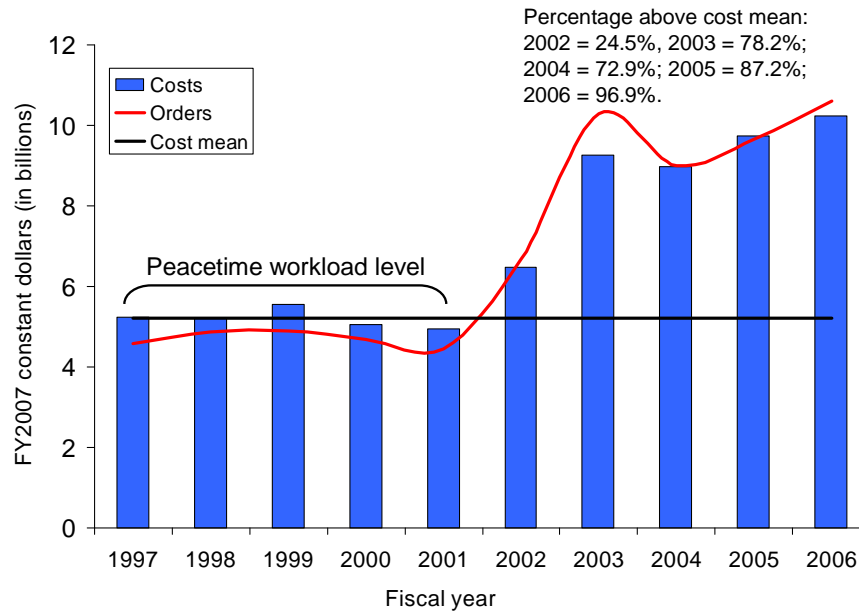
We recommend USTRANSCOM continue implementation of DEAMS. We further recommend the DEAMS program manager coordinate with the USTRANSCOM distribution portfolio manager and owners of legacy feeder systems to ensure those systems provide accurate, complete, and compliant data. DoD should continue to aggressively pursue completing the Transportation Global Edit Table and the interface with the Financial and Air Clearance Transportation System to provide effective edits that ensure the use of valid TACs—a continuing and common contributor to irreconcilable TWCF invoices.

To facilitate this effort, we recommend USTRANSCOM—as the distribution portfolio manager—issue guidance, provide oversight, allocate resources, and give priority to ensuring the legacy feeder systems provide accurate and timely data to DEAMS.

## **PRESERVE AND EXPAND TWCF WORKLOAD**

TWCF workload in support of the GWOT has grown dramatically. Figure 8-1 illustrates how TWCF costs have increased by approximately 97 percent since 2001. While the figure displays all TWCF workload, the principal driver of the workload increase is airlift costs and orders. Because of this dramatic workload growth, it is very difficult to assess what the peacetime workload of the TWCF would be if GWOT workload were to end.

Figure 8-1. TWCF Costs and Orders



A large business base ensures USTRANSCOM can recover its direct and indirect costs over more workload, which results in lower overall rates. Therefore, we recommend OSD and USTRANSCOM pursue methods for preserving and expanding TWCF workload during this period of high workload so the TWCF has a cushion when the GWOT ends. One approach would be to pursue the PBL and prime vendor workload that is moving gradually out of the TWCF through negotiations with individual logistics providers. Another approach would be to seek approval for designating portions of the TWCF as a core logistics capability.

## Develop Public-Private Partnerships for PBL and Prime Vendors

Each PBL and prime vendor contract is handcrafted and varies from other contracts. PBL contractors may take on a number of functions normally performed by the military services or defense agencies. These functions include determining spare parts requirements, physical distribution, warehousing of material, depot-level maintenance, configuration management, and some engineering functions.

There is a strong perception that PBLs must use commercial supply chains to move materiel from source to the warfighter in theater. Moreover, acquisition regulations do not require defense contractors to consider the DTS as an alternative or primary source of transportation, nor do they incorporate contract clauses or business processes that provide for the ability to transition to the DTS during wartime operations. DLA, however, has developed contract clauses that require



prime vendor contractors to mark their materiel using MIL-STD 129P, which is DoD standard practice for military marking for shipment and storage.<sup>2</sup>

There are no business rules that require contractors to consider the capabilities of the DTS in satisfying their military distribution requirements. Moreover, there are no business rules that require a contractor to submit a workable plan to transition shipments back into the DTS when commercial transportation services are interrupted because of war, natural disaster, or transportation-related labor stoppages. Contractors providing DoD logistics support must prepare for contingency operations and may find, through advance discussions and planning, that both peacetime and wartime use of the DTS could be to the advantage of both DoD and contractors. Not only would contractors' use of the DTS preserve TWCF workload, but it would eliminate competition between USTRANSCOM and contractors for the same limited air and sealift transportation assets and provide greater visibility of materiel flowing into the Combatant Commander's area of responsibility.

We recommend USTRANSCOM develop processes and procedures to support becoming a transportation logistics provider that offers lift to both military and defense contractor customers. USTRANSCOM should also establish a readiness program in conjunction with the DoD procurement community to expand and facilitate USTRANSCOM providing distribution services to defense contractor customers.

We recommend OSD and USTRANSCOM develop standard clauses for vendor contracts that encourage early and continuous partnerships between USTRANSCOM and PBL, CLS, and prime vendor contractors for the movement of defense materiel in the DTS. USTRANSCOM should design a process that could be used by weapon system managers and defense contractors to transition from commercial supply chain providers to the DTS during the peacetime-to-war transition. Furthermore, contractors should be required to develop a plan for transition to the DTS during contingency operations and include a provision to conduct a live test at least annually for the life of the contract.

## **Identify Core Logistics Capabilities for Selected TWCF Business Areas**

A more dramatic approach to preserving TWCF workload would be to designate elements of the TWCF as core logistics capabilities. Public law recognizes it is essential for the national defense that DoD maintain a core logistics capability that is government-owned and government-operated, and includes government personnel and government-owned and government-operated equipment and facilities. This core logistics capability ensures a ready and controlled source of technical competence and resources necessary to ensure effective and timely

---

<sup>2</sup> Defense Logistics Acquisition Directive (DLAD) Part 52, paragraph 52.211-9010, "Shipping label requirements—MIL-STD-129P."

---

response to mobilization, national defense contingency situations, and other emergency requirements.

We recommend the Secretary of Defense identify portions of the DTS as core logistics capabilities and designate the TWCF workload required to sustain them.<sup>3</sup> For example, the Secretary of Defense could designate organic channel airlift as a center of industrial and technical excellence (CITE), and authorize and encourage the head of the center to enter into public-private cooperative arrangements or a “public-private partnership.” The head of this center could then offer channel airlift services to private industry (specifically defense contractors supporting military systems) to make more efficient and economical use of government-owned transportation capability. Similar to the way DoD handles depot maintenance, preserving portions of the DTS from workload erosion would safeguard transportation mobilization capability.

We recommend OSD develop legislative language and pursue the approval to create an industrial center of excellence for transportation so USTRANSCOM could pursue transportation partnerships through acquisition policy and with weapon system program managers and other contracted DoD service and support providers, such as PBL contractors and prime vendors. This policy should include movements by service contract providers supporting deployed forces.

## IDENTIFY AND REMOVE ALL MOBILIZATION COSTS FROM THE TWCF

A key “value” challenge for USTRANSCOM is to price its services to be competitive with commercial providers for similar transportation services. This is particularly true for airlift cargo and sealift container movements. Military service and defense agency customers understand that certain DTS infrastructure must be maintained and readiness training performed to ensure the DTS is capable of supporting global contingency operations, but they are concerned they are bearing that readiness burden in their transportation budgets. Customers have an incentive to conserve their limited transportation dollars. They realize they have commercial alternatives to the DTS and in their endeavor to conserve their transportation dollars, they will turn to commercial alternatives when USTRANSCOM rates are perceived as too high. This behavior, in turn, undermines the long-term viability of TWCF. Unless USTRANSCOM is able to offer competitive pricing, customers will continue to look elsewhere to meet their transportation requirements.

DoD’s FMR permits the compensation of mobilization costs so that rates can be set to a competitive level. It specifically identifies AMC and SDDC as two recipients of funding support for mobilization costs.<sup>4,5</sup> The ARA provides AMC a

---

<sup>3</sup> 10 United States Code, Section 2464, “Core Logistics Capabilities.”

<sup>4</sup> *DoD Financial Management Regulation*, Volume 11B, Chapter 3, paragraph 030105.

<sup>5</sup> In this section, we use AMC and the ARA to develop our recommendation; however, this approach should be applied to all TWCF business areas that incur mobilization costs.

source of funds to maintain the mobilization capability of the airlift system by paying for airlift flying hours for pilot and crew training. This mobilization training funding helps AMC provide airlift service that otherwise would not be competitive with commercial alternatives in moving air-eligible cargo and passengers.

We recommend USTRANSCOM and AMC closely examine the cost of operating and maintaining organic airlift assets (such as C-17s and C-5s), training crews, and related overhead costs to identify all costs that could be associated with maintaining a readiness capability. Removing these readiness costs from TWCF rates would be similar to the DWCF Task Force recommendation contained in MID 903 for DLA (and addressed in Chapter 2). This would entail conducting a cost assessment of all direct and overhead costs and identifying which costs are directly tied to meeting readiness requirements. We further recommend the OUSD Comptroller authorize all readiness-related costs be funded directly through the ARA to drive airlift rates down to a competitive level. Moreover, we recommend this approach be applied to all TWCF business areas.

Removing all readiness costs from the TWCF would provide a clear measure of the value of TWCF services and result in more competitive billing rates. This possibly would preclude key TWCF customers, such as the DECA from seeking exclusion from participating in the TWCF in the future.<sup>6</sup>

## REVISE AMC CHANNEL AIRLIFT RATES

DoD's current policy to set channel airlift rates equal to or just below commercial rates is designed to encourage customers to meet their airlift requirements using AMC-arranged airlift instead of going directly to the commercial marketplace for lower cost airlift.

AMC channel cargo often includes commodities, special handling requirements, sizes, and weights that commercial air freight carriers cannot handle. AMC defines channel rates for these using a variety of factors; however, for cargo that is acceptable for commercial movement, AMC prices the channel rates just below the commercial equivalent in an attempt to secure the business within the DTS. AMC's customers are astute enough to understand that AMC service is not always identical to the services procured from the commercial marketplace. In other words, customers know they are not getting commercial service for a commercial price.

---

<sup>6</sup> Title 10 of the U.S. Code allows the military exchanges and commissaries to enter into their own arrangements with U.S. flag carriers for over-ocean movement outside the DTS. Congress also granted DeCA legislative relief from paying standard TWCF billing rates for the movement of containerized sealift cargo. By direction, DeCA pays SDDC for equivalent, non-readiness value-added services. For FY2006, DeCA's surcharge rate was around 8.1 percent, as compared to the SDDC aggregate rate of 34.8 percent for all other DoD customers.

---

As an example, AMC may only offer service on a specified schedule that may not meet the customer's time-definite delivery requirement, or it may only offer service from aerial port to aerial port (rather than door-to-door, as commonly provided by commercial carriers). Consequently, AMC's customers must arrange for commercial transportation to ensure their delivery requirements are met, or arrange their own transportation to and from AMC aerial ports, which results in extra costs, more workload, and multiple invoices. As a consequence, AMC customers are frequently dissatisfied and will look to a purely commercial airlift alternative when they are given a choice.

In addition to port-to-port service, we recommend channel airlift rates be expanded to offer customers pricing options for door-to-door levels of service. Further, AMC, in coordination with USTRANSCOM in its DPO role, should seek to expand door-to-door service opportunities for its customers, and include door-to-door pricing alternatives. This would require an analysis of traffic lanes to identify which channels offer sufficient volume of cargo to warrant door-to-door service. Alternatively, USTRANSCOM should seek to integrate a combination of organic and commercial lift to provide door-to-door service as determined by customer demand for the service. Together, AMC service may become more attractive to customers, which may help combat workload erosion to non-AMC-arranged commercial carriers.

## UPDATE SDDC'S BASELINE

One of the concerns expressed by military service budget developers was the accuracy of TWCF charges, both reimbursable and rate-based. During the course of this study, we became aware of an audit into SDDC pricing. During interviews, we asked SDDC personnel when SDDC's cost baseline would be updated. We were told it had not been updated in a very long time, and the SDDC personnel could not recall the date of the last update.

One of the challenges affecting the updating of costs is the separation of GWOT costs from peacetime costs in the baseline. While it may be difficult to separate these costs in the SDDC baseline, we recommend it be done to reflect current trends and help develop customer confidence in TWCF charges.

## EXPAND CUSTOMER OUTREACH

Our final recommendation does not require any structural changes in the TWCF, but it could increase customer knowledge and understanding of the TWCF process and their willingness to embrace TWCF rates and services.

The less customers know about the TWCF rate setting process and the cost elements driving those rates, the less value they assign to TWCF services. Although USTRANSCOM financial personnel strive to educate their customers on the TWCF rate-setting process, they are not reaching all the key players in their

customer base. In addition, customers know little of DEAMS and how it will support their information requirements.

We recommend USTRANSCOM expand its customer outreach by providing on-line information and periodic outreach briefings for its customers on the TWCF rate setting process, its limitations, and the major cost drivers behind each of the principal business areas. The capabilities and implementation status of DEAMS should be included in this outreach effort. Further, USTRANSCOM should participate in military service and component command functional conferences and financial forums to explain and discuss the TWCF process and employ customer relationship management concepts with the military service and defense agency transportation functional representatives. These efforts would also help USTRANSCOM better understand its customer's needs and expectations for using the DTS and TWCF.



# Appendix A

## Foundation for the Working Capital Fund

---

The foundation for the working capital fund is Title 10, Subtitle A, Part IV, chapter 131, §2208, Working Capital Funds:

- (a) To control and account more effectively for the cost of programs and work performed in the Department of Defense, the Secretary of Defense may require the establishment of working-capital funds in the Department of Defense to—
  - (1) finance inventories of such supplies as he may designate; and
  - (2) provide working capital for such industrial-type activities, and such commercial-type activities that provide common services within or among departments and agencies of the Department of Defense, as he may designate.
- (b) Upon the request of the Secretary of Defense, the Secretary of the Treasury shall establish working-capital funds established under this section on the books of the Department of the Treasury.
- (c) Working-capital funds shall be charged, when appropriate, with the cost of—
  - (1) supplies that are procured or otherwise acquired, manufactured, repaired, issued, or used; and
  - (2) services or work performed; including applicable administrative expenses, and be reimbursed from available appropriations or otherwise credited for those costs, including applicable administrative expenses and costs of using equipment.
- (d) The Secretary of Defense may provide capital for working-capital funds by capitalizing inventories. In addition, such amounts may be appropriated for the purpose of providing capital for working-capital funds as have been specifically authorized by law.
- (e) Subject to the authority and direction of the Secretary of Defense, the Secretary of each military department shall allocate responsibility for its functions, powers, and duties to accomplish the most economical and efficient organization and operation of the activities, and the most economical and efficient use of the inventories, for which working-capital funds are authorized by this section.
- (f) The requisitioning agency may not incur a cost for supplies drawn from inventories, or services or work performed by industrial-type or commercial-type activities for which working-capital funds may be established under this section, that is more than the amount of appropriations or other funds available for those purposes.
- (g) The appraised value of supplies returned to working-capital funds by a department, activity, or agency may be charged to that fund. The proceeds thereof shall be

---

credited to current applicable appropriations and are available for expenditure for the same purposes that those appropriations are so available. Credits may not be made to appropriations under this subsection as the result of capitalization of inventories under subsection (d).

(h) The Secretary of Defense shall prescribe regulations governing the operation of activities and use of inventories authorized by this section. The regulations may, if the needs of the Department of Defense require it and it is otherwise authorized by law, authorize supplies to be sold to, or services to be rendered or work performed for, persons outside the Department of Defense. However, supplies available in inventories financed by working capital funds established under this section may be sold to contractors for use in performing contracts with the Department of Defense. Working-capital funds shall be reimbursed for supplies so sold, services so rendered, or work so performed by charges to applicable appropriations or payments received in cash.

(i) For provisions relating to sales outside the Department of Defense of manufactured articles and services by a working-capital funded Army industrial facility (including a Department of the Army arsenal) that manufactures large caliber cannons, gun mounts, recoil mechanisms, ammunition, munitions, or components thereof, see section 4543 of this title.

(j)

(1) The Secretary of a military department may authorize a working capital funded industrial facility of that department to manufacture or remanufacture articles and sell these articles, as well as manufacturing, remanufacturing, and engineering services provided by such facilities, to persons outside the Department of Defense if—

(A) the person purchasing the article or service is fulfilling a Department of Defense contract or a subcontract under a Department of Defense contract, and the solicitation for the contract or subcontract is open to competition between Department of Defense activities and private firms; or

(B) the Secretary would advance the objectives set forth in section 2474 (b)(2) of this title by authorizing the facility to do so.

(2) The Secretary of Defense may waive the conditions in paragraph (1) in the case of a particular sale if the Secretary determines that the waiver is necessary for reasons of national security and notifies Congress regarding the reasons for the waiver.

(k)

(1) Subject to paragraph (2), a contract for the procurement of a capital asset financed by a working-capital fund may be awarded in advance of the availability of funds in the working-capital fund for the procurement.

(2) Paragraph (1) applies to any of the following capital assets that have a development or acquisition cost of not less than \$100,000:



- (A) An unspecified minor military construction project under section 2805 (c)(1) of this title.
  - (B) Automatic data processing equipment or software.
  - (C) Any other equipment.
  - (D) Any other capital improvement.
- (l)
- (1) An advance billing of a customer of a working-capital fund may be made if the Secretary of the military department concerned submits to Congress written notification of the advance billing within 30 days after the end of the month in which the advanced billing was made. The notification shall include the following:
    - (A) The reasons for the advance billing.
    - (B) An analysis of the effects of the advance billing on military readiness.
    - (C) An analysis of the effects of the advance billing on the customer.
  - (2) The Secretary of Defense may waive the notification requirements of paragraph (1)—
    - (A) during a period of war or national emergency; or
    - (B) to the extent that the Secretary determines necessary to support a contingency operation.
  - (3) The total amount of the advance billings rendered or imposed for all working-capital funds of the Department of Defense in a fiscal year may not exceed \$1,000,000,000.
  - (4) In this subsection:
    - (A) The term “advance billing”, with respect to a working-capital fund, means a billing of a customer by the fund, or a requirement for a customer to reimburse or otherwise credit the fund, for the cost of goods or services provided (or for other expenses incurred) on behalf of the customer that is rendered or imposed before the customer receives the goods or before the services have been performed.
    - (B) The term “customer” means a requisitioning component or agency.
- (m) Capital Asset Subaccounts.—Amounts charged for depreciation of capital assets shall be credited to a separate capital asset subaccount established within a working-capital fund.
- (n) Separate Accounting, Reporting, and Auditing of Funds and Activities.—The Secretary of Defense, with respect to the working-capital funds of each Defense Agency, and the Secretary of each military department, with respect to the working-

---

capital funds of the military department, shall provide for separate accounting, reporting, and auditing of funds and activities managed through the working-capital funds.

(o) Charges for Goods and Services Provided Through the Fund.—

(1) Charges for goods and services provided for an activity through a working-capital fund shall include the following:

(A) Amounts necessary to recover the full costs of the goods and services provided for that activity.

(B) Amounts for depreciation of capital assets, set in accordance with generally accepted accounting principles.

(2) Charges for goods and services provided through a working-capital fund may not include the following:

(A) Amounts necessary to recover the costs of a military construction project (as defined in section 2801 (b) of this title), other than a minor construction project financed by the fund pursuant to section 2805 (c)(1) of this title.

(B) Amounts necessary to cover costs incurred in connection with the closure or realignment of a military installation.

(C) Amounts necessary to recover the costs of functions designated by the Secretary of Defense as mission critical, such as ammunition handling safety, and amounts for ancillary tasks not directly related to the mission of the function or activity managed through the fund.

(p) Procedures For Accumulation of Funds.—The Secretary of Defense, with respect to each working-capital fund of a Defense Agency, and the Secretary of a military department, with respect to each working-capital fund of the military department, shall establish billing procedures to ensure that the balance in that working-capital fund does not exceed the amount necessary to provide for the working-capital requirements of that fund, as determined by the Secretary.

(q) Annual Reports and Budget.—The Secretary of Defense, with respect to each working-capital fund of a Defense Agency, and the Secretary of each military department, with respect to each working-capital fund of the military department, shall annually submit to Congress, at the same time that the President submits the budget under section 1105 of title 31, the following:

(1) A detailed report that contains a statement of all receipts and disbursements of the fund (including such a statement for each subaccount of the fund) for the fiscal year ending in the year preceding the year in which the budget is submitted.

(2) A detailed proposed budget for the operation of the fund for the fiscal year for which the budget is submitted.

(3) A comparison of the amounts actually expended for the operation of the fund for the fiscal year referred to in paragraph (1) with the amount proposed for the operation of the fund for that fiscal year in the President's budget.

(4) A report on the capital asset subaccount of the fund that contains the following information:

(A) The opening balance of the subaccount as of the beginning of the fiscal year in which the report is submitted.

(B) The estimated amounts to be credited to the subaccount in the fiscal year in which the report is submitted.

(C) The estimated amounts of outlays to be paid out of the subaccount in the fiscal year in which the report is submitted.

(D) The estimated balance of the subaccount at the end of the fiscal year in which the report is submitted.

(E) A statement of how much of the estimated balance at the end of the fiscal year in which the report is submitted will be needed to pay outlays in the immediately following fiscal year that are in excess of the amount to be credited to the subaccount in the immediately following fiscal year.

(r) Notification of Transfers.—

(1) Notwithstanding any authority provided in this section to transfer funds, the transfer of funds from a working-capital fund, including a transfer to another working-capital fund, shall not be made under such authority unless the Secretary of Defense submits, in advance, a notification of the proposed transfer to the congressional defense committees in accordance with customary procedures.

(2) The amount of a transfer covered by a notification under paragraph (1) that is made in a fiscal year does not count toward any limitation on the total amount of transfers that may be made for that fiscal year under authority provided to the Secretary of Defense in a law authorizing appropriations for a fiscal year for military activities of the Department of Defense or a law making appropriations for the Department of Defense.



# Appendix B

## DWCF Business Areas

---

Under the DWCF structure, business operations previously covered by the stock and industrial funds and other support functions are now categorized as business areas. Each business area within a DoD component is an aggregation of activities that provide goods and services on a reimbursable basis to other DoD activities and to authorized non-DoD activities.

*Table B-1. DWCF Business Areas*

Business area	Activity group	Function	Customers
Base Support	Navy Public Works	Provides utilities services, facility maintenance, transportation support, engineering services, and shore facilities planning	DoD activities
Building Maintenance	Washington Headquarters Service (WHS): Buildings Maintenance Fund	Finances operation, maintenance, protection, and repair of government-owned and leased facilities (exclusive of Pentagon Reservation)	All services
Commissary	Defense Commissary Agency (DeCA) Commissary: Resale Stocks DECA: Commissary Operations	Operates stores for resale of groceries and household supplies	Members of DoD military services and their families
Defense Reutilization and Marketing Service	DLA (DRMS)	Manages excess property within the government; disposes of hazardous property	DoD, federal agencies, and the public
Depot Maintenance	Army Navy Air Force	Repairs, overhauls, rebuilds, manufacturers, converts, inspects, and tests materials and vehicles	Army, Navy, and Air Force
Distribution Depots	DLA Distribution Depots	Provides worldwide warehousing for DoD	Inventory control points within military services and the operating units receiving materials
Financial Operations	Defense Finance and Accounting Service	Maintains payroll of all military personnel; responsible for all accounting operations	All DoD services, including vendors, contractors, military personnel, and their families

Table B-1. DWCF Business Areas

Business area	Activity group	Function	Customers
Information Services	DISA Computing Services DISA Telecommunications Service Defense Finance and Accounting Service Army	Provides information processing, software support, communications, technical support, and acquisition services	Army, Navy, Air Force, defense agencies, Office of the Secretary of Defense, and other federal agencies
National Stockpile	National Defense Stockpile Transaction Fund	Provides safe, secure, and environmentally sound stewardship for materials in the national defense stockpile	All services
Ordnance	Conventional Ammunition Working Capital Fund	Manufactures and demilitarizes ammunition and artillery for all DoD branches, stores and issues ammunition, performs maintenance, and manages logistics of ordnance	All services and foreign military sales (FMS) for U.S. allies
Pentagon Maintenance	WHS: Pentagon Reservation Maintenance Revolving Fund	Finances space and building services for DoD Components within the Pentagon Reservation	Pentagon tenants
Printing Services	DLA Document Automation and Production Service	Provides printing and publication products and services	DoD activities
Research and Development	Navy	Provides research, development, test, evaluation, and engineering support	Army, Navy, Air Force, and Office of the Secretary of Defense
Security	DSS	Conducts personnel security investigations, provides industrial security products and services, provides security training	DoD agencies and other government entities
Supply Management	Army Marine Corps Navy Air Force DLA	Manages inventories of fuels, weapon systems consumable, and depot-level reparable spare parts	Army, Navy, Air Force, and other DoD agencies
Transportation	U.S. Transportation Command Navy	Provides airlift and sealift services for personnel and cargo; provides traffic management, land transportation, ocean terminals, and intermodal container management	All services, Defense Logistics Agency, Joint Chiefs of Staff, combatant commands, National Security Agency, and other DoD and federal agencies

# Appendix C

## Anti-Deficiency Act

---

The Anti-Deficiency Act is one of the major laws through which Congress exercises its constitutional control of the public purse. It evolved over a period in response to various abuses. The fiscal principles underlying the Anti-Deficiency Act are really quite simple: Government officials may not make payments or commit the United States to make payments at some future time for goods or services unless there is enough money in the “bank” to cover the cost in full. The “bank,” of course, is the available appropriation.

The law prohibits the following:

- ◆ Making or authorizing an expenditure from, or creating or authorizing an obligation under, any appropriation or fund in excess of the amount available in the appropriation or fund unless authorized by law.
- ◆ Involving the government in any obligation to pay money before funds have been appropriated for that purpose, unless otherwise allowed by law.
- ◆ Accepting voluntary services for the United States, or employing personal services not authorized by law, except in cases of emergency involving the safety of human life or the protection of property.
- ◆ Making obligations or expenditures in excess of an apportionment or reapportionment, or in excess of the amount permitted by agency regulations.

Violations of the Anti-Deficiency Act are subject to administrative and penal sanctions. The Anti-Deficiency Act is the only one of the Title 31, U.S. Code, fiscal statutes to prescribe penalties of both types.

An officer or employee who obligates or expends in excess or advance of appropriation, accepts voluntary services, or obligates or expends in excess of an apportionment or administrative subdivision as specified in an agency’s regulation “shall be subject to appropriate administrative discipline including, when circumstances warrant, suspension from duty without pay or removal from office.”<sup>1</sup>

In addition, an officer or employee who “knowingly and willfully” violates any of the three provisions cited above “shall be fined not more than \$5,000, imprisoned for not more than 2 years, or both.”<sup>2</sup>

---

<sup>1</sup> Title 31 U.S.C. § 1349(a), 1518.

<sup>2</sup> Title 31 U.S.C. § 1350, 1519.

---

Once it is determined that there has been a violation of the Anti-Deficiency Act, the agency head “shall report immediately to the President and Congress all relevant facts and a statement of actions taken.”<sup>3</sup> The reports are to be signed by the agency head. The report to the President is to be forwarded through the Director of OMB. In addition, the heads of executive branch agencies and the Mayor of the District of Columbia shall also transmit “[a] copy of each report...to the Comptroller General on the same date the report is transmitted to the President and Congress.”

OMB has issued further instructions on preparing the reports, which may be found in OMB Circular No. A-11. The report is to include all pertinent facts and a statement of all actions taken to address and correct the Anti-Deficiency Act violation, such as administrative discipline imposed, referral to the Justice Department where appropriate, and new safeguards imposed. An agency also should include a request for a supplemental or deficiency appropriation when needed.

---

<sup>3</sup> Title 31 U.S.C. § 1351, 1517(b).



# Appendix D

## Transportation and Related Operational Costs

---

LMI was asked to document how much DoD spends on the various transportation service categories. This appendix contains the results of our research.

Identifying what DoD pays for transportation is a complex and convoluted endeavor. What DoD budgets for transportation does not necessarily correspond to what it pays for transportation. Accordingly, the budget exhibits reflected in Chapter 3 do not reflect actual expenditures and therefore will not directly correlate with the expenditure and projected revenue data reflected in tables within this appendix.

The transportation expenditures reflected in this appendix comprise a combination of direct appropriation and Transportation Working Capital Fund (TWCF) funding sources. The expenditures include the following:

- ◆ Costs for commercial transportation services paid directly to carriers using U.S. Bank's PowerTrack™ system
- ◆ Costs for use of organic and commercial airlift and sealift (not processed through PowerTrack)
- ◆ Labor, infrastructure, and system costs required to operate, maintain, exercise, and manage the Defense Transportation System (DTS).

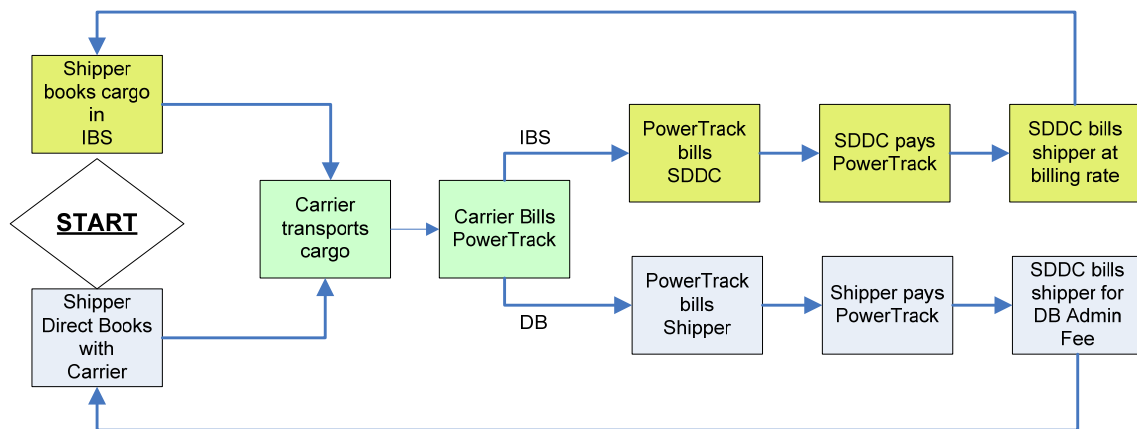
DoD uses several transportation shipper and payment systems within the DTS. These systems play a role in managing the TWCF; however, no single system gathers all transportation payment data. PowerTrack, while not perfect or fully inclusive, is the best system to determine a significant portion of DoD's cost for commercial transportation services.

Cost and shipment data obtained from PowerTrack are reflected in Table D-1 and Table D-2. Other transportation costs not processed through PowerTrack include Air Mobility Command military and commercially chartered airlift flights, military sealift charters and break bulk movements, and all surcharges by SDDC for services such as traffic management and port operations.

## LIMITATIONS OF DATA

We found the concept of “cost” is a relative term, depending on the intended view. For example, the cost to a shipper for moving an ocean container overseas can have several elements, each costed and billed as part of a system. To illustrate, we use the example of the ocean cargo booking and payment process in Figure D-1.

Figure D-1. Ocean Cargo Booking and Payment Process



For a door-to-door movement, if the shipper books the cargo using SDDC’s Integrated Booking System (IBS), a commercial carrier picks up the container and moves it to its destination. The carrier bills PowerTrack at the agreed upon per-container rate plus accessorial in accordance with the Universal Service Contract.<sup>1</sup> PowerTrack pays the carrier and, in turn, bills SDDC.

SDDC reimburses PowerTrack for the carrier invoiced amount for moving the container, irrespective of the contents or weight. In effect, this is the cost for movement of the “box” overseas; but the shipper never sees this bill and never knows the dollar amount. Instead, SDDC bills the shipper at a constructed, cost-recovery rate under the TWCF. This rate is calculated using the measurement ton factor for the contents of the container. The cost to the shipper could be double the amount paid by SDDC to the carrier (via PowerTrack).

For containers booked by shippers under the Direct Booking Arrangement, SDDC cost recovery is factored a different way. In this case, the shipper is directly billed via PowerTrack for the commercial cost of moving the container. SDDC then bills the shipper an “administrative fee” as a source of cost recovery.

According to our analysis, the administrative fee, which is a percentage factor multiplied by the actual PowerTrack amount, is slightly less than the aggregate

<sup>1</sup> Although this is a per-container transaction cost, the cost is relative to SDDC, not to the shipper.

cost recovery rate used in constructing the SDDC billing rates. Thus, the shipper's true total cost is a little less than if he or she had booked using IBS. In this case, however, the shipper is aware of the true carrier cost of the movement.

Using PowerTrack solely to characterize TWCF costs has its shortcomings. Depending on what data you view, you may find overlaps of data. If you view SDDC IBS-booked container total shipment amounts, PowerTrack data will be included in the total. But PowerTrack data does not capture payments for Air Mobility Command military airlift or commercial charter flights, military sealift charters, or SDDC traffic management or port operation surcharges. In addition, certain in-process adjustments to line item charges invoiced in PowerTrack may not be visible in a single snapshot view of PowerTrack data.

Finally, not all information within PowerTrack is accurate or specific enough to provide the detailed analysis we desired. For instance, erroneous mode entries and unpopulated event dates may be problematic, depending on the purpose of the analysis. Some modes of transportation are plagued by data shortfalls. For instance, data entries for ocean container shipments do not accurately capture the weight of shipments as ocean container charges are not affected by the weight of the container. Therefore, determining the weight moved via ocean container is not possible without data from other DoD systems, if at all. These errors and omissions in PowerTrack are primarily due to shortfalls between shipper systems that feed PowerTrack rather than PowerTrack itself. This limits the analytical usefulness of PowerTrack data without supplemental information from other systems or sources. In addition, when the data are populated and the syntax of the data passes edit, it still may be factually incorrect. PowerTrack is only as good as the data provided by feeder systems or as entered by DoD or carrier personnel.

Notwithstanding the limitations of PowerTrack, no other DoD system accurately captures actual transportation expenditures. As a result, we use USTRANSCOM-provided revenue projections to identify those transportation costs not processed through PowerTrack. These projected costs include military and commercially chartered airlift flights, military sealift charters and break bulk movements, and surcharges by SDDC for services such as traffic management and port operations. These costs are reflected in Table D-3.

## COMPONENT AND AGENCY DATA SUMMARY

Table D-1 shows shipment information by component and agency. This data captures shipments originating between 1 June 2006 and 31 May 2007.

*Table D-1. Shipment Information by Component and Agency*

Service or agency	Number of shipments	Total weight	Total billed
AAFES	1,358,726	171,088,866	\$170,722,005
Air Force	309,936	294,297,980	\$114,876,725
Army	377,313	3,083,862,511	\$399,240,739
DCMA	189,390	1,717,817,493	\$169,088,011
DeCA	33,400	63,610,862	\$48,889,505
DLA	1,756,890	8,442,928,291	\$606,737,230
DMEA	804	404,406	\$160,576
DoD-HHG	8,747	22,307,354	\$1,592,444
DRMS	873	7,663,666	\$669,068
GSA-HQ	106	646,785	\$319,879
Marine Corps	29,424	210,092,455	\$33,625,268
MPSA	1,327	4,509,249	\$3,230,345
Navy	640,351	668,612,122	\$224,837,464
NEXCOM	97,500	219,401,758	\$44,862,243
NIMA-HQ	93	228,761	\$85,166
NSA-Army	319	1,006,334	\$344,470
National Guard	29,024	454,451,913	\$50,930,140
USTRANSCOM	77,433	317,750,472	\$361,143,445
Total	4,911,656	15,680,681,278	\$2,231,354,723

Table D-2 shows shipment information by mode. This display is based on the same data reflected in Table D-1 (we removed costs specifically labeled as “household goods”) during the period 1 June 2006, to 31 May 2007. Because of some of the data issues discussed earlier, some modal information (truckload [TL] versus less than truckload [LTL]) is combined into the category “Truck” versus LTL and TL separately.

Table D-2. Shipment Information by Mode

Mode	Shipments	Total weight <sup>a</sup>	Total billed
Air	2,459,506	332,929,920	\$564,162,273
Bus	685	1,436,686	\$1,572,977
Drive away/tow away (D/T)	8,323	167,363,864	\$19,356,588
Freight forwarder	8,043	134,047,346	\$16,733,889
Pipeline	765	103,208,308	\$59,655,213
Rail	5,559	2,071,727,667	\$147,645,630
Small package <sup>b</sup>	1,332,101	17,999,739	\$8,182,903
Truck <sup>c</sup>	956,263	11,895,496,878	\$849,435,148
Water <sup>d</sup>	138,093	950,863,947	\$559,978,004
Other	131	3,282	\$3,591,458
Totals	4,909,469	15,675,077,637	\$2,230,314,084

<sup>a</sup> In pounds

<sup>b</sup> A significant number of small package shipments are captured in PowerTrack under the "air" category but could not be separately identified.

<sup>c</sup> Includes truckload and less-than-truckload. This category also includes HHG moves moving as FAK (e.g., direct procurement method movements).

<sup>d</sup> Includes containers moving in liner service and barge movements.

Table D-3 shows AMC, MSC, and SDDC transportation and transportation-related revenue projections for FY2007 by category. We include these numbers because, at the macro level, they represent expenditures by customers for key types of transportation services not included in the PowerTrack database. This was the most current data we could get from U.S. Transportation Command (USTRANSCOM) because of problems with lagging data from the multiple systems used to aggregate transportation financial data. Brief explanations of the categories are provided below the table.

Table D-3. Revenue Projections for FY2007 (in millions)

Category	Total revenue
AMC	
SAAM	\$4,587
Air channel cargo	1,875
Air Force training	548
Exercise support	102
AMC Total	\$7,112

Table D-3. Revenue Projections  
for FY2007 (in millions)

Category	Total revenue
<b>MSC</b>	
Pre-positioning ships	\$263
Cargo operations	196
Tanker operations	136
Surge full operating status	101
Surge reduced operating status	148
Other Reimbursable	9
MSC Total	\$853
<b>SDDC</b>	
Ocean liner	\$1,167
Privately owned vehicle (ocean)	241
Port operations	176
Traffic management	96
SDDC Total	\$1,680
Total DoD	\$9,747

## AMC

- ◆ SAAM missions can move cargo, passengers, or a combination of both. While we do not have a specific breakdown, we believe much of the SAAM revenue generated was due to charter passenger movement on international flights supporting the GWOT. International group moves are, by definition, classified as SAAMs.
- ◆ Air channel cargo represents revenue earned on AMC cargo flights, whether operated by an organic AMC aircraft or by a chartered commercial flight ordered to clear cargo backlog from ports or augment the organic fleet when it is committed to higher-priority missions.
- ◆ Air Force training represents flying hours billed to the Air Force by AMC for crew training on AMC aircraft. (While this shows as revenue, there are no movement service costs associated with this category. Opportune airlift, such as movement of Denton Amendment cargo, may be a byproduct of these flying hours.)
- ◆ Air exercise support applies to airlift services provided to support movement in conjunction with JCS and other exercise programs.

## MSC

- ◆ The category pre-positioning ships includes the operation and maintenance of DOD or chartered vessels in support of the prepositioning strategies of the Army, Air Force, Navy, and DLA. Marine Corps pre-positioning fleet (MPF) program, also managed by MSC, falls under the Navy Working Capital Fund, not the TWCF; therefore, it is not listed in the table. The Marine Corps MPF program is valued at \$325.5 million
- ◆ Cargo operations (dry cargo) includes costs of chartering and operating/maintaining US flagged-commercial ships and DOD owned vessels to meet cargo requirements that cannot be accommodated by regularly scheduled ocean liner service. (On occasion, foreign-flag ships may be required.)
- ◆ Tanker operations include the four MSC-operated, government-owned and one large long-term charter tanker that support Defense Energy Support Center's global requirement for providing fuel.
- ◆ Surge ROS (reduced operating status) includes cost of maintaining the surge fleet (fast sealift ships, LMSRs, and militarily useful RRF ships owned by the Department of Transportation) in reduced operating status. The ships are maintained and operated by commercial contractors to Navy, MSC, and regulatory standards. The costs are born by the National Sealift Defense Fund.
- ◆ Surge FOS (full operating status) includes the operation and underway maintenance of the surge fleet ships while activated to support mission activities. FOS costs are born by the sponsoring customer, billed at ship per-diem rates
- ◆ The other reimbursable category includes reimbursable canal fees, and other GWOT reimbursable items associated with MSC-provided support.

---

## SDDC

- ◆ Ocean liner includes amounts billed through their Cost and Billing (CAB) system, for bookings made using the Integrated Booking System (IBS), and the administrative fee collected for transactions that were initiated through the Direct Booking Program. In FY2006, approximately 106,000 containers were shipped by DoD.<sup>2</sup> Approximately 6.3 million tons were booked by DoD shippers using IBS. USTRANSCOM TCJ8-provided data showed that, for direct booking, the total cost of freight paid to carriers for FY2006 was \$101.1 million. On top of this, shippers paid SDDC \$28.9 million in administration fees.
- ◆ POV (privately owned vehicle) ocean includes the cost for overseas movements of POVs booked through IBS. In FY2006, the Global POV Contract covered approximately 71,400 privately owned vehicle movements. The contract provides for over-ocean movement, storage, and vehicle processing. SDDC's actual over-ocean contract cost (paid to the POV contract carrier) was approximately \$64 million in FY2006.
- ◆ Port operations include the cost of stevedore and related port costs for SDDC managed military ocean terminals.
- ◆ Traffic management includes the cost of SDDC procurement, management, administration activities, and systems that support the movement of cargo and household goods.

---

<sup>2</sup> For FY2006, 86 percent of the total containers were booked by Army and Air Force Exchange Service (AAFES), Defense Commissary Agency (DeCA), Navy Exchange Service Command (NEXCOM), and prime vendors.



# Appendix E

## Abbreviations

---

ADP	automated data processing
ADUSD(TP)	Assistant Deputy Under Secretary of Defense for Transportation Policy
AFB	Air Force Base
AMC	Air Mobility Command
AOR	accumulated operating result
APS-3	Army Pre-Positioned Stocks 3
ARA	Airlift Readiness Account
BES	Budget Estimate Submission
BPS	Budget Preparation System
CAB	Cost and Billing System
CFO	Chief Financial Officer
CONUS	continental United States
CRAF	Civil Reserve Air Fleet
DBOF	Defense Business Operations Fund
DDC	Defense Distribution Center
DEAMS	Defense Enterprise Accounting and Management System
DECA	Defense Commissary Agency
DESC	Defense Energy Support Center
DFAS	Defense Finance and Accounting Service
DLA	Defense Logistics Agency
DPO	distribution process owner
DTS	Defense Transportation System
DWCF	Defense Working Capital Fund
FDM	financial data mart
FFC	U.S. Fleet Forces Command
FMR	Financial Management Regulation
FSS	fast sealift ship

---

FYDP	Future Years Defense Program
G&A	general and administrative
GFM	Global Freight Management
GPC	Global Privately Owned Vehicle Contract Program
GSA	General Services Administration
GWOT	Global War on Terror
JCS	Joint Chief of Staff
LMSR	large, medium speed roll-on/roll-off
MAC	Military Airlift Command
MPF	Maritime Pre-Positioning Force
MSC	Military Sealift Command
MSCFMS	Military Sealift Command Financial Management System
MTMC	Military Traffic Management Command
MTons	measurement tons
NDAF	Navy, DLA, and Air Force
NFAF	Naval Fleet Auxiliary Force
NOR	net operating result
NWCF	Navy Working Capital Fund
O&M	operations and maintenance
OCONUS	outside the continental United States
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense
OUSD(C)	Office of the Under Secretary of Defense (Comptroller)
PBD	Program Budget Decision
PBL	performance-based logistics
PDM	Program Decision Memorandum
PM	program manager
POM	Program Objective Memorandum
POV	privately owned vehicle
PPBES	Planning, Programming, Budgeting, and Execution System
RIC	reserve industrial capacity
ROS	reduced operating status

RRF	Ready Reserve Force
SAAM	special assignment airlift missions
SDDC	Military Surface Deployment and Distribution Command
SDT	second destination transportation
SME	subject matter expert
SWT	service-wide transportation
TAC	transportation account code
TCC	transportation component commands
TFMS-M	Transportation Financial Management System–MTMC
TTF	training, test, and ferry
TWCF	Transportation Working Capital Fund
USAF	U.S. Air Force
USSGL	U.S. Standard General Ledger
USTRANSCOM	U.S. Transportation Command
VISA	Voluntary Intermodal Sealift Agreement
WCF	working capitol fund
WPS	Worldwide Port System
WWX	World Wide Express

