Command Cost Model Document

U.S. Army Test and Evaluation Command (ATEC)

Enterprise Resource Planning (ERP) Command Cost Model (CCM) Document — Command Series

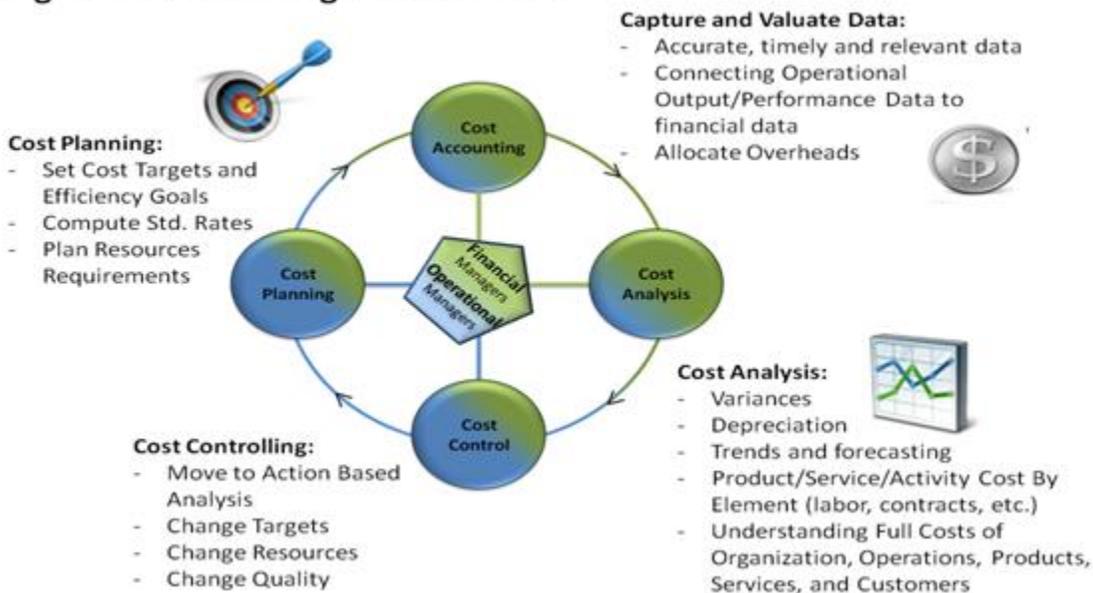Reference No. » CCM—OA41

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Statement of Purpose

The purpose of the *ERP Command Cost Model (CCM)* document (hereinafter the "Cost Model") is to provide a <u>living document</u>, which contains the necessary information to be utilized as a reference guide to aid in the understanding of how the command's current Cost Model is represented in the multiple ARMY ERP platforms, such as the General Fund Enterprise Business System (GFEBS), Global Combat Support System (GCSS), and Logistics Modernization Program (LMP) ERPs. Each command's Cost Model and corresponding utilization of supporting capabilities within the ERP's has been adapted to meet the requirements of each command and the Army-Wide cost objectives. The Cost Model consists of the defined system master data and supporting transactions necessary to support the Cost Management Process (see Figure 1). Therefore, the Cost Model consists of:

- identification of the cost objectives
- definition for the master data elements
- execution of various kinds of planning
- capturing of 'actuals'
- allocations/cost assignments and corresponding data loads necessary for driver data
- various reporting requirements

Figure 1: Cost Management Process

Capture and Valuate Data:
- Accurate, timely and relevant data
- Connecting Operational Output/Performance Data to financial data
- Allocate Overheads

Cost Planning:
- Set Cost Targets and Efficiency Goals
- Compute Std. Rates
- Plan Resources Requirements

Cost Controlling:
- Move to Action Based Analysis
- Change Targets
- Change Resources
- Change Quality

Cost Analysis:
- Variances
- Depreciation
- Trends and forecasting
- Product/Service/Activity Cost By Element (labor, contracts, etc.)
- Understanding Full Costs of Organization, Operations, Products, Services, and Customers

The intended audience of this document consists of readers already familiar with the ERP applications and the cost management concepts within the Cost Management Handbook.

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Command Overview

U.S. Army Test and Evaluation Command (ATEC) has responsibility for testing (developmental and operational) and providing independent evaluations and assessments of capabilities utilized to equip the war fighters. ATEC is comprised of a highly skilled workforce with advanced knowledge of various areas (e.g. planners, technicians, scientists, engineers, evaluators, etc.) performing testing and evaluation activities, which often require design and use of test instrumentation. ATEC's results are essential to inform key decision makers of their varied customer base, which encompasses more than just Army entities, including all branches of military, agencies, and allied countries, etc.

Cost Management Objectives

Current Objectives

ATEC's cost management objective is to simultaneously provide visibility into the full cost of:

- the organizations,

- the test and evaluation activities the organizations perform (e.g.their internal and external products/services); and,

- the maintenance of facilties and utilization of the facilities when performing work effort.

To meet this objective, all ATEC transactions, where possible, utilize multiple cost objects to reflect which organization, in what facility, for which testing/evaluation effort (see Capture Actuals section for specific details and examples). ATEC facilities are equipment in place (e.g. a laboratory within a building) or utilization of real property (e.g. M880 MORTAR RANGE). The entire ATEC cost model is specifically and consistently structured to meet this multiple cost objective view.

Future Objectives

As activities and support requirements change, objectives should continually be reviewed to ensure the Cost Model is providing the level of information required to make resource informed decisions and/or provide transparency for external reporting, requirements justifications, and customer billing.

Command Master Data

Cost Centers

Overview

Cost Centers (CCs) represent the organizations (e.g. Company A) listed within the Modification Table of Organization and Equipment (MTOE) or Table of Distribution and Allowances (TDAs) entities (e.g. BUDGET DIVISION). Cost Centers are established to collect and manage costs incurred within an organization for the corresponding capacity output provided (e.g. Labor Hours). Cost Centers align to the UIC-Paragraph structure of the TDAs or the MTOE structured authorized UICs (e.g. Company A). ATEC has TDA related Cost Centers only.

Coding Logic

Cost Centers for ATEC were originally generated utilizing a 3* series numbering. ATEC now functions within the Army's Global Combat Support System-Army (GCSS-A) ERP, which replaces many legacy logistical systems, such as the Property Book and Unit Supply Enhanced (PBUSE) system. GCSS-A technically requires Federated 4* series Cost Centers. Therefore, ATEC was completely Federated for FY15 to have 4* series Cost Center numbers to support utilizing GCSS-A as well. To maintain consistency between GFEBS and GCSS-Army, Cost Center changes are allowed under specific conditions. Creating a new Cost Center requires a unique combination of the UIC-Paragraph on an approved Force Structure document or a structure Derivative UIC (DUIC) to reflect the MTOE units (e.g. WXXXA0 for Company A).

Informational Fields

In addition to the Cost Center code, there are many other data elements defined on the Cost Center master data record that are utilized for reporting or interfacing with other systems, such as (but not limited to), Standard Hierarchy, Area of Responsibility, Name 4 and Interface Indicator (utilized if using ATAAPS for time tracking).

Activity Types

Overview

Activity Types (i.e. Resource Pools), describes the kind of capacity of a specified resource within a Cost Center, typically measured in units of time, hours (HRS) or volume (BTUs), etc. Therefore, Activity Types (AcTypes) are used to assign capacity-related costs to consuming cost objects. Activity Types are used to plan, allocate and control costs. Activity Types are categorized as Labor Related versus Non-Labor Related. The most prevalent category is Labor Related, which is structured to reflect the different types of Labor Related Resource Pools such as Civilians, Military, etc. Additionally, Non-Labor Related Activity Types are created as needed to reflect the capacity costs of Machines (e.g. Bulldozer $/Hour) or Facilities (e.g. $/Sqft).

Usage & Calculations

ATEC's main capacity is work force and therefore Labor Related. The transactions for associating the capacity consumed requires a *quantity* and *rate*, to exist for the Cost Center and Activity Type. Table 1 below lists a summary of Activity Type utilized by ATEC.

- Labor Related Activity Types – the Labor Related Activity Types have been defined for the ARMY as a whole, based on various Pay Plans and Series and encompasses all of the kinds of skills provided by labor resources utilized by ATEC. Specifics for how Labor is tracked by each category of Activity Types are provided within the Capture Actuals: Labor section below.

  - Civilian – For all Civilian related labor charges, the payroll costs remain on the Cost Center where the Primary expense posting occurs. For entities tracking Civilian Labor to products/services, then Civilian Labor Activity Types are utilized to perform time tracking. ATEC currently performs Time Tracking for Civilian labor hours commdn wide. Therefore Labor Activity Types are utilized to support both the payroll and time tracking processes.

  - Military – Currently, ATEC is tracking time related to Military labor hours and output worked within GFEBS.

  - Local National – ATEC does not have Local National (LN) Payroll and therefore LN Activity Types are not utilized.

  - Contractor – ATEC currently does track Contractor labor hours to outputs. ATEC has a Contractor Information Management System (CIMS) that provides to GFEBS the Contractor Labor Hours to the output supported.

- Non-Labor Activity Types – Currently ATEC does not utilize Non-Labor Activity Types to assign out cost of capacity.

Table 1: Summary Utilization of Activity Types

Type	Area	Utilized
Labor	Civilians	Yes
Labor	Military	Yes
Labor	Local Nationals	No
Labor	Contractors	Yes
Non-Labor	NA	No

Internal Orders

Overview

Orders are a type of cost object utilized to capture the cost of an event (e.g. maintenance request, reason for travel) or a repetitive service (e.g. Military Card Processing). There are various kinds of Orders, such as Internal Orders (IOs) and Plant Maintenance Orders (PMOs). Within each kind of Order there are various Order Types which support the segregation of like-kind events.

Command Usage

ATEC utilizes Internal Orders (Order Type ZTE1) within its Cost Model to track facilities costs and utilization such as DECONTAMINATION PAD COMPLEX, AMBIENT BREEZE TUNNEL (ABT), SV ELECTRONIC ATTACK (EA). Outside of facilities tracking, there are a very few Internal Order for one-off events; such as, SNOW REMOVAL, SPECIAL PROJECTS, COMMAND SPONSORED EVENTS.

All of the ATEC Internal Orders (IOs) are Statistical (STAT). STAT IOs can only be utilized in conjunction with another cost object such as a Cost Center and/or WBS Element. For example, STAT IOs are utilized to provide the view by facility utilized with the real posting consuming budget against the customer WBS Element paying for the test.

WBS Elements

Overview
Work Breakdown Structure (WBS) Elements are utilized to identify the sub-activities required to perform a Project.

Command Usage

ATEC uses WBS Elements to:

- Collect any reimbursable costs for services provided

- Handle miscellaneous collections processes

- Provide funding to other entities via the Direct Charge process

- Manage Official Representation Funding (ORF)

- Track Functional Cost Account (FCA) codes in the rare instances that they are necessary, such as F9871 - MILITARY TRAINING SPECIFIC ALLOTMENT

Statistical Key Figures (Non-Financial Measures)

Statistical Key figures (SKFs) represent the non-financial measures a command might want to track to support performance reporting and/or to be utilized to support Allocations. Currently ATEC does not utilize SKFs to track non-financial measures.

Cost Elements

Primary Cost Elements

Primary Cost Elements track initial expenditures within the system and are defined ARMY-wide. Therefore, nothing specific for the ATEC command has been developed related to Primary Cost Elements.

Secondary Cost Elements

Secondary Cost Elements are utilized to track cost flows from initial expenditure to final cost objects. Secondary Cost Elements generated specifically to address ATEC requirements are listed in Table 2 below. The objective for these additional secondary cost elements is to facilitate tracking contractor related costs to the work performed.

Table 2: Secondary Cost Elements Specific to Command Needs

Cost Element Code	Cost Element Description	Purpose
9100.CTRE	CONTRACTOR EQUIPMENT	Provides visibility into contractor costs specific to the work effort.
9100.CTRF	CONTRACT FEES	Provides visibility into contractor costs specific to the work effort.
9100.CTRT	CONTRACTOR TRAVEL	Provides visibility into contractor costs specific to the work effort.
9100.CTRS	CONTRACTOR SUPPLIES	Provides visibility into contractor costs specific to the work effort.

Business Processes

Currently, the ATEC Cost Model does not use Business Processes to track cross-functional business activities or Activity-based Costing.

Real Property

ATEC does not have Real Property (e.g. Building X or Land Y) and therefore this cost object is not present within the ATEC Cost Model. The Facilities tracked via Internal Orders are for locations/grouping of equipment within Real Property (e.g. Laborotary within a building or Range on land.) Therefore Real Property depreciation is not found within the ATEC cost Model while Equipment depreciations is present (see Depreciation section below.)

Attributes (Custom Fields)

Currently, ATEC is using several Custom Fields added to the base SAP master data elements of Cost Centers, Internal Orders and WBS Elements:

- Attribute 1 (ATTR1) Field – utilized to capture a command wide Discreet Management Code, such as DMC10 – Revitalization/Upgrade (RU) or DMC11 – Test Operating Procedures (TOPs)

- Attribute 2 (ATTR2) Field – contains the Facilities Code (e.g. FCGJ – FIELD TEST ENGINEERING COMPLEX or FCZZ – NON FACILITY) utilized command wide.

- Attribute 3 (ATTR3) Field – does not have a check table and is provided for entities within a command to capture information as needed, such as tracking by TEAM 1- 3 at Dugway Proving Grounds

- Functional Cost Account (FCA) – tracking FCA codes issued for tracking of Hurricanes and deployment related events

ATEC should consider using the following Custom Fields added to the WBS Element:

- Major Defense Acquitision Program (MDAP) field is utilized to track the phase of the MDAP. This field is utilized already within some areas of ATEC but not consistently throughout ATEC to track work efforts related to the OPERATIONS & SUPPORT (O&S) and TECHNOLOGY DEVLOPMENT(TD) phases.

- Weapon System field contains a listing of Weapon Systems such as UH-60 Utility Helicopter or CH-47 for Chinook. Many of the ATEC WBS Element descriptions track the kind of Weapon System the Test/Evaluation effort is supporting and populating this field would allow for quick reporting and to support the Army wide cost objective of life cycle costing of a Weapon System.

Planning

ATEC currently does not utilize any Cost Planning capabilities.

Capture Actuals

Payroll

Civilian Payroll will be disbursed out of the Defense Civilian Payroll System (DCPS) with financial transactions being recorded on a bi-weekly basis. The Budget LOA is defined within the Human Resources (HR) master data record for each employee. One item to note is the Funds Center for the paying Budget LOA is actually determined by the Funds Management business logic (i.e. FMDERIVE – a custom table inside the ERP platforms that associate Cost Management master data with Funds Management master data).

ATEC is responsible to maintain both the Faces-to-Spaces document identifying the association of Activity types to Cost Centers and the calculations of the Rates. Additionally, ATEC maintains the HR LOA within ERPs and requests updates to the FMDERIVE related business rules necessary for payroll to post against the correct funding. For more information on Faces-to-Spaces see http://www.opm.gov/oca/10tables/indexGS.asp .

Military Payroll currently comprises a portion of ATEC's overall cost of operations. Currently, the MILPAY appropriation is not being recorded in GFEBS but is scheduled for FY15. Payroll for Military is managed and paid from a centralized headquarters account and will not be associated to the organization the Military is assigned to. For entities tracking labor hours of Military utilized, a non-budget relevant imputed cost for Military payroll will eventually be associated (post MILPAY Phase 1B still not scheduled) to the benefiting command, such as ATEC, to offset and labor cost charged from organizations to products/services.

Labor

ATEC currently tracks Civilian labor hours daily to products/services command wide. Therefore, Secondary Cost Elements, such as 9300.0100 Labor Charge are seen assigning the cost of labor from ATEC-related Cost Centers to Orders and/or WBS Elements. To meet current cost objectives, ATEC utilizes multiple cost objects when tracking Civilian labor hours within Automated Time Attendance and Production System (ATAAPS). Productive hours are posted from the organizational Cost Center to both a STAT IO for the Facility (e.g. 12000124 – GRANTITE TEST RANGE) utilized to perform the work effort, in additional to a WBS Element representing what the work effort was (e.g. internal project or customer). When tracking non-productive time such as leave, holiday etc., the organizational Cost Center receives those hours in addition a STAT IO for non-Facility is (i.e. 12000462 – NON-FACILITY) is also posted to ensure consistent tracking to multiple cost objects at all times.

ATEC also tracks Military labor hours to products/services through the ATAAPS interface with GFEBS. Therefore, Secondary Cost Elements, such as 9400.0150 MILITARY LBR CHARGE are seen assigning the cost of labor from ATEC-related Cost Centers to Orders and/or WBS Elements. Military Labor is not billed out through this process even if the receiver is for a reimbursable WBS Element. The Military hours tracked to work efforts are to associate corresponding indirect costs related to supporting the Military resource working (e.g. computer/network costs, management oversight costs, etc.).

The ATEC CIMS inbound interface to GFEBS provides Contractor labor time tracking information to the products/services in a format similar to the ATAAPS data for Civilians and Military. Contractor-related Activity Types post utilizing Secondary Cost Elements, such as 9300.0160 CONTRACTED LABOR. In some cases, ATEC utilizes Non-Budget relevant Activity Type code for

Contractor (e.g. 16999 – SHOP RATE 1 – NBR) which utilizes Secondary Cost Element 9400.0160 NBR CONTRACT LABOR.

Non-Pay/Labor

For Non-Pay/Labor costs, the individual initiating the budget execution action needs to indicate the organization and/or event (e.g. Internal Order or WBS Element) receiving the benefit of the non-payroll expense. In order to ensure the multiple cost objectives, Non-Pay/Labor costs are tracked to multiple cost collectors as well based for Organizations, Facilities, and work effort.

Depreciation

ATEC receives depreciation postings for capital equipment tracked within the Property Book Unit Supply Enhanced (PBUSE) system. PBUSE is being subsumed by GCSS-Army as a part of the GCSS-Army Wave 2 rollout FY15 – 17.

In the interim, PBUSE interfaces with GFEBS to provide all transactional data to financially reflect the capital equipment acquisitions, destruction, lost and transferred. GFEBS utilizes the asset transactions in conjunction with depreciation schedules or equipment usage data received from OSMIS to determine the Usage-Based Depreciation to post as the non-budget relevant cost of the equipment associated to each Organization or Unit (Cost Center).

Perform Allocations/Cost Assignments

Various kinds of Allocations/Assignments can be supported within the Cost Model. ATEC utilizes Costing Sheets to associate indirect costs to the their end cost objects.

Costing Sheets

DASA-CE creates and maintains various Costing Sheets for ATEC. A Costing Sheet is an allocation tool that is used for application of indirect costs (e.g. management oversight, network support, etc.) to receiver object (WBS Elements for ATEC) that reflects the work effort. Costing Sheets have two methods for calculating the amount of indirect costs to be associated:

1) Percent of the dollars posted -   An example of this method is to support the Unfunded Civilian Service Retirement (UCSR) process. A percentage of just the labor dollars charged to a WBS Elements is utilized to calculate the amount to collect for unfunded civilian retirement, postretirement health benefit and postretirement life insurance costs from specific customer types (i.e. DoD Components, Federal Agencies, and private parties.)

2) Dollar per Hour ($/Hr) – An example of this method is for each labor hour confirmed to the WBS Element (e.g. 10 hrs of direct labor hours at $78.00/Hr resulting in $780.00 of direct labor costs), an additional $33.52/Hr is charged to cover all indirect costs (resulting in $335.20 of indirect costs also being associated to the WBS Element.)

CM Data Load

There are several Army-wide systems interfacing cost management data such as GCSS-A for tactical equipment utilization or the Worldwide Ammunition Reporting System (WARS) interface to provide the cost of training ammo for a unit. Currently, ATEC does not have any external systems that need to be imported as cost drivers for allocations.

Reporting

No specific reports are associated for the ATEC command only. Table 3 below provides a sample list of common Cost Management related reports used for all commands:

Table 3: Sample List of Common Cost Management Reports

GFEBS ECC Reports			
Area	**Report Name**	**T-Code/ROLE**	**Benefit**
Master Data – CCs	Display Cost Centers (CCs)	KS03 and KS13/ EPS_EC_CM_ECC_DISPLY_RPTR_0000	Display individual or all Cost Centers Master Data within a Group (e.g. use the last 4 digits of the Fund Center to get all Cost Centers associated with the Cost Center Hierarchy of that Fund Center).
Master Data – IOs	Display Internal Orders (IOs)	KO03 and KOK3 / EPS_EC_CM_ECC_DISPLY_RPTR_0000	Display individual or all Internal Order Master Data.
Master Data – WBSs	Project Info System: WBS Elements	CN43n	Displays all Projects and WBS Element Master Data.
Plan – AcType Rates	Activity Type (AcTypes) Price Report	KSBT/ EPS_EC_CM_ECC_DISPLY_RPTR_0000	Displays AcType Rates associated to a Cost Center.
Actuals – CCs	Cost Centers: Actual/Plan/Variance	S-ALR_87013611/ EPS_EC_CM_ECC_DISPLY_RPTR_0000	Actual $s for Cost Centers and AcType, SKF Quantities.
Actuals – IOs	Orders: Actual/Plan/Variance	S-ALR_87012993/ EPS_EC_CM_ECC_DISPLY_RPTR_0000	Actual $s for Internal Orders and SKF Quantities.
Actuals – WBS	Display Project Actual Costs Line Items	CJI3	Cost Line Item Postings to WBS Elements.
Actuals – Costs	Display Actual Cost Document	KSB5/ EPS_EC_CM_ECC_DISPLY_RPTR_0000	CO Document Actual Costs for Transactions that have posted.
GFEBS BI Reports			
Area	**Report Name**	**T-Code/ROLE**	**Benefit**
Actuals – Costs	Cost by Reports	Cost by Cum Report / Cost Management Reporter	BI Report displaying costs with various Attributes.

Considerations for Cost Model Updates

Table 4 below lists items for consideration for updating/improving the ATEC Cost Model:

Notional example only – to be built with Command based on priorities

Table 4: Improvements to Command Cost Model

Code	Category	Description	Benefit	Timeline
1	Master Data	Review utilization of Weapon System and/or MDAP on WBS Elements.	Allows for automatically reporting by Weapon System supported and/or MDAP phase.	QX FY15
2	Master Data	Evaluate RESP CC on WBS elements to support Settlements.	All WBS Elements have to be net zero eventually. Costs are assigned back to a Cost Center for the organization responsible or to follow-on products/services. Allows for deactivation of master data.	QX FY15
3	Master Data	Continually review Cost Centers for Federation and GFMDI.	Aligns structures to future automated approach for maintenance of Cost Centers.	QX FY15
4	Non-Financial Measures	Determine what Metrics ATEC utilizes for performance and identify if they can be associated within the Cost Model.	Alignment of Output/Measures with costs for efficiency/effectiveness reporting.	QX FY15