Cost Assessment Data Enterprise (CADE) Project

CADE Vision Update for ICEAA
August 2014

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Agenda

• Objectives
• Comprehensiveness & Vision
• History – Analysis Evolution
• Today’s Process
• Vision – Total Analyst Access
• Inc 1.5 (Today – released end of May 2014) & Incs 2-4
• Community Integration
• Government-Industry Cooperation Opportunities
• Current Collaboration & Government CSDR Evolution
• Long Term Plan (DRAFT)
CADE Objectives/KPPs

Improve Analyst Productivity
- Increase output per unit time
- Provide near real-time access to data, more data, and less burden on the analyst to retrieve and process
- Reduce time for analyst to climb the program familiarization learning curve

Effectiveness
- Enable more comprehensive assessments
- Gain insight from previous analysts
- Facilitate telling the program’s “story”, holistic analysis

Data Quality and Reporting Compliance Improvement
- Includes all the Department’s cost data - both EVM and CSDRs

Comprehensiveness
- Having all information at the analyst’s fingertips – a centralized virtual library

Source Data Transparency
Comprehensiveness & Our Vision

Comprehensive Data Availability:
Having all information at the analyst’s fingertips – a centralized virtual library with everything in it

- Cost Data (CSDRs/1921s): contains all an analyst needs to build an estimate
  • Need to consider what data is needed at all times: AoAs, MS As, MS Bs, MS Cs, FRPs, Sustainment decisions, MYPs, etc

- CARDs: contains all programmatic and technical descriptions an analyst needs to build an estimate

- Capturing Institutional Knowledge: what analysts need to know about the data
  • Harnessing knowledge of the entire community

Our Vision for CADE and CSDRs (1921s):
Cost analysts will have all of this data and institutional knowledge at their fingertips. It will be the exception – not the rule – that we have to go back to industry to do our estimates.
Analysis Evolution

**Time to Prepare, Estimate**

- **2005**
- **2009**
- **2013**
- **2016**
- **2018**

**Data Sources**
- Program Office
- DACIMS
- SARs
- DAES
- Contractors
- Service O&S
- Data Libraries
- Colleagues Network

- EVM-CR
- DACIMS
- DAMIR
- Contractors
- Service O&S
- Data Libraries

- EVM Visual Display
- DCARC Bulk Download
- DAMIR
- Contractors
- Service O&S
- Data Libraries

- CADE Total Access
- Service O&S
- Data Libraries

- CADE Vision

**Synthesis and Analysis**
- Manual Entry
- Cut & paste
- Automated Entry
  - Manual Analysis
- Automated analytics
- Complete, seamless knowledge sharing

**Analyst Effectiveness**
Today’s Process

Time for CPR Data Collection and Syntheses

<table>
<thead>
<tr>
<th>Hours</th>
<th>Analyst 2008</th>
<th>User Support Sep 2013</th>
<th>CADE 0.0</th>
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**Analyst in 2008:**
200 hours, typing in by hand selected data over time

**User Support Sep 2013:**
20 hours to bulk download and format ~40 contracts

**CADE 0.0:**
Retrieve data from 40 contracts over time within 2hrs
CADE Increment 0

CPR Visual Analysis via Custom and Standard Views within Dashboard

Search for and add programs to list of favorite programs

Navigate to other programs via “My Programs” tool bar

Export data being viewed

Navigate to other data sources for the selected program

Link to download Navy and Air Force O&S Visual Analysis Tools

Demonstration
Increment 0.5 – New Functionality

Administrative function for updating tools, resources, and external links

Quick program selector and favorites access

New Earned Value View

Improved View navigation through panel selector

Improved navigation between View types

Milestone Widget: Add Milestones to Visual Displays

Program Events Widget: Define, Save & Add Program Events to Views

External Links Widget

Enhanced CADE Total Access Design

Army O&S VATs for multiple commodities (Aircraft, Combat, Wheeled Combat)
CADE Vision of the Future: Total Analyst Access
Community Collaboration

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Opportunities for Government-Industry Cooperation

• Contractor/Government Implementation Efficiency
  – Mechanize and automate data transfer
  – Reduce errors
  – Reduce down-the-line questions
  – Improve contractor-to-government communication and insight

• CADE: The Department’s Unified Initiative to Collect, Organize and Use Data
  – We’ll have useable data in one place for all government analysts to use
    • Today there are 4-6 or more offices collecting, normalizing, reviewing, storing cost data at one time -- this happens at every major review
  – Collect it only once!

• Access to Contractor Data
  – Near real-time access to data, and less burden on the analyst to retrieve and process
  – Easily check if the data is showing up correct
  – See how the government is looking at the data
Collaboration Example:
CADE Infrastructure & Data

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CSDR Data We Collect Today

"Functional Breakout"
- Functional Cost-Hour Report (1921-1)
  - Cost and hour data (REC/NRE) for specific elements broken down by functional category

"By Tail Number"
- Progress Curve Report (1921-2)
  - Lot or Unit reporting of direct recurring costs to date for specific hardware elements; Technical Characteristics

"Business Base"
- Contractor Business Data Report (1921-3)
  - Direct and indirect cost, hour and employee data by functional category for a Contractor Business Unit

"The Cost Summary"
- Cost Data Summary Report (1921)
  - Summary cost data for all elements on approved contract CSDR plan

"The Dictionary"
- Contract Data Reporting Structure Dictionary
  - Lists all contract data reporting elements with definitions of technical, work & cost content

"Sustainment"
- Contractor Sustainment Report (1921-4)
  - Nonrecurring and recurring costs reported against a sustainment cost element structure

"Software"
- Software Resource Data Report (SRDR)
  - Size, schedule and effort data on software development

CSDRs
Current Contractor Cost Reporting Process

Data errors introduced before even arriving at DoD:

- Different reporting structures
- Manual mapping and allocation

Inconsistent data:
report to report, contractor to contractor, program to program
Revolutionizing Data Collection: Moving to The X-Files

Automated
• Less labor intensive

Data provided at lower levels
• Eliminates errors of mapping and allocation
• Allows analysts more insight

Able to read in contractor formats

Higher frequency of submissions
• Contractors willing to provide data more often in exchange for ease of reporting

Allows for detailed look into current programs

Reduces need for government Q/C

Joint plan and reporting structures between Cost Community & AT&L
Long Term Plan

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**Key Dates and Events**

- **Inc. 0**: Major Tech Refresh & Add'l Storage
- **Inc. 0.5**: CPR Visual Analytics
- **Inc. 1.0**: CSDR XML Data Submission
- **Inc. 1.5**: MDA Training
- **Inc. 2.0**: + Reporting Server
- **Inc. 2.5**: Open CADE to Cost Community
- **Inc. 3.0**: CSDR XML Data Submission
- **Inc. 3.5**: Joint CSDR/EVM Plan
- **Inc. 4.0**: Joint CSDR/EVM Plan
- **Inc. 4.5**: Joint Tech Data Policy
- **Inc. 5.0**: Joint Tech Data Policy
- **Inc. 5.5**: CSDR Migration complete

**Other Events**

- **Kickoff CSDR Working Group**
- **MDA-DCARC Rotations Start**
- **IPMR Req'd Data Submission**
- **Final EV Data Quality IPT**
- **Joint Acq Str Language in Template**
- **DAVE/DAMIR System Interface Proof of Concept**
- **AIR Access Through DAVE**
- **Joint Tech Data Policy**
- **J-DOCS**

**Technical Tools**

- QlikView
- NGC Brainstorm
- LMCO Deep Dive
- X-Files Prototype

**Unclassified/Draft**

- "Base Year"
- Option Year 1
- Option Year 2
- Option Year 3