

Cost Reporting for Contractor Logistics Support Contracts

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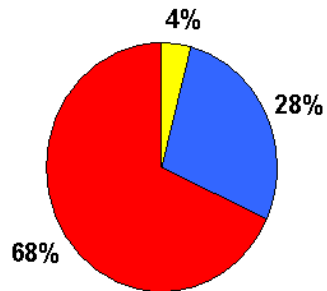
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Presentation Outline

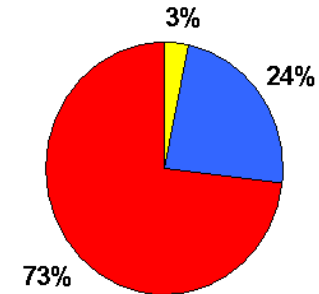
- Background
- CLS Reporting Initiative Specifics
- Key Considerations
- Next Steps
- Conclusion

Background ... from 100K Feet

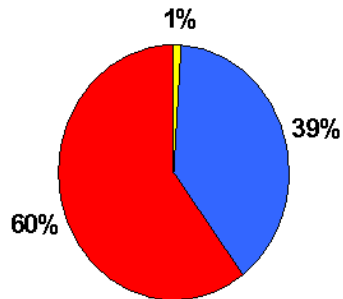
Ground Combat Systems



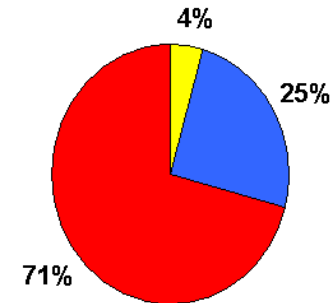
Rotary Wing Aircraft



Surface Ships



Fighter Aircraft



 RDT&E

 Procurement

 O&S

Background ... from 75K Feet

- DoD's philosophy & approach to weapon system sustainment has been evolving since the mid-90s
 - From mostly organic (i.e., government) support with limited contractor involvement (e.g., depot maintenance)
 - To varying degrees & types of contractor (i.e., prime & major subcontractor) support
- Current DoD acquisition policy (*DoDD 5000.01*, May 2003 & *DoDI 5000.02*, Dec 2008) states that Performance-Based Logistics (PBL) is the preferred approach for product support implementation
 - Performance can & has been specified/measured in a variety of ways (e.g., operational availability, repair turnaround time, supply response time, etc.)
 - The preferred contracting approach is the use of long-term contracts with incentives tied to performance

Background ... from 50K Feet

- DoD's appetite for O&S cost data has been largely satisfied by the Services' respective Visibility and Management of Operating & Support Cost (VAMOSOC) systems
 - These systems are fed by a myriad of disparate and often Service-specific finance & accounting, logistics & other reporting systems
 - Depending on the O&S cost element, these systems provide good visibility into organic costs, but little-to-no visibility into contract costs
- Implementation of CLS strategies has generated growing DoD demand for contract cost data that VAMOSOC's associated feeder systems cannot satisfy
 - Near-term demand for CLS cost data has been met by the Cost & Software Data Reporting (CSDR) system, which is acquisition not O&S cost oriented
 - CSDR system uses commodity-specific acquisition WBSs prescribed by MIL-HDBK-881A & acquisition focused cost reporting formats
 - CSDR implementation for CLS has been on a case-by-case basis since no formal guidance exists

Background ... from 25K Feet

- Numerous ACAT I programs have submitted CLS cost reporting plans to the Defense Cost & Resource Center (DCARC), which administers the Cost and Software Data Reporting (CSDR) process
- Disparate reporting to date pending formal guidance on standard CLS cost reporting

Program	Contractor
F-119 Engine (F-22A)	Pratt and Whitney
F-22A Air Vehicle	Lockheed Martin
F-414 Engine (F/A-18E/F)	General Electric
Joint Cargo Aircraft	L-3
C-5 RERP	Lockheed Martin
Stryker Armored Vehicle	General Dynamics
V-22	Bell-Boeing
Lightweight Utility Helo	EADS
F-35 (JSF)	Lockheed Martin
F/A-18E/F FIRST	Boeing

Initiative Specifics

- Phase I (completed in August 2008)
 - Performed by Institute for Defense Analyses (IDA) for OSD PA&E and OUSD(AT&L)
 - Reviewed current DoD policies for weapon system support, and identified key issues that would need to be addressed by any initiative to collect cost and performance data from sustainment contracts
 - Researched actual field-level experiences & perspectives in the implementation & management of contractor support arrangements via case studies of eleven current weapon systems

C-17 Cargo Aircraft	Predator Unmanned Aerial Vehicle
C-130J Cargo Aircraft	Shadow 200 Unmanned Aerial Vehicle
Joint Surveillance & Target Attack Radar System (JSTARS)	Hunter Unmanned Aerial Vehicle
F-18 E/F Fighter Aircraft	LPD-17 Amphibious Ship
T-45 Training Aircraft	Stryker Armored Vehicle
AE 1107C Engine (V-22 Aircraft)	

Initiative Specifics (con't)

- Leveraged case study findings to develop a conceptual framework for what data are needed, when they are needed, and how they would be used
 - Identified key uses of the data
 - Budgeting cost factors
 - Proposal evaluation
 - PBL strategy assessment
 - Engineering trade-offs
 - Cost estimation for milestone decision making
 - Attempted to strike a balance between establishing a reasonable degree of rigor & standardization throughout DoD while permitting flexible reporting arrangements that could be tailored to the unique contract circumstances
 - Developed a comprehensive strategy for systematic and managed data reporting and collection, including an overarching reporting process & associated timelines to institutionalize collection of the right data
 - Recommended that OSD PA&E Defense Cost & Resource Center (DCARC) manage implementation
 - Prepared drafts of specific data report formats and preparation instructions that could in the future be placed on major sustainment contracts
- Documented in “*Collection of Operating and Support Data from Weapon System Support Contracts*,” IDA, Aug 2008, L. Roark, et. al.

Initiative Specifics (con't)

- Phase 2 (Fall 2008 to Summer 2009)
 - Technomics performing for OSD PA&E and DCARC
 - Refine and vet WBS, formats and procedures via workshops with program offices and their industry partners, including but not limited to CSDR plan development workshops in support of DCARC activities

F-22A	December 4
T-45	December 8
Stryker	December 15
Joint Cargo Aircraft (JCA)	Ongoing
JSTARS/C-17/Global Hawk	TBD
JSF	TBD
Sky Warrior UAV	TBD
AIM-9X Air-to-Air Missile	TBD
Others	TBD

- Use these workshops to acquire a good understanding of program-specific CLS implementations, including industry roles & responsibilities, cost accounting practices, etc.
- Address the implications of including this data in VAMOSOC

Key Phase 2 Considerations - Overview

- What is the 'best' WBS(s) for reporting CLS information?
- What data elements need to be reported?
 - Cost/man-hour data
 - Explanatory metrics that provide context to the cost/man-hour data
- What formats should be used to report the information & when are the formats due?

Key Phase 2 Considerations -- WBS

- What WBS balances DoD needs (i.e., likely analytical uses of the data) with industry needs & reporting capability?
 - Level of visibility to facilitate understanding of costs, including product-level visibility & supply chain management visibility
 - Comparability with de facto standard DoD O&S WBS (i.e., the CAIG O&S WBS)
 - Distinction of acquisition (i.e., RDT&E and procurement) vs. O&S phase cost elements
 - Since DOD cost analysts are required to make this distinction
- At what level of indenture does the WBS need to be tailored to commodity-specific attributes?
- At what level of indenture does the WBS expose contractor proprietary information?

Strawman WBS

Based on OSD CAIG
2007 O&S WBS

Acquisition Elements

Prime Mission Equipment
SE/PM
System T&E
Training
Data
PSE
CSE
Operational/Site Activation
Industrial Facilities
Initial Spares and Repair Parts

Based on
MILHDBK-881A

Operations and Support elements

Unit Level Manpower
Operations
Maintenance
Other unit level

Unit Operations
Material
Support Services
TDY

Maintenance
Organizational
Consumables
Repairables
Repair of Repairables*
Procurement of Repairables*
Maintenance Services (incl. Field Service Reps)

Intermediate
Consumables
Repairables
Repair of Repairables*
Procurement of Repairables*
Maintenance Services (incl. Field Service Reps)

Depot
Consumables
Repairables
Repair of Repairables*
Procurement of Repairables*
Overhauls*

Supply Chain Management
Inventory Control
Packaging, Handling & Shipping
Transportation

Sustaining Support
Training
Operator Training
Maintenance Training
Other Training
Support Equipment Replacement
Sustaining SE/PM
Other

Continuing System Improvements
Hardware Mods/Modernization
Software Mods/Modernization

Indirect Support
Installation Support
Personnel Support
General Training & Education

* This element will likely require additional level(s) of indenture to provide product-oriented (e.g., subsystem, assembly, subassembly, etc.) visibility

Key Phase 2 Considerations -- Data Elements

- What cost data types balance DoD needs with industry needs & reporting capability?
 - Total cost by WBS element for all WBS elements (definitely)
 - Labor cost & hours for all or some WBS elements and 'right' functional labor category visibility
 - Engineering
 - Non-engineering
 - Material cost for all or some WBS elements and 'right' material cost category visibility
 - Raw material
 - Purchased parts
 - Purchased equipment/subcontracts
 - Recurring vs. non-recurring or another (e.g., fixed vs. variable) distinction by WBS element
- What non-cost data types balance DoD needs with industry needs & reporting capability?
 - OPTEMPO (e.g., flying hours)
 - Quantity (i.e., system, sub-system, assembly or sub-assembly)
 - Other (e.g., MTBF, operational availability, software TRs closed, etc.)

Key Phase 2 Considerations -- Other

- Can we accomplish CLS reporting with current CCDR forms?
 - Is a revised DD Form 1921-I sufficient or is a new functional form required to achieve labor cost/man-hour & material cost visibility?
 - Is the “quantity” column of the DD Form 1921 sufficient for non-cost data reporting?
 - If not, will adoption of new forms have CDRL cost implications?
- Given the difference between O&S phase and acquisition phase work content & deliverables, do the following make sense?
 - Lower contract dollar thresholds
 - More frequent reporting (e.g., bi-annual reports)

Next Steps (Phase 3)

- Technomics to perform for OSD PA&E and DCARC (Summer to Winter 09)
- Establish final formal reporting requirements to be administered by DCARC as part of the CSDR process
 - Standard CLS WBS that affords appropriate cost visibility
 - Logically organized planning & reporting formats that address the right set of cost and explanatory metric information
 - Clear supporting Data Item Descriptions (DIDs) that facilitate industry compliance with the requirement
- Update the “*CSDR Manual*”, which is the cost-reporting appendix to DoD 5000.04-M, “*Department of Defense Cost Analysis Guidance and Procedures Manual*”
- Prepare CLS-related revision to the OSD CAIG “*Operating and Support Cost-Estimating Guide*”, specifically revisions to the cost element structure & associated cost element definitions
- Prepare recommended revision to MIL-STD-881, specifically addition of an O&S WBS that is consistent with the aforementioned OSD CAIG *O&S Cost Estimating Guide* revision

In Conclusion

- Collection of quality CLS cost data & explanatory metrics that can be compared across programs is crucial to estimating future and in-service weapon systems
- Similar to CSDRs for acquisition contracts, the success of this initiative is highly dependent on the support & active involvement of the DoD cost community
 - Must minimize Program Office & industry concerns by engaging on a program-by-program basis with sound rationale
 - Must ensure data quality by investing the time required to understand & validate the data