2020 OSD CAPE CADE VIRTUAL COST & TECHNICAL FOCUS GROUP

Meeting Date:	October 21-22, 2020
Topics:	COVID-19 Memo; FlexFile Updates; CADE New Features; DoD Cost Estimating Guide; Data Analytics; Cost Policy, Statutes and Regs Guidance; Sustainment Cost Policy, Collection, and Reporting; Inflation/Escalation Guidance; 1921-3; SRDR Implementation; SRDR Agile Survey Results
Location:	VIRTUAL (WebEx)
Purpose:	Inform organizations of the latest status on a variety of cost, software, and technical reporting, data collection, and policy initiatives with sessions and community feedback forums to discuss implementation guidance.
Attendees:	Total: 221 Army: 41 DoN: 26 Air Force: 20 4th Estate: 26 Industry: 55 Support: 53

Meeting Minutes

Day 1 Part 1 (Govt/Industry)

Attendees:	TOTAL ATTENDEES: 199 OSD CAPE, Army, DoN, Air Force, 4th Estate, Industry, Consultants, Other Govt

Topic:	*COVID-19 Memo,* (OSD CAPE)
Discussion:	• Began dialogue with industry in May. Goal was to have industry identify COVID impacts in CCDRs, IPMRs, incorporating into standard processes. Encouraged development of best practices • Industry seeking more guidance on how to collect COVID-19 costs, but CAPE does not intend to dictate lower level details. Every company collects costs differently, so overarching guidance is not feasible. CAPE does not want to provide detailed reporting requirements that may be perceived as burdensome to industry • Current initiatives include adding special instructions to CSDR plans and asking questions to contractors in validation error reports

	◦ Range of questions regarding impacts, how they are recorded, are they quantifiable, etc. ◦ This is a collaborative process between government and industry. Questions/suggestions are specified by unique circumstances facing contractors • Government is planning to share the best practices and lessons learned that companies have provided once substantive feedback is received (no timeframe determined).
Questions/Answers:	• None
Action Items:	• None

Topic:	*FlexFile Update,* (OSD CAPE)
Discussion:	• FlexFiles have made remarkable progress and has been a collaborative process among DCARC, government analysts, and industry counterparts • FlexFiles do not stop meetings from occurring but have streamlined the processes and collaboration • FlexFiles are a win-win thanks to what industry has provided so far and will continue to improve • DCARC team is willing to provide industry training to help contractors who submit FlexFiles ◦ Lockheed Martin Rep: Want to echo that DCARC has been great in partnering with us to help work through some of the nuances in first submissions • FlexFiles provide more detailed, powerful data for government analysts • FlexFile Metrics: ◦ 52 FlexFiles submitted, 30 accepted so far ◦ Over the next 15 years, the FlexFile will quickly overtake legacy reports as the most common method of cost reporting ▪ By 2024, it is projected that more than 50% of the total CCDRs due annually will be FlexFiles ◦ Large number of individuals trained through FF training events (~980 individuals from industry and government) • What are we monitoring? ◦ What industry is using to submit the data ▪ Three submission mechanisms: Contractor Format, Three-Part Template, and JSON ◦ What are the FlexFile specific validation rules ▪ What checks are we performing consistently ▪ Are there checks that CADE can automate ◦ How long it takes to validate

	▪ Through August, validations are taking on average ~90 days, but this is decreasing o Who has not submitted yet (i.e., compliance) ▪ 63% of overdue submissions have contractors who haven't reported FlexFiles before o Is our implementation guidance/training material helpful ▪ Is industry submitting according to the DID ▪ How is industry submitting certain data fields (e.g., Functional Category) ▪ Are there more scenarios that need to be detailed in the Implementation Guide • FlexFile 'Yelp Reviews' from early adopters: o Industry showing desire to switch over to FlexFile submissions o Government excitement for FlexFiles and their ability to provide time-phased visibility
Questions/Answers:	• Question: Are overdue submissions primarily from Prime contractors or Subcontractors? o Answer: About a 50/50 split right now [Upon further research, as of 11/18/2020 there were 46 prime and 49 subcontractor FlexFiles that were overdue.]
Action Items:	• Provide answer to Prime/Sub question (see above)

Topic:	*FlexFile Panel Discussion Representatives* Facilitator, OSD CAPE Lockheed Martin Raytheon Northrop Grumman AFCAA OSD CAPE ODASA-CE NAVAIR
Discussion:	• Lockheed Martin: o Difficult for first time submitting. Very time consuming o Had to update CWBS structure after the first draft of the plan o DCARC helped with submission and timelines o Collaborated with (internal) IT team because current financial tools did not provide data in the JSON format ▪ Began preparing 8 months before the first submission to properly pull and report data ▪ Using the cPet tool was very helpful for converting data to the appropriate format

- Great experience partnering with Govt and DCARC
- Raytheon
  - Submitted half a dozen or so FlexFiles to date. Doing FlexFiles for 1+ years. Data we are questioned on requires mapping and remarks to be validated
  - Raytheon uses a third-party tool to prepare their FF submissions. Using EVM system to help submit the reports
- Northrop Grumman
  - First heard of FlexFile with EPS program. Quite a few initial challenges. Didn't have many resources available at start of FlexFile initiative
  - MPM and SAP financial systems do not deliver data in desired format
    - Needed to get the data in the correct format
    - Remapping accounting system
  - Training material and templates have been tremendously helpful
- AFCAA
  - Has been reviewing FlexFiles for a year, there's a natural learning curve
  - Validating the initial submission takes time, but subsequent resubmits are easier and easier to validate. Using Microsoft Power BI to visualize different FlexFile submissions over time, which helps with the validation process
- OSD CAPE
  - Appreciates having costs tagged to contractor's native functional category
  - FF provides better contractor native rates and combined with time phasing, allows for better estimation on labor rates
  - Monthly phased data is critical
- ODASA-CE
  - Believes FlexFiles will save time with cost estimates
  - Greater ease in sorting data, appreciates the pivot functionality
  - Format is better than legacy [1921 series] and provides deeper insights from data
  - Needed help to locate specific data within CADE, specifically where to find quantity data
- NAVAIR
  - So far, not too many reports, 1 sustainment and 2 production contracts reporting
  - Validations are positive; allows PivotTables, can see labor, materials, direct, indirect costs from all work packages

	o NAVAIR validation feedback – analysts like what they see in the data o FF vs Legacy ▪ FlexFiles are better than 1921-5 sustainment reports. Using PivotTables helps drill down to work center and is not limited to 1921-5 categories ▪ FlexFile data makes it easier to trace labor and materials and to separate direct and indirect costs o Hearing industry feedback that FF is more straightforward and requires a 'one-time set-up' for cost reporting *Is your company incorporating any FlexFile 'lessons learned' across its internal organizations?* - Lockheed Martin o No specific lessons learned in, but Lockheed Martin has a FlexFile working group. Members from every business unit share lessons learned. This acts as a FF knowledge share - Raytheon o No specific lessons learned in but are coordinating efforts across business units. Doing detailed work infrastructure of our accounting systems - Northrop Grumman o Working on a 'homegrown tool' for FlexFile reporting that will be used within NGC across different programs *What FlexFile resources have helped? What gaps can be improved?* - NAVAIR o CADE policy, DID, Implementation Guide (and Three Part Template), CADE website have been very informative and helpful. Using cPet to import/export CSDR plans - Northrop Grumman o Training was not technical enough. Require more information on the File Format Specification (FFS) and Data Exchange Instructions (DEI). Wanted more information on submission process - AFCAA o The CADE Public site showing policies, DIDs, Implementation Guide is very helpful - OSD CAPE o Looking for more automation. cPet performs Legacy automation tasks at a high level. Hoping to see that translate to the FlexFile detail, too. This will cut down on recurring work

- There is a lot more data in FFs. The data can be pivoted and CADE allows for a couple of tables. The data is easier to be reviewed for outliers

There are three submission formats for the FlexFile. Which one are you using?

- Lockheed Martin
  - JSON format with cPet
- Raytheon
  - JSON format with third-party tool that helps populate the JSON
- Northrop Grumman
  - Using cPet as well

Government analysts, please comment on the usefulness of the FlexFile/Quantity reports vs the 1921:

- OSD CAPE - The monthly phased data is critical and helps to identify when costs change. Also helps developing cost curves and comparing against schedule data. Also, having information tagged to the contractor’s system is helpful. It is easier to come up with uncertainties – we can calculate confidence intervals with more data points (monthly data) and uncertainty ratios for labor rates seem to be much more reasonable

Industry, compare and contrast your experiences with validation process of FlexFiles:

- Lockheed Martin – Very different to compare and contrast; the amount of data in a FlexFile is exponentially greater; difficult to compare though because it is still too new; there is still a learning curve
- Raytheon – The Unit and End Item reporting is a new cut that we did not have to worry about before. We really have to think about how we are going to handle that

How does someone (either an industry reporter or government analyst developing a CSDR Plan) switch from 1921s to FlexFiles?

- NAVAIR – We have had a few industry partners want to switch over, even in the middle of contracts. We have been able to accommodate that; some contractors have stated the FlexFile is more straightforward; some contractors are looking to standardize their reporting across their company

Anything else from the panelists?

- AFCAA – To help in our validation, we are using Power BI to visualize the data, and it has been useful to us

	• ODASA-CE – In addition to the resources available on CADE, the DCARC analysts have been very helpful and responsive. I appreciate it and wanted to extend my thanks • NAVAIR – The DCARC team is available to the contractors to help them with their submission. They can help with CADE access, validation, step-by-step instructions, and other issues. Please reach out to the CADE team for help

Questions/Answers:	• Question: Clarify difference between reporting at unit vs using sublots? If reporting units are sublots then left blank?
	  o Answer: Reporting the number units is the same as reporting the number of units developed, produced, sustained, etc. This information will be reported in the Quantity Data Report. Unit/sublot reporting is the same as reporting the costs for an individual unit or sublot (similar to the DD Form 1921-2). The CSDR Plan will specify whether the costs should be at an individual unit level or at a sublot level. If reporting the latter, then the CSDR Plan will also define what unit of measure the sublot will take
	• Question: Do we need to adjust CDRLs to accommodate the average 90 day review time until we develop more expertise with the FlexFile formats?
	  o Answer: The current metrics show that across the first 50 FF submissions, it took an average of 90 days for acceptance. Review times are decreasing over time. The initial submission will have longer review time. It also depends on the interaction of CWIPT members
	  o Answer: A participant replied, “The CDRL does need to be updated. There should be a way to update the CSDR plan without requiring a contract change each time the plan is changed.”
	• Question: What is the most common cause(s) for 'rejection' on FlexFiles vs just data update/corrections?
	  o Answer: There is not one item that prevents a report from being accepted. Reports are rejected to provide the contractor more time to address certain items from the Validation Error Report
	• Question: Will there be some policy guidance to come out for the submission of classified tech data and remarking within the Technical Data Reports (TDRs)?
	  o All files submitted to CADE must be *Unclassified*. The TDR should use Remarks to reference a classified annex, if applicable, and how it was delivered. The government will work with industry to harvest data from other sources, e.g., system specification, etc for some of the data but no finalized implementation has been determined.
	• Question: How is the Three-Part Template going to handle over 1 million rows...or the Excel limitation?

	- Answer: There are a few work around options to include the use of either JSON or a contractor provided format submission which could look like the Three-Part Template but via an alternative data format like CSV that does not have the limitations of Excel. - We could also consider breaking the submissions up logically by some data element (e.g., Orders or Lots) so that the contractor can still utilize the Three-Part Template as is • Question: How can I change my legacy contract requirements to FlexFile reporting? - Answer: Changing to FlexFile is encouraged as a matter of course but there need to be a vetting process to make the change, and a CSDR Plan revision is required in this case. Please contact your counterpart in the DCARC to see if this something to implement. • Question: What resources are there for submitting to CADE? - Answer: DCARC, CADE Public site (https://cade.osd.mil/), CADE Help Desk (cadesupport@tecolote.com)
Action Items:	• None

Day 1 Part 2 (Govt only)

Attendees:	TOTAL ATTENDEES: 124 OSD CAPE, Army, DoN, Air Force, 4th Estate, Consultants, Other Govt

Topic:	*CADE New Features,* (OSD CAPE)
Discussion:	• CADE DTMHub – DTM = Datasets, Tools, and Models. Endorsing organizations have signed MOAs with CAPE. They select primary/secondary uploaders to get applications into CADE. DTMHub is at the bottom of the Data & Analytics page. A few other items to highlight – 1921-3, SAR Database, and CARDs are now accessible. Now you can access these through Data & Analytics, whereas before they were only available from the Portal - Once MOAs are signed, the primary/secondary uploaders upload the application into CADE. Will provide owner of application and metadata. Then, you can search for an application using a keyword search - Analysts can download files and links from endorsing organizations. Organizations can co-endorse - Only unclassified data in CADE, and all applications have to be unclassified and scanned for vulnerabilities if it’s something like a .exe file

	o Non-government analysts cannot see the DTM Hub. They cannot see the DTM at all, but they will see the new homepage for D&A
	• DTMHub Implementation
	  o Increment 1: endorsing org admin functions
	  o Increment 2: landing page and management functions
	• Post Award Conference (PAC) Tracker
	  o New Dashboard Tile
	    ▪ Allows plans analyst to manage PAC dates and upload briefings and other important information
	  o PAC tile metadata is populated by PPM
	  o Can export list of programs and associated PAC data displayed in the tile
	• CSDR Browse Bulk Export
	  o Ability to download up to 10,000 submission events (immediate and shorter time) in roughly 1.5 hours

Questions/Answers:	• Question: Will the PAC Tracker store PAC files collected from industry?
	  o Answer: The CADE Library has the PAC slides. In addition, general PAC briefing material can be accessed from the dashboard tile in the CADE Portal for analyst that have access to the programs
	• Question: What does your testing show in terms of download times for large file sets?
	  o Answer: Downloading 10,000 files took around 30 minutes; depends on the day but there have been H/W improvements with JSP that are showing noticeable improvements in response time

Action Items:	• None

Topic:	*DoD Cost Estimating Guide,* (OSD CAPE)
Discussion:	• Updated guide. Language does not include ‘must’ or ‘shall’ as this is not policy • Different from the updated GAO process guide (updated March 2020), which applies to the entire federal government • Guide introduces “The Snake”: a visualization to explain the iterative process of cost estimating. It mirrors GAO process but is still unique • Guide also includes a list of training resources that point to other helpful information • DoD Guide: o It is not:

	▪ policy, a replacement for existing Components' materials, a checklist/scorecard, an exhaustive guide fit for every cost estimating scenario o It is: ▪ a reference, a link between DoD policies and Components' Guides • Where can you find it on CADE? o On the CADE Portal - News Item tile: DOD COST ESTIMATING GUIDE • Version 2 (v2) efforts underway o Adding a case study o Reading list, statute and policy updates, commodity specific WBS/CES examples, info on middle tier acquisition, discussion on community tools, models, resources
Questions/Answers:	• Questions and feedback captured from live polling software • Did you know the DoD Cost Estimating Guide draft is available on the CADE Portal? o 46% yes, 54 no o Version 1 is a draft; will not functionally change but there will be some cleanup • Did you read it and find the draft useful? o 67% Not Sure, 33% Yes o We will discuss improvements, and you can send additional feedback to the email address in the previous slide • What words describe the Cost Estimating Guide? o Resource, comprehensive, overkill, policy, guide, non-authoritative, tool, handy, helpful • What topics would you like covered in v2? o Agile, additive manufacturing, big data, visualization techniques, machine learning, hours, non-SLOC software estimating, SAR/APB standard terms, autonomous systems • Any impacts from IPMDAR? o There is not much in the Cost Estimating Guide now about EVM, so adding that would be helpful o The IPMDAR is the next generation release of the IPMR; very FlexFile like. Trying to get data out of an EVM system, whereas FlexFiles get more info from accounting system o Correlating the IPMDAR to the FlexFile could be very useful and engaging
Action Items:	• None

Topic:	*Data Analytics Panel Discussion Representatives*

	Facilitator, OSD CAPE OSD CAPE ODASA-CE AFCAA MDA NAVAIR ODASA-CE
Discussion:	• Question 1 - What tools are analysts using for analysis? o ODASA-CE– Majority of work uses ACEIT with CO$TAT. Army VAMOSC (OSMIS) uses Qlik. Obviously, some use Excel o AFCAA– Making good progress in optimizing data tools. Mostly rely upon Excel; some use ACEIT and CO$TAT for regression; R can run multiple regressions and some are moving towards this. Tableau, Power BI and others also being used. Working on purchasing JMP licenses o OSD CAPE – Individual users rely upon R, Tableau, and others. As products are sent across CAPE, Excel is the program of choice. o MDA – We have a core team that validates CSDRs and use planning tools for cost estimates and design tools for matrixed people in programs. Many use ACEIT, but there is a home grown Excel VBA utility o NAVAIR – Individually, completely focused on R and self-admitted outlier. The rest of the Navy relies upon Excel, Tableau, and Qik. We build software, take actuals, build web apps and cut proposal times on less than ACAT ID contracts o ODASA-CE – Excel, CO$TAT, and other programs. Some dabbling in R, Python • Question 2 – Are analysts satisfied as well as leaders with the tools available? o MDA – MDA is very stingy with software on our IT systems, but answers are still being provided as needed. R and Python are used, but associated packages cannot be downloaded or used; analysts don't necessarily have what they need o OSD CAPE – Senior leaders appear to be satisfied, but maybe not as timely as folks would like, e.g., reason for EVAMOSC to get the data quicker o All in all, yes, across all panelists with the exception of commercial free software on government systems • Question 3 – Are we meeting the needs of decision makers? o ODASA-CE: I would never say that we are not giving them what they need. Using univariate/linear regression not appetizing but it does not mean we are not optimizing o ODASA-CE: Using accounting/costing during MS reviews. Other wider breadth use accounting systems. We are not pushing boundaries with CSDRs. SES members trained in predictive models. Tools come in handy as we push toward better data and SES expectations

	- NAVAIR: Two perspectives: Person in the building [analyst], no, not meeting needs; for the user, probably not. If the decision-makers are asking questions, we have not answered their needs. Providing self-service access [e.g., dashboards] would help them answer their questions - OSD CAPE: So the decision-makers can be their own analysts - NAVAIR: Let the analysts work on data. Keep the lower level work from the leaders - ODASA-CE: Leadership is getting what they need. Are we optimizing the life cycle costs with the best tools? Not there yet. We are looking at accounting data pulls, the entire community using older tools. COSTAT/Excel for visualization. On analyst level, we need to take advantage of tools with training, adoption - MDA: A problem with MDA is they are slow to adopt new technology. They are very stringent on software approval process, so the effort is on the backs of the analysts. Decision makers are getting what they need but it is due to nights/weekends. R, Python we have but not the packages we need. Analysts do not have what they need - OSD CAPE: We have overcome many issues but software availability is not the problem. Different people in different walks of life. Training/education might be our focus. We have a variety of ways to develop analysis. EVAMOSC will speed delivery since O&S data isn't arriving in a timely fashion • Questions 4 and 5 – Is there a demand from the normal analyst for the newer tools, and is there access to these tools? - OSD CAPE – Coding skills are required for the newer tools and not all analysts have these skills; not all analysts have an understanding of the tools and therefore, may not understand content received from one of the newer tools - ODASA-CE – There are pockets of folks with interest in these newer tools, especially the newer hires. Tried to remain simple in the R and Python tools used so as to better convince/explain results to others. Roadblock is getting the software on the network and what can be put in AWS Gov cloud - ODASA-CE – Workforce exposure is a large concern. Again, new hires are typically exposed to Python/R, but current infrastructure might not have these programs; trying to learn from these new hires - NAVAIR – NMCI is the single biggest hindrance to us. "Security first" is locking down any capability to use these tool sets. Hiring someone with these R/Python skills when competing with the likes of Google and Microsoft is challenging - MDA – Recruiting folks with skills, but not providing them the tools is limiting those that would accept the job

	- AFCAA – We have had some success with the new hires, but we are still struggling. There is an appetite for the newer tools, but the majority of analysts have not moved towards these newer tools yet. Found that if we send folks to training and then use these folks to help train others, that is showing some promise for AFCAA via Power BI specifically. Roadblocks are less for us with our leadership support, but the networks are still a hindrance - ODASA-CE - Limitations on production data through AWS Gov cloud. Limitations on updated packages - Be able to explain decision trees, ML, higher-level analysis, or even basics like multi-variable regression to decision makers. Some decision makers are open to such approached - MDA - Recruitment issues because of a lack of high-level tools. This can stifle creativity - ODASA-CE - Comments/concerns on whether decision makers can grasp emerging analysis fields like machine learning. Whether this will require more scrutiny on deliverables or more leniency - OSD CAPE - Shared thoughts on skill gap related to coding. There are those who are proficient coders and others who stick to Excel. Expressed concern about creating a code-based deliverable and having to back track and translate down to a more accessible, Excel-based product - Widespread sentiment: How do we introduce and implement newer, more powerful analysis tools without overwhelming new and old users alike? How do we attract and retain top data science talent? FlexFile Analytics Example (OSD-CAPE) - FlexFile package to manage and handle native JSON data. Ability to convert JSON data into a more familiar flat file format - Read and begin analyzing data sources of the FlexFile using R - Reading in packages - dplyr, readflexfile, costmisc - add_id_col: Reads in FlexFiles and labels if there are more than one in a file path - flatten_ff: Reads all of the JSON files together and stacks FlexFiles together

	• Calling this function will ingest the FlexFile in JSON format into R. Right now, each page of the JSON data model is a separate table, which could be helpful if you wanted to focus on one thing (e.g., just orders and lots) • Next, we use flatten FlexFile to convert these individual tables into a data frame in R. Now all the data from the FlexFile is in the same data frame • From here, you can do more advanced analysis. The “?” before a function name will pull up the R Help documentation to explain what the function does and its arguments • There is more extensive documentation on Github (https://github.com/Technomics/) for the readflexfile package, but it provides step-by-step instructions for using the package.
Questions/Answers:	• Question: Will these R packages be in the DTM Hub? o There are still some challenges with executable-type code. If CAPE, as the endorsing organization, authorizes its inclusion on the DTM Hub, we can absolutely add it. We need to work through the nuances/concerns with adding executable code first.
Action Items:	• None

Day 2 (Govt/Industry)

Attendees:	TOTAL ATTENDEES: 157 a.m.; 149 p.m. OSD CAPE, Army, DoN, Air Force, 4th Estate, Industry, Consultants, Other Govt

Topic:	*Cost Policy, Statutes and Regs Guidance,* (OSD CAPE)

Discussion:	• DoDI 5000.02 came out recently with six acquisition pathways, each with its own instruction (Urgent Capability, MTA, Major Capability, Defense Business Systems, Services, Software)
	• Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) periodically releases policy development updates
	• The DAU website has resources to explore these policies
	• Slide 7 can be used as a reference as to what sections of Title 10 are associated with cost estimating
	• Updated MIL-STD-881E for Work Breakdown Structure (WBS) released recently, with a more comprehensive update to follow
	• Updates coming soon for:
	  o DoDI5000.04-M Cost and Software Data Reporting Manual
	  o DoD Cost Estimating Guide [see above]
	  o Inflation and escalation best practice for cost analysis
	• DoDI 50000.73 Changes

	o Reflects cost estimate requirements and process for Adaptive Acquisition Framework pathways rather than ACAT ID vs. IC programs o Organization by acquisition pathway rather than by event o Detailed table with reporting requirements for CSDRs, focusing on dollar thresholds rather than official ACAT designations • Other Policy Updates: o 5000.04 coming out soon ▪ Might be possible to get a copy; comment window for formal process closes tomorrow [23 Oct 2020], but can probably send out if someone wants to review the draft ▪ Trying to clarify guidance for ACAT III/IV programs – new 5000.04-M will supersede memos exempting III/IV because reporting will be based on dollar thresholds and not ACAT level o Operating and Support Cost Estimating Guide, Cost Estimating Guidebook, Inflation and Escalation Best Practices (additional references) – not assigned DOD # so we can make updates more frequently o MIL-STD-881E ▪ More detailed Test and Evaluation (T&E) elements and Government Test and Evaluation Appendix M – a more comprehensive update (MIL-STD-881F) to follow o DFARS is being updated to better align with other policy (industry very interested in these updates) ▪ One change is rebranding Post Award Conference as CSDR Readiness Review o Back-to-Basics certification and credential program o Update to MDAP and Major System dollar thresholds for RDT&E and Procurement from 1990 to 2020 dollars
Questions/Answers:	• Question: The latest DoDI 5000.73 only references for Other Programs $100M in acquisition expenditures, but the prior guidance documents mention waivers for these ACAT levels III/IV unless they were specifically called out as pilots. Is there clarity for ACAT III/IV CSDR reporting in the DoDM 5000.04? o Answer: There will be some detail in the 5000.04, but the reporting is based on dollar values, not ACAT level
Action Items:	• None

Topic:	*Sustainment Cost Policy, Collection, Reporting,* (OSD CAPE)

Discussion:	• Updates made to Operating and Support (O&S) Cost Guide since 2014 – referenced changes to policy and guidance, as well as changes in data collection and other practices
	• O&S Cost Guide changes
	  o Guide not just for traditional MDAPs
	  o Emphasis on critical importance of product support in Acquisition and handoff to Sustainment
	  o Provide more background info on different types of maintenance and supply chain management
	  o Define CLS, ICS, PBL, IPS. Includes a glossary
	  o Guide references inflation and escalation considerations for O&S
	  o Updates to Fixed vs. Variable costs with respect to O&S cost elements
	  o Updated list of statutory provisions pertaining to O&S costs and sustainment metrics
	• Cost Element Structure and Definition Changes
	  o Removed 2.1 Operating Material
	  o Renamed 3.1 Consumable Material and Repair Costs to Consumables
	    ▪ Removed 2.1.3 Other Operating Material and placed content in 3.1 Consumables
	  o Removed 3.5 Other Maintenance and 4.5 Information Systems
	  o 5.1 Hardware Modifications
	• EVAMOSC
	  o Enterprise VAMOSC (eVAMOSC) exists because Congress wants increased visibility into costs for sustainment and wants increased transparency; EVAMOSC system is the department’s response to that need
	  o Data platform for actual O&S cost data of major weapon systems
	  o Authoritative source of O&S cost data
	  o Current VAMOSC system vs, eVAMOSC effort
	  o Part 1 of EVAMOSC
	    ▪ VAMOSC Tool
	    ▪ Consolidated VAMOSC Tool (CVT)
	      • Data Tab and visualization tool
	• Sustainment Cost Reporting Status
	  o Sustainment CSDRs have been increasing since 2012
	• Army Organic FlexFile Solution
	  o Army Material Command and CAPE have developed an enterprise FlexFile approach for reporting organic (i.e., government depot) effort
	  o FlexFile DID compliant

	o Next step is working with Navy to do something similar
Questions/Answers:	• Question from DoN Rep - How soon do you expect current VAMOSC systems to implement the CES changes? o Answer: As soon as they can • Question from Space EA Systems Rep - Was the O&S Cost Element Structure (First/Second Level) reviewed with the EVM community and industry? o Answer: This is for cost estimating. Working on MIL-STD 881F and 881D/E contained the O&S structure • Question (Poll EV) - Can you share any information related to the test and evaluation initiative? o Answer: That update is contained in the MIL-STD 881E and updating CADE training to address changes • Question (Poll EV) - Why publish the O&S guide? It is not a standardized policy and enforceable o Answer: We wanted to allow some flexibility and not mandate the process
Action Items:	• None

Topic:	*Inflation / Escalation,* (OSD CAPE)
Discussion:	• Best Practices Handbook was necessary to standardize guidance for government's 'use' of inflation/escalation • Need to define consistent, best practice for Inflation vs. Escalation o Inflation = economy-wide; escalation= commodity-specific • CAPE has a role to standardize practices for escalation so that there is consistency in cost estimates • 2020 handbook version is an update of the 2017 published handbook o Also clarifies terms – some are used in different ways, which is confusing, so trying to draw cleaner lines o Comments are due back from service cost centers tomorrow [23 Oct 2020]; will go on CADE website when finished (not sending drafts externally at this time) • There is more content in this guide highlighting the difference between obligations and expenditures • Base year does not equal constant year all the time; base year is a point of reference, not a dollar type • What's added: o New Escalation Tools

	▪ Carrot chart, Pitchfork chart, Ninja Star chart ▪ Carrot chart • Helps analyst determine their dollar input type; i.e., are dollars in constant price, constant year, or then-year dollars ▪ Pitchfork chart • Helps analyst figure out the type of output they want • All roads lead to constant price - previously normalize to “base year dollars” before moving forward; normalizing to “constant price” here does the same thing ▪ Ninja Star chart • For usual conversions, comparable to old DAU ‘X’ chart o Index Resources ▪ Inflation • GDP Price Index ▪ Escalation • DoD-published MILPAY, CIVPAY, Fuel • Producer/Consumer Price Indices • Analyst Driven o New Framework for Analyzing Escalation ▪ Quantity and Quality have to be estimated discretely (learning curves, changing mix of skills and productivity, workforce size) ▪ Pricing can be estimated discretely or via indices (maybe you have known pay rates, but maybe you don’t so you need an index) • You want to avoid using both an index and negotiated rates in the same estimate because you could be double counting • Previously – said that quantity and quality are not included in real price changes o DoD cost estimators are more likely looking at complex systems with changing quality (not like the Big Mac Index that has constant quality), so you have to estimate discretely. F-15 purchased in 2015 is probably much different than one bought in 2018, and cost estimators need to be able to account for that change

	- Base year – when you have a normalized value, what are you comparing it to? - Doesn't tell you what index you need to use to get there - Base year now is talking about a point of reference, not a dollar type - When we present final estimates and say these are in TY and CY, which TY do we use? - PITCHFORK chart – looking specifically at obligations - Depends on what you are doing; could be cases where expenditures are useful - Re-baselining is a new concept in the handbook - If you are dealing with a dollar type that has already been normalized and you are trying to do another conversion, you need to you the same index as whatever you used to baseline in the first place – otherwise, you could have index on index variation in your estimates
Questions/Answers:	• None
Action Items:	• None

Topic:	*1921-3 DID,* (OSD CAPE)
Discussion:	- Contractor Business Data Report (CBDR): Annual report at business unit level that provides rates data and facilitates overhead analysis - A new DID was created primarily to eliminate allocation issues, and because the required reporting format has changed over the past two years to contractor-specific/unique format - Format was changed to provide insight on how contractors collect costs and maintain their accounting systems - Contractor format eliminates allocation issues - Rates are the same ones used in FRPs, proposals, DCAA audits - We are "speaking the same language" with the new format; looking at the same rates - Instead of rolling labor rates up into government-defined buckets, contractor now submits via individual accounting systems - The rolled up values from contractor format should equate to the bucket value on the government format, but now we can see the FRP that was actually used for each proposal – did not have that granularity before

	• Contractor format should be less burdensome for the contractor
	  o Will also allow us to work with contractors and their accounting systems (similar to FlexFiles)
	  o Should provide additional insights
	• Direct labor rates no longer need to be molded to fit into standard government functional categories. Getting more fine level data. Multiple direct labor rate categories
	• Overhead expenses are also more detailed in the new format, particularly in reference to fringe costs
	• Overhead Base Details
	  o Contractor format allows the business to report costs and hours according to the categories in their internal accounting records
	• Overhead Expense Details
	  o The contractor format enables analysis of fringe cost growth over time
	  o Fringe costs – we can now identify how overhead is broken out (medical, retirement, etc.) and track growth over time

Questions/Answers:	• Question from TACOM Rep – Can you elaborate on the allocation more? Oshkosh does JLTV, FMTV, and FHTV systems o Answer: The business units are where the allocation is implemented. Data by program is not impacted from an allocation standpoint
Action Items:	• None

Topic:	*SRDR Implementation,* (AFCAA and OSD CAPE)

Discussion:	• The SRDRs are required, and the cost estimating community uses the data extensively to support estimates on software-intensive programs
	• SRDR Database:
	  o Currently, the Excel-based form is great for collecting data, but the analysis is different
	  o Due to formatting and the spread of WBS elements, it's not great for analysis, and we want something that is a little more "flat"
	  o Analysts want to be able to export data from the SRDR submissions in a more useable format, which is something the SRDR Working Group is looking at
	  o Right now, NAVAIR populates a large spreadsheet that includes every field on the SRDR; uploaded to the CADE library

	▪ We want to ingest that data into a new database, taking into account what has been normalized, raw, and calculated (e.g., ESLOC adjustment factors) ▪ NAVAIR expects to do this through 2024 • Been looking to revise forms – idea was to make the process of flowing data from the Excel format to an analyze-able format faster and in less manual method o Want to do real-time ETL and validation o Want to ensure we can have "dimensional" Excel exports (format that supports analysis) o Remove embedded DID references so that users don't need to remove them in order to ingest data o Also clarify which cells should contain data; layout change that make this unambiguous using indents, bolds, greyed out cells to represent groups o Add "Release Status" item, which is not technically new information – before, it was implied by the release start, and end dates. Now, it is clear that the "intent" of the data was to report on a completed release or a release in progress o Remove example text from cells o Add Release and CSCI IDs that align with the plan that help tie the two documents together • Dimensional Export Concept o An SRDR file can include multiple forms and pages (Releases and CSCIs). Flattening data into Primary Tables allows for better organized data to facilitate analysis o Primary Tables include: Metadata, Release Level Data, CSCI Level Data, Part 2 (Effort Data) o Multiple one-to-many sub-tables; gives analyst an awareness that deeper data exists, but these sub-tables aren't intended to overwhelm • All SRDR work that we do is now almost fully integrated into the cPet tool o Can create an empty SRDR template that is consistent with the plan with the IDs that are already there in your supplement. After filling in a template, you can run it back through cPet to validate it, flatten it, and convert to XML. This is available in test mode, but not available in Production yet • Also trying to integrate fully into the CSDR-SR Workflow

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The new thing here is that, when you upload files and validate, you get a CCDR validation error report and the dimensional export (this is something that you can already do with FlexFiles and 1921s)
This is all coming forward, now through February

Data & Analytics Integration – For government analysts that are consumers of the data, not submitters
The CSDR Browse function lets you search for submissions. You can see the submissions, parsed and scraped CCDR data, and soon we will add a tab for parsed and scraped SRDR data
DID Watch Items

One initial report, one final report, and anything between is an interim. Interims can tie to the start/end of releases, program milestones, or can be time based. Time based is pretty common for agile programs since the sprints may be every two to four weeks
SLOC for agile programs – agile programs must report sizing, either SLOC or agile measures depending on what is agreed to in the CWIPT
Make a consistent example across report formats for SW-specific comment elements. For example, Development (Dev) and Maintenance (Mx) break out different things. There may still be differences between what is needed for Dev and Mx, but we want to be as consistent as possible

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Question from Pratt Miller Rep. - The data the government is looking to support SRDR is more detailed than many industry partners actually collect the data. To supply this type of data will be slowing down industry and development. How does the government expect to handle higher costs to support this detailed information request?

First, agile from the government perspective is new for data collection, so we are still in the trial and error phase. If we are not collecting the right metrics, we might not know that yet. We want to hear your thoughts on what is wrong. Tell us what you do collect and how it helps you, or how it can help us. We are open to critiques to make this more useful for everyone
Second, with regards to higher costs, we do have a Cost of SRDR study going on. We are trying to see if this is really driving the cost of the whole program and to see the benefit of collecting this data versus ignoring it and not collecting it at all

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Topic:	*SRDR Agile Survey & Results,* (AFCAA)

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Background

There is a need for greater characterization beyond strict, binary ‘agile’ and ‘non-agile’ programs
Bulk of data is still in traditional, waterfall data
Agile field in the SRDR often sees inconsistent data reporting/identification
Program level rollups include a mix of agile and non-agile elements

Survey Implementation

Qualitative survey responses pair well with the quantitative data from the actual SRDRs
Month-long survey period
Two-phased approach: Phase 1 was to get initial data and feedback on the survey itself

Programs targeted are the ones that the working group members wanted data on
Presented data at IT-CAST – received a lot of support, including from DHS who supported with additional programs to target

Multiple Choice questions (to be consistent) to focus on pace of delivery, feedback, contracting strategy, and testing
Also asked for demographics and value and metrics utilization

Survey Overview

Metadata & Demographics
Assessment Questions

Pace of software delivery
Feedback, collaboration, and involvement
Contracting strategy
Testing (automation and parallel)

Value and metrics utilization understanding for shaping future data collection

Responses

Survey was open and active for a month; had about 50% response rate (16 total from AF, Army, MDA, DHS)

AIS programs all identified as being agile – AIS is the least constrained system, so maybe it is more conducive for an agile approach? Interesting result

Contracting strategy – does this allow for agile, or is that something that is a limiting factor from the beginning?

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	- Spectrum from informal agreements (requirements can always update incrementally) and requirements locked (require formal request and approval to make change) - Interestingly, one agile program reported that its contract did not allow for refinement o Another question was on testing – wanted to know how the programs would categorize its automation and parallel testing (to what extent are each being used across the program) - 75% of programs are using automated testing more than 50% of the time - Most programs are taking advantage of parallel testing capabilities o For metrics, we were curious which metrics programs collect (e.g., are they collecting to support proposals? what metrics are they collecting?) - Size metrics – we asked about SLOC, RICE, requirements, and function points. Most programs still measure SLOC, which is interesting because there has been pushback. Requirements are still more common than SLOC, though - Our only free-text question was: How does your program track and measure value? - Example answers include value was achieving milestones, getting capability out, having a robust set of metrics, Earned Value Management for development, relying on qualitative feedback (i.e., are we giving you what you need?). The main takeaway here is that this is something that is not yet standardized. I think we all know that because we are struggling with it, and the survey validated that o No programs identified as having iterative, evolutionary, or waterfall processes o 2/3 of respondents are delivering internally at a monthly cadence (or more frequently) • After going through each individual survey question, we were seeing if there are any patterns that we could see. One that we did see as a common thread was that, if you start with a flexible contract type, it is more likely to influence your agile development process. If you have that, it leads to a more frequent internal development cycle. Automated testing allows for more frequent external deployments. I think this passes the logic check for most of us

	• We did not get any feedback that indicated we were asking the wrong questions (i.e., none were prohibitive from answering, none were non-discriminators). We did get a few suggestions for future questions (e.g., formal training for personnel, asking what hierarchy programs are using to determine/prioritize epics/capabilities/features). Difficult to answer questions included automated tested and the fact that we ask the respondent to answer on the behalf of the program, which could be difficult • We are approaching Phase II of the survey, so we are trying to figure out how to move the survey forward and formalize it. Does it become a standardized survey we request after the SRDR? Do we make it part of the SRDR by modifying the DID? Do we make it an addendum?

Questions/Answers:	• Question from NFA Consultant – Do you think that it is too early to determine the impact and cost of agile development - its cost, etc. Companies are not performing this properly and what you get is a mix of actions that may or not be agile related. Do you think that to get the best data will take well over 4-5 years or more? Particularly if they are still starting the agile process. Or are we on the right track now?
	    o Answer: Over at AAP, we are very interested in this exact topic and dealing with “buying the software factory” mentality vs. Agile development consistent with a defined baseline. I tend to agree with you that it will take a while to really assess impact objectively. Especially as contracting for Agile settles
	• Question from Space EA Systems – Are people looking at hours and how that compares to sprint duration and team size?
	    o Answer: Yes, those of us who run agile programs. At AAP with things like the Agile/EVM guide, you still need some reasonable measure of size for objective costing. SLOC is a problem but still the most objective measure. For some classes of software, I really like RICE Points or those type-sizing measures. Hours is not really a measure of what is produced. It is a measure of what was spent. So two teams can deliver the same functionality with different hours
	    o Comment from NFA consultant - I think function points have a closer relationship as well vs. SLOC
	    o Agreed, depending on type of software. Unfortunately, Story Points is a team-specific measure. It is not generally comparable across teams.

Action Items:	• None