



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Meeting Date: 8-9 November, 2022

Topics: Cost Assessment/Data Collection Trends
Compliance/Red Critical Trend Over Time
DD Form 2794 CSDR Plan Change Overview
FlexFile Overview/DID Updates
Industry Panel: Latest FlexFile and QDR Implementation Changes
What's New in CADE
Data & Analytics (SAF VAULT)
DAU Back to Basics
Cost of CSDR
DFARS Updates
Sustainment Reviews
Industry Panel: Software Development & Data Collection
Validations
Cerberus Demonstration
Technical Data

Location: Virtual (WebEx)

Purpose: Discuss the latest status on a variety of cost, software, and technical reporting, data collection, and policy initiatives.

Attendees: **Total:** 376
Government: 175
Industry: 94
Support Contractor: 99
Other: 8



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Meeting Minutes

Day 1 Part 1 (Govt/Industry)

Attendees:	331 (total unique participants)
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Topic:	Opening Remarks Dr. Rick Burke, DDCA (OSD CAPE)
Discussion:	<ul style="list-style-type: none"> • Need for Data <ul style="list-style-type: none"> o Cost and Software Data Reports (CSDRs) are <i>“the life blood of cost analysis”</i> <ul style="list-style-type: none"> ▪ Reporting first began [under a different name] in “the ‘60s and ‘70s” o “Need for data is increasing and cost [of providing the data] is decreasing” o “Culture change in the Department” <ul style="list-style-type: none"> ▪ “Leadership is using cost estimates to support full funding in the Future Years Defense Program [FYDP]” o “FlexFiles are beginning to blossom” <ul style="list-style-type: none"> ▪ Started about five years ago • Emergent Challenges <ul style="list-style-type: none"> o “We need to expand our source of data given the Adaptive Acquisition Framework [AAF]” <ul style="list-style-type: none"> ▪ [Middle Tier of Acquisition (MTA) and Urgent Operational Need (UON) acquisitions, be they Service-unique or Joint] o “Sustainment Reviews for fielded systems five years after IOC [Initial Operational Capability]” <ul style="list-style-type: none"> ▪ “Particularly for Contractor Logistics Support [CLS]” • “Good News” <ul style="list-style-type: none"> o “IDA [Institute for Defense Analyses] is publishing in the next several weeks a report on acquisition outcomes prior to 2009 versus after WSARA [the Weapon Systems Acquisition Reform Act]” <ul style="list-style-type: none"> ▪ “Results are very encouraging” ▪ “A good news story for the cost community”



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Topic:	<p style="text-align: center;">Cost Assessment/Data Collection Trends Mr. Fred Janicki, SES (OSD CAPE)</p> <p><i>The DoD now has access to more data than they did five years ago, let alone a decade ago! Various CSDR policies have been implemented to capture data across more pathways, programs, contractors, reporting entities, and different types of reports. This session will detail those requirements and show the growth in reporting from year to year and where we see this going from today.</i></p>
Discussion:	<ul style="list-style-type: none"> • DoD is collecting more data <ul style="list-style-type: none"> ○ In the 2017 National Defense Authorization Act (NDAA), there was a change to the level of collection. Previously ACAT I, now any program over \$100M, increasing the volume of submissions ○ In addition to data being collected on more programs/contracts, the DoD now collects data at a more granular level with FlexFiles <ul style="list-style-type: none"> ▪ Legacy 1921 series reports were less voluminous ○ Improved/expanded software (SRDR), technical and sustainment data ○ Reporting will plateau in the future, but at a higher volume of submissions due to expanded programs, contracts, and report types • More data presents a challenge overall and has increased the workload on everyone: DCARC, program offices, other government reviewers, etc. Therefore, we need to increase staffing across all organizations to process this data • Technical data in conjunction with cost data allows a much deeper level of analysis <ul style="list-style-type: none"> ○ It requires a greater level of collaboration with systems engineering and other counterparts • All this new data is opening doors to new types of analysis • Reminder that new contracts should not be awarded with 1921 series requirements. • Growth of CSDR over time <ul style="list-style-type: none"> ○ More programs are reporting CSDRs than ever before <ul style="list-style-type: none"> ▪ Large jump following NDAA 2017 ▪ Another jump following release of 5000.73 in 2020 ○ Since the FlexFile requirement was introduced in 2019, the quantity of FlexFiles has grown rapidly ○ Each service has been growing from year to year ○ ACAT vs non-ACAT growth over time, since 2015, over 2000 to date in non-ACAT I submissions ○
Questions, Answers, and Comments:	<p>Q: Nick C (ODASA-CE) 10:21 AM</p> <p>Is there a plan to develop more automat[ed] via Artificial Intelligence (AI)/Machine Learning (ML) validation tools for the data to minimize the burden on the human in the loop as the data submission[s] are growing?</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

A: Jack Titus (DCARC)

These approaches will be considered as part of the Advanced Validations process. We have introduced ways to automate validations and data collection, *review_csd*, new CADE IT requirements, etc.

Q: Tom C (Lockheed Martin) 10:21 AM

[Are there] any concerns on technical data from a consistency perspective across contractors/platforms?

A: Fred Janicki (OSD CAPE)

There are enough core metrics with standard definitions that should manage consistency across contractors. Some level of inconsistency is unavoidable (e.g., heritage information). That is something that will continue to be improved over time.

A: CADE

Consistency is always a challenge, just as with cost data. Our goal is to find a happy medium, with enough standardization to ensure comparability across programs where appropriate but enough flexibility to enable truly unique items to be accurately represented.

Q: John D (BAE Systems) 10:22 AM

[Are there] any efforts to develop data standards?

A: Charlotte T (CADE) 10:22 AM

Yes! The Tech Data Standard can be found here: <https://cade.osd.mil/policy/techdata>

A: Jean C (AFCAA) 10:24 AM

And the tech data parameters are standardized via "Tech Vocabulary"

<https://cade.osd.mil/content/cade/files/csdr/dids/current/2%20-%20CADE%20Technical%20Vocabulary%2002032021.xlsx>

Q: Kaye L (DHA) 10:24 AM

With the establishing of the Tech Data Standards, what efforts are made to regulate [how] data submission occurs in that form? Will the system accept data submitted in a form outside of the standard?

A: Crystal R (DCARC) 10:28 AM

The technical data standards provide the list of parameters and standard definitions by commodity. There is not a standardized submission format. There is an example on the CADE public website, but today the system will accept any file type. The submission must include all of the fields as directed in the Data Item Description (DID) for the Technical Data Report (TDR).

A: Courtney Clark (CADE) 10:28 AM

We have Tech Data Standards and a data model but we are accepting Technical Data submissions that do not adhere to the Technical Data Standards with the understanding that this is a newer requirement.



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	<p>Q: John D (BAE Systems) 10:29 AM Forgive my lack of unfamiliarity with these provided standards. I was referring to data standards for a WBS. Looking at a couple of the technical templates they look like bill of materials. Missing are any verbs...</p> <p>A: Crystal R (DCARC) 10:31 AM The Technical parameters align with the WBS that is included in all of the CSDR deliverables. We typically use a WBS that is based on [MIL-STD-881]. We have CSDR Standard Plans by commodity available on the CADE public website.</p> <p>Q: Akale T (DCMA) 10:23 AM Why is the Cost of Quality Data, particularly Cost of Poor Quality, not collected as one of the important data for cost estimating?</p> <p>A: CADE These costs (literal and metaphorical) cannot possibly be part of the cost data we collect. DCARC, through the Planning and Validation processes, is focused on collecting better data. We would not purposely collect poorer data just so we could also measure the impact of doing so! See the CADE for the Contracting Community training materials for examples of where the lack of robust cost data had dire consequences: little to no basis for a multi-billion-dollar program; inability to certify a multi-year procurement (MYP) that would've saved millions of dollars; excessive contractor and subcontractor profit; etc.</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

<p>Topic:</p>	<p style="text-align: center;">Compliance/Red Critical Over Time Ms. Min-Jung Gantt (OSD CAPE), Ms. Alex Marsh (DCARC)</p> <p><i>Almost all programs with CSDR requirements receive a quarterly compliance rating from the DCARC that highlights delinquent reports and missing CSDR plans. This session will provide an overview of CSDR compliance process, rating criteria, and compliance trends. It will also provide status and inform analysts of steps they can take to ensure submission events are up-to-date in the CADE system, which may help to prevent or resolve compliance issues.</i></p>
<p>Discussion:</p>	<p>It's great that we're collecting all this data, but we need to also look at where the data is not coming in, aka compliance issues.</p> <ul style="list-style-type: none"> • DCARC completes CSDR compliance every month, and it is sent to the program office quarterly by Defense Acquisition Executive Summary (DAES) group (A, B, C). DCARC sends out compliance updates at the beginning of the month to the CWIPT, who provide updates and work to resolve any compliance issues • Reminder to make sure you are assigned to your program(s) in CADE so that DCARC knows to include you in all CWIPT communications, including compliance <ul style="list-style-type: none"> ○ DCARC relies heavily on the program office to stay updated on what's happening with the individual program • DCARC submits the compliance assessments to Defense Acquisition Visibility Environment (DAVE) monthly • Compliance ratings are, in increasing order of concern, Green, Green Advisory, Yellow, Red, and Red Critical. Rating for program is an overall rating, not by contract. One delinquent contract will affect the rating of the entire program. It is the responsibility of the program office to ensure that contractors are compliant. • Just as the overall submission count has increased, the count of delinquent submissions has also increased <ul style="list-style-type: none"> ○ Our intent is not to point fingers at any particular organization (Industry, program offices, DCARC) for this trend. Collecting this data is beneficial to all of us, and it should be a collaborative effort amongst us all to get the data reported • F-35 non-compliance is getting a lot of adverse attention from DoD leadership and a path forward is being worked on to make sure the data are collected • Some of the reasons for non-compliance are administrative in nature (e.g., a report is cancelled and the submission event is not updated accordingly in the CADE Portal). Sometimes there is confusion with schedule (contract award date slips, period of performance is extended, etc.) • All CWIPT members should be active in resolving compliance issues. Getting a CADE account is an important first step for staying in the loop <ul style="list-style-type: none"> ○ If you have a CADE account you can see this information within the delinquent reports if you are government; if you are an industry member, you can see the reports that are delinquent or behind in your submitter portal • Industry needs to stay on top of their deliverables and delinquencies and reach out with any questions or issues



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<ul style="list-style-type: none"> • Kaye L (DHA) asked whether there is a way to lessen the burden in getting a CADE account. Would it not make sense to allow DoD employees to receive one upon initiation of employment? Especially for those expected to perform such duties pertaining to CADE? <ul style="list-style-type: none"> ○ Alex M (DCARC) responded that if you have a CAC or ECA cert (as well as an NDA), it is a fairly easy process to get a CADE account. Reach out to the CADE Help Desk with any questions • CSDR Compliance over time <ul style="list-style-type: none"> ○ From the FlexFiles, we're trending up in collecting more data, and how many submissions are being delinquent or not provided (Red or Red Critical) ○ Hopeful for a plateau (and ultimate decline) in Red / Red Critical compliance ratings • Consequences for being "red"? <ul style="list-style-type: none"> ○ Milestone reviews can be impacted ○ Sustainment reviews also take into account CSDR compliance • Once your contract is definitized, hold a CSDR Readiness Review (RR) so that you can update the plan and align with the new contract to make sure it matches the correct dates <ul style="list-style-type: none"> ○ If you don't have a RR scheduled, ask your PO and DCARC analyst to help • Compliance is getting attention from DoD leadership • Common (administrative) causes for non-compliance <ul style="list-style-type: none"> ○ Contract award or other milestone dates slip ○ Period of performance is extended ○ Contract is cancelled ○ Initial SRDR assumption no long valid ○ Initial subcontractor assumption no longer valid ○ Contract was awarded with no submitter • Forward way ahead <ul style="list-style-type: none"> ○ We need your help! ○ PO, DCARC, SCCs/CAPE, and Industry are all involved in helping to update their compliance issues and be aware of what is going on with their program ○ Ensure that people on the contract have a CADE account so they are in the loop on programs
<p>Questions, Answers, and Comments:</p>	<p>Q: Rob C (AFCAA) 10:30 AM When do you forecast the 1921 report submissions will end and the FlexFiles will be the predominant form submitted?</p> <p style="padding-left: 40px;">A: Alex M (DCARC) 10:31 AM Hi Rob - We are forecasting that FlexFiles will be the predominant submission method by 2024, but we will continue to receive 1921s at least through 2028</p> <p>Q: India B (PEO M&S) 10:31 AM Where can we find the May 2019 memo on the legacy 1921?</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

A: Peter B (CADE) 10:32AM

<https://cade.osd.mil/content/cade/files/flexfile/FlexFile%20Policy%20implementation%20Memo,%20dtd%20March%202022,%202019.pdf>

A: Peter B (CADE) 10:33 AM

22 Mar 2019 is memo date, 15 May 2019 is implementation date, aka FlexFile Day!

Q: Becky W (Northrop Grumman) 10:32 AM

How difficult is it to get a CSDR requirement changed to FlexFile?

A: Jack Titus (DCARC)

Existing contracts with legacy 1921 requirements can remain as is. CSDR requirement should be FlexFiles for all new contracts. To implement this, the RFP/contract should have the appropriate CDRLs, SOW language, and CSDR plan requirements to align with the FlexFile requirements. Example CDRLs for FlexFiles can be found here:

<https://cade.osd.mil/policy/cdrl>

Q: Janet G (USN)

We need a MIL-STD [881 WBS] for training devices

A: Crystal Rudloff (CADE) 10:33 AM

We do have a CSDR Standard Plan for Training Devices!

CSDR Standard Plans can be found here <https://cade.osd.mil/policy/csd-plan>

*Training Systems is the name of the CSDR standard plan that I was referencing

C: Janet G (USN) 10:34 AM

Yes, but not in [MIL-STD] 881.

A: Crystal Rudloff (CADE) 10:34 AM

Correct. It is not in 881.

A: Steve Cox (CADE) 10:34 AM

There are plans to revise the latest 881 in the near future.

Q: Nick C (ODASA-CE) 10:41 AM

Has CAPE or A&S thought about adding CSDR compliance to the new SAR data requirements similar to the DAES reporting data element?

A: Alex Marsh (DCARC)

Sounds like a great idea! Keep in mind that compliance information is available in real time in the CADE Portal. For Government, check the compliance dashboard. For Industry, check Upload Home, and reach out to DCARC if you have any issues

Q: Brian C (PEO Ships) 10:41 AM

Are there any consequences for being "red"?

A: Alex Marsh / Jack Titus (DCARC)



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

An adverse compliance rating may impact milestone reviews. Sustainment reviews can also reflect a poor compliance rating.

Q: Nick W (IDA) 10:42 AM

If the main concern is the CSDR being late, why does the review process occur on the timescale of a month? Couldn't you have a flag that is updated every day because CSDRs are tracked in CADE?

A: Alex M (DCARC)

The Compliance Dashboard does show a real-time view of all delinquent submissions for a given program. Any government analyst with access to a program in CADE can access this information within the Compliance Dashboard.

The process wherein the DCARC alerts programs to their compliance status happens quarterly for each program to align with the required reporting cadence in DAVE. Due to the administrative burden of providing compliance notifications, it is not feasible to provide these notifications more often than quarterly at this time. However, as stated above, Program Office Analysts with a CADE account may check delinquencies for a given program at any time within the CADE Compliance Dashboard.

Q: Yoko A (Boeing) 10:44

is there a main root cause what is causing all the Red?

A: Alex M (DCARC)

There are several potential causes for compliance issues (aside from the obvious and substantive failure to submit). The DCARC is currently evaluating and analyzing the causes of non-compliance as we work to resolve Red and Red Critical delinquencies across several programs. Our early findings indicate that communication breakdowns (between Program Offices and industry, prime and subcontractors, Program Offices and the DCARC, etc.) contribute significantly to delinquencies. If CSDR requirements and necessary changes are not communicated to the DCARC, then the DCARC cannot take the actions needed to address these changes, thus resulting in delinquencies within CADE that could realistically be resolved by administrative CSDR plan changes.

Q: John T (RTX Pratt & Whitney) 10:44 AM

We find that the CSDR Plan in the proposal doesn't align with the actual definitization of the contract. Sometimes a year goes by before we get on contract. How can we get an accurate updated CSDR Plan to work off?

A: Alex M (DCARC)

Having a CSDR Readiness Review (CSDR-RR) within 60 days of your contract award is extremely helpful in ensuring that the CSDR plan aligns with the proposed solution. Often CSDR plans are made with little to no knowledge of what an offeror may propose, so the Cost Working-Group Integrated Product Team (CWIPT) relies heavily on the contractor to provide recommended updates to the CSDR plan after contract award that align with how work is being done on contract. If you need to update your



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>CSDR plan at any point throughout the execution of a contract, reach out to the Program Office (who should contact the DCARC) if you do not know your DCARC Analyst. If you do know your DCARC Analyst, you may reach out directly and include the Program Office on your communications.</p> <p>Q: Yoko A (Boeing) 10:44 AM Do the delinquent dates come [from] the CADE Portal? We've noticed many plans require date edits due to timing of contract awards. Would these outdated dates be part of the delinquent metrics?</p> <p>A: Alex M (DCARC) 10:44 AM Yes, the delinquency dates come from CADE. The items in this table are the common "administrative" reasons for delinquencies.</p> <p>Q: Jessica T (PEO CS & CSS) 10:45 AM Is part of the red % due to the complexity of current requirements? Is there [a] plan to simplify or streamline requirements to make them easier to understand, easier to review, easier to comply, etc.</p> <p>A: Alex M (DCARC) The DCARC is in early stages of analyzing the root causes of compliance issues, so we are unsure if complexity of requirements is a driver.</p> <p>Q: Nick W (IDA) 10:57 AM Is there a chart showing CSDR compliance status vs. realized cost growth?</p> <p>A: OSD CAPE No. Because it generally takes several years for cost growth to manifest, we'd have to look at some sort of a modal compliance rating over time. <i>A priori</i>, we might expect this to be a rough correlation, an indication of a complex and/or poorly managed program. A more direct relationship might entail inability to approve an MYP or effectively negotiate follow-on lots due to absence of prior Production lot data.</p>
<p>Action Items:</p>	<ul style="list-style-type: none"> • [MJ Gantt] Investigate improvements to real-time compliance visibility within the CADE Portal and whether CSDR Compliance can and should be included in the new SAR



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

<p>Topic:</p>	<p style="text-align: center;">DD Form 2794 CSDR Plan Change Overview Ms. Courtney Clark (CADE)</p> <p><i>The DD Form 2794 Cost and Software Data Reporting Plan is an effort between the Cost Assessment and Program Evaluation (CAPE), the Service Cost Centers, and the individual Program Management Offices to ensure the reporting requirements and structures are properly defined for cost, software, and technical data reporting. This session will review the DD 2794 recommended changes. These changes are intended to more accurately capture the requirements for the new cost data collection initiatives.</i></p>
<p>Discussion:</p>	<ul style="list-style-type: none"> • The DD Form 2794 Cost and Software Data Reporting (CSDR) Plan needs updates because there have been new cost data collection initiatives since the creation of the plan. It was updated in 2019 to represent the FlexFile requirement, but additional changes are being recommended based on the evolution of these requirements. <ul style="list-style-type: none"> ○ Make it clear to industry exactly what is required from them ○ Make it clear to future and current users of the data what was requested from industry • The DD Form 2794 CSDR Plan is a tool that DCARC, CAPE, PO, Service Cost Centers (SCCs) use to tell industry how to report their program based on a set of standards related to their commodity and how to report costs and what to report costs based on their WBS • Goals: <ul style="list-style-type: none"> ○ Represent new cost data collection initiatives ○ Remove ambiguity from requirements ○ Formalize cost and technical data reporting requirements • Recommended changes to the DD2794 <ul style="list-style-type: none"> ○ Metadata <ul style="list-style-type: none"> ▪ Reorder and align fields into five categories <ul style="list-style-type: none"> • Program information, contract information, plan information, government POC, reporting entity ○ Page 2 requirements <ul style="list-style-type: none"> ▪ Add a page to indicate a summary of the data reporting requirements ○ Page 3 reporting <ul style="list-style-type: none"> ▪ Reorder columns on reporting requirements to support a more logical and clear order ▪ Add SRDR and Tech data columns to remove ambiguity from form ○ Page 7 SRDR dev <ul style="list-style-type: none"> ▪ Add SRDR software specific common elements table to state which WBS elements are software specific common elements • The new Requirements page does not align perfectly with the old Events page – there are some differences • Specific updates: <ul style="list-style-type: none"> ○ Scope phase is broader because alternative acquisition pathways don't necessarily follow the same milestones as the standard



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	<ul style="list-style-type: none">○ Page 2 is the summary page that will check off the requirements for each required form on this plan○ SRDR data columns are broken out by form, in case different WBS elements apply to different SRDR reports○ SRDR Dev Software-Specific common elements (box 17) was added for clarity● If you're interested in piloting this form or offering feedback, please reach out to DCARC or to Courtney Clark● Fred Janicki (OSD CAPE) recommended a wide distribution to Industry to solicit as much feedback as possible● Demo<ul style="list-style-type: none">○ Adds acquisition information to the metadata page○ Contract information based on the section of data it's related to<ul style="list-style-type: none">▪ Contract number▪ PMP▪ Commodity type▪ Scope phase○ Plan information is grouped together○ Plan requirements additional page<ul style="list-style-type: none">▪ Summary page for the forms you are required to report▪ FlexFile vs. legacy▪ Software reporting▪ Technical data, M&R, RDT, 1921-3
<p><u>Questions, Answers, and Comments:</u></p>	<p>Q: Jodi W (Thales) 11:08 AM Isn't the new REQMTS page the same as the current Events page?</p> <p>A: Crystal R (DCARC) 11:12 AM They should align, but the Requirements should specify which CSDR deliverables are required. The Events tab will tell you which dates they should be submitted and the "as of" dates for each report.</p> <p>Q: Michael F (Midnite Dynamics) 11:09 AM How will these DD 2794 changes affect the FlexFile File Format Specification (FFS)?</p> <p>A: Crystal R (DCARC) 11:22 AM Appropriation was removed.</p> <p>Q: Robyn M (NAVAIR) 11:09 AM Is this available to use now, or coming in the future?</p> <p>A: Crystal R (DCARC) 11:18 AM It will be coming in the future. We are planning to pilot it on a program or two in the near future.</p> <p>Q: Kenneth T (BAE Systems) 11:15 AM And it will be submitted via Excel?</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

A: Crystal R (DCARC) 11:20 AM

The DD2794 will be created in Excel or can be developed in cPet.

Q: Clare M (Lockheed Martin) 11:19 AM

What value contract receives a CSDR Plan, and does this also apply to OTA?

A: Steve C (CADE) 11:21 AM

The contract values are indicated in [DoDI 5000.73](#), which also mentions applicability to OTAs.

A: Jack Titus (DCARC) 11:21 AM

A CSDR plan should be created for a contract that exceeds the \$50M threshold, and yes, this also applies to OTAs. I would also note that high risk/high technical interest efforts can have a CSDR plan for \$20M-\$50M and that MTA programs are above \$20M for the contract. These are defined in [DoDI] 5000.73.

Q: Ezequiel M (PEO C4I) 11:21 AM

Is any data being collected from government independent estimates into CADE? Are there any plans to have government produced data centralized into CADE? For instance, there is limited data available from FMS contracts.

A: Peter B (CADE) 11:23 AM

(1) Government ICEs are in the CADE Library; (2) additional government data/tools are in Data, Tools and Models (DTM) Hub, both in Data & Analytics. DCARC does collect Foreign Military Sales (FMS) data, please contact them directly for details.

Q: Yoko (Boeing) 11:21 AM

Will the metadata tab of the CDRLs follow this chronological order, too?

A: Courtney Clark (CADE)

As it currently stands, we do not plan on updating the CDRLs unless we receive major feedback requesting those be updated.

Q: Dan F (PEO GCS) 11:22 AM

After the pilot, when do you anticipate the new version will be released to the wider community?

A: Courtney Clark (CADE)

This would depend on how long the pilot takes and how many subsequent changes are requested. We can very roughly estimate end of 2023.

Q: Kaye L (DHA) 11:23 AM

Will [government] users be permitted to see the results of the pilot?

A: Courtney Clark (CADE)

Yes.

Q: Kenneth T (BAE Systems) 11:23 AM



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>That explains a lot.... I am completely lost what this is compared to the JSON file I thought you needed.</p> <p>A: Alex M (DCARC) 11:27 AM DD 2794 (CSDR Plan) is available in CADE in Excel and XML. The FlexFile (Cost and Hour Report) is one of the CSDR deliverables, and that is the CDRL that is submitted in JSON. You can submit the FlexFile as an Excel file as well, but it does needs to be filled in in such a way that the DCARC is able to convert to JSON (this means that it needs to align with the File Format Specification). cPet can help you convert Excel to JSON if you are submitting in that JSON Data Model. cPet is available as a standalone Desktop app or as a web version within CADE.</p> <p>Q: John D (BAE Systems) 11:24 AM Is there an overall concept of operations regarding the whole process, roles, execution, etc.?</p> <p>A: Andi H (DCARC) 11:26 AM Yes, there is an instructions manual to filling out the current CSDR plan on the CADE public website found here: https://cade.osd.mil/policy/dd2794</p>
Action Items:	<ul style="list-style-type: none">• [Courtney Clark (CADE)]: Share the draft DD Form 2794 CSDR Plan widely with Industry, gather comments, and pilot with Industry



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	<p style="text-align: center;">FlexFile Overview/DID Updates Mr. Fred Janicki, SES (OSD CAPE), Mr. Jack Titus (DCARC)</p> <p><i>FlexFiles have been required for 3+ years now. This brief is to show the large influx of FlexFiles CADE has received over the past couple of years and what we have learned from these reports. From what CADE/DCARC has learned, we will share Submit-Review lessons, updates we have been working on for next DID iteration, upcoming updates for other supporting documents, and what we are monitoring for future changes.</i></p>
Discussion:	<ul style="list-style-type: none"> • Fred <ul style="list-style-type: none"> ○ We are happy to provide FlexFile training to any business unit that needs it ○ We are making great progress • Jack <ul style="list-style-type: none"> ○ Communicating the submission process has been the most difficult part ○ Internal reporting entity information most difficult to validate ○ DID changes heavily reliant on industry feedback that was presented to the Cost Reporting Standards Board (CSRB) ○ On industry feedback loop, hope to have DID updates ready to approve mid to late next year • Number of contractors submitting FlexFiles has grown as number receiving waivers to use 1921s has decreased • Chart showing increased percentage of CCDRs taking the form of FlexFiles • Growth in FlexFile submissions shows the growth in contractor proficiency in using them • Lessons learned: better explanations of how to report in correct format, better resources available on CADE Public website • Hardest elements to report are Unit/Sublot and Allocations • Hardest to validate are Accounts and Functional Categories / Functional Overhead Categories • Errors received for FlexFiles are often similar to those found in Legacy • FlexFile DID update in the works, with over 150 recommendations from running list since 2017 • Overview of DID and upcoming DID updates • Looking forward to sharing validation checks in the future for submitter use • Training: <ul style="list-style-type: none"> ○ Resources available with links ○ Contact DCARC analysts for questions • Fred Janicki: when will the update draft be shared with industry? <ul style="list-style-type: none"> ○ Jack: springtime 2023 after government review of draft
Questions, Answers, and Comments:	<p>Q: Nick C (ODASA-CE) 11:34 AM Have any Government entities submitted a FlexFile, i.e., depot or software factory? If so, has there been any feedback?</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>A: Jenna Meyers (OSD CAPE) 11:40 AM From the Army, there are CSDR plans on two programs leveraging software factories but they have not submitted yet, but the plan is for FlexFiles. I believe the AF uses an alternative data format for their software factory and that data is in CADE (but not a FlexFile). For non-software, there is a depot reporting, but I'd need to check if it's a FlexFile format.</p> <p>Q: Nick C (ODASA-CE) 11:44 AM Thanks. I thought that one of the LCMC submitted a FlexFile for a DBS effort, was just wondering if/how the DCARC might have supported them and if it was challenging for them? Did not know if anyone from the Government that submitted a FlexFile could talk about it.</p> <p>A: Crystal R (DCARC) 11:43 AM Jenna is correct. The AF Software Factories report according to an alternative data format. There is a new DevSecOps CSDR Standard Plan that, once implemented, may provide a mechanism to receive a FlexFile, but none to-date.</p> <p>Q: Stan S (Midnite Dynamics) 11:44 AM As a third-party CCDR FlexFile solution provider, is it possible to get a copy of the draft in advance of its formal release?</p> <p>A: Peter B (CADE) 11:46 AM It is available at https://cade.osd.mil/policy/flexfile-quantity</p>
Action Items:	<ul style="list-style-type: none">• [Jack Titus (DCARC)] Share FlexFile draft update with Industry for comment (<i>after</i> initial Government Review)



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<p>Topic:</p>	<p style="text-align: center;">Industry Panel: Discussion on Latest FlexFile and Quantity Data Report Implementation Changes</p> <p style="text-align: center;">Government Panelists: Ms. Jean Cohen (AFCAA), Ms. Jenna Meyers (CAPE), Ms. Shevonne Stanley (NAVAIR), Ms. Allison Hawkins (ODASA-CE)</p> <p style="text-align: center;">Industry Panelists: Mr. Sam Sandsness (BAE), Ms. Yoko Alfaro (Boeing), Ms. Rachel Barsch (Lockheed Martin), Ms. Bree Stevison (Northrop Grumman), and Ms. Shelby Haugarth (Raytheon)</p> <p style="text-align: center;">Moderator: Mr. Jack Titus (DCARC)</p> <p><i>Government and industry panel to discuss current state of FlexFiles for creation, review, quality, and lessons learned. Then the panel will shift focus and discuss the ongoing updates to the DID and how some of these desired updates work into the processes of both parties for CSDR creation and use.</i></p>
<p>Discussion:</p>	<p><i>Started with Welcome from DCARC (Jack Titus). Jack then introduced each of the panelists, reading each of their bios for who they are, what they support in the CSDR process, and specific programs they do so for. Finally, Jack laid out the structure of the panel as a two-part discussion: 1) Current status of FlexFiles and 2) Discuss the possible changes to the FlexFile DID and requirements to receive industry feedback.</i></p> <p>1. FlexFile Data and Processing (Industry/Govt)</p> <p style="padding-left: 20px;">1. How long does a FlexFile take to produce/validate?</p> <ol style="list-style-type: none"> 1. Boeing (YA): To produce a file it takes ~40 hours for Initial and ~ 60 hours for interim. These estimates do not include WBS Dictionary effort. 2. Raytheon (SH): In talking with analysts and seeing it first hand, it typically takes anywhere from 20 to 80 hours to complete a CSDR from start to finish. This includes everyone’s time that is involved (PMs, CAMs, FA, IPTs) and it could easily take longer for a first-time submission. 3. NG (BS): Approximately 24 hours for first submission and clearing all the validation errors. NGP has over 7,000 work packages and even very small nomenclature anomalies can cause hundreds of errors (i.e., an extra space in the title of the work package, numbers not being formatted as text, etc.) 4. DCARC (JT): Has this metric decreased overtime? [Answer can be just yes/no if you would like]. Can you share with others how you have done this? <ol style="list-style-type: none"> 1. Receive responses then mention cost of CSDR study metric of ~36 avg from our response. Key up Matt and Crystal presentation for tomorrow. Thank Yoko and Shelby and also note that Yoko has great Webinar from Dec. 2021 as she walked through her FlexFile process. 5. DCARC (JT): Now let’s jump to govt to see how validation has been going 6. NAVAIR (SS): NAVAIR (SS): FlexFiles have been required and coming in the last 3+ years but, like industry, NAVAIR is still learning/adjusting to these reports coming in. We have been working to create a more fluid validation process by setting up a working group where goal is to become



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

familiar and work through the master checklist of to increase efficiency in our review.

7. AFCAA (JC): Talk to validation process and use of PowerBI (noted that she can demo to others as well).

2. What are common issues or questions brought up during *creation/review* of the FlexFile?

1. NG (BS): There is confusion within the different Sectors of the company about what is the Source of Truth for the Actuals (Part 2). My last program used the EV System (Cobra) for both Actuals and FAC, but my current program uses ERP for actuals and Cobra for FAC. Using SAP makes it a lot more difficult as there are over 200 Functional Categories to map. Overtime comes in as ODC yet we map it to the Direct Labor Category to which it was charged, IWOs are required to be coded as Direct Materials, yet they come in with hours which needs to be explained. Last submission had over 40 rows of explanations needed in the WBS elements remarks, most of which were redundant and repeated throughout the WBS structure.
2. Raytheon (SH): Many times, analysts will see the requirement for the first time and have no idea what it is, or where to start, how long it will take. I direct them first to pull the DD2794 Plan out of CADE if it has been created in XLS and XML formats and review it. Ideally, they would know about the requirement before the creation of the DD2794 Plan and the program would be involved in the CSDR Readiness Review. I point them to CADE, to the DIDs, Implementation Guide, CSDR Manual. Common issues: Define Unit/Sublots – what is it, what are they looking for. Same with orders/lots and Quantities if they have the QDR requirement.
3. Boeing (YA): Order/Lot, End Item and proper WBS Element levels to use.
4. NAVAIR (SS): Some of the questions that I receive are more from industry requesting training or assistance on understanding the FlexFile. Typically, I point them to the resources on the CADE public site and online training but have found that the in-person training has been best. However, the goal for NAVAIR and DCARC through the DID update process is to make the requirement clear from the provided documentation in the reports.
5. DCARC (JT): Great points! DoD 5000.04 states that CSDR plan should be approved prior to RFP release so contractor is aware of requirement (see 5000.73 so you know when required govt analysts!). Thank you for pointing to resources and again agree that having a CSDR-RR will help solidify plan and clarify those areas as they should be discussed.

3. Have you noticed greater *reporting efficiency/data quality* with FlexFiles?

1. AFCAA (JC): Increased data quality. From submission to submission have seen less time to produce and also data itself is lower level for analysis.
2. Boeing (YA): Yes, on two main points. 1) Boeing Standardization for all submissions and 2) analyzing the data for remarks helps us clearly see drivers of anomalies which can help us address root cause issues i.e.,



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Customer direction for CLIN moves. Maybe planning earlier in the future with increased communication can help reduce cost transfers.

3. Raytheon (SH): I do see that it provides better quality of data. However, it provides a deeper look into the financials and how everything is broken out within the financial system which has led to longer processing time than legacy reports.

2. Proposed FlexFile DID Changes

1. While working proposed changes we have come across needs to update the FlexFile Data model. Thoughts on changes to:

1. Dictionary: Addition of "Change" column to indicate Order/Lot or End Item differences

1. Boeing (YA): For CSDR plans with many Order/Lots or End Items, this may be a big challenge. I see the value with Order/Lot, but again, if the plan has too many, especially with many at very low dollar values, this can be very tedious and time consuming.
2. DCARC (JT): Intent to capture specific detail to these fields as not always seen from received.
3. ODASA (AH): Change is X if yes, then definition details that

2. Forecast At Completion update to include End Item

1. Boeing (YA): We can support Order/Lot and End Item in the FAC.
2. DCARC (JT): Receive Quantity Data by End Item so intent would be to link the cost and quantities to be at same level. Anyone on the panel want to share?

3. Quantity Data Report: Integration into the FlexFile Data Model

1. **Addition of End Item to the Quantity to Date (with allowable null inputs for WIP)**
2. Boeing (YA): It's still not clear what we are to count in the QDR. Need better definitions so it is clear if it is the number of WBS Element systems i.e., Fuel System or is it component parts that make up the Fuel System or detailed parts? If it's at the Macro level i.e., number of Fuel Systems on the A/C, it's ok to have the QDR integrated with the Flex File Data Model.
3. LM (RB): Hard for FMS integration efforts and especially sustainment and development. Need updated definitions. Like idea of combining.
4. NAVAIR (SS): Talk to how QDR data model already created and if worked into FlexFile it would be similar reporting as we received with 1921s where dollars and units were in one report.
5. DCARC (JT): With updated definitions for these fields, do panelist see any issue with combining the now separate reports, into one?

4. FACs reported at lowest level elements (similar to ATDs)

1. Boeing (YA): this is Boeing's standard approach. We manage the FAC within each account (control account) we establish. So, we



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

are able to report both the ATD and FAC at the proper child WBS Element. Summarizing the FAC is actually more effort for us.

2. NAVAIR (SS): This is good to hear. More question to industry and other panelists if this would cause issue with reporting and if/how it would impact if EVM system.

2. The FlexFile has needed updates to the definition of fields for intended reporting and understanding. Thoughts on:

1. Report Cycle definitions in current standard plans included in DID (i.e., initial as of award, interim/final is exercised)

1. DCARC (JT): Explain and bring up definitions. Would override the Implementation guide definitions.
2. CAPE (JM): Explain intended use of initial report in this manner.
3. Boeing (YA): Boeing still faces the limitations with the definition of the "Initial" submission. They include:
 1. Estimates/negotiations are typically worked at a summary WBS level i.e., level 3 due to USG proposal deadlines and use of parametric.
 2. Various proposals are at a ROM level containing no WBS information.
 3. As the above are more common, than not, the baseline implementation timeframe is used to determine the proper WBS breakdown.
 4. If the initial submission stays as spelled out below with a 60-day turnaround, the baseline implementation timeframe will be used now to determine the full proposal (Exercised and Un-Exercised CLINs/Options) WBS breakdown causing delays to the internal baseline implementation for the exercised CLINs/Options
4. Boeing (YA): Ideas to make it work:
 1. Boeing can submit the Initial "As Proposed/Negotiated" i.e., if Level 3 WBS was provided, then Level 3 WBS will be reported, no lower.
 2. Some estimating details contain a mix bag of levels 1, 2 and 3. Again, the estimated WBS will be reported "As Proposed/Negotiated".
 3. Internally, Boeing Leaders will need to determine if the Estimating team should be responsible for the initial submission versus the Finance team.
 4. The Estimating team typically is not responsible for CDRL completions and submissions so there will be a big learning curve here.
5. Raytheon (SS): Regarding the As of Date being at contract award for initial submission: This would be a major change. This would require submitting the proposal FAC rather than contractual data



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

based on an assumed scope which may or may not align with the authorized contractual scope. Programs are typically struggling to get the initial CSDR submission done on time as it is with the current as of dates and due dates. Pulling that forward would essentially cause programs to be at a higher risk of being late on the initial submissions. Getting the proposal data into the financial system would essentially be the same process as baselining. This would cause the program to essentially baseline twice and increase cost to the program.

6. LM (RB): Would require BOEs from initial award for contract implemented into report. Could be challenge as it is a different system for Aero but have all information to do so if POs accept may take work
7. DCARC (JT): Thank you all for the feedback on initial. I also wanted to get feedback on final report requirement as well.
8. BAE (SS): Final CSDR deliverable due dates often fall outside the period of performance. We might have an as-of date for the final deliverable close to or at the end of the POP, then the delivery date for the CSDR would be outside the POP.

2. Account, CLIN, Functional Category, Order/Lot, Fee, Contract Price, and End Item are all be updated. What has been most troublesome to plan/report?

1. LM (RB): Inconsistent of applications for certain programs. For LM it has been time phasing. Some initial FlexFiles didn't require time phasing per CWIPT instruction. However, now it's on all plans as requirement. Can make update but would want to talk value add at the CSDR-RR.
2. Boeing (YA): The one that has been most troublesome during the CSDR Planning phase due to limited knowledge is the End Item. There seems to be a misunderstanding or assumptions of what this is and we have to work through that during the proposal phase.
3. NG (BS): Summary cost data is always confusing because I try to tie back to the Format 1 but since we are using ERP for actuals, it doesn't take into account Estimated Actuals and therefore does not tie to what we are reporting to the customer exactly.
4. DCARC (JT): Thank you! I would note time phasing is currently expected on all FlexFile submissions. Provides value add for costs overtime. End Item definitions are being update to account for this so it is clear upon initial creation. Summary Cost data definitions are being greater defined as well as the relationship for similar fields throughout the different parts or sections of FlexFile.

3. Other Changes



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>1. Reporting requirements for Contractor Formatted FlexFile submissions (i.e. DCARC meeting or field mapping)</p> <ol style="list-style-type: none"> 1. LM (RB): LM reports to different FAR codes and categories of cost. Looking back to F-22 days we needed a de-coder ring. If template was on CADE website this could be completed, then need to have it pre-approved. 2. ODASA (AH): Have received a contractor formatted FlexFiles from newer industry members to CSDRs. Have found it an easy pathway to provide CSDRs but have seen nonrecurring effort and time to get to a final product. Believe this DID update will aid in the process of converting CTR formatted FlexFiles into JSON for more efficient validations and reviews. <p>2. Direct Reporting Subcontractor and Inter Company Work Orders (IWO) shift to Standard Category (Tier 1)</p> <ol style="list-style-type: none"> 1. DCARC (JT): Clarify need to easily identify Direct Reporting Subs and it would not impact those who submit Tier 2. 2. BAE (SS): Share experience working with Subcontractors / being a subcontractor (direct reporting subcontractor). Makes sense for Tier 1. 3. LM (RB): Would government want to split out Tier 1 materials to Direct Materials AND Direct Reporting Subcontractors? If intent could be done. IWOs would be greater challenge. <p>3. Expansion of Unit Reporting to report more than just touch labor (when available)</p> <ol style="list-style-type: none"> 1. DCARC (JT): The old DID did not allow for anything outside of touch. We had entities who could for certain efforts (think retrofit) and were instructed not to. 2. Boeing (YA): Utilize the Allocation Methodologies in most cases 3. LM (RB): Track at the FAR level so anything more than touch would not be applicable.
<p><u>Questions, Answers, and Comments:</u></p>	<p>Q: Emily B (NAVAIR) 11:55 AM Why do you think it takes longer to submit an interim vs. an initial?</p> <p>A: Yoko A (Boeing) The Interim takes longer than the initial because it has to be compared to the previous, initial, or prior year's submission. This comparison is not applicable in the initial. When comparing to the prior submission, getting the data formatted in a way to ensure nothing goofy has changed historically gets a little tricky as each line has many dimensions, i.e., Order/Lot, End Item, WBS, Rec/NR, Standard Category ID, Time Phasing, etc. My approach has been to concatenate all these columns to create a unique record per line in the Prior and Current. Then I can align side by side and see where new lines exist, old lines disappeared, or values have changed. Currently, this effort feels like a lot of heavy lifting. I'm sure once I work a few more, it'll get better,</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

and we'll figure out how to make it more automated. Either way, the comparison to prior submission by default incorporates more time in completing vs. the initial.

Q: Jenna Meyers (OSD CAPE) 11:56 AM

Is that number of hours affected if you are reporting EVM on the contract or is it regardless and just based on the accounting system setup?

A: Yoko A (Boeing)

The number of hours is regardless of [whether] EVM [is required via] DFARS [clause]. It's based on System Setup/Prep, downloading reports, validating, housecleaning for standard category ID, and then Analysis. The Analysis piece is the biggest piece of the number of hours to complete. Looking for the anomalies listed in the Implementation Guide, i.e., Negative Hours and or \$\$s in ATD and or FAC; ATD>FAC at any level of [the WBS]; FAC with no ATD; etc. Our process is well established now with good automation in place to flush these conditions out, but it still takes time to review and absorb and most of all determine which ones need investigation for a solid Remark. During this process we assess anomalies that are nickel [and] dime stuff and can be explained with a blanket statement in the Summary Remarks tab vs. others that may affect numerous WBS elements due to one big action such as a Contract Mod, Customer Direction, or Cost Transfers that may be explained with a blanket statement in the Summary Remarks tab vs. those that are unique by WBS and should be explained in the WBS elements Remarks tab.

Q: Jodi W (Thales) 11:57 AM

Could the panelist repeat what software she uses to help with FlexFile creation?

A: Peter B (CADE) 11:59 AM

C*CERT

A: Peter B (CADE) 11:59 AM

OSD CAPE / CADE / DCARC does not endorse any particular 3rd party tool

Q: Michael F (Midnite Dynamics) 12:09 PM

Very confusing...CADE does not support any specific 3rd party tool, yet it apparently supports open-source solutions?

A: Peter B (CADE) 12:11 PM

Two different issues: (1) tools Industry uses to put together their submissions; (2) tools Government uses to analyze the data. Re #2, I was referring to approaches like Jean and Hannah's. Re #1, DCARC is delighted with any tool – corporate, government, third party, or open source – that helps industry to submit timely and complete FlexFiles and other CSDRs!

Q: Kaye L (DHA) 11:58 AM

If formatting tool has been created, would it not be advantageous to share for others to use to help ease the process for all?



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

A: Peter B (CADE) 12:01 PM

Various organizations are looking at open-source tools. Sign up for our CADE 301 pilot!

Q: Kaye L (DHA) 12:08 PM

Open Source is fine, but what system checks are in place to ensure the use of such is cyber secure? And once determined, would that be the tool of note per CADE?

A: CADE

cPet is the only CADE-provided tool at this time outside of the CADE Portal itself. Various government organizations (including OSD CAPE) endorse various tools, and they can be found in the DTM Hub within Data & Analytics.

Q: Michelle B (DCAA) 11:59 AM

Are FlexFiles updated or adjusted to account for mergers and/or accounting changes? If not, how do we ensure consistency in reporting?

A: DCARC

Yes, DCARC has run into instances of mergers for Raytheon (with Rockwell Collins), Lockheed Martin (with Sikorsky), Leidos (with Dynetics Technical Solutions and smaller subsidiaries), and others. There was not a requirement to re-map the actuals provided previously but the action was to include both previous accounts and include the new accounts and map those to the same WBS elements on the CSDR plan. Then all future submissions would be in accordance with the newer accounting system. No analysis has been done on the different structures of lower-level accounts but there is consistency on collection of costs at WBS and standard functional category level.

Q: Ken F (Sandia National Laboratory) 12:01 PM

Department of Energy (DOE) is moving to the JSON format also; do you think you will ever team with DOE to get on a common format?

A: DCARC

Yes, DCARC has worked with different DOE groups, specifically Sandia, on programs such as ICBM and USNDS. There was discussion about utilizing the contractor formatted FlexFile submission type as a way to submit native data that meets the requirements as the FlexFile. However, if Sandia is anticipating JSON then the mapping is being done internally. This DoD process will not be similar to some of the other DOE processes where data is received from native database and then mapped into VEGA database. The DoD process of CSDRs requires a different level of standardization for industry and government reporting.

Q: Kaye L (DHA) 12:09 PM

If there is a chance to see the use of the 4-hour automation tool as government (CIV), even if amended, would be great.

A: DCARC



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

I believe by “automation tool” you are referencing the PowerBI tool that AFCAA uses for validation. For more information, government analysts should reach out to Jannette (Jean) Cohen for the Power BI Template for CSDR FlexFile and TDR review assistance.

Q: Robert R (AFLCMC) 12:14 PM

As more software dominant programs go to Agile development, the line between development and sustainment gets harder to track since it's often the same people doing both and they may even impact the same lines of code simultaneously so that there's only a single code baseline that is being adjusted. Does a Dev and MX distinction still make sense in those cases?

A: Alex M (DCARC) 12:17 PM

The CWIPT (Cost Working-Group Integrated Product Team) that develops the CSDR plan can discuss the software scope and what reporting format is most appropriate. In some cases, the distinction is not significant so we will recommend one format over the other. It just depends on the specifics of the effort! Each software program is a little different, so planning requires good conversation between all stakeholders. Also - we have an SRDR Panel on the docket tomorrow at 11:15.

Q: Christine C (Bell) 12:15 PM

Would quantities ever be headcount or equivalent headcount? Where is the definition of the quantity provided? Only in the remarks of the contract plan?

A: DCARC

Definitions for quantity would be in the Data Item Description (DID) of the Quantity Data Report (QDR). Often times quantities are intended to capture the amount of units for a hardware element. However, it is understood that there are sustainment like efforts or elements that would require a quantity. The current definition does not account for this detail but [the] update to the DID does account for this specifically. There are custom additions and also language similar to the Sustainment Standard Plan Remark. To answer the initial question, yes, there are instances where headcount would be a measure of quantity for certain elements.

C: Carlos Z (AFCAA) 12:23 PM

As future/interim reports are submitted, we would expect to see FlexFile Remarks utilized to help tell the story of the contract scope evolution (added scope, descope, etc.).

C: Jean C (AFCAA) 12:32 PM

To pile on to Carlos Z's comment...yes, please utilize the remarks section, in all three reports. It helps cut down on [our] sending a report back with comments to DCARC if we already understand anomalies within a given report. Remark Remark Remark!

Q: Peter B (CADE) 12:23 PM

Rachel Barsch, shouldn't FlexFile's inclusion of CLINs help with aligning scope between Initial and Final?



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>A: Rachel Barsch (Lockheed Martin Aeronautics) 12:25 PM CLIN level detail will help, but if there is a Termination for Convenience, Scope added (Debit Credit, Request for Equitable Adjustment, etc.) it might not correlate one to one.</p>
Action Items:	



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Day 1 Part 2 (Govt only)

Attendees:	TOTAL ATTENDEES: 160
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Topic:	<p style="text-align: center;">What's New in CADE? Ms. Courtney Clark, Mr. Peter Shmorhun (CADE)</p> <p><i>The Cost Assessment Data Enterprise (CADE) is an Office of the Secretary of Defense Cost Assessment and Program Evaluation (OSD CAPE) initiative to increase analyst productivity and effectiveness for government analysts by collecting, organizing and displaying data in a single integrated web-based application, improving data quality, reporting compliance and source data transparency. This session will cover new CADE features and capabilities since the last Focus Group, including CCDR Data Export, the FlexFile Multi-File export, and the SRDR Data Export.</i></p>
Discussion:	<ul style="list-style-type: none"> • CADE <ul style="list-style-type: none"> ○ Bulk exports designed with intentionality to be as intuitive as possible ○ Cost and Hour Data <ul style="list-style-type: none"> • Great to look at singular contracts, however bulk export with formatting is more important for entire system / PoP analysis • CADE metadata is included with all exports <ul style="list-style-type: none"> ▪ Level of normalization occurs with all metadata, i.e., if you want to align all Boeing files, the metadata is already normalized/prepared for you so that you can look at the subset of data prepared • Main goal <ul style="list-style-type: none"> ○ What do these exports do and how are they designed • CCDR Export <ul style="list-style-type: none"> ○ Background <ul style="list-style-type: none"> • Flattened export has been available for a while, however there were limitations dependent on what extension/application was used • Implementation and feedback provided great opportunity to make flattened CCDR more friendly • CCDR export - encompasses <i>all</i> CCDR data (Legacy and FlexFile) and provides a transparent, consistent and usable base ○ Export <ul style="list-style-type: none"> • Faster to render ○ Cost Data Summary - 1921 ○ Functional Cost Hour Tab 1921-1/-5 ○ FCH 2003 Detail - Reporting Contractor/ Sub Total breakout and clearly identified ○ Unit Cost Tab - Quantity values exported with traceability ○ FlexFile, Quantity Report Data - Interleaved with legacy data. <ul style="list-style-type: none"> • Benefits: takes FlexFile data and rolls up from lower levels ○ Additional Notes <ul style="list-style-type: none"> • Over course of year, extensive QA has been done to ensure native files are rendering; continue to QA to ensure accuracy of exports • Bulk FlexFile Export <ul style="list-style-type: none"> ○ Released August 2022 as a prototype



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Created to see how users would use it in bulk as well as help CADE define the requirements moving forward
- Includes all actual-to-date dollar values in FlexFile with CADE metadata
- FlexFile is originally at contractor accounting level
- Taken the data, put it into csv files to look across all FlexFiles
- Bulk pivot - FlexFile, but individual CSV for a FlexFile submission and intentionally done
- Recommendation is to use a data science tool, as Excel could be limiting with respect to rendering
- Benefits
 - Contains all FlexFile actuals to date, and lives within export
 - System metadata - if you're interested in a specific program and wanted to look at CCDR/SRDR export vs. Pivot, the capability is there. User can look at there to compare across reports and has been done with different exports. Also looking for other ways to connect with judgment but useful with CADE system metadata
- Note - zipped file with multiple CSVs containing multiple FlexFiles
 - Forecasts At Completion (FACs) are not included in export as the actual data is at a much lower level. Crossover exists if you choose to look in that manner
 - Allocations - already applied to actuals, can look at native FlexFile for how they're applied
- SRDR dimensional export
 - All forms are updated to be XML/Excel-machine readable (DD Form 3026 series)
 - Forms are officially approved and available
 - Implemented IT changes
 - cPet Desktop, Web and CSDR Submit-Review updated, too
 - Create SRDR supplements
 - Generate forms for industry
 - Validate industry-prepared SRDR forms
 - Ingest industry-submitted SRDR forms
 - CADE team working to migrate all SRDRs in a non-machine-readable format to machine-readable
 - Availability - 179 Dev, 83 MX, 37 ERPs migrated
 - Have been making sure data are captured
 - Sample
 - Only available on 3026 forms, legacy SRDR does not include this export
 - Looking for legacy exports?
 - Flattened version of NAVAIR database
 - DTMHub availability
 - Update in September 2022 - dimensional export added in Part 2 time-phased data
 - Reporting period ID is index column
 - Mapping will need to be used by dates and not reporting period index columns
- Added
 - Moving towards bigger data
 - Think about utilizing older requirements with newer requirements to see how we can mix the two



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Questions, Answers, and Comments:	<p>Q: Anita W (USSF) 1:39 PM Do my cost personnel need any special software in order to fully utilize CADE? Cost of software?</p> <p>A: Alex M (DCARC): No additional software is required to fully utilize CADE.</p> <p>For report authors and submitters, the CADE Portal contains cPet Web, which can convert files to XML and JSON to align with DID requirements. cPet Desktop can also be downloaded from the CADE Portal, which contains additional beneficial functionality (such as the ability to generate reporting templates that align with a CSDR plan). cPet Desktop is not required, but it can be helpful. It is a free tool. Some industry partners may use additional software at additional costs to assist with preparing reports, but this is not a requirement.</p>
Action Items:	None



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	<p style="text-align: center;">Data & Analytics (SAF VAULT) Ms. Sarah Green (AFCAA)</p> <p><i>AFCAA is leveraging a Cloud-based platform (VAULT) and state of the art toolsets in order to increase process automation and build predictive models with the end goal of significantly increasing both the quality and efficiency of our data analytics. This presentation will include a live demonstration of some of the AFCAA products developed within the VAULT in order to transform manual processes into end-to-end streamlined analytics.</i></p>
Discussion:	<ul style="list-style-type: none"> - Why analytics? <ul style="list-style-type: none"> o More data available than ever before; not only has number of submissions doubled, but the FlexFile requirements have increased o Nature of data is very different, expecting quantity and complexity to increase more and more - Ask yourself - what are your processes/toolsets/skillsets today? How have those evolved over time? <ul style="list-style-type: none"> o If data's more than doubling, what is your organization doing with that? - VAULT - Air Force Cloud-based platform <ul style="list-style-type: none"> o Tenant space <ul style="list-style-type: none"> • Dedicated storage and computing section of VAULT that only AFCAA can access • Opportunity for automation, collaboration, centralization - Legacy vs. VAULT <ul style="list-style-type: none"> o Data Science programmers are limited with respect to resources on government side <ul style="list-style-type: none"> • VAULT can actually utilize data science skills that Python and R can provide with little to no code required on the part of the end user - Visualization <ul style="list-style-type: none"> o Tie EVM, Contracts, and CSDR data for one commodity o Dataiku <ul style="list-style-type: none"> • One tool available in VAULT - can actually form analysis and modeling and tie back to data - Demo – walk through how to use the VAULT <ul style="list-style-type: none"> o Yellow = visual recipes o Green = predictions such as least-squares regression o Step 1 - uploading data to tool (AFCAA tenant space) <ul style="list-style-type: none"> • Bulk download of relational dataset (FACADE example for demo purposes) • Two tables - metadata, cost summary data <ul style="list-style-type: none"> ▪ Cost Summary <ul style="list-style-type: none"> • What are the values here, can see what different types of contractors there are / account and records contractors are to see exploration o Step 2 - join metadata and cost-summary tables <ul style="list-style-type: none"> • Highlight two, join two and create "recipe" <ul style="list-style-type: none"> ▪ Joins two column names via left_join • AC Qty has red - see what is not abiding by things here <ul style="list-style-type: none"> ▪ Full quantities (seeing decimals/fractions) can clean to decimals



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<ul style="list-style-type: none"> <ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ Internal/external quantities (1.0/1.0), won't recognize it and will need to clean it via script delimiter ○ Scripts can be saved, and applied across many datasets for other analysts to utilize to ensure steps don't need to be recreated - VAULT does not require a license, requires GFE laptop however, not for contractors <ul style="list-style-type: none"> ○ Support contracts - government agency needs to set that up - Cost does not total too much, try-before-you-buy options available for analysts - Data is very different from what we have received over the years - Valuable for CADE to collect and validate the data, can't do anything without it - VAULT is an AF cloud platform <ul style="list-style-type: none"> ○ Clusters of computers to work with larger datasets - Use of Tableau and Dataiku (end-to-end data science platform) - VAULT will also call out inputs that cannot be read in for analysis - Power of this is with changing inputs we can then feed the new data and re-run flow. All same steps applied to data set - Adding in prepare recipe <ul style="list-style-type: none"> ○ Has functions that can be used ○ Script/automated steps with functions during that flow - Any new data you have can apply those same steps can then go beyond that - Use CSDR data, join the data, then steps to clean with recipe <ul style="list-style-type: none"> ○ Clean can also be normalize or map data ○ Can package up entire flow and turn into an application - Say you want to build CER for the data, filter out just select datapoint <ul style="list-style-type: none"> ○ Tied to raw data so when you get data upload ○ Powerful capabilities for analysis ○ Don't normally have enough data for decision trees or neural networks but as we get more then they will start being an option for us ○ Trying to predict T1 costs on weight <ul style="list-style-type: none"> ▪ Development or payload ▪ Can treat as categorical variable - How this works as cost model, same info you would plug into CER <ul style="list-style-type: none"> ○ Identify cost drivers in CER ○ Score (trophy) the prediction - Out of the box that is available for NLP tools - Can customize for the cost community
<p><u>Questions, Answers, and Comments:</u></p>	<p>Q: Daniel A (USN) 1:49 PM Does VAULT require a license?</p> <p>A: Sarah Green (AFCAA) Organizations can contact Sarah Green. VAULT does not require a license for an account, but you do need a CAC and government-furnished equipment (GFE), e.g., a laptop. Setting up a tenant space costs money for the storage, but it's only about</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

\$6K/year. Within the VAULT, tools can be chosen à la carte, with associated fees. AFCAA pays for Dataiku and Tableau. Based on your business case, it's well worth it.

Q: Nick C (ODASA-CE) 1:49 PM

How does a non-AFCAA analyst obtain access to VAULT.

A: Sarah Green (AFCAA)

With CAC and GFE, a government analyst can get initial access to the VAULT. You won't see anything until you set up a tenant space. Only then can you upload (proprietary) data. Go to the help desk tab to request space from the site. There is a 60-day free trial. Can share lessons learned and pilots with other organizations.

Q: Daniel A (USN) 2:09 PM

What is the mechanism for an analyst to input raw data?

A: Sarah Green (AFCAA)

TBD

Q: Kaye L (DHA) 2:13 PM

With the cost of the license, how much storage is allowed?

A: Sarah Green (AFCAA)

It varies. See above.

Q: Kaye L (DHA) 2:14 PM

How long does it take for government to receive the access?

A: Sarah Green (AFCAA)

It varies.

Q: Wallace R (DCMA) 2:14 PM

Who takes action on the data results? Let's say you know one WBS is a large cost driver ... then what? Where does the information go and what actions take place? Is the data passed down to the engineers at a program office?

A: Sarah Green (AFCAA) 2:18 PM

The results of the analysis in this specific example would be used in our cost and schedule estimates (POEs, NACAs, ICEs, etc) - but these are data science tools not specific to cost estimating so there are tons of other applications!

Q: Daniel A (USN) 2:16 PM

Are all the tools COTS, or are any developed by the USAF specifically for this application?

A: Sarah Green (AFCAA) 2:19 PM

The VAULT has only COTS tools available so none of them are specific to cost estimating however many of them support custom applications that can be built out on top of the COTS tool which is what we're working on at the moment

Q: Kaye L (DHA) 2:16 PM

Is there some non-proprietary information that we can see to assess the tool?



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>A: Sarah Green (AFCAA) 2:22 PM You can request a tenant space and trial licenses for the tools for your organization and then use non-proprietary data to assess the tool such as FACADE [Cerberus] data or other.</p> <p>Q: Wallace R (DCMA) 2:21 PM So, do you use the DCMA Earned Value team reports as a double check on the results?</p> <p>A: Sarah Green (AFCAA) 2:23 PM Yes, we also use EVM-CR data for analysis in the VAULT as well as other data sources. I focused primarily on CSDR data because of the forum.</p> <p>Q: Kaye L (DHA) 2:23 PM Ok. Thank you. Perchance are there any functional example files to walk through all tool processes?</p> <p>A: Sarah Green (AFCAA) 2:25 PM There are definitely example datasets that all the software applications such as Dataiku use for their trainings. Trainings are available online and they are available for instructor-led guidance during weekly "office hours" for VAULT platform users</p>
Action Items:	<ul style="list-style-type: none">• [Sarah Green (AFCAA)] Share the VAULT URL



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

<p>Topic:</p>	<p style="text-align: center;">DAU Back to Basics Mr. Colin Stratakes (OSD CAPE), Mr. Wayne Cleary (CADE)</p> <p><i>OSD CAPE will discuss the changes to certification in the BUS-CE acquisition career field, deployed courses being offered by DAU supporting our certifications, and progress towards the release of courses supporting “Software Cost Estimation” and “application and Implementation of O&S Cost” credentials.</i></p>
<p>Discussion:</p>	<ul style="list-style-type: none"> • Back to Basics (BtB) overview • The DoD created a Business Transformation Task Force in 2020 to revamp standards for DAWIA certification for over a dozen disciplines or functional areas of acquisition responsibility including Business Cost Estimating (BUS-CE). The Task Group included representatives from: <ul style="list-style-type: none"> • Office of the Secretary of Defense (OSD) • The Services • Defense Acquisition University (DAU), including the Human Capital Initiative (HCI) office • Multiple 4th Estate Agencies • Various Director of Acquisition Career/Talent Management (DACM) offices within the DoD. • According to DAU, the reduction “... allows greater training flexibility beyond the basic certifications - with training to be taken only when needed, depending on the person, position, product, and the acquisition life cycle stage of the program.” <ul style="list-style-type: none"> ○ DAU implemented BtB for BUS-CE <ul style="list-style-type: none"> • Core certification <ul style="list-style-type: none"> ▪ Two levels now vs. three previously <ul style="list-style-type: none"> • Practitioner • Advanced • All courses have been deployed by DAU • Credentials <ul style="list-style-type: none"> ▪ Focused areas of expertise for learning <ul style="list-style-type: none"> • Software cost estimating • Application and implementation of operations and support cost ▪ Made so that analysts can be identified via their skillsets • Prior framework, 362 course hours were required, <ul style="list-style-type: none"> ○ Now 164 course hours to be fully certified under BtB BUS-CE <ul style="list-style-type: none"> • -89% and -55% in classroom time and total required course hours, respectively



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Former is due in large part to increased prevalence of online and virtual instructor led training (VILT)
- FlexFile 101, CADE 101, CADE 201 officially incorporated into BUS-CE curriculum
 - FlexFile 101
 - How initiative started and what are the requirements leveraged
 - Hands-on exploration
 - CADE 101
 - Fundamentals for CSDR and basic types of data contained
 - Policy and guidance documents of CSDR across all Acquisition pathways and contract constructs
 - CADE 201
 - How to use plan standards, how to use RDT, how to use PAC / CSDR RR to obviate submission rework/delays
 - Data Access
- Rationale for the Change
 - There were too many career fields, some of them arguably not focused on core Acquisition
 - BUS-FM and BUS-CE preserved, along with Program Management, Contracting, Engineering, Logistics, and Test & Evaluation
 - Reduce “scrap learning,” wherein bulk of initial certification training is not immediately used, and increase just-in-time (JIT) learning via credentials “A lot of the community was already DAWIA Level III certified”
 - Workforce [presumably] had reached a point of stabilization
 - Emphasis on (relevant) continuous learning
- Issues
 - Preservation of Cost
 - Mr. Peter Braxton made the audience aware of “an existential threat to the cost community” when changes to certification standards were under consideration by the Task Group
 - That is, there had been a distinct possibility that DAU would *not prescribe any core (mandatory) requirements* for the discipline of cost analysis
 - He thanked the OSD CAPE, and Ms. MJ Gantt in particular, for “heroic efforts” in reinforcing the need for core competency in cost analysis
 - Dr. Brian Flynn inquired about classes in weapon system technology and indirect cost analysis
 - Presumably to be handled in continuous learning



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<ul style="list-style-type: none"> • Topics can always be considered for credentials in the future ○ <u>Grandfathering</u> <ul style="list-style-type: none"> ▪ Question arose on “grandfathering.” DoD guidance: <ul style="list-style-type: none"> • “A transition was developed and approved that will automatically move individuals with Level III certification and six or more years of relevant experience to the Advanced Level certification” • “All other Level III and Level II certified individuals will automatically transition to the Practitioner Level of certification if experience requirements are met. Individuals with Level I or no certification will follow the new requirements for obtaining Practitioner certification.”
<p>Questions, Answers, and Comments:</p>	<p>Q: Peter B (CADE) 2:24 PM Colin, how does grandfathering work?</p> <p>A: Colin Stratakes (OSD CAPE) An HCI memo is forthcoming.</p> <p>Q: Kaye L (DHA) 2:24 PM For this session -- why such a large reduction in the amount of learning from previous to BtB?</p> <p>A: Peter B (CADE) 2:25 PM A lot of the community was already through DAWIA Level III. [See also above discussion on scrap learning vs. JIT learning.]</p> <p>Q: Nick C (ODASA-CE) 2:26 PM Will there be a credential on inflation/escalation?</p> <p>A: Colin Stratakes (OSD CAPE) Not currently planned. DAU’s focus is on incorporating material from the recently released “Inflation and Escalation Best Practices for Cost Analysis - Analyst Handbook” in the core certification courses.</p> <p>Q: Jeramia P (ODASA-CE) 2:26 PM Who is proposing and defining the credentials? If DAU is not supporting a credential, who defines the training that grants that credential?</p> <p>A: Jenna Meyers (OSD CAPE) 2:29 PM The services built a competency model to address broad learning objectives for potential non-DAU credentials. The DACM office of each service would need to have a way to include that training into their systems that track training (vs</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>DAU). DAU would just "advertise" that credential on their site- the other career fields do this using Coursera, for instance.</p> <p>Q: Brian F (DCARC) 2:30 PM Coverage of indirect costs? Weapon system technology 101?</p> <p>A: Colin Stratakes (OSD CAPE) The difference between direct and indirect costs should be covered in the core curriculum (BCE 1000). There are no current plans for credentials on commodity-specific estimating, to include courses on commodity-specific introductions, data, and methods.</p> <p>Q: Sara F (USN) 2:34 PM NPS MCEA cert/degree, will it transfer to DAU certification like it used to?</p> <p>A: Colin Stratakes (OSD CAPE) Changes to equivalency and fulfillment for BUS-CE courses were not explicitly addressed as part of the BtB effort.</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Day 2 (Govt/Industry)

Attendees:	TOTAL ATTENDEES: 286
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Topic:	<p>Cost of CSDR</p> <p>Mr. Matt Stahr (AFCAA), Ms. Crystal Rudloff (AFCARC)</p> <p><i>The Air Force team will provide an overview of the Cost of the Cost and Software Data Resources (CSDR) Study to include its purpose, preliminary findings and next steps.</i></p>
Discussion:	<ul style="list-style-type: none"> • Crystal expressed appreciation for the panel discussion yesterday sharing industry CSDR reporting experiences and LOE to produce and deliver submissions. • Goal is to not only the cost of CSDRs, but also gather feedback from folks completing the reports. We are also interested in feedback on DIDs, training, submission process – all to improve how DCARC works. • DCARC Team disseminated the “Cost of CSDR” survey to submitters from each accepted CSDR submission. The survey is administered using a tool called Qualtrics. It includes only 10 questions designed to elicit responses easily and quickly. The survey also includes a link to industry to share with coworkers. • The DCARC takes survey responses and performs analysis to understand cost drivers, and to understand the context of the submissions. The DCARC looks at variables that impact hours (e.g., number of CSCIs, if there was Unit reporting.) • The DCARC has received responses across the gamut – some respondents were broad an unfamiliar not knowing there was an implementation guide to help, for example, whereas others gave detailed feedback on specific issues. • Crystal presented tables of Survey metrics. First table provides Survey Totals broken by SRDR, FlexFile/QDR, Tech Data, and M&R. Second table shows avg hours per submission (same categories) <ul style="list-style-type: none"> ○ SRDR 90 hrs/submission – a bit higher than other submission types since it’s highly manual ○ FlexFile = 39 hrs/submission ○ Tech Data = 22 hrs (\$5000) /submission ○ M&R = 88 hrs (\$20,000) /submission • The DCARC Team plans to collect more surveys, more data, and conduct more analysis, for example, will look at Initial vs Interim vs Final to see differences. • Asks industry to please respond. • Notes there is a freeform portion of the survey. Looks forward to reading, especially suggested improvements.
Questions, Answers, and Comments:	<p>Q: Bryn T (SSC/SNFC) 10:10 AM</p> <p>Is there consideration to making the SRDR reporting threshold of \$20M be linked to a base year? The threshold for reporting is getting lower and lower as it stands Are you aware of studies/analysis/CERs based on Story Point sizing? This time-intensive and therefore expensive data</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

collection seems directly at odds with the Agile thought that SPs are not comparable between teams.

A: DCARC:

The DCARC has not historically changed reporting requirements and thresholds due to inflation. This can be a discussion topic for leadership in the future.

Q: Jeff M (AFLCMC) 10:13 AM

Do they delineate the category of hour such as how many hours does it take to generate the data vs how many hours are spent in some level of management review?

A: Michael K (DCARC) 10:20 AM

we do not. we ask for the total amount of hours required to complete the form, and also ask for the number of hours it took to iterate with DCARC during the process.

Q: Daniel A (USN) 10:13 AM

Is the 39 hours for the FlexFile/QDR for either report or for the combination of the FlexFile and the QDR (where applicable)?

Q: Daniel A (USN) 10:14 AM

Do you have measures of spread as well as the average hours per submission?

A: Michael K (DCARC) 10:17 AM

Daniel - We initially ask whether you prepared the FlexFile, the QDR or both. We then ask you for the respective hours required. The 39 hours represents the average of all responses received for both Flexfile and QDR. We do have the ability to split out by specific form however based on the response to question one

Q: Gary B (IDA) 10:15 AM

*Are these estimated costs, for *validate* cost report submissions? This value is crucial in a world where 80% of the submissions are invalid as submitted.*

A: Alex M (DCARC):

Yes, we do not request this data from industry until their report has been accepted in CADE. Therefore, the hours they provide in their survey reflect all effort for the initial submission and all subsequent corrections.

Q: Kenneth T (BAE Systems) 10:15 AM

Does this include the NRE to set up the process?

A: DCARC:

No, we only want to capture the effort required to complete the discrete submission event the survey pertains to.

Q: Kaye L (DHA) 10:16 AM

As EVM does seem like data, is there consideration of having a interconnection of collection? Sharing of information between the two, thereby reducing work and ensuring info submission



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

A: DCARC:

EVM and CSDR are separate CDRL requirements and will continue to require separate deliverables. CSDRs previously used “co-plans” to link the WBS between the two but resulted in more issues than benefits so it has continued as separate requirements as the level of detail expected for CSDRs exceeds that of limited EVM.

Q: Shevonne S (NAVAIR) 10:17 AM

Do you have a breakout of hours between software development and software maintenance?

A: Michael K (DCARC) 10:19 AM

We collect hour data by form type, so Dev, Maint, ERP, and the Initial and Final's.

Q: India B (PEO M&S) 10:17 AM

Was it \$26K per SRDR submission?

A: DCARC:

SRDR's take an average of 74 hours to complete across all form types according to our survey.

Q: Nick C (ODASA-CE) 10:18 AM

Do you also have metrics for the effort the Government expends reviewing for validation?

A: DCARC:

The cost of CSDR study is currently only looking at industry feedback on time to complete the submittal. From the DCARC perspective, the range of validating a report varies from organization and to the specific person. On average, I would guess it takes 1-2 hours per report for a comprehensive review (this does not include meetings or subsequent re-reviews). The DCARC is working to produce a comprehensive master checklist with a designation to who would be responsible for that area of the report. Once this is standardized, we can better collect metrics on how long that takes from the government to review each submission.

Q: John D (BAE Systems) 10:18 AM

can NRE costs for database development to make the process more effective on the data collection side be included?

A: DCARC:

No, we only want to capture the effort required to complete the discrete submission event the survey pertains to.

Q: Shevonne S (NAVAIR) 10:21 AM

What are the hours for Dev vs. Maintenance?

A: DCARC:

Dev: 52 hours. Maintenance: 73 hours.

A: Peter B (CADE) 10:22 AM



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Have you seen Dr. Wilson Rosa's 2022 paper using DHS data?

A: Peter B (CADE) 10:25 AM

<https://www.iceaaonline.com/pit22sessions/#SA09> DHS looks at six different sizing methods, including Stories and Story Points. They did not score best but still resulted in reasonable EERs.

C: Denise Nelson (Boeing) 10:23 AM

the real time involved is setting up the charge lines and baselining the code to prepare for the future SRDR deliverables

C: Denise Nelson (Boeing) 10:23 AM

if the prepare properly, then the SRDR doesn't take long

C: Wallace R (DCMA) 10:24 AM

Right, it seems like it would save money to just have one stop shop.

C: Peter B (CADE) 10:28 AM

BTW, if Cost of CSDR were a cost driver, there would be a cost element for it in MIL-STD-881!

Q: Luis M (L3 Harris) 10:31 AM

Use the WBS for 'Data' which is one of the Common Elements.

Q: Kaye L (DHA) 10:33 AM

Is that not part of the issue with Estimate interpretation? Using a generalized term for a value makes the share difficult

Q: Wallace R (DCMA) 10:31 AM

Can you elaborate? Are you saying since it isn't in the mil-std, it isn't a cost? I am just trying to understand.

A: Jenna Meyers (OSD CAPE) 10:35 AM

CSDR reporting is certainly a cost, I think Peter was saying that it's not one of the big drivers since it rolls into broader WBS elements (like data) vs being called out discretely

Q: Kaye L (DHA) 10:40 AM

But what about the software in the weapons systems? are those saved too from such review?

A: Peter B (CADE) 10:51 AM

Element 6 of 10 is IT/SWMX, so definitely included. Jenna's comment was relative to the Software Acquisition Pathway being exempt from SRs (for now).

why is there less cost data using a CLS? Would there not be more reporting, especially for those programs with CSDR submissions?

Q: Bryn Turner (SSC/SNFCQ) 10:33 AM

I heard yesterday the reporting threshold is \$50M which I understand is for govt submissions, vs the \$100M I see in 5000.73



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>A: Alex M (DCARC): \$100M is the program threshold, whereas \$50M is the contract/subcontract threshold (the contract/subcontract threshold is \$20M for Middle Tier Acquisition programs). CSDR applies to programs with over \$100M in anticipated acquisition expenditures, regardless of acquisition pathway. To determine if CSDR applies to a given contract, first determine if the program itself is expected to have over \$100M in acquisition expenditures. If yes, then determine if an individual contract, agreement, or subcontract is over \$50M (\$20M for MTAs). If yes, then CSDR is required.</p>
Action Items:	none

Topic:	<p style="text-align: center;">DFARS Updates Ms. Min-Jung Gantt, Mr. Dan Germony, Ms. Erica Walters (OSD CAPE), Mr. Steve Cox (CADE)</p> <p style="text-align: center;"><i>This session will provide the background and current DFARS status.</i></p>
Discussion:	<ul style="list-style-type: none"> • Draft of DFARS 234.252 and DFARS 234.71 updated to reflect changes is CSDR requirements, to include: the newly created program Pathways and the \$100M threshold, keeping up with the updated DoDI 5000.73 Cost Analysis Guidance and Procedures. • Wanted to remove industry burden, for example: removed CSDR reporting from proposals, clarified CSDR readiness review, • Cost community working to flesh out updated DFARS. Will be available for industry response, feedback • MJ thanks everyone for attending the discussion yesterday on Compliance and responding to DCARC to help improve status of their programs.
Questions, Answers, and Comments:	<p>Q: Geoffrey B (CDAO) 10:33 AM Does CADE get any heads up on congressional language that may impact reporting?</p> <p>A: Dan Germony (OSD CAPE): Yes, CAPE does get notified of congressional language and works to implement or update policy to align with policy language changes.</p> <p>Q: Kaye L (DHA) 10:34 AM Will we see a new appropriation for software?</p> <p>A: Dan Germony (OSD CAPE): At this time, we have not heard of a change to create a separate appropriation for software.</p> <p>C: Luis M (L3 Harris) 10:36 AM Data Repository. The activity and enterprise data storage entity (or sometimes entities) for Government approved data that are the property of the Government into which data has been specifically partitioned for analytical or reporting purposes. As custodian for the Government, the repository, authorized by approved change orders, maintains the authoritative source of truth (i.e., configuration controlled digital baseline).</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	<p style="text-align: center;">Sustainment Reviews Ms. Jenna Meyers (OSD CAPE)</p> <p><i>With the growing recognition on the importance of sustainment in the DoD, Sustainment Reviews have become a key forum to provide insight into sustainment costs and activities. This briefing will provide an overview of Sustainment Reviews and address OSD CAPE’s role and lessons learned.</i></p>
Discussion:	<p>Overview</p> <ul style="list-style-type: none"> • A sustainment review (SR) is an in-depth examination of performance and cost effectiveness during sustainment • 2021 NDAA requirements <ul style="list-style-type: none"> ○ SRs are submitted to Congress no later than the end of the fiscal year ○ Critical cost growth metric [similar to Nunn-McCurdy for Acquisition] <ul style="list-style-type: none"> ▪ At least 25% more than most recent independent cost estimate or ▪ At least 50% more than the original Baseline Estimate <p>10 Data Elements</p> <ul style="list-style-type: none"> • June 2021, USD(A&S) provided supplemental direction for the implementation of SRs <ul style="list-style-type: none"> ○ SRs occur ever 5 years after IOC and every 5 years throughout lifecycle ○ Programs with critical cost growth, the Service will brief their planned response to Congress at the SR ○ Services will upload documents to Acquisition Information Repository (AIR) • June 2021, CAPE provide guidance for the cost components of the SR <ul style="list-style-type: none"> ○ MILDEPS are responsible for submitting SR files to CADE ○ CAPE will review cost data sources ○ CAPE will review CSDR compliance ○ CAPE will review the Services’ SR package and submit a report of findings to the Secretary of each MILDEP <p>2021-2022 SR Summary</p> <ul style="list-style-type: none"> • Each Service has their own SR development and review process • Quality of SR materials has increased significantly • In FY21, only 3 programs out of 14 were able to complete a Category B cost growth comparison • In FY22, 11 programs out of 22 were to complete a Category B cost growth comparison <p>Data Availability</p> <ul style="list-style-type: none"> • Most programs are using the Service’s VAMOSC system for a portion of the ICE • Programs using Contractor Logistics Support (CLS) have less available cost data • In order to collect consistent CSDR info, CAPE provided a data collection template in the FY22 SR CAPE memo



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	<p>Lessons Learned from the SRs</p> <ul style="list-style-type: none">• SRs are a significant effort for the Services• Data elements in the Congressional SR package should be consistent with the ICE• Depending on the Service/commodity, program-specific sustainment actuals are difficult to extract• ICE and SR assumptions should be communicated early and often across stakeholders• The comparison to the original baseline (Category B growth) is challenging and may not always be meaningful• Inconsistent application of the CAPE Inflation and Escalation Handbook across the Services• CSDRs are often excluded from sustainment contracts/efforts• VAMOSCs systems have deficiencies, but it is an opportunity to learn and improve for EVAMOSCs in the CAPE O&S structure (either expanded detail or additional elements)
<p>Questions, Answers, and Comments:</p>	<p>Q: Janice H (PEO M&S) 10:51 AM Are SETA contracts required to do CSDR reporting?</p> <p>A: Jack Titus (DCARC): Yes, SETA contracts are required to do CSDR reporting. 5000.73 states based off of contract value. CADE has collected CSDRs on multiple contracts for engineering services and technical assistance contracts.</p> <p>Q: Nick C (ODASA-CE) 10:51 AM If services are finding deficiencies and correcting them in their VAMOSCs systems why the push to use EVAMOSCs in FY23+</p> <p>A: Dan Germony (OSD CAPE) 10:54 AM I think we can review that when we are USG online only.</p> <p>Q: Nick C (ODASA-CE) 10:58 AM Can you speak to how EVAMOSCs will be displayed/rolled into CADE? Will format be similar to a bulk/flat file download?</p> <p>A: Stephen M (NAVSEA) 10:56 AM Model Based Product Support is replacing the Navy's legacy logistics databases. This may improve the flow of data into VAMOSCs.</p> <p>A: Dan Germony (OSD CAPE) 11:12 AM By the way, if you are not sure what EVAMOSCs is, you can learn more here: https://evamosc.osd.mil/</p> <p>Q: Jack Titus (DCARC) 10:52 AM For programs that we realized contracts were missing CSDRs, did they provide reasoning or did we learn as to why they did not put the requirement on that contract?</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>A: Jenna Meyers (OSD CAPE): Many are either unaware of the requirement or point to the lack of specificity in DoD 5000.73 for different nomenclature of ACAT levels. Hope is that OSRs serve as a learning opportunity for programs to become more CSDR fluent.</p> <p>C: Jack Titus (DCARC) 10:59 AM Understood about PMs not controlling the contracts. Agree with your point as well to add detail to 5000.73 as I have had pushback at DCARC about [lack of] specific references to Services Category (SCAT) programs and Contractor Logistics Support (CLS) contracts.</p> <p>Q: Kaye L (DHA) 10:59 AM If the regular perpetrators are recognized, what are the corrective actions taken to prevent such future actions in terms of information deficiencies.</p> <p>A: Jenna Meyers (OSD CAPE) 11:00 AM Good question, don't have the exact answer to that one yet :)</p> <p>Q: Jack Titus (DCARC) 11:01 AM One question you mentioned was "Are we capturing Sustainment data correctly?" Any idea if we are expecting shifts in the CAPE O&S structure (either expanded detail or additional elements)? FYI, the O&S CES is defined in this document: https://www.cape.osd.mil/files/OS_Guide_Sept_2020.pdf</p> <p>A: Dan Germony (OSD CAPE) 11:05 AM We are closely tracking our ability to use the [MILDEPs'] data to populate EVAMOSOC and if needed, will update the O&S guide's CES. No major changes are anticipated at this time.</p> <p>A: Dan Germony (OSD CAPE) 11:05 AM We may adjust specific definitions but will work with multiple SMEs and offices before doing that.</p> <p>C: Jack Titus (DCARC) 11:07 AM Thank you for the clarification! Looking forward to expanded use of this structure on more sustainment contracts!</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	Industry Panel: Software Development and Data Collection Industry Panelists: Denise Nelson (Boeing), Luke Ranck (RTX), Pavel Shipillo (Lockheed Martin M&FC) Moderator: Matt Stahr (AFCAA)
Discussion:	<ul style="list-style-type: none"> • Question 1: For agile programs what has changed for you internally as far as generating proposals? Does the way that you estimate for proposals differ from estimating a program in progress? <ul style="list-style-type: none"> ○ <u>Denise</u>: Short answer is that I do not use it. I typically am working development where the teams are not in place. Don't have enough data. For follow-on efforts, we can use the data from agile. ○ <u>Luke</u>: We are trying to bid from an Epic or Capability perspective. If it is a new pursuit, it is challenging to find the right analogous programs to estimate that way...we still bounce off of former metrics. Counterbalance the risk from proposals...bid at Capability or Epic levels. No accounting changes. WBS might be aligned in a different manner ○ <u>Pavel</u>: Agree with Luke and Denise. Similar boat. We might bid a bit extra for a scrum master role...just because the whole organization hasn't fully changed because of agile. Might have a bit of extra overhead. Follow-on efforts with great data, relationship with customer, easy to project forward. By and large still traditional • Question 2: What approaches (SLOC, function points, capacity-based) do you use today to estimate your programs, and has that changed with agile? <ul style="list-style-type: none"> ○ <u>Luke</u>: I think it has changed. I think we are moving away from SLOC. Have not used function points. Right now, using capabilities. Based it off of another program on the same campus. After about one, one and a half years...updating those metrics based on actuals. We did back into SLOC using hours. Provided that to leadership. ○ <u>Matt</u>: you used capabilities and hours, is that a LOE based effort? ○ <u>Luke</u>: yes. Decompose into capabilities and build up hours.... build out long term plan ○ <u>Pavel</u>: From our perspective, we did not use T-shirt sizes or story points. Have seen examples of function points. SLOC has been king. We still collect it because there is not a great replacement for it. We all know SLOC is bad, but do not have a great replacement. ○ <u>Pavel</u>: From our perspective, we did not use T-shirt sizes or story points. Have seen examples of function points. SLOC has been king. We still collect it because there is not a great replacement for it. We all know SLOC is not bad, but do not have a great replacement. ○ <u>Matt</u>: pre-agile, that was the case...is that changing for you? ○ <u>Pavel</u>: across the board, see scrum and story points...see some t-shirt sizes to resist trying to equate one team to another. We are still proposing in SLOC. Propose in one way, but the team is managed in another. Tying it back is a challenge



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Denise: I have to ditto most of what Pavel said. Boeing still uses SLOC. I have been trying to use Function points. Maybe we will come up with new ways moving forward...
- Matt: have you used function points?
- Denise: we have 3-4 people internally who do this. We do not have a certified function point person in Boeing. Would like to have one, but do not have it
- **Question 3: How do the metrics you collect for agile programs differ from what you collected during traditional/waterfall software development, to include progress metrics, cost metrics, and quality metrics?**
 - Pavel: we have done our best to try to automate the SLOC metrics. Some are specific to the team. Don't micromanage...these are for the team...metrics for bigger picture for management – defect rate, stuff like that. As far as assessing value. If you are looking to assess value from an agile perspective, gauging a programs ability to deliver change and incremental value. Agile is a tool best used when there is convention...need to continue to work and not grind to a halt when something happens. How many sprints did it take to deliver a MVP regardless how many changes. Still see quite a bit of traditional artifacts. Not many true agile managed programs.
 - Pavel: we are looking at trends within the commercial industry. Those who have service type products have embraced Dora? Objective way to measure performance based on customer satisfaction. Is your product really a service and does Dora make sense. WE have Jira...dora metrics do not always make sense. Downtime is not meaningful when it is not a service.
 - Denise: We were just starting to collect agile metrics already. It helped that the SRDR asks for them. We still collect some that you do not ask for. Jira or VersionOne did it for you anyway.
 - Matt: what do you collect that is not part of the form?
 - Denise: burndown rate, agile velocity, some quality metrics. They are coming out of data that we would provide anyway
 - Matt: the agile metrics came about five years ago. We went with the metrics that we thought were the best at the time...we rely on industry to say..this doesn't make sense. Open to feedback...if you can improve your process
 - Denise – would get really upset...that those are team-specific. Will send you a list of what we collect outside of the form. Would work with internal Boeing clients..." if you are agile, you have to report these metrics." We can't say that anymore
 - Luke: we collect at the program increment (PI) level. Burn-up, burn-down, and velocity. Progress toward MVP or Minimal Marketable Products. Story points are so subjective across the board. We can even set a limit like 10 hrs per story point, have used both of them...so dependent on the team...when you look at story points and you use them...maybe follow-on efforts. In Jira, there are so many different ways to do agile...most of us are doing hybrid agile...I have about 40 metrics between how many the government is asking



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

for and how much RTN is looking for. Velocity does not always give you a good idea of what.

- Matt: manual intensive ness of the SRDR – is that something that you fill out or does it get passed around?
- Luke: pass around to product owners on an ongoing basis...do not want to wait for an annual basis. All info is in Jira.
- Matt: you perform config control over all of the information.
- **Question 4: Research is evolving on the ability to use data directly from software management tools such as Jira Pivotal Tracker, etc. Overall, what is your perspective on what does/doesn't work within these tools?**
 - Denise: In the future, also trying to automate filling out SRDR templates. Each iteration of SRDR is better, but having new forms all the time hinders automation. Biggest complaint is being able to use UCC. Another issue is you can't capture hours in Jira. Hard to distinguish activities an engineer goes through in a DevSecOps environment.
 - Luke: we use Jira. One of the best metrics is gathered as you're doing your work. One big problem with CADE is that there are many configs for Jira that it's hard to apply it to CADE submissions uniformly. Collecting data as you're doing work is more accurate than filled out at end of month, but impossible to standardize.
 - Matt: The flexibility [of Jira] is a blessing and a curse. It allows for customization
 - Pavel: agree with Denise and Luke. Have had pretty good luck pulling metrics from Jira. Tools put on top of Jira force it to be used in a specific way, which has helped. Definitely geared towards short-term planning. The limits is all the customization that you can do, it's like the Wild West. We traditionally generated IMS at the same level and that tracked to a WBS. Progress measured against what you said you would do. With scrum and Jira, they give you much more data to work with and teams can be motivated to make use of that data and value quality work early. In the effort of trying to integrate agility and Jira into what we're used to, there is high-res data that isn't always useful. Too much mess in those details, and that mess is now visible. Managing that would be frustrating for developers. Best compromise is create a very defined isolation where things are reported in standard way as specific level. Other danger is in planning, people think "We have IMS to develop but we have to be agile, so pull data into IMS".
 - Matt: many reasons why some of those tools are better to use in the short term.
 - Pavel: When they re-did portfolio. Got rid of the IMS...Jira said that it was low-value.
 - Denise: same from an estimating perspective. Collecting metrics and trying to determine when the software is "done"



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Luke: iron triangle...agile was designed to try to break through...or you have a capacity contract that can help. Now you have customers in scrums.. there is chaos that goes on in a development environment. You eliminate the surprises, but you introduce micro-management
- **Question 5: What is your level of involvement with the growing number of software factories across the services? Do you have your own designated software factory?**
 - Luke: our program has its own software factory. Large program. Has been in work since 2010. Has grown over time. Many resources put in place to create that DevSecOps environment. We have folks that are using some of the government provided development environments. Challenges associated with that, but also some benefit. We have diverse programs. RTN has been doing the same types of things. Not one
 - Matt: they are separate entities, but leverage lessons learned on infrastructure, etc. No re-inventing the wheel
 - Pavel: I have not personally been exposed to these. Did some surveying. As a company, we have contributed to FORGE, Platform 1 and Big Bang. We have a template at the software department level for the types of stages that you would want in your DevSecOps...we engage with programs to instantiate that template, but the factory becomes its own. There is always some customization. We start with the same template. Looking at that configuration across programs, will see some familiarity
 - Matt: what did you use to develop your template
 - Pavel: industry standards and approaches...much like you would expect..1, 2, 3 for each stage that are most popular. Do security scanning...the stages that are in the documents
 - Denise: similar story. We have a DevSecOps team. They do it all the same way. We use similar tools and have some Boeing tools. That is instantiated on each program. Isolated programs using the same environment. DevSecOps is not a software estimate, this is an IT estimate. Pivotal was one of the first things that we were researching and piloting.
 - Pavel: we have a dedicated software factory team that engages the programs. You have one or two people who understand DevOps...very in-demand role. Our team is to not just set them up and get them to a level of proficiency, but to continue...
 - Matt: all 3 operate in a similar manner. Lessons learned at a corporate level, but each program is unique and has its own instantiation. AF started with less than 10, now we have like 17. Have the same model for the same reasons.
- **Question 6: Are you familiar with the agile survey that is sent out by DCARC as part of an accepted SRDR submission and if so, do you agree with its characterization of the “levels” of agile programs? Do you have insight into the lack of responses DCARC is seeing since implementation of the survey after 2020?**
 - Denise: I don't know why we're not filling out the survey, but I can help get people to



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Pavel: depends on who fills it out. Product manager, or program director? This affects whether or not it gets filled out. This will also affect what they put on the form.
- **Daniel Andelin: If industry is moving away from SLOC as a metric, is there a way to measure new ones that don't use SLOC against new ones that don't?**
 - Denise: there is, but it's the worst part of my job. It is very hard
 - Pavel: I have not normalized old data. Looking at traditional estimation, if you have a ton of WBS elements you have to look at all of them and the charge numbers and see what it would mean if you used it as a point of estimate. I don't have a good answer.
- **Steve Cox How do you remove or decrease the subjectivity from many of the non-SLOC software metrics today?**
 - Pavel: DORA(?) does that well, it focuses on customer-facing performance. The further back you go the more subjective they are so it gets more difficult
 - Denise: more helpful to focus on less subjectivity going forward, it's on leadership as they are collecting the data
- **Robert Reid: While burn-down rate and velocity can be useful for execution, what else is useful?**
 - Denise: (missed response due to noise)
 - Pavel: if you're looking at previous performance on capability that is somewhat similar, mirror what Denise is saying
- **Peter Braxton: Is there a logical FlexFile analogy for SRDR? SRDR has a lot of hand-jamming so is there a good way to remove that?**
 - Pavel: Jira has an extensive ability to pull data which should be used. Jira is unique in that you can configure it differently, but you could use a code generator to put something into JSON notation
 - Denise: ditto with Pavel. People are writing scripts to try and automate it.
- **Fred Janicki: Metrics that define content. We used to use ESLOC for that. Maybe it is not appropriate anymore. At the end of the day, when we are developing an estimate or when you are putting together a proposal. What metric are you using for that measure.**
 - Denise: we are still using ESLOC
 - Fred: that is what I am seeing in proposals. You are still using it as a content measure. Where are those databases kept. How do you do that.
 - Pavel: across the corporation there are varying answers. Missile and Fire Control and there are differences, usually kept per program. F-35 kept their own. Not done at the department level because there is too much difference. Try to look at actuals in proposals. Use some kind of factor on top. software team looks at SLOC estimation. Does SLOC support your estimate of the actuals
 - Fred: from what I heard...SLOC is still that metrics in BOEs for proposals. Is there a plan to get away from that?
 - Pavel: there is a sentiment



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<ul style="list-style-type: none"> ○ <u>Denise</u>: I have been trying to push this for several years ○ <u>Pavel</u>: if a huge amount of your effort is DevSecOps...the things that come out of being iterative and agile...SLOC will be less and less effective...will have to iterate ○ <u>Denise</u>: DevSecOps makes that harder to collect that information moving forward. ○ <u>Fred</u>: GBSB has a lot of software...collecting all sorts of metrics..but program is also collecting SLOC. I had a long convo with Bill Moore, asked him the same question. He doesn't see NG changing that metric as the basis for content in proposal bids...or estimates...will be in this world a bit longer. Haven't found anything better
<p><u>Questions, Answers, and Comments:</u></p>	<p>Q: Daniel A (USN) 11:29 AM If industry is moving away from SLOC as a software estimating metric, is there a good way to normalize old, SLOC-based SRDRs to measure them against the newer metrics?</p> <p>A: Jack Titus (DCARC) and Matt Stahr (AFCAA): In Nov 2017, the current SRDR DID was approved and the major difference between that and the prior version (other than separating Dev, Mx, and ERP into their own forms) was the addition of agile measures in addition to SLOC. Agile metrics (and other non-SLOC based metrics) were added in attempt to more accurately capture the software data. However, to date, there has not been enough data collected yet to make that determination. However, there is research going on to take stock of what's out there and do some preliminary analysis. Until we know if agile measures are a better measuring stick, or if we are even collecting the right ones, we will continue to collect both in order to make that comparison and not create a gap between only physical sizing for the last couple decades and agile measures from 2017 onward. Per the DID, if you are using any type of agile development process, you must report agile measures in addition to SLOC or another alternative sizing method agreed to by the CWIPT.</p> <p>Q: Kaye L (DHA) 11:31 AM So, what is the likelihood that what we are saying now about SLOC may soon be said about function points?</p> <p>A: Denise Nelson (Boeing) 11:32 AM Yes! I think we will abandon FP also</p> <p>C: Kaye L (DHA) 11:34 AM Sound like we have to keep our day jobs even if we pursue FP credentialing.</p> <p>C: Nick W (IDA) 11:31 AM One thing to keep in mind comparing estimates based on SLOC from before this year and going forward is that AI coding assistants exist now. Software engineer productivity is ~30% higher in the results I saw Q: Codex. Assuming industry is adopting them that is.</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Q: Steve C (CADE) 11:35 AM

How do you remove/decrease the subjectivity from many of the non-SLOC software metrics today?

A: DCARC:

This is a challenging question. The advantage to using SLOC and especially SLOC counts that have been derived using the same code counting tool is that it is consistent and has relatively low subjectivity. For many of the non-SLOC based metrics there is a higher degree of subjectivity inherent in the data. Without standards or rules for metrics, this is a real challenge. As more data comes in the goal for various operations research groups will be to assess the applicability and accuracy of non-SLOC measures.

C: Peter B (CADE) 11:36 AM

<https://ifpug.org/certification> FWIW

Q: Brian R (AFLCMC) 11:37 AM

While burn down rate and velocity can be helpful for program execution, are they really useful for cost estimating and comparing across teams, especially on projects of different types and scopes?

A: DCARC:

The SRDR DID does not require metrics for burn down rate or velocity. The intent of the SRDR is to collect data to support cost estimating. While productivity metrics can be inferred from the data, it is a general consensus that agile metrics are very challenging to use and compare across different projects and even teams within the same project.

Q: Nick W (IDA) 11:40 AM

Why doesn't CAPE supply an open-source library to pull out SRDR information from popular tools like Jira, etc.? Sounds like each contractor is duplicating this work.

A: DCARC:

This has been discussed in different CSDR-related forums, but the challenge is in the standardization and implementation across these tools. In many cases, contractors are pulling information out of a tool to provide the data requested in the SRDR, but not all of the data requested can be derived from such a tool and only if the tool has been set-up from the beginning to capture the requested data and information. In various forums, requests have been made to pilot such an endeavor, but we have not yet had any volunteers.

Q: Peter B (CADE) 11:40 AM

Is there a logical FlexFile analogy for SRDR? Like just give us a dump from your Jira or VersionOne? Are you doing this with any of your customers today?

A: DCARC:



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

We are not doing this today. We have had this question come up in various CSDR-related forums, but the issue is that these tools do not collect all of the data and information requested in an SRDR and that there is a challenge with respect to the standardization of the information from these tools.

Q: Nick W (IDA) 11:40 AM

Make it cheap to pull, and then you can start collecting data needed to answer questions like Brian's

Q: Wallace R (DCMA) 11:46 AM

The front-line observing systems engineers on weapons systems I would like to completely agree with Denise ... very very difficult.

Q: Kaye L (DHA) 11:48 AM

Even if cannot "Standardize", is there a way to create ranges for work and/or program sizes?

A: DCARC:

Part of the intent of collecting Agile data in the SRDR is to understand if there is a meaningful way to use this data and information consistently across programs in the DoD. A potential solution that might be inferred from this data would be a set of ranges for work and/or program size. Because the SRDR data and information is used to forecast and predict future costs, much of the focus of SLOC is to use it to estimate program size or complexity. The hope is that similar information can be derived from the data reported in the Agile metrics portion of the SRDR.

C: Nick W (IDA) 11:52 AM

Turns out Deloitte already made a library like the one I was proposing. Doesn't seem that crazy to use. <https://github.com/DeloitteDigitalUK/jira-agile-metrics>

C: Nick W (IDA) 11:58 AM

For those interested in measures outside of those captured in GitHub and Jira. https://twitter.com/rhein_wein/status/1518615061023010816?lang=en

Q: Yoko A (Boeing) 12:07 PM

For Flex File surveys, the POC typically shares it with me to help complete as I help them through the process in detail. So, I do take the time to fill it out and submit. Maybe the survey email can state to share with others who can help provide feedback?

A: Michael K (DCARC) 12:10 PM

The end of the email asks to please forward the survey to anyone else who has helped prepare the respective reports. If we receive multiple responses tied to one submission (i.e: a response from both the submitter and the preparer), we sum the hours and treat them as one data point.

A: Michael K (DCARC) 12:11 PM

We really want to capture the effort required to complete the entire report from everyone involved.



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>C: Nick W (IDA) 12:10 PM I find it a little amusing that we admit agile metrics are not comparable across teams and projects, but we assume SLOC from a decade ago will let us do that.</p> <p>C: Nick W (IDA) 12:15 PM FYI, the Deloitte library I mentioned is outdated, but it does exactly this. You specify your workflow configuration in a config file, and it adapts to pull out the data from the API</p> <p>C: Nick W (IDA) 12:21 PM You may want to ask this question of a non-traditional contractor who does not have historical investment in BoEs based on SLOC.</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	<p style="text-align: center;">Validations</p> <p style="text-align: center;">Ms. Alex Marsh (DCARC), Ms. Courtney Clark, Mr. Peter Shmorhun (CADE)</p> <p><i>Automated validations of CSDR data is a feature within CADE that provides submitters and analysts with real-time visibility into errors with CSDR submissions. This session will focus on reviewing the existing validation process and validation checklist, most common validation errors, and future validations that will be implemented into CADE for FlexFile and SRDR data.</i></p>
Discussion:	<ul style="list-style-type: none"> • Validation Process <ul style="list-style-type: none"> ○ Contractor submits, DCARC and CWIPT review, DCARC sends back error report, Contractor resubmits • Conducted study to show which are common errors from a large sample of CSDRs <ul style="list-style-type: none"> ○ 1921 - Top 4 most common errors cannot be caught by an automated system ○ 1921-1 and 1921-5 – many more common errors are able to be caught by an automated system ○ 1921-2 – not enough data on this report type yet ○ FlexFile and QDR - many more common errors are able to be caught by an automated system ○ Many errors can be explained by a clarifying remark <ul style="list-style-type: none"> ▪ Multiple similar Minor Errors can be explained by a blanket remark ▪ Common requirements that are unable to be reported can be explained by a remark • For 1921 reports, you can see the errors before the DCARC corrects it using cPet or CADE. • Major Errors prevent upload into CADE, unless a DCARC analyst is able to override these errors • For FlexFiles/QDR, cPet can check for errors in FlexFiles and print a comprehensive report. <ul style="list-style-type: none"> ○ DCARC analysts are here to help with resolving any errors • CADE can also show the Major and Minor Errors after uploading into the CSDR-Submit/Review in a validation error log <ul style="list-style-type: none"> ○ Able to email them to a colleague from within CADE as well; useful when the data preparer is not the same person as the data submitter • cPet Desktop is able to convert Excel to XML to be able to upload to CADE • Submission number can be found on CADE and the CSDR Plan • SRDR validation is coming soon to both cPet Desktop and cPet Web <ul style="list-style-type: none"> ○ It will check that the SRDR elements such as releases, CSCIs, metadata, etc., are reporting correctly to the plan ○ Many internal checks such as “Fields cannot be blank” • CADE has automated validation, full transparency where the Submitter has access to all validation rules and utilities (cPet) • cPet Web performs the same as cPet Desktop • All information about the cPet with demo files is on the CADE Public site, with webinars about validations • Talk through CSDR Validation



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Results of mini study, common errors
- How industry can leverage major and minor errors
- Better understand request from DCARC to correct errors
- Current Validation Process
 - Reporting entity submits in CADE
 - DCARC/CWIPT check against the DID and internal consistency for anything in need of clarification
 - Compiled into one error report, sent to submitter
 - Submitter corrects errors, works with DCARC/CWIPT to clarify/fix errors
 - DCARC finalizes report
- Common Errors Mini Study
 - Examined comments being returned to industry to see what was most common, see which CADE were catching most and could be made a check prior to submitting
 - Received lots of reports of all types, compiled top 20 errors of each report, determined which of the checks caught were automated by CADE
- CCDR Errors
- 1921
 - Blue is not captured by CADE automated process, red is captured
 - Biggest one not automated is COVID impacts
 - Change in CADE made so that the expected submission number is seen on Page 1 in CADE to clear up that error
 - NRE/RE – usually a check saying yes, they're all recurring or no they should be broken out
 - WBS Name usually minor (typo) but if major it will be asked to be updated
 - Do not expect to see costs to date decrease compared to costs incurred at completion
 - FCCOM/MR checks – please provide info saying FCCOM is not applicable to you. MR should not be on a final report (typically), if it is it needs explanation
- 1921-1 & -5
 - Minor error other costs >10% - want a remark knowing what those costs are capturing for better data detail
 - All materials against one element – confirm that there is no purchased parts or raw materials etc
 - Making sure metadata aligns both with the CSDR Plan and the associated 1921
 - Costs incurred to Date/WBS Name doesn't match same as 1921
 - Dollars not hours, direct labor no overhead, and labor rate checks all similar, need a remark usually
- FlexFile
 - Data is checked at a lower level on a FlexFile than on a legacy, leads to a comment coming back mentioning multiple instances/elements



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

- Most common is ATDs>FACs – can be explained with blanket remark, usually related to the way internal accounting system does not properly align with FlexFile
- ODC>10% same as for legacy, just more detailed
- Making sure summary elements are all filled out or explained why they are blank
- Negative dollars/Hours – small values can be explained by a blanket accounting remark, specific instances (re-burdening, lower rate applied) require more specific explanation
- DCARC may check automated checks at a lower level than the automation applies to, could relate in passing automated checks but receiving a report about it
- Automated CCDR Checks
- 1921
 - cPet is the first place to see the possible errors, after uploading CSDR Plan and 1921, -1, -2, and/or -5. cPet will force you to correct major errors before submission in CADE. Minor errors will appear. Can reach out to your DCARC analyst to explain these minor checks and get ahead of the ball on them (correct before submitting)
- FlexFile
 - cPet checks for ff-specific checks, cPet will produce an Excel sheet outlining all errors found
- CADE checks
 - CADE will do similar checks to cPet, can see the checks after the report has been uploaded and validated
 - CCDR Report Name column is where you can see the major/minor errors in more detail
 - Major errors on first tab, minor on second tab. Both tabs can be exported to Excel for ease of use, or emailed to DCARC analyst or anyone with a CADE account (preparer, submitter, etc)
 - If unsure of what the minor errors mean, email to DCARC analyst to get them resolved prior to uploading in CADE
- Other Common Errors of Note
 - Legacy not in XML
 - Use cPet desktop/Web to access XML conversion tools
 - Only need to submit XML, not excel and xml
 - Submission Number Incorrect
 - Common across all report types
 - Make sure everything aligns with CADE and the submission number in the CSDR Plan
 - Resubmission number is only visible in CADE, only 1 or greater if the report has been formally rejected
 - Costs reported for “NA” or Definitions reported but no costs



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<ul style="list-style-type: none"> ▪ Misalignment between CWBS and actual data reported ▪ Should be indicating if cost is not applicable to scope or if it will become applicable in the future • Automated SRDR errors <ul style="list-style-type: none"> ○ Most common SRDR errors are related to leaving sections blank without remarks. ○ Marking elements n/a or providing remarks allows us to know that it wasn't an oversight ○ Not using the UCC-G or UCC-SG or not saying you are using an alternative method ○ Making sure what you are reporting aligns with what is expected per the CSDR Plan ○ Metadata checks more automated as well • I was told to define all elements (for legacy) as if all effort was exercised. For FlexFile do we not define the element until it is exercised since the dictionary is provided at every submission? <ul style="list-style-type: none"> ○ if you need another submission event in CADE to submit an updated dictionary, reach out to your DCARC analyst. We can create a new event for you. • CADE Automated Validation <ul style="list-style-type: none"> ○ CSDR-SR uses machine readable formats to perform automated checks, lessens the burden of the reviewers ○ Automation works best hand-in-hand with the human reviewers <ul style="list-style-type: none"> ▪ Only a piece of the process ○ Increased transparency into the checks and the process, give the submitter everything needed to pre-validate before submitting in CADE ○ Limits iterating back and forth with DCARC and submitter team ○ Some SRDR validation structure already built into CADE, mostly all high-level metadata type checks <ul style="list-style-type: none"> ▪ At this time, not required, just laying the groundwork ○ cPet Desktop and CSDR-SR perform the same checks, aids in transparency <ul style="list-style-type: none"> ▪ Many resources available on CADE Public or through DCARC/webinars/trainings/deep dives
<p>Questions, Answers, and Comments:</p>	<p>Q: Sara F (USN) 1:37 PM In CADE you said it shows validation errors ... I think it was 40 errors. Does it show Industry the major errors or minor errors as well? Why allow submission if there are major or minor errors if CADE already is catching it? It would save a lot of time validating FlexFiles.</p> <p>A: Alex M (DCARC): CADE shows Industry Minor and Major validation errors. CADE will not allow Industry to submit a report with Major Errors unless a DCARC Analyst provides a Major Error Override (which is only done for FlexFiles). Major Errors are substantively different between FlexFiles and the legacy 1921 series. 1921s are not accepted with any Major</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Errors. FlexFiles can be accepted with certain Major Errors (subtotal does not equal root, Children do not sum to Parent). These are a result of the way CADE automatically checks the elements.

Minor Errors are often resolved via Remarks, and CADE does not perform analysis of the Remarks provided to determine if they adequately address the crux of the Minor Error (this must be done by the CWIPT when validating the report). It would be burdensome to prevent Industry from submitting if a Minor Error exists because it is very likely that Industry has resolved the error via a Remark.

A: Christine C (Bell) 1:38 PM

Minor errors can already have remarks included; the validation doesn't know if remarks are included.

Q: Joe K (GDBIW) 1:39 PM

If we have zero-value elements, we put a comment in REMARKS. Is that acceptable?

A: Alex M (DCARC):

If an element is not applicable to the scope of a contract, the WBS Dictionary should define the element as "Not Applicable."

Q: Christine C (Bell) 1:39 PM

I was told to define all elements (for legacy) as if all effort was exercised. For FlexFile do we not define the element until it is exercised since the dictionary is provided at every submission?

Q: Christine C (Bell) 1:41 PM

For legacy we added a 1921-1 remark that no costs are reported on a defined element if the effort is not yet exercised. At Final, if it was never exercised, we update the dictionary to say the item was never exercised.

A: Alex M (DCARC):

For both FlexFiles and Legacy reports, the best means of indicating that an element is not applicable is to define it as "Not Applicable" in the WBS Dictionary. If you have defined the element as "Not Applicable" in the dictionary, you do not need to provide Remarks in the report itself to indicate why the expected costs are \$0.00. In the dictionary, you may also state that costs are not applicable as of the "As Of Date" of the report, but may become applicable if scope is added to the contract at a later date.

Q: Joe K (GDBIW) 1:44 PM

OK. Thanks for the clarification on the FINAL submission. Does the CADE accept the updated CWBS dictionary, even though it's not listed?

A: Alex Marsh (DCARC) 1:44 PM

If you need another submission event in CADE to submit an updated dictionary, reach out to your DCARC analyst. We can create a new event for you.



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>Q: Rob C (AFCAA) 1:48 PM I would like to know what DCARC is doing to fix the hundreds of "Missing" reports. For example, DCARC metrics for the F-35 program today shows 224 missing prime contractor submissions and 752 missing subcontractor submissions. This situation seems to be the elephant in the room. We put plans on contracts and expect Industry to upload their submissions, and in specific situations, Industry fails to make their contractually required submissions and the missing total report count continues to grow. I admit this is a very tough challenge. I love all the automated validations improvements CADE is making, but if we never receive the reports in the first place, our validation tools are of not much use! My hope is CADE leadership is open to new and innovative ideas to solve this problem and certainly my organization, AFCAA, is willing to assist in this regard. Thanks.</p> <p>A: MJ Gantt (OSD CAPE) 2:17 PM Thanks for your comment about F-35. CAPE is aware and are taking actions to review and address.</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	Cerberus Demonstration Mr. Dan Germony (OSD CAPE), Mr. Adam James (CADE) <i>This session will provide a demonstration of the Cerberus dataset available on FACADE.</i>
Discussion:	<ul style="list-style-type: none"> • Motivation to create the Cerberus Dataset <ul style="list-style-type: none"> ○ Cost estimating and analysis routinely involve the use of proprietary or sensitive data ○ Historically, non-proprietary datasets have been smaller and less complex than what will be encountered in the real world • Cerberus deliverables contain realistic time-phasing of costs/hours at all WBS levels • The dataset is hosted within FACADE ("Fake CADE"), the training site for CADE • Recommend to use the Cerberus dataset for training
<u>Questions, Answers, and Comments:</u>	<p>Q: Jean C (AFCAA) 1:50 PM Does the Cerberus Dataset have FlexFiles and TDRs and SRDRs with its training data?</p> <p style="padding-left: 40px;">A: Peter B (CADE) 1:50 PM Yes, it's the full FlexFile-based package.</p> <p>Q: Rob C (AFCAA) 2:00 PM Any plans for the CADE team to develop Cerberus data sets for other commodities?</p> <p style="padding-left: 40px;">A: Dan Germony (OSD CAPE) 2:00 PM If we can get SMEs [subject matter experts] and funding, sure!</p> <p style="padding-left: 40px;">C: Rob C (AFCAA) 2:01 PM I'll bring up the idea in my annual summary of AF CADE requirements with my leadership.</p> <p style="padding-left: 40px;">A: Peter B (CADE) 2:01 PM As Dan mentioned, the established R scripts can be used with new configuration files.</p> <p>Q: Kevin J (FMB-6 Naval Cost Division) 2:00 PM Is the readflexfile R package available to share?</p> <p style="padding-left: 40px;">A: Dan Germony (OSD CAPE) 2:01 PM Yes, it is online, https://github.com/Technomics/readflexfile</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	<p style="text-align: center;">Technical Data Ms. Courtney Clark (CADE)</p> <p><i>The Technical Data initiative is intended to systematically capture technical data and other cost-driving metrics on DoD contracts. This session will give a status update on where the Technical Data initiative stands today and what the anticipated growth looks like, as well as to provide a demo of the Technical Data Utility to show its use for both industry and government.</i></p>
Discussion:	<ul style="list-style-type: none"> • Legacy situation: <i>ad hoc</i> collection from certain CRDLs through a program office • What is Tech Data, and why do we collect it? • Technical Data initiative – Method to capture technical data on contracts <ul style="list-style-type: none"> ○ Review many technical parameters with the scope of contract ○ People who are going to do analysis on technical data, there is a common technical data dictionary ○ Trying to not be burdensome on Industry <ul style="list-style-type: none"> ▪ We can work with them to only utilize the most important data ▪ We collect it for cost drivers and how it relates to the each WBS element, end item, and order/lot. • There are many plans and submissions that are currently available for analysis. • Start with MIL-STD-881 WBS, then review core parameters, ensure no duplicative information, and then refine contract-specific parameters. • Industry should submit in a data model format <ul style="list-style-type: none"> ○ CADE Team is flexible on the formatting so we can use it for future ease of analysis ○ End goal should be being able to cross-reference this data from one program to another at the WBS element level ○ Integration of data is the goal • Tech data requirements list of potential examples (Excel workbook) is posted on CADE Public site • Government and Industry are welcome to give feedback on how to improve the Tech Data for all • Technical Data Initiative <ul style="list-style-type: none"> ○ Tech Data is a requirement but it hasn't been implemented in such a way as to export it directly related to cost <ul style="list-style-type: none"> ▪ Can be reported ad-hoc ○ Technical data initiative – provide a thoughtful way to collect data as it applies to the mil-std ○ Reviewing what we actually need, what its tied to in the WBS/order&lot/etc ○ Tech data vocab socialized between 2017-19, can be updated, please provide feedback ○ Core parameters – when looking at commodity, gives pre-defined set of parameters that could apply to that commodity/WBS ○ Maximized taking the tech data in a way optimized for cost analysis ○ Looking at integration into cost value as well as orders/lots and others



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<ul style="list-style-type: none"> ○ Air Force / Space Force leading the way with most Tech Data Reports on plan/in submission ● Tech Data Planning Process to End Goal <ul style="list-style-type: none"> ○ DD Form 2794 specifies the CSDR Plan ○ Want contractors to be able to understand what is being asked by putting discrete instructions in the CSDR Plan ○ Go from perspective of both analyst and industry ○ Takes commodity and phase into account <ul style="list-style-type: none"> ▪ How does life cycle affect the scope being asked from Industry? ○ Never want to ask for duplicative requirements <ul style="list-style-type: none"> ▪ Software effort would not be asked to be captured on a TDR if there is an SRDR reporting requirement, e.g. ○ Tech data utility is part of the planning process, houses the tech data vocab, core parameters, and other resources <ul style="list-style-type: none"> ▪ Available on the CADE Public site ▪ Good place to go to get familiar with data requirements ○ Emphasis on starting with the planning process ○ Data model is the end goal ○ Ask that industry submits in data model format if possible <ul style="list-style-type: none"> ▪ Not intended to be burdensome, intended for future analysis/capability ○ End goal: cut across multiple commodities/contracts to compare ○ Want the level being requested to have the capability to tie the tech data back to costs and a larger integrated database to refer back to ● Utility demonstration <ul style="list-style-type: none"> ○ If there is a parameter on one program and its being placed on another, check that the same vocab is used on both ○ Again, on the public site, attempt to be transparent <ul style="list-style-type: none"> ▪ Gov and industry can use it ○ Emphasis on future database having common unit of measure to ease analysis ○ Look at the database, respond with comments/concerns/suggestions <ul style="list-style-type: none"> ▪ Additions, subtractions, ways to make the process easier
<p>Questions, Answers, and Comments:</p>	<p>C: Jeff M (Independent) 2:02 PM Additional background on Tech Data here: https://www.iceaaonline.com/wp-content/uploads/2021/06/MLD06-ppt-McDowell-Data-With-A-Purpose.pdf</p> <p>Q: Kenneth T (BAE Systems) 2:19 PM Are there official contractors out there that the government approves that understand what is needed that can help industry organize this to get it right? Like tax advisors to help with taxes.</p>



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

	<p>A: DCARC: To date, DCARC has not seen or heard of any government approved contractors or third-party tools to easily align the requirements with native system/data.</p>
Action Items:	none



2022 OSD CAPE CADE COST & TECHNICAL FOCUS GROUP

Topic:	Closing Remarks Mr. Fred Janicki, SES (OSD CAPE)
Discussion:	<ul style="list-style-type: none"> • Big thank you to the cade team for a well done and well-organized focus group <ul style="list-style-type: none"> ○ Kudos to everyone to everyone who participated and shared their work • Everyone’s session was very interesting and kept everything captivating, great mix of all topics • The collaboration with Industry and the industry panel were great to see • Please fill out the survey as we pay great attention to the survey <ul style="list-style-type: none"> ○ We will continue to iterate on the content each year • Recording and presentation slide materials will be available for all on the CADE Public site (https://cade.osd.mil/) • We hope to conduct a hybrid CADE Focus Group event next fall (2023), with a significant in-person component
Questions, Answers, and Comments:	none
Action Items:	[all attendees] Complete Qualtrics survey to provide feedback on CADE Focus Group event https://survey.az1.qualtrics.com/jfe/form/SV_efybO8YJmZ8KgmO