



COST ASSESSMENT DATA ENTERPRISE

FlexFile 101



Welcome to FlexFile 101



› Cost Assessment Data Enterprise (CADE) home page

- › Point of entry for CADE Portal
- › Policy and Training information
- › <https://cade.osd.mil/>

› Bridge Learning Management System (LMS)

- › Online courses and (future) live training registration
- › <https://cade.bridgeapp.com/>

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- ❖ FlexFile Implementation Overview
- ❖ Legacy Reports
- ❖ FlexFile/QDR Data Groups
- ❖ FlexFile/QDR Planning, Submission, and Validation
- ❖ Data Access – CSDR-SR
- ❖ Data Access – Data and Analytics
- ❖ Important Documents



Takeaways from today's course:

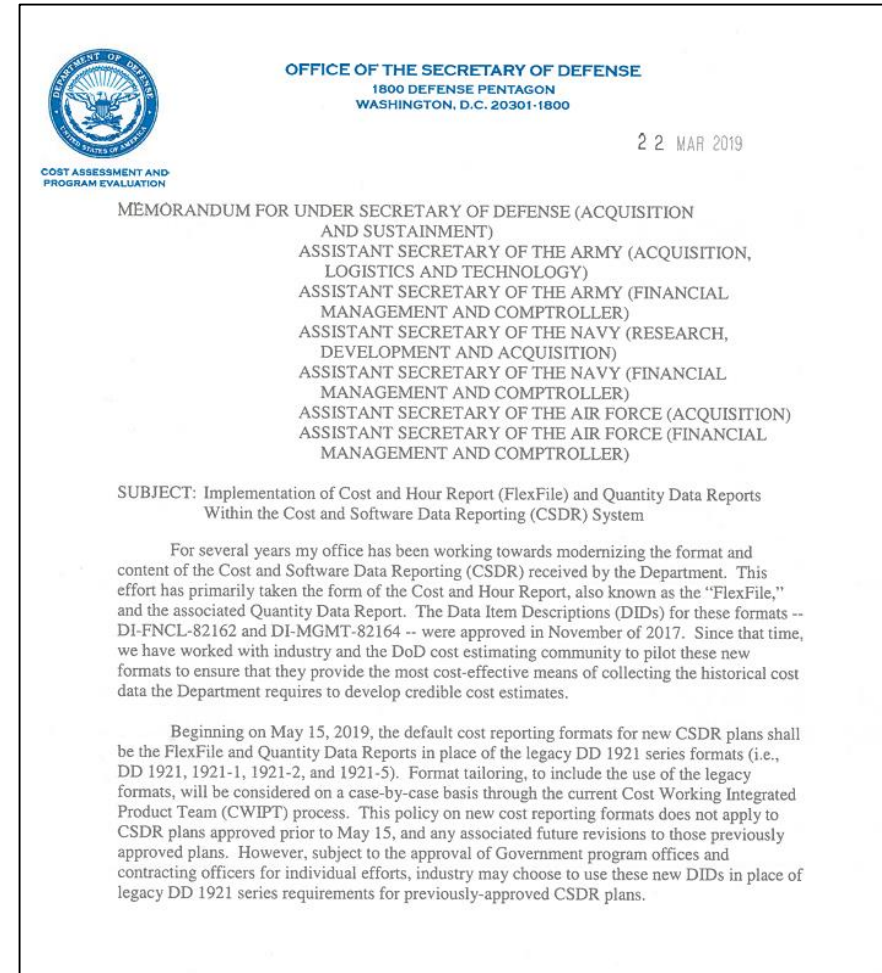
1. Determine the requirements of the Cost and Hour Report (FlexFile) and Quantity Data Report
2. Identify additional insight provided by FlexFile in comparison to legacy 1921 reports
3. Explain implementation and impacts FlexFiles have to CSDR Planning process
4. Identify the resources and references for FlexFile Validation process
5. Demonstrate how FlexFile data is submitted, stored and retrieved
6. Access the utility of the CSDR Browse functionality in Data & Analytics to search available CSDR Data in an easy-to-use filter

FlexFile Implementation



Implementation

- As of May 15th, 2019 (per Deputy Director, Cost Assessment memo), the Cost and Hour Report (FlexFile) and Quantity Data Report (QDR) will replace DD 1921 Series as the default required cost reporting requirement for newly approved CSDR plans
- Some tailoring of the DID requirements may be proposed by the CWIPT (e.g. time-phasing for periods longer than a month)
- If there is context-specific rationale, e.g. the reporting contractor and effort being performed make it unlikely the additional insight provided will be utilized, then the CWIPT may propose to use the DD 1921 series.



Legacy 1921 Reports to FlexFiles



Legacy DIDs

DATA ITEM DESCRIPTION
 Title: Sustainment Functional Cost-Hour Report (DD Form 1921-5)
 Number: DI-FNCL-81992
 AMSC Number: 9573
 DTIC Applicable: No
 Approval Date: 20150921
 Limitation:
 GIDEP Applicable: No

DATA ITEM DESCRIPTION
 Title: "Progress Curve Report" (DD Form 1921-2)
 Number: DI-FNCL-81566C
 AMSC Number: 9573
 DTIC Applicable: No
 Approval Date: 20110518
 Limitation:
 GIDEP Applicable: No

DATA ITEM DESCRIPTION
 Title: "Functional Cost-Hour Report" (DD Form 1921-1)
 Number: DI-FNCL-81566C
 AMSC Number: 9573
 DTIC Applicable: No
 Approval Date: 20110518
 Limitation:
 GIDEP Applicable: No

DATA ITEM DESCRIPTION
 Title: "Cost Data Summary Report" (DD Form 1921)
 Number: DI-FNCL-81565C
 AMSC Number: 9573
 DTIC Applicable: No
 Approval Date: 20110518
 Limitation:
 GIDEP Applicable: No

DATA ITEM DESCRIPTION
 Title: Contract Work Breakdown Structure
 Number: DI-MGMT-81334D
 AMSC Number: D9199
 DTIC Applicable:
 Preparing Activity: CAPE
 Applicable Forms: Not Applicable
 Approval Date: 20110518
 Limitation:
 GIDEP Applicable:

Use/Relationship: This documents the Contract Work Breakdown Structure (CWBS) and its extension by the contractor using terminology and definitions, as applicable, in MIL-HDBK-881.

Requirement: This DID summarizes the format for the CWBS and provides preparation instructions to support the data and frequency requirements specified in the contract. This DID applies to all contracts that require a Work Breakdown Structure (WBS). It is related to the four Contractor Cost Data Reporting (CCDR) formats: DD Form 1921, "Cost Data Summary Report" (DI-FNCL-81565); DD Form 1921-1, "Functional Cost-Hour Report" (DI-FNCL-81566); DD Form 1921-2, "Progress Curve Report" (DI-FNCL-81567); and DD Form 1921-5, "Sustainment Functional Cost-Hour Report" (DI-FNCL-81992). This DID is also related to the "Contract Performance Report" (DI-MGMT-81466) and DD Form 1586, "Contract Funds Status Report" (DI-MGMT-81468).

For those contracts with Cost and Software Data Reporting (CSDR) requirements, the CWBS must agree with the contract CSDR Plan approved by the Office of the Secretary of Defense (OSD) Deputy Director, Cost Assessment (DDCA).

The purpose and intent of the CWBS and CWBS dictionary is to document the contractor's deliverable products and planned approach to performing the contract scope of work. It also contains the technical description of the military end item being developed/procured by the contract. The technical definitions and descriptions of each product-oriented (i.e., hardware) WBS element should be derived from the contractor's systems engineering Integrated Product Team (IPT) or related technical department. The cost content of each WBS element definition should be produced by the contractor's finance department.

MIL-HDBK-881 serves as the basis for developing the CWBS. Routine reporting shall be at CWBS level 3 for all contractors. Extensions of the CWBS can be tailored to the specific program but will be consistent with MIL-HDBK-881. More detailed reporting of the CWBS shall be required only for those lower-level elements that address high-risk, high-value, or high-technical-interest areas of a program. Identifying these additional elements for inclusion in the CWBS is a critical early assignment for the Cost Working-Group Integrated Product Team (CWIPT) for inclusion in the CWBS.

The reporting contractor must prepare and submit, using the CSDR Submit-Review System, the first contract CWBS Index and Dictionary at the same time the first Interim Report is due or, when the Initial Report, if required, is due. However, contractors also have the option to submit the Index and Dictionary earlier to facilitate report planning. The reporting contractor must also maintain and update the Dictionary throughout the life of the contract. If changes to the CWBS occur, the contractor must submit an updated CWBS Index and Dictionary with the next affected CSD Reports. The contractor is not

From five DIDs to two

- CWBS Index and Dictionary
- 1921: Cost Data Summary Report
- 1921-1: Functional Cost-Hour Report
- 1921-2: Progress Curve Report
- 1921-5: Sustainment Functional Cost-Hour Report

FlexFiles/Quantity Data Report

DATA ITEM DESCRIPTION
 Title: Cost and Hour Report (FlexFile)
 Number: DI-FNCL-82162
 AMSC Number: 9870
 DTIC Applicable: No
 Approval Date:
 Limitation:
 GIDEP Applicable: No
 Project Number: FNCL-2017-005

DATA ITEM DESCRIPTION
 Title: Quantity Data Report
 Number: DI-FNCL-82164
 AMSC Number: 9870
 DTIC Applicable: No
 Preparing Activity: CAPE
 Approval Date:
 Limitation:
 GIDEP Applicable: No
 Project Number: FNCL-2017-005

USE/RELATIONSHIP: The Quantity Data Report is the Department of Defense (DoD) system for collecting program quantity information as part of the Cost, Software, and Technical Data Reporting (CSDR) requirement. The resulting data repository serves as the primary source for contract cost and software data for many DoD resource analysis efforts; including cost database development, applied cost estimating, cost research, program reviews, Analysis of Alternatives (AoA), and life cycle cost estimates. The Quantity Data Report provides context to cost and hour data to derive accurate unit cost.

For background and detailed requirements related to CSDR, refer to DoD 5000.04-M-1 (or latest version), "Cost and Software Data Reporting (CSDR) Manual."

The Quantity Data Report is structured around five data groups below that contain the content and relationships required for electronic submissions:

Quantity Data Group Name	Data Group
Report Metadata	A
DD FORM 2794 Data Elements	B
Quantity At Completion	C
Assessed Quantity To Date	D
Sequencing (as required by DD FORM 2794)	E

A. Data Group A - **Report Metadata**: Provides metadata on the contract that allows the submitted data to be associated with other program data.

B. Data Group B - **DD FORM 2794 Data Elements**: Documents WBS reporting elements and additional data tags, or identification to separate data items, as required by the DD FORM 2794.

C. Data Group C - **Quantity At Completion**: Documents the quantities at completion, both delivered and internal, for relevant pieces of scope by Work Breakdown Structure (WBS), consistent with the DD FORM 2794.

D. Data Group D - **Assessed Quantity To Date**: Documents quantities completed to date and quantities in process by WBS consistent with the DD FORM 2794.

E. Data Group E - **Sequencing (as required by DD FORM 2794)**: Documents the cumulative sequencing of delivered and internal units produced for each End Item coming from the same production line.

This DID summarizes content and provides instructions to support the data and frequency requirements specified in the contract for Quantity Data reporting. The Quantity Data Report is related to other program acquisition

Legacy Reports and the FlexFile



CSDR Staples

- Work Breakdown Structure
- Nonrecurring and Recurring
- Standard Functional Categories

CONTRACT LINE ITEM	REPORTING ELEMENTS	ELEMENT CODE	TO DATE			AT COMPLETION			UNITS	COSTS INCURRED			TOTAL			
			COSTS INCURRED			COSTS INCURRED										
			NON-RECURRING	RECURRING	TOTAL	NON-RECURRING	RECURRING	TOTAL								
15,17	1000 AIR VEHICLE	A10100	—	—	—	—	—	—	—	—	—	—				
19	2000 TRAINING	A10200	—	—	—	—	—	—	—	—	—	—				
21AC	3200 ORGANIZATIONAL/INTERMEDIATE SUPPORT EQUIPMENT	A10411	—	—	—	—	—	—	—	—	—	—				
21AA	3300 DEPOT SUPPORT EQUIPMENT	A10440	—	—	—	—	—	—	—	—	—	—				
	3400 AVIONICS INTERMEDIATE SHOP	A10450	88,358	13,209	101,567	153,359	22,926	176,285					TOTAL			
	3400 AVIONICS INTERMEDIATE SHOP (NOT ON CONTRACT)	A10450	—	—	—	79	36	115								
21	3000 PECULIAR SUPPORT EQUIPMENT	A10400	88,358	13,209	101,567	153,359	22,926	176,285					AT COMPL			
21	3000 PECULIAR SUPPORT EQUIPMENT (NOT ON CONTRACT)	A10400	—	—	—	79	36	115					0			
22	5100 ENGINEERING MANAGEMENT/SYSTEM ENGINEERING	A10610	—	—	—	—	—	—					179			
22	5200 SUPPORT PROJECT MANAGEMENT	A10620	—	—	—	—	—	—					1,196			
22	5400 CONSORTIUM SYSTEM/PROJECT MANAGEMENT	A10630	—	—	—	—	—	—					5,939			
22	5500 FOREIGN MILITARY SALES	A10660	—	—	—	—	—	—					238			
22	5600 SYSTEM PROJECT MANAGEMENT - AIS	A10640	3,465	23,907	27,372	5,582	38,512	44,094					10,373			
22	5700 SYSTEM PROJECT MANAGEMENT - DEPOT	A10650	—	—	—	—	—	—					2			
22	5000 SYSTEM/PROJECT MANAGEMENT	A10600	3,465	23,907	27,372	5,582	38,512	44,094					55			
23	6100 TECHNICAL PUBLICATIONS	A10710	—	—	—	—	—	—					80			
23	6200 ENGINEERING DATA	A10720	5,845	21	5,866	6,849	25	6,874					184			
23	6300 MANAGEMENT DATA	A10730	—	—	—	—	—	—					2			
23	6400 DATA DEPOSITORY	A10740	28	20	48	—	42	70					5			
23	6500 ECP PREPARATION	A10750	—	—	—	—	14	14					55			
23	6700 PROCUREMENT METHOD CODING	A10770	—	—	—	—	—	—					80			
23	6000 DATA	A10700	5,873	41	5,914	6,906	81	6,987					184			
REMARKS																
14 DIRECT LABOR DOLLARS													\$ 3,096	\$ 3,574	\$ 3,096	\$ 3,574
15 OVERHEAD													\$ 5,769	\$ 6,085	\$ 5,769	\$ 6,085
16 OTHER DIRECT CHARGES (Specify)													\$	\$	\$	\$
17 TOTAL QUALITY CONTROL DOLLARS													\$ 8,865	\$ 9,659	\$ 8,865	\$ 9,659
MANUFACTURING																
18 DIRECT LABOR HOURS													880	940	880	940
19 DIRECT LABOR DOLLARS													\$ 14,938	\$ 15,075	\$ 14,938	\$ 15,075
20 OVERHEAD													\$ 33,064	\$ 33,005	\$ 33,064	\$ 33,005
21 MATERIALS AND PURCHASED PARTS													\$ 94,946	\$ 105,111	\$ 13,428	\$ 13,789
22 OTHER DIRECT CHARGES (Specify)													\$	\$	\$	\$
23 TOTAL MANUFACTURING DOLLARS													\$ 142,948	\$ 153,191	\$ 13,428	\$ 13,789
24 PURCHASED EQUIPMENT													\$	\$	\$	\$
25 MATERIAL OVERHEAD													\$	\$	\$	\$
26 OTHER COSTS NOT SHOWN ELSEWHERE (Specify)													\$ 6,237	\$ 11,336	\$	\$ 6,237
27 TOTAL COST LESS G&A													\$ 167,715	\$ 184,639	\$ 13,428	\$ 13,789
28 G & A													\$	\$	\$	\$
29 TOTAL COST PLUS G&A													\$	\$	\$	\$
30 FEE OR PROFIT													\$	\$	\$	\$
31 TOTAL OF LINES 29 AND 30													\$	\$	\$	\$

CSDRs reported since the 1960s with three MVP requirements



COST ASSESSMENT DATA ENTERPRISE

The FlexFile

Approved Data
Requirements





FlexFile Data Requirements

Data Group A

Report Metadata

- Approved Plan Number
- Submission Event
- Period of Performance
- Reporting Organization
- As of Date
- Date Prepared
- more in the DID...

Data Group B

DD Form 2794 Data Elements

- WBS Element
- Order/Lot
- End Item

Data Group C

Definitions and Remarks

- WBS Element Definitions
- Remarks by WBS Element
- Summary Remarks

Data Group D

Summary Elements

- Order/Lot
- Subtotal
- General and Administrative
- Undistributed Budget
- Management Reserve
- Facilities Capital Cost of Money
- Contract Fee
- Contract Price

Data Group E

Actuals To Date (ATD)

- Account
- Reporting Period
- CLIN
- Nonrecurring or Recurring
- Functional Category / Overhead
- Standard Functional Category
- Unit/Sublot
- WBS Element
- Order/Lot and End Item
- ATD (Dollars and Labor Hours)

Data Group F

Allocation Methodology

- Allocation Method

Data Group G

Forecasts At Completion (FAC)

- FAC (Dollars)
- FAC (Labor Hours)

Greatest value to cost estimator, in many cases, will be the additional insight requested in Group E

Legacy Element

The core of the FlexFile is providing dollars and hours at the **CLIN** and **account** level in **contractor native categories, time phased.**

- Insight into contractor’s native Functional Categories
- Below WBS level of reporting with CLIN and Account
- Data time-phased monthly or to align with contractor’s financial calendars
- Continuity with prior reports by requiring the legacy elements

Quantity Data Report Requirements



Data Group A

Report Metadata

[Approved Plan Number](#)
[Submission Event](#)
[Period of Performance](#)
[Reporting Organization](#)
[As of Date](#)
[Date Prepared](#)
[more in the DID...](#)

Data Group B

Government Furnished Equipment

[WBS Code/Level/Name](#)
 Order/Lot
 End Item

Data Group C

Quantity at Completion

[Delivered Quantity At Completion](#)
[Internal Quantity At Completion](#)
 Co-production or Concurrent
 Quantity At Completion
 Government Furnished Equipment At
 Completion
[Remarks](#)

Data Group D

Assessed Quantity to Date

[Quantity Completed To Date](#)
[Quantity In Process](#)
[Remarks](#)

Data Group E

Sequencing (as required by Plan)

[First Unit Number](#)
[Last Unit Number](#)
[Is Internal](#)

Legacy Element

The Quantity Data Report ties the necessary quantity information to the FlexFile:

- Units to date should reflect an actual count of physically completed units
- Allow sequencing quantities to be optional through Planning process for each End-Item as not all End Items may require sequencing (e.g., Kits)
- Sequencing was allowed for lower level WBS elements in legacy 1921-2, but FlexFile does not sequence WBS elements (only End Items)
- To Date and In Process to be defined by contractor in the Remarks section

Summary: FlexFile Reporting Requirements

Legacy Reporting

DIDs	Reporting Elements	Submission mechanism	Formats available to analysts
CWBS 1921 1921-1 1921-2 1921-5	<ul style="list-style-type: none"> WBS NR/R Standard Functional Category Unit/Sublot Cost Reporting ATDs and FACs To Date Quantities At Completion Quantities Sequencing Definitions 	<ul style="list-style-type: none"> XML DD Forms generated by cPet desktop or web 	<ul style="list-style-type: none"> 1921 DD Forms Excel flat file

- FlexFile and Quantity Data Report will replace DD 1921 Series
- All of the elements found in the DD 1921 Series can be found in the FlexFile and Quantity Data Report



FlexFile/Quantity Data Report

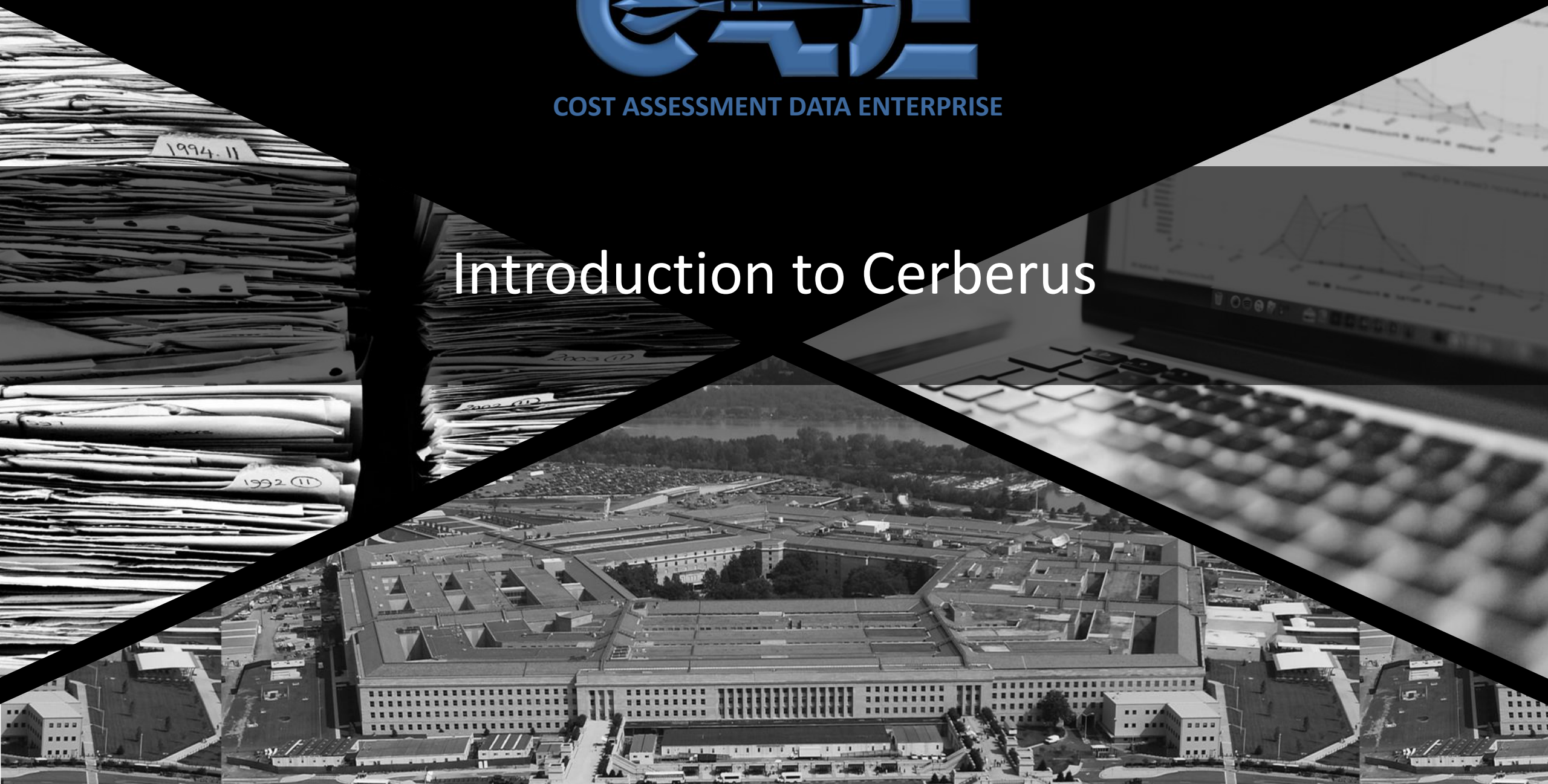
DIDs	Reporting Elements	Submission mechanism	Formats available to analysts
FlexFile QDR	<ul style="list-style-type: none"> All Legacy reporting elements Account End Item and Order/Lot CLIN Functional (Internal) Category Functional (Internal) Overhead Category Time-phasing Allocation Methodology GFE units 	<ul style="list-style-type: none"> JSON Data Model <u>or</u> Excel-Compatible Format 	<ul style="list-style-type: none"> 1921 DD Form Excel flat File

- For one submission, the contractor will submit a FlexFile and a corresponding Quantity Data Report (if applicable)
- The CWBS Dictionary is part of the FlexFile DID and must be submitted with every FlexFile



COST ASSESSMENT DATA ENTERPRISE

Introduction to Cerberus



Cerberus Program Overview

- Fictional Program Information
- Service/Commodity: *Army Ground Vehicle Program*
- Acquisition Pathway: *Major Capability Acquisition (ACAT-I)*
- Program Timeframe:
 - *Engineering and Manufacturing Development (EMD)*
 - *Low Rate Initial Production (LRIP)*
- Contract Overview:
 - *Single Award FAR 15 Indefinite Delivery / Indefinite Quantity (IDIQ)*
 - *Firm Fixed Price (FFP) design and production CLINs*
 - *Cost Plus Fixed Fee (CPFF) Total Package Fielding and Contractor Logistics Support (CLS) CLINs*

Realistic Narrative

- Deliverables show cost growth between “Initial” and “Final” submissions. Cost growth can clearly be attributed to software development “issues discovered during program testing”

The appearance of specific weapon systems does not imply or constitute OSD endorsement of a specific system, design, or contractor.

Inspiration Board



Analogous Real Systems

Robotic Combat Vehicle – Medium

Size, Tracked, Autonomous

Joint Light Tactical Vehicle

Family of Vehicles, Appliqué Kits

Optionally Manned Fighting Vehicle

Multiple Main Armaments

Cerberus Program Overview

- Why “Cerberus”?
- From Greek Mythology: Cerberus is Hades’ three-headed guard dog of the underworld



Credit: The Metropolitan Museum of Art

- The Cerberus Autonomous Vehicle has three armaments
 - 30mm turret (provided as Government Furnished Equipment)
 - 50 cal Remote Weapon Station (RWS)
 - Anti-tank, fire-and-forget rocket (e.g., Javelin) mounted to RWS

Cerberus Computer Software Configuration Items (CSCIs)

CSCI ID	CSCI Nomenclature
C1	Sensor Processing
C2	Autonomous Navigation
C3	Vehicle Control
C4	Vehicle Simulator

Cerberus Prime Mission

Product WBS

WBS Code	WBS Nomenclature
1.0	Cerberus Autonomous Vehicles
1.1	Family of Cerberus Autonomous Vehicle
1.1.1	Cerberus Autonomous Vehicle (CAV)
1.1.1.1	CAV Integration, Assembly, Test, and Checkout
1.1.1.2	Hull/Frame/Body/Cab
1.1.1.3	System Survivability
1.1.1.4	Turret Assembly
1.1.1.5	Suspension/Steering
1.1.1.6	Vehicle Electronics
1.1.1.7	Power Package/Drive Train
1.1.1.7.1	Power Package
1.1.1.7.1.1	Dressed Engine
1.1.1.7.1.1.1	Engine Block
1.1.1.7.1.1.2	Turbocharger
1.1.1.7.1.1.3	Other Dressed Engine
1.1.1.7.1.2	Transmission
1.1.1.7.2	Drive Train
1.1.1.8	Auxiliary Automotive
1.1.1.9	Fire Control
1.1.1.10	Armament
1.1.1.10.1	30mm Gun
1.1.1.10.2	Remote Weapon Station (RWS)
1.1.1.10.2.1	M2 50-cal / Mk19 Mount
1.1.1.10.2.2	Anti-Tank Missile
1.1.1.10.2.3	Other Remote Weapon Station (RWS)
1.1.1.10.3	Other Armament
1.1.1.11	Automatic Ammunition Handling
1.1.1.12	Navigation and Remote Piloting Systems
1.1.1.13	Special Equipment
1.1.1.14	Communications
1.1.1.15	CAV Software Release
1.1.1.15.1	Sensor Processing
1.1.1.15.2	Autonomous Navigation
1.1.1.15.3	Vehicle Control
1.1.1.16	Other CAV Subsystems

Based on MIL-STD-881
Appendix G Ground
Vehicle Systems



Access to Cerberus FlexFile, Quantity Data Report, Technical Data Report, and Maintenance and Repair Part Reports with initials, interims, and finals



The header features the CADE logo on the left, followed by navigation links: "Request CADE Account How to Register", "CADE Portal" (with a lock icon), and "FACADE" (with a graduation cap icon).

- About CADE
- CSDR Reporting Guidance
- Cost Estimating Guidance
- Tools & Training
- News
- Calendar



CADE
is the authoritative source
for **defense contractor cost data**



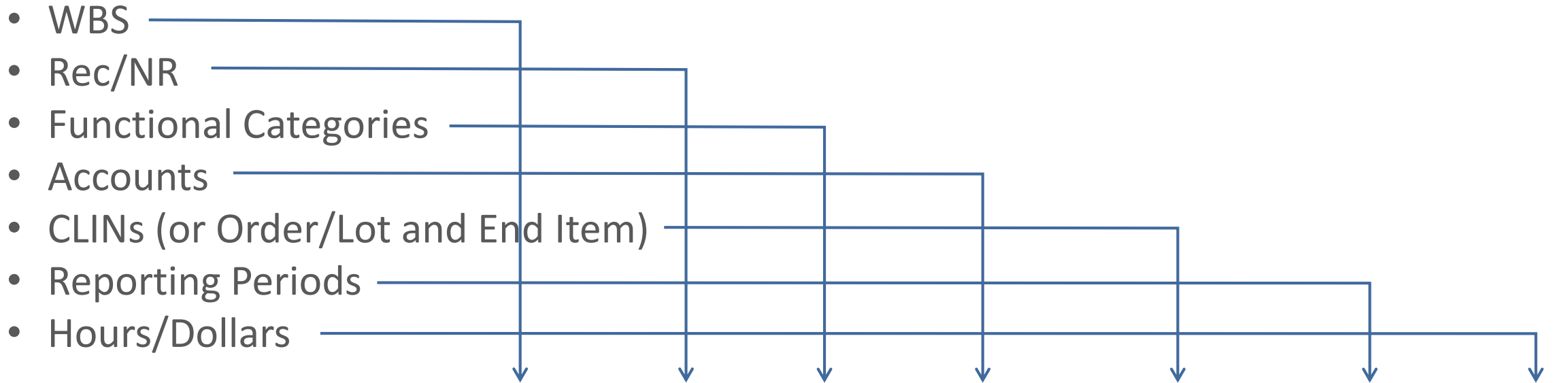
COST ASSESSMENT DATA ENTERPRISE

Cerberus FlexFile Demo (w/ CSDR plan)



FlexFile Combinatorial Explosion

- Why are there so many rows in a FlexFile?
- In short, *Data Granularity*



$$25 \times 2 \times 5 \times 10 \times 10 \times 50 \times 1$$

- For Cerberus, this product is 937,008,000!

- 98,448 rows → 0.0105% “saturation”

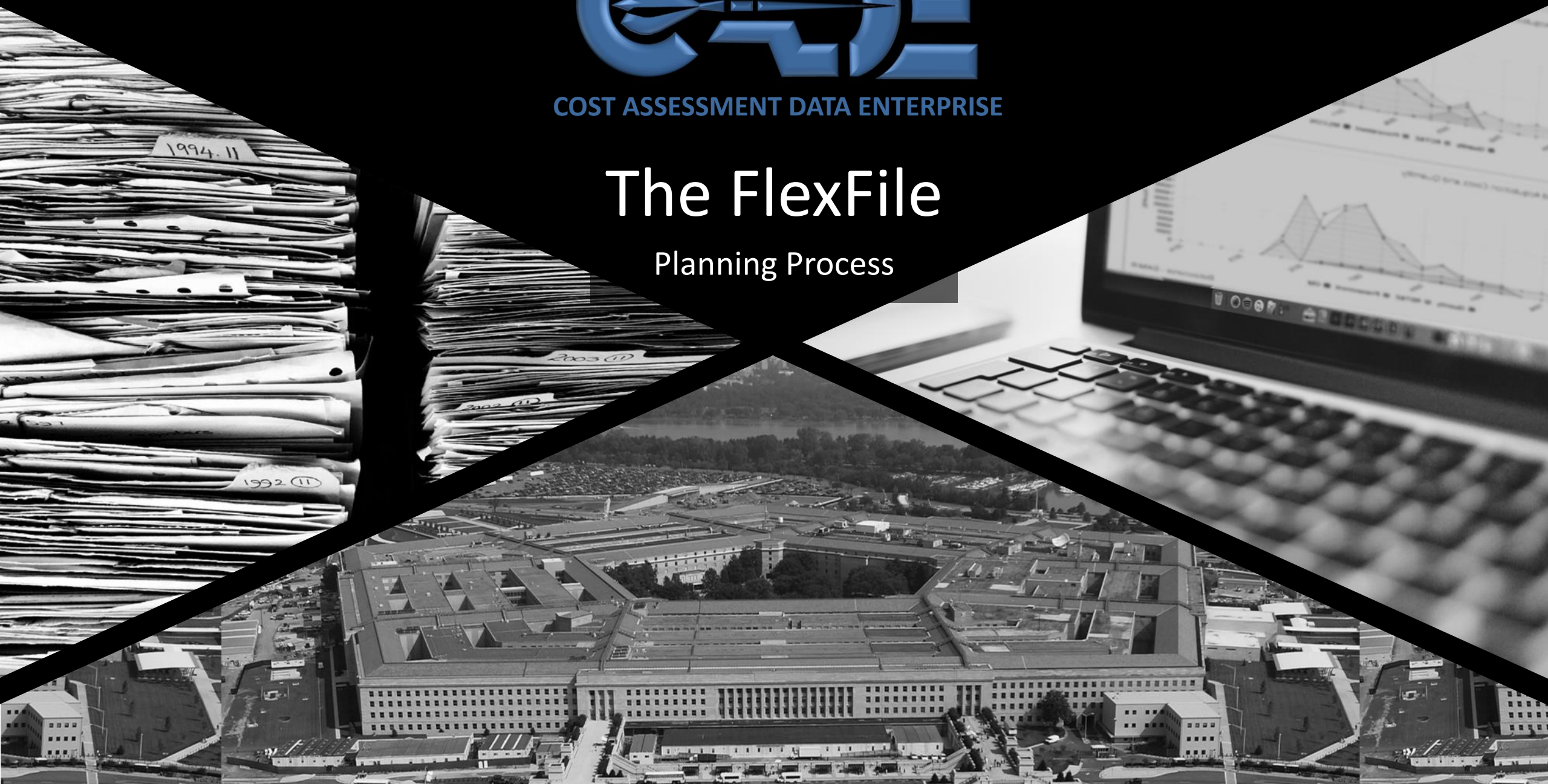
$$= 1,250,000$$



COST ASSESSMENT DATA ENTERPRISE

The FlexFile

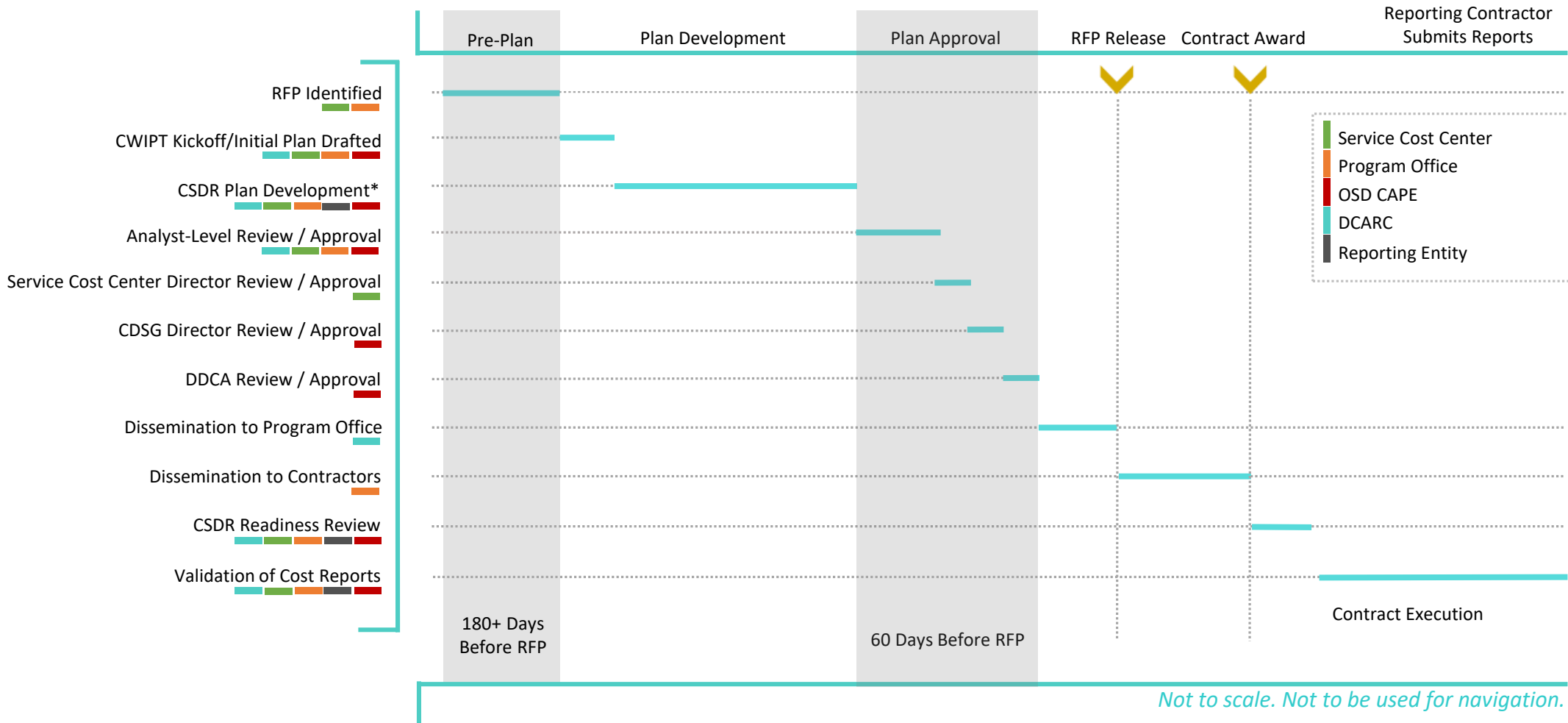
Planning Process



Planning Process Flowchart (ACAT I)



CADE 201



* The reporting entity is involved in the plan development process before contract award if the reporting entity is known (i.e., a sole source environment). Otherwise, the reporting entity is involved in development after contract award.

CSDR Plan (DD 2794)



Pg. 1, Metadata

- Program Information
- Contract Information
- Reporting Information

Pg. 2, Reporting

- Define reporting WBS
- Indicate where actual and forecast cost data is required
- Indicate which elements require certain report types

Pg. 3, Events

- Indicate when and which reports are required
- Indicate the frequency and submission of reports

Pg. 4, Remarks

- Enter any pertinent remarks about the CSDR Plan that help explain or clarify any of the reports

Pg. 5, Scope Def

- Indicate the Order/Lots and End Items that the contractor will be tagging the reported dollars and hours to
- Require Unit Reporting in box 18c if the CWIPT required unit cost reporting

Pg. 6, SRDR Dev

- Define software releases and CSCIs
- Link software product size reporting elements to Reporting tab
- Link software product size submissions to Events tab

Pg. 7, SRDR Mx

- Define software releases
- Link software product size reporting elements to Reporting tab
- Link software product size submissions to Events tab

Pg. 8, SRDR ERP

- Similar to Mx but for ERP
- Only used for Defense Business Systems (DBS)

Pg. 9, Tech Rqts

- Refined Contract-Specific Technical Parameters
- Commodity and Phase Specific Technical Parameters

DD 2794 (CSDR Plan), Pg 1 (Metadata)

Program and effort

COST AND SOFTWARE DATA REPORTING PLAN		OMB No. 0704-0188
<p>The public reporting burden for this collection of information is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p>PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.</p>		
1a. PROGRAM NAME		
Cerberus Autonomous Vehicle Program		
1b. PHASE/MILESTONE (check all that apply)		
<input type="checkbox"/> Pre-A <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C-LRIP <input type="checkbox"/> C-FRP <input type="checkbox"/> O&S		
1c. PRIME MISSION PRODUCT		
Cerberus Autonomous Vehicles		
1d. ACQUISITION CATEGORY (ACAT)		
<input type="checkbox"/> Pre-ACAT <input checked="" type="checkbox"/> ACAT I (MDAP) <input type="checkbox"/> ACAT IA (MAIS) <input type="checkbox"/> ACAT II <input type="checkbox"/> ACAT III <input type="checkbox"/> Other		
2. COMMODITY TYPE		
Ground Vehicle System		
3. PLAN ITERATION TYPE		
<input type="checkbox"/> INITIAL <input checked="" type="checkbox"/> REVISION		
4. CURRENT SUBMISSION DATE (YYYYMMDD)		
20180530		
5. LAST APPROVED PLAN DATE (YYYYMMDD)		
20170228		
6a. GOVERNMENT PLAN POINT OF CONTACT (POC) NAME (Last, First, M.)		
Deeare, Cezar		
6b. ADDRESS (Include ZIP Code)		
5000 Manual Ave. Suite 04 District of Columbia, DC 20301-1800		
6c. TELEPHONE NUMBER (Include Area Code)		
(555) 123-4567		
6d. E-MAIL ADDRESS		
Cezar.Deearo@programoffice.mil		
7. PLAN TYPE		
<input type="checkbox"/> GOVERNMENT <input checked="" type="checkbox"/> CONTRACT (PRIME) <input type="checkbox"/> CONTRACT (SUB)		
8. PLAN GOVERNMENT PREPARING ORGANIZATION		
Cerberus Autonomous Vehicle Program Office		
9a. CONTRACTOR NAME/ADDRESS		
i. REPORTING ORGANIZATION NAME		
Con-Tractor, LLC		
ii. DIVISION NAME		
Autonomous Vehicle Division		
iii. LOCATION		
57th Street Suite 123 New York, NY 10019		
iv. CONTRACTOR BUSINESS DATA REPORT (CBDR 1921-3) REQUIREMENT:		
<input checked="" type="checkbox"/> CBDR REQUIRED FOR THIS ORGANIZATION		
9b. CONTRACT NUMBER (List all that apply, separated by commas)		
Z123D4-15-D-7890		
9c. APPROPRIATION (check all that apply)		
<input checked="" type="checkbox"/> RDTS&E <input checked="" type="checkbox"/> PROCUREMENT <input type="checkbox"/> O&M <input type="checkbox"/> FMS <input type="checkbox"/> WCF <input type="checkbox"/> OTHER		
10a. APPROVED PLAN NUMBER		
Z-99-C1(R2)		
10b. APPROVED PLAN REVISION NUMBER		
3		
10c. APPROVED PLAN REQUIREMENTS		
<input checked="" type="checkbox"/> AT COMPLETION COSTS FOR STANDARD FUNCTIONAL CATEGORIES (FlexFile or Legacy) <input checked="" type="checkbox"/> AT COMPLETION COSTS FOR RECURRING/NONRECURRING (FlexFile only) <input checked="" type="checkbox"/> TECHNICAL DATA REQUIRED		
10d. COST REPORT TYPE		
<input checked="" type="checkbox"/> FLEXFILE <input type="checkbox"/> LEGACY DD 1921 SERIES		

➤ Metadata provides the basis of the “who” and the “what” is to be captured in the CSDR plan

Contractor and contract

Reporting detail

DD 2794 (CSDR Plan), Pg 2 (Reporting)

COST AND SOFTWARE DATA REPORTING PLAN											
11. WORK BREAKDOWN STRUCTURE (WBS)			12. COST					13. TECHNICAL DATA			
a. WBS CODE	b. WBS LEVEL	c. WBS ELEMENT NAME	a. ACTUALS TO DATE (ATD)	b. LEGACY 1921-1	c. LEGACY 1921-2	d. LEGACY 1921-5	e. EAC/FAC (See item 10d)	a. QUANTITY		b. SRDR FORMATS	c. MAINT. & REPAIR PARTS
								i. QUANTITY DATA	ii. GFE QUANTITY		
1.0	1	Cerberus Autonomous Vehicles									
1.1	2	Family of Cerberus Autonomous Vehicle									
1.1.1	3	Cerberus Autonomous Vehicle (CAV)						X			
1.1.1.1	4	CAV Integration, Assembly, Test, and Checkout	X				X	X			
1.1.1.2	4	Hull/Frame/Body/Cab	X				X	X			
1.1.1.3	4	System Survivability	X				X	X			
1.1.1.4	4	Turret Assembly	X				X	X			
1.1.1.5	4	Suspension/Steering	X				X	X			
1.1.1.6	4	Vehicle Electronics	X				X	X			
1.1.1.7	4	Power Package/Drive Train						X			
1.1.1.8	4	Auxiliary Automotive	X				X	X			
1.1.1.9	4	Fire Control	X				X	X			
1.1.1.10	4	Armament						X			
1.1.1.10.3	5	Other Armament	X				X	X			
1.1.1.11	4	Automatic Ammunition Handling	X				X	X			
1.1.1.12	4	Navigation and Remote Piloting Systems	X				X	X			
1.1.1.13	4	Special Equipment	X				X	X			
1.1.1.14	4	Communications	X				X	X			
1.1.1.15	4	CAV Software Release								X	
1.1.1.15.1	5	Sensor Processing	X				X			X	
1.1.1.15.2	5	Autonomous Navigation	X				X			X	
1.1.1.15.3	5	Vehicle Control	X				X			X	
1.1.1.16	4	Other CAV Subsystems	X				X	X			
1.1.2	3	Variant 2 - UNUSED	X				X	X			
1.1.3	3	Equipment Kits	X				X	X			
1.2	2	Secondary Vehicle	X				X	X			
1.3	2	Systems Engineering									
1.3.1	3	Software Systems Engineering	X				X			X	
1.3.2	3	Integrated Logistics Support (ILS) Systems Engineering	X				X				
1.3.3	3	Cybersecurity Systems Engineering	X				X				
1.3.4	3	Core Systems Engineering	X				X				
1.3.5	3	Other Systems Engineering	X				X				
1.4	2	Program Management									
1.4.1	3	Software Program Management	X				X			X	
1.4.2	3	Integrated Logistics Support (ILS) Program Management	X				X				
1.4.3	3	Cybersecurity Management	X				X				
1.4.4	3	Core Program Management	X				X				
1.4.5	3	Other Program Management	X				X				

If the CWIPT is requiring FlexFiles:

- Indicate the **LOWEST LEVEL** of the WBS in column 12a (ACTUALS TO DATE (ATD)) where actual cost data is required
- Indicate **EVERY** element for column 12e (AT COMPLETION COSTS) where forecasted data is required**
- Indicate which elements require Quantity Data Report data in box 13a

**FAC level is up to CWIPT discretion

*WBS continues past 1.4 with MILSTD881F Appendix G alignment

DD 2794 (CSDR Plan), Pg 3 (Events)

COST AND SOFTWARE DATA REPORTING PLAN					
14. CSDR SUBMISSION EVENTS					
a. EVENT ID	b. DATA REPORT(S)	c. SUBMISSION EVENT NAME	d. REPORT CYCLE	e. AS OF DATE (YYYYMMDD)	f. DUE DATE (YYYYMMDD)
1	Cost and Hour Report (FlexFile), Quantity Data Report	Contract Award	Initial	20150401	20150701
2	Technical Data Report	Contract Award	Initial	20150401	20150701
3	SRDR Development	Contract Award	Initial	20150401	20150701
4	Cost and Hour Report (FlexFile), Quantity Data Report	Annual Submission 2016	Interim	20160430	20160630
5	Technical Data Report	Annual Submission 2016	Interim	20160430	20160630
6	SRDR Development	Annual Submission 2016	Interim	20160430	20160630
7	Cost and Hour Report (FlexFile), Quantity Data Report	EMD Phase Complete	Interim	20170331	20170531
8	Technical Data Report	EMD Phase Complete	Interim	20170331	20170531
9	SRDR Development	EMD Phase Complete	Interim	20170331	20170531
10	Cost and Hour Report (FlexFile), Quantity Data Report	Annual Submission 2018	Interim	20180430	20180630
11	Technical Data Report	Annual Submission 2018	Interim	20180430	20180630
12	SRDR Development	Annual Submission 2018	Interim	20180430	20180630
13	Maintenance and Repair Parts Data Report	Annual Submission 2018	Interim	20180430	20180630
14	Cost and Hour Report (FlexFile), Quantity Data Report	Annual Submission 2019	Interim	20190430	20190630
15	Technical Data Report	Annual Submission 2019	Interim	20190430	20190630
16	SRDR Development	Annual Submission 2019	Interim	20190430	20190630
17	Maintenance and Repair Parts Data Report	Annual Submission 2019	Interim	20190430	20190630
18	Cost and Hour Report (FlexFile), Quantity Data Report	Contract Complete	Final	20190930	20191130
19	Technical Data Report	Contract Complete	Final	20190930	20191130
20	SRDR Development	Contract Complete	Final	20190930	20191130
21	Maintenance and Repair Parts Data Report	Contract Complete	Final	20190930	20191130

- FlexFile and Quantity Data Reports will be submitted together
- FlexFiles and Quantity Data Reports will typically be submitted annually (but dependent on CWIPT)



COST AND SOFTWARE DATA REPORTING PLAN

15. REMARKS

FAC vs EAC

The checkmarks for EAC/FAC in column 12e at the WBS level shall be reported as "Forecast at Completion" (FAC). The Forecast At Completion (FAC) required here is not subject to the standards established in ANS/EIA-748 guideline #27 (Estimate at Complete); therefore, the FAC does not need to be, but may be, derived from Industry Earned Value Management (EVM) processes.

NON-RECURRING/RECURRING DEFINITIONS

Recurring and Non-Recurring Costs required for all levels:

WBS Index and Dictionary

The WBS Dictionary is a living document and must match the technical content, cost content, and work content of each end item (see Block 17) for all WBS elements for each Cost and Hour (FlexFile) submission. The dictionary shall contain a disclosure statement detailing any differences between the CSDR reporting methodology and the reporting entity's Cost Accounting Standards. The dictionary shall include a section detailing how parts are procured under this contract and any limitations of the parts procurement cost data or allocation of cost data for the WBS element.

The reporting entity must maintain and update the WBS Dictionary throughout the life of the contract, IAW DI-FNCL-82162, if changes to the WBS occur, the reporting entity shall annotate and track changes by adding the "As of Date" of the submitted FlexFile report and indicate the changes to the WBS Index and Dictionary Definitions.

For WBS elements identified in block 11 of the CSDR plan that is not within the contract's scope of work, the reporting entity shall report in the dictionary that "This CSDR WBS element is not associated with this contract's scope of work", and zero costs will be associated for ATD and FAC for these WBS elements.

END ITEMS/ORDER LOTS SCOPE

Block 16 Orders/Lots is meant to capture the discrete Delivery Orders/Task Orders exercised on the contract. If a Delivery Order/Task Order is exercised on the contract and the CSDR plan has not been updated, it is the Reporting Entity's responsibility to still submit the dollars and hours in the FlexFile tagged to the appropriate Delivery Orders/Task Orders. The CSDR plan will be revised accordingly to include all exercised Delivery Orders/Task Orders.

COST AND HOUR REPORT UNIT/SUBLOT REPORTING

The Reporting Entity is required to provide unit or subplot (specify) reporting for any given Order/Lot and End Item as outlined in block 18 of the DD Form 2794. If Unit Reporting is selected in item 18c (Unit Reporting), it is expected that all touch labor costs and hours that are associated with the discrete units or sublots be tagged as Touch Manufacturing or Touch Maintenance as defined in Data Group E, Item 7.

QUANTITY REPORTING

a. If the quantity for a given element differs from the quantity reported for the full system, provide a comment in the WBS Element Remarks section.

b. The Reporting Entity shall provide meaningful quantity information lower than the summary level in the remarks for WBS elements Peculiar Support Equipment, Common Support Equipment, and Initial Spares and Repair Parts, if applicable.

- CSDR and FlexFile Common Remarks
- CWIPT emphasis / Contractor clarification

DD 2794 (CSDR Plan), Pg 5 (Scope Def)

COST AND SOFTWARE DATA REPORTING PLAN			
INTRA-CONTRACT SCOPE REPORTING DEFINITION			
16. ORDERS/LOTS			
a. ID	b. NAME	c. PHASE/MILESTONE	
Z123D4-15-F-0001	Delivery Order 1 - EMD Phase	B	
Z123D4-17-F-0002	Delivery Order 2 - LRIP 1	C-LRIP	
Z123D4-18-F-0003	Delivery Order 3 - LRIP 2	C-LRIP	
Z123D4-XX-F-0004...n	Delivery Order 4...n		
17. END ITEMS			
a. ID	b. NAME		
1_common	Common		
2_GPV	General Purpose Variant		
3_RV	Reconnaissance Variant		
4_SSV	Supply Support Variant		
5_cbk	Combat Bumper Kit		
6_cjak	Countermeasure Jammer Attachment Kit		
7_wk	Winch Kit		
18. OPTIONAL REQUIREMENTS			
a. ORDER/LOT ID	b. END ITEM ID	c. UNIT REPORTING (X if applicable)	d. SEQUENCING (X if applicable)
Z123D4-15-F-0001	2_GPV	X	X
Z123D4-15-F-0001	3_RV	X	X
Z123D4-15-F-0001	4_SSV	X	X
Z123D4-17-F-0002	2_GPV	X	X
Z123D4-17-F-0002	3_RV	X	X
Z123D4-17-F-0002	4_SSV	X	X
Z123D4-18-F-0003	2_GPV	X	X
Z123D4-18-F-0003	3_RV	X	X
Z123D4-18-F-0003	4_SSV	X	X
Z123D4-XX-F-0004...n	2_GPV	X	X
Z123D4-XX-F-0004...n	3_RV	X	X
Z123D4-XX-F-0004...n	4_SSV	X	X

If the CWIPT is requiring FlexFiles, the Scope Def page is required

- Indicate the Order/Lots and End Items that the contractor will be tagging the reported dollars and hours to
- Require Unit Reporting in box 18c if the CWIPT required unit cost reporting, similar to the 1921-2 requirement
- Indicate that Unit Reporting is required in the FlexFile instead of a 1921-2
- See the implementation guide for more information regarding these two fields

Examples



What is Order/Lot?

Order/Lot field identifies different purchase orders on the same contract.

They will be identified by the CWIPT during the planning process in block 16.

Some examples are detailed below...

ID	Order/Lot	ID	Order/Lot
1	Lot 1	1	LRIP 1
2	Lot 2	2	LRIP 2

ID	Order/Lot	ID	Order/Lot
1	DO 001	1	TO 001
2	DO 002	2	TO 002

ID	Order/Lot	ID	Order/Lot
1	Prelim Design	1	FY17
2	Detailed Design	2	FY18

What is End Item?

End Items are uniquely identified platforms, models, versions, flights, variants, kits, services, or sustainment activities that is delivered.

They will be identified by the CWIPT during the planning process in block 17.

Some examples are detailed below...

ID	End Item	ID	End Item
1	Variant A	1	Hull 100
2	Variant B	2	Hull 101

ID	End Item	ID	End Item
1	Kit 1	1	Activity x
2	Kit 2	2	Activity y

ID	End Item
1	F-120 A
2	F-120 B

Relationship with Submission Events

A single FlexFile submission will contain data for all of the identified End Items and Order/Lots as opposed to requiring as many submissions as there are End Items and Order/Lots.

For example, if there are five lots on a contract, the Legacy CCDRs would have been given **five submissions** for each lot.

In the FlexFile, those five lots would be detailed in the Order/Lot table (depicted below) and the data for each will be provided in a **single submission**.

ID	Order/Lot
1	Lot 1
2	Lot 2
3	Lot 3
4	Lot 4
5	Lot 5

ID is a product of the data model used to ingest the FlexFile data in CADE. Both tables would have unique IDs to identify the End Items and Order/Lots.

Example



FlexFile Plan – Order/Lot

ID	Order/Lot
1	LRIP 1
2	LRIP 2

FlexFile Plan – Submission Events



Event ID	Data Reports	Submission Event Name	As of Date	Due Date
1	FlexFile, Quantity	Annual Report #1	1/1/2019	3/2/2019
2	FlexFile, Quantity	Annual Report #2	1/1/2020	3/2/2020

Legacy Plan – Submission Events



Event ID	Data Reports	Submission Event Name	As of Date	Due Date
1	CWBS Dictionary	CWBS Dictionary	1/1/2018	3/2/2018
2	1921, 1921-1	LRIP 1 Report	1/1/2019	3/2/2019
3	1921, 1921-1	LRIP 2 Report	1/1/2020	3/2/2020

- Utilizing the *Order/Lot* table in the FlexFile plan results in the same data as requiring a submission, say, per *LRIP* (same applies to all *Purchase Orders*, including *Delivery Orders*)
- Dollars and hours will be tagged to the discrete *LRIPs* using the *Order/Lot* data field
- Since the WBS definitions are part of the FlexFile DID, there is no need to require it on the FlexFile plan

Example



FlexFile Plan – End Item

ID	End Item
1	Variant A
2	Variant B
3	Variant C

FlexFile Plan – Submission Events



Event ID	Data Reports	Submission Event Name	As of Date	Due Date
1	FlexFile, Quantity	Contract Completion	1/1/2019	3/2/2019

Legacy Plan – Submission Events



Event ID	Data Reports	Submission Event Name	As of Date	Due Date
1	CWBS Dictionary	CWBS Dictionary	1/1/2018	3/2/2018
2	1921, 1921-1	Variant A Report	1/1/2019	3/2/2019
3	1921, 1921-1	Variant B Report	1/1/2019	3/2/2019
4	1921, 1921-1	Variant C Report	1/1/2019	3/2/2019

- Utilizing the *End Item* table in the FlexFile plan results in the same data as requiring a submission per *Variant*
- Dollars and hours will be tagged to the discrete *Variants* using the *End Item* data field
- Since the WBS definitions are part of the FlexFile DID, there is no need to require it on the FlexFile plan


Example



FlexFile Plan – End Item


ID	End Item
1	Variant A
2	Variant B

FlexFile Plan – Reporting



WBS Code	WBS Level	WBS Name
1.0	1	Ground Vehicle
1.1	2	Family of Vehicles
1.1.1	3	Subsystem 1...n

Legacy Plan – Reporting



WBS Code	WBS Level	WBS Name
1.0	1	Ground Vehicle
1.1	2	Family of Vehicles
1.1.1	3	Variant A
1.1.1.1	4	Subsystem 1...n
1.1.2	3	Variant B
1.1.2.1	4	Subsystem 1...n

- Utilizing the *End Item* table results in the same information as breaking out the WBS by *Variant*
- Dollars and hours will be tagged to the discrete *Variants* using the *End Item* data field
- Since the WBS is **NOT** broken out by *Variant*, the CWIPT needs to ensure that the definitions provided in the FlexFile have unique *Variant* detail



Since the Quantity Data Report is a separate requirement, it can be explicitly planned for as part of the CSDR Plan.

- The CWIPT must request which WBS elements they expect to receive quantity information for.
- Quantities at completion will then be reported for the combinations of applicable WBS elements, Order/Lot tags, and End Item tags

The FlexFile and Quantity Data Report must be submitted as part of the same submission event.

If it is determined by the CWIPT that there is not value in asking for quantity data, then the Quantity Data Report does not need to be required.

When deciding what quantity information to require, an analyst should consider...

1. The unique combinations of WBS element, Order/Lot tag, and End Item tag
2. What the quantity value would represent (i.e. would the value be standardized)

Note: The guidance above is only applicable for quantities at completion. Quantities in process and completed to date are only reported for the unique combinations of WBS element and Order/Lot tag.

Production Example



Scenario:

- Two delivery orders providing complete aircraft systems to the government
- The **Order/Lot** tags will be **DO1** and **DO2**
- The total system has two variants
- The **End Item** tags will be **VarA** and **VarB**

Quantity Data Report:

- Requirement should be checked off for the applicable HW subsystems in addition to 1.0 to ensure sufficient quantities are reported
- If complete systems are not being delivered, then checking off 1.0 may be misleading since the number reported would be comprised of two or more different subsystems (i.e. not standardized)

	A	B	C	D
1	Quantities At Completion			
2	Order or Lot ID	End Item ID	WBS Element ID	Delivered Quantity At Completion
3	DO1	VarA	1.0 - Aircraft System	10
4	DO1	VarB	1.0 - Aircraft System	10
5	DO2	VarA	1.0 - Aircraft System	15
6	DO2	VarB	1.0 - Aircraft System	15
7	DO1	VarA	1.2.3 - Propulsion	20
8	DO1	VarB	1.2.3 - Propulsion	20
9	DO2	VarA	1.2.3 - Propulsion	30
10	DO2	VarB	1.2.3 - Propulsion	30

Would want to know the relationship between the total system and certain subsystems (i.e. an aircraft is comprised of two propulsion systems)

Sustainment Example



Scenario:

- Two task orders that are providing some services for an aircraft system
- The **Order/Lot** tags will be **TO1** and **TO2**
- The aircraft system has two variants and there is a requirement to see how many of each variant were serviced
- The **End Item** tags will be **VarA** and **VarB**

Quantity Data Report:

- Need to decide whether it makes sense to receive a quantity at any other level of the WBS
- An analyst would need to make clear what the quantity should represent (e.g. number of vehicles serviced)
- Any detail regarding the types of services or repair parts would come through in a different report (e.g. –M/R), unless it is defined in the WBS

	A	B	C	D
1	Quantities At Completion			
2	Order or Lot ID	End Item ID	WBS Element ID	Delivered Quantity At Completion
3	TO1	VarA	1.0 - Sustainment	10
4	TO1	VarB	1.0 - Sustainment	5
5	TO2	VarA	1.0 - Sustainment	15
6	TO2	VarB	1.0 - Sustainment	10

Would need to make sure it is clear what the value reported represents



Planning Considerations Summary

The following considerations should be included in addition to existing CSDR planning guidance

- Define desired frequency of FlexFiles
- Define Order/Lot and End Item (see Figure 1)
- Unit Reporting and Sequencing requirements when applicable
- Level of FACs and if broken out by Nonrecurring/Recurring and the Standard Functional Category
- Quantity Data Report requires that reporting elements are selected and that GFE are properly identified (see Figure 2)
- Quantity Data Report also requires that sequencing be selected by Order/Lot and End Item

Figure 1 - DD Form 2794, Supp. (SCOPE DEF)

COST AND SOFTWARE DATA REPORTING PLAN		
INTRA-CONTRACT SCOPE REPORTING DEFINITION		
16. ORDERS/LOTS		
a. ID	b. NAME	c. PHASE/MILESTONE
1	LRIP 1	C-LRIP
2	LRIP 2	C-LRIP
17. END ITEMS		
a. ID	b. NAME	
1	Variant A	
2	Variant B	

Figure 2 - DD Form 2794, Pg 1 (REPORTING)

a. WBS CODE	b. WBS LEVEL	c. WBS ELEMENT NAME	a. ACTUALS TO DATE (ATD)	a. QUANTITY		b. SRDR FORMATS	c. MAINT. & REPAIR
				i. QUANTITY DATA	ii. GFE QUANTITY		
1.0	1	Ground Vehicle System		X			
1.1	2	Family of Vehicles		X			
1.1.1	3	Vehicle Integration, Assembly, Test and Checkout	X	X			
1.1.2	3	Hull/Frame/Body/Cab	X	X			
1.1.3	3	System Survivability	X	X			
1.1.4	3	Turret Assembly	X	X			

CSDR Process



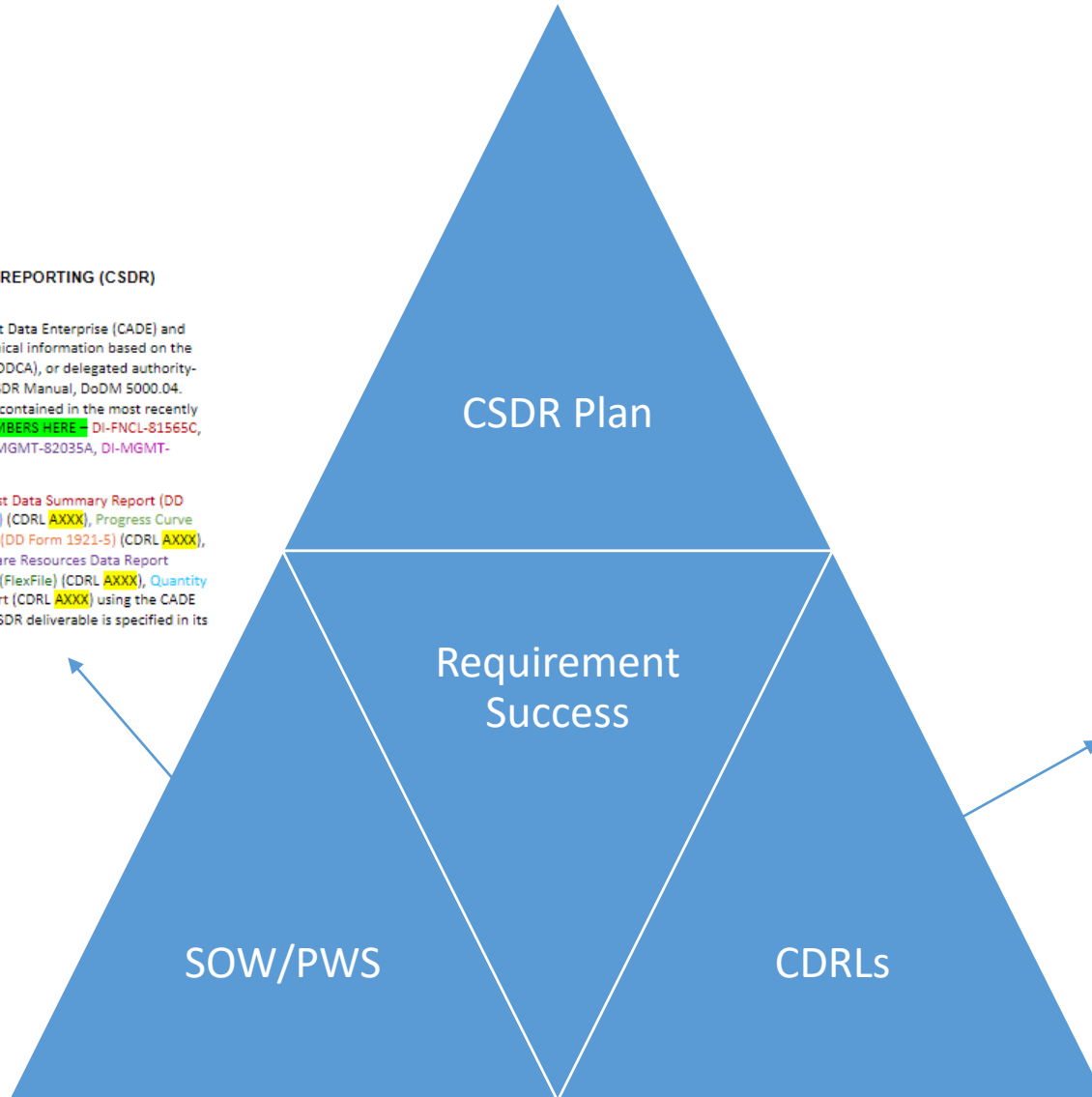
FlexFile Requirement Reference Documents



C.X.X.X CONTRACTOR COST AND SOFTWARE DATA REPORTING (CSDR)

The contractor shall systematically collect and report to Cost Assessment Data Enterprise (CADE) and the United States Government (USG) the actual contract costs and technical information based on the Office of the Secretary of Defense (OSD) Deputy Director Cost Analysis (DDCA), or delegated authority-approved CSDR plan (Attachment XXXX) in accordance with (IAW) the CSDR Manual, DoDM 5000.04. CSDR deliverables shall be prepared in accordance with the instructions contained in the most recently approved versions of the Data Item Descriptions (DIDs), **SELECT DID NUMBERS HERE** DI-FNCL-81565C, DI-FNCL-81566C, DI-FNCL-81567C, DI-FNCL-81992, DI-FNCL-81765B, DI-MGMT-82035A, DI-MGMT-82165, DI-FNCL-82162, DI-MGMT-82164, DI-MGMT-82163.

The Contractor shall submit electronically the **SELECT REPORTS HERE** Cost Data Summary Report (DD Form 1921) (CDRL AXXX), Functional Cost-Hour Report (DD Form 1921-1) (CDRL AXXX), Progress Curve Report (1921-2) (CDRL AXXX), Sustainment Functional Cost-Hour Report (DD Form 1921-5) (CDRL AXXX), Contractor Business Data Report (DD Form 1921-3) (CDRL AXXX), Software Resources Data Report (CDRL AXXX), Technical Data Report (CDRL AXXX), Cost and Hour Report (FlexFile) (CDRL AXXX), Quantity Data Report (-Q) (CDRL AXXX), Maintenance and Repair Parts Data Report (CDRL AXXX) using the CADE CSDR Submit-Review System. The required form and file type for each CSDR deliverable is specified in its DID.



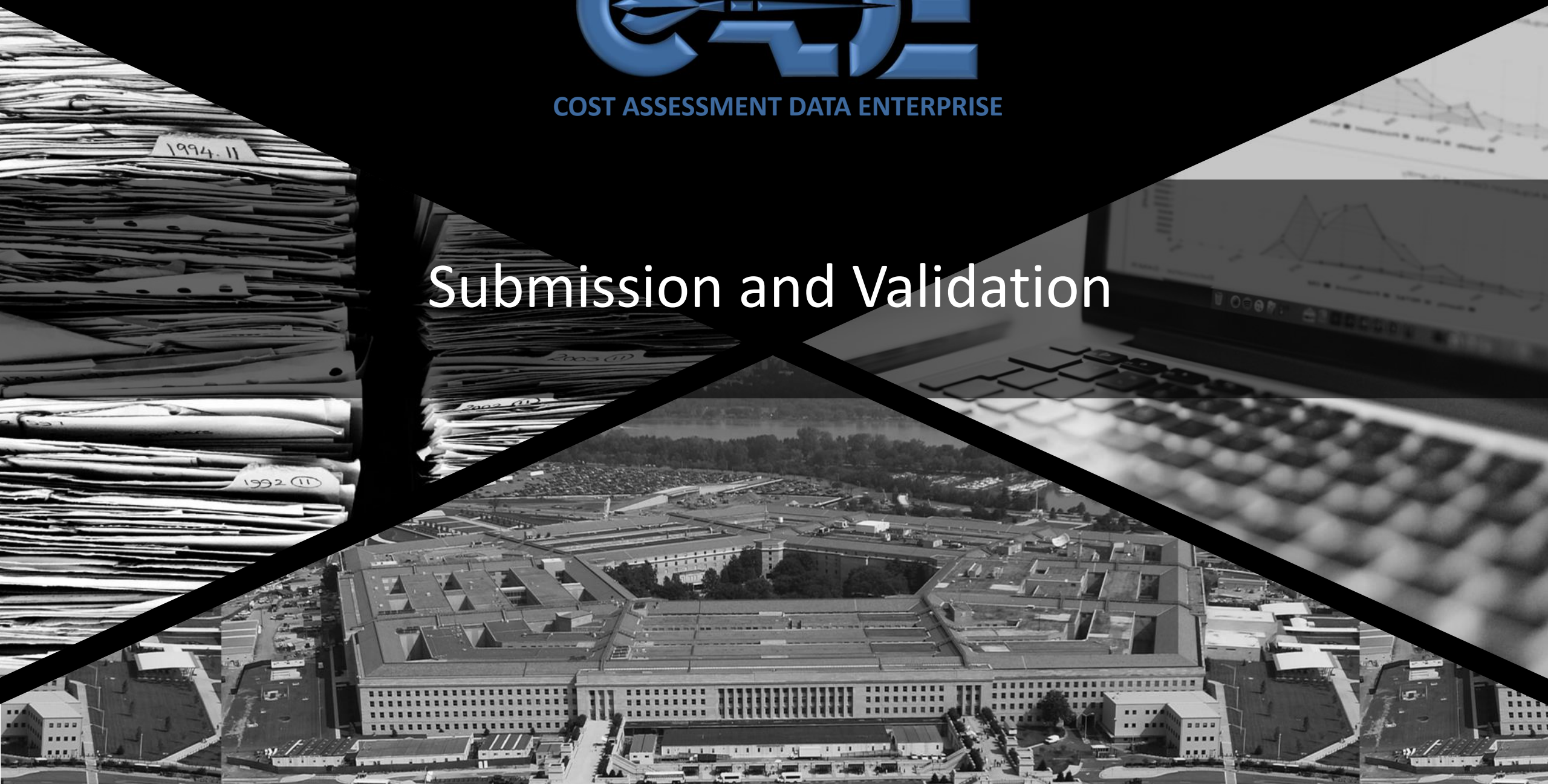
CONTRACT DATA REQUIREMENTS LIST										Form Approved OMB No. 0704-0188	
<p>The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/RF No. listed in Block E.</p>											
A. CONTRACT LINE ITEM NO.		B. EXHIBIT		C. CATEGORY: TDP _____ TM _____ OTHER _____							
D. SYSTEM/ITEM				E. CONTRACT/PR NO.				F. CONTRACTOR			
1. DATA ITEM NO.		2. TITLE OF DATA ITEM				3. SUBTITLE					
		Cost and Hour Report (Flexfile)				Contractor Cost Data Reporting (CCDR)					
4. AUTHORITY (Data Acquisition Document No.)				5. CONTRACT REFERENCE				6. REQUIRING OFFICE			
DI-FNCL-82162											
7. DD 250 REQ		8. DIRT STATEMENT REQUIRED		10. FREQUENCY		12. DATE OF FIRST SUBMISSION		14. DISTRIBUTION			
				See Block 16		See Block 16		a. ADDRESSEE			
8. APP CODE		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION		See Block 16		Draft		Final	
		See Block 16		See Block 16				Flag		Repro	
15. REMARKS								OSD CAPE			
Blocks 10 - 13: Prepare the Cost and Hour Report (FlexFile) in accordance with DI-FNCL-82162 and the OSD CAPE Deputy Director, Cost Assessment (DDCA)-approved contract CSDR Plan. The DID, DI-FNCL-82162, is available from the Cost Assessment Data Enterprise (CADE) website at https://cade.osd.mil/policy/dids . The CSDR Plan is included as a contract attachment.								See Block 16			
The following tailoring of the DID is acceptable:											
1. Data Group B - Item 4 - Additional Data Fields #1-#12											
Not required.											
Contractors shall be required to submit the Cost and Hour Report (FlexFile) at frequencies specified in the CAPE-approved CSDR plan. The contract CSDR plan uses the event field as the driver for the submission of the reports, not the "as of date." If the event slips, the contractor must notify the Government Program Office that a date change is needed. It is the responsibility of the Government Program Office to submit a request for change in the event-driven date for reporting through the CAPE website for CAPE approval before relief is given for the date reflected in the CAPE-approved CSDR Plan.											
The FlexFile shall be delivered in either a) MS Excel (.xlsx) or comma separated values (.csv) in the contractor's format of choosing, so long as it fulfills the requirements of the DD FORM 2794 and is in accordance with the FlexFile DID or b) JavaScript Object Notation (JSON) as described in the FlexFile File Format Specification (FFS) and Data Exchange Instructions (DEI) referenced in the FlexFile DID Requirements Section 2.											
All files shall be submitted electronically using the CADE website. Data submitters must register through the CADE website and possess a DoD-approved ECA digital certificate or DoD-issued CAC to obtain a CADE Portal account and be authorized to upload CSDR content. Users can obtain access by submitting user information about themselves and their organizations to the CADE Portal and requesting a CSDR submitter user role. After the registration information has been verified, CAPE shall authorize the user account and requested roles. All CADE Portal accounts need to be renewed at least annually.											
15. TOTAL								0		0	
G. PREPARED BY				H. DATE		I. APPROVED BY		J. DATE			

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE



COST ASSESSMENT DATA ENTERPRISE

Submission and Validation





Submission Considerations

- The starting point for submission allows industry to submit the reports in an Excel Template files instead of the JSON Data Model.
- The data model is final and industry may choose to submit according to the JSON Data Model.
- The reporting entity is recommended to convert Excel Template Files to JSON files using cPet tool to ensure accordance with Data Exchange Instructions (DEI) and File Format Specifications (FFS)

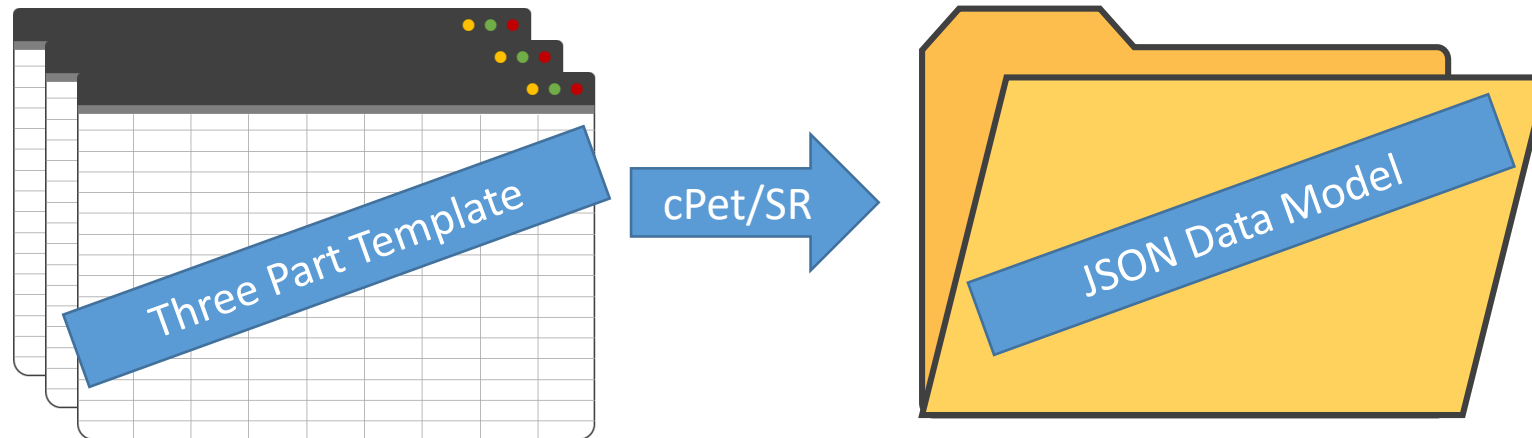
Validation Considerations

- **DCARC** will ensure compliance with
 - DID
 - DEI/FFS
 - Approved CSDR plan
 - Equivalent of Legacy 1921 validation rules
- **External stakeholders** may also consider any of the additional insight provided in the FlexFile format when conducting their reviews.

**CSDR
Process**



If using the Excel Template Files the process follows as below:



NOTE: If available, outside tools can be utilized to directly export JSON files that are in accordance with DEI/FFS

Guidance and templates outlining the options can be found at
<https://cade.osd.mil/policy/flexfile-quantity>



Excel format and XML schema no longer the final version of CCDRs. FlexFile and Quantity Data Report files to convert to JSON or validate correctly in CADE must be in accordance with:

- Data Exchange Instructions (DEI): Provides specific direction for populating the different data model inputs for each required Table, Entity, and Fields and details expected enumerations for selected inputs (e.g. contract type).
- File Format Specifications: Intended as a technical reference for computer programmers implementing software to support the exchange of data (i.e. tables, nullable fields, key constraints, enumerations, singletons, strings, and structures).

FlexFile DEI OrdersOrLots Example

2.1.3 OrdersOrLots

Table	OrdersOrLots	
Entity	OrderOrLot	
Fields	Name	Use Notes
	ID	Provide the ID for the order/lot.
	Name	Provide the name of the order/lot.
	PhaseOrMilestoneID	Program the phase/milestone.
	CustomerName	Provide the customer name.
	ContractTypeID	Provide the contract type.
	ContractPrice	Provide the contract price.
	ContractCeiling	Provide the contract ceiling.
	PeriodOfPerformance_StartDate	Provide the period of performance start date.
	PeriodOfPerformance_EndDate	Provide the period of performance end date.
AppropriationTypeID	Provide the appropriation type.	
Use Notes		

FlexFile FFS OrdersOrLots Example

2.2.3 OrdersOrLots

Table	OrdersOrLots		
Entity	OrderOrLot		
Fields	Name	Data Type	Nullable
	ID	StringID	No
	Name	String	No
	PhaseOrMilestoneID	StringID	Yes
	CustomerName	String	Yes
	ContractTypeID	StringID	Yes
	ContractPrice	Decimal	Yes
	ContractCeiling	Decimal	Yes
	PeriodOfPerformance_StartDate	Date	Yes
	PeriodOfPerformance_EndDate	Date	Yes
AppropriationTypeID	StringID	Yes	
Primary Key	ID		
Foreign Keys	PhaseOrMilestoneID: PhaseOrMilestoneEnum(ID) ContractTypeID: ContractTypeEnum(ID) AppropriationTypeID: AppropriationTypeEnum(ID)		
Use Constraints			



COST ASSESSMENT DATA ENTERPRISE

Data and Analytics

FlexFile Data Access



CADE FlexFile Outputs

Data & Analytics: Single Submission

- Highlights different download options associated with a single FlexFile submission

Data & Analytics: Bulk Downloads

- Highlights different download options associated with bulk downloading FlexFiles

Potential Use Cases of FlexFile Exports

- Highlights different use cases with each file type

Data & Analytics: Single Submission



Search for CSDR Data

CSDR Browse

Browse CSDR submissions (1921s, SRDRs, FlexFiles) with enhanced searching

Bulk Exports SRDR & FlexFiles

Export all published SRDR data and flattened, pivot-friendly FlexFile data

Quick Downloads

Bulk download CSDR submission files for a given Service or Commodity

Enter CSDR Browse


D&A- Individual Submission

<input checked="" type="checkbox"/> Submissions (6) <input type="checkbox"/> CCDR Reports (18) <input type="checkbox"/> SRDR Data														
<input checked="" type="checkbox"/>	Program	Model	Contract Task	Weapon Sys Type (Contract)	Order/Lot	As Of	Contract Number	Pri/Sub	Reporting Contractor	Submission Event	Report Type	Report Cycle	# Rpts	# Files
<input checked="" type="checkbox"/>	Cerberus	Cerberus Autonom... Vehicle	Cerberus EMD, LRIP 1-2	Light Armored Vehicle		4/1/2015	Z123D4-15-D-7890	Prime	Con-tractor, LLC	Contract Award	FlexFile, Quantity Data Report	Initial	0	3
<input checked="" type="checkbox"/>	Cerberus	Cerberus Autonom... Vehicle	Cerberus EMD, LRIP 1-2	Light Armored Vehicle		4/30/2016	Z123D4-15-D-7890	Prime	Con-tractor, LLC	Annual Submission 2016	FlexFile, Quantity Data Report	Inte...	0	2
<input checked="" type="checkbox"/>	Cerberus	Cerberus Autonom... Vehicle	Cerberus EMD, LRIP 1-2	Light Armored Vehicle		3/31/2017	Z123D4-15-D-7890	Prime	Con-tractor, LLC	EMD Phase Complete	FlexFile, Quantity Data Report	Inte...	0	2
<input checked="" type="checkbox"/>	Cerberus	Cerberus Autonom... Vehicle	Cerberus EMD, LRIP 1-2	Light Armored Vehicle		4/30/2018	Z123D4-15-D-7890	Prime	Con-tractor, LLC	Annual Submission 2018	FlexFile, Quantity Data Report	Inte...	0	2
											FlexFile.			






- Select 1 Submission Event to see the corresponding downloads associated with a single Submission Event

D&A- Individual Submission

Submission Metadata

Program:	Cerberus	Phase:	PROD
MIL-STD:	SURFACE VEHICLE	Contract Task:	Cerberus EMD, LRIP 1-2
Contract #:	Z123D4-15-D-7890	Sub Event:	EMD Phase Complete
Reporting Ctr:	Con-Tractor, LLC	Report Cycle:	Interim
Division:	Autonomous Vehicle Division	As Of Date:	03/31/2017
Location:	New York	Plan #:	Z-99-C1(R) 
Prime/Sub:	Prime	Submission ID:	25532






Submission Files

	File Name	File Type	Exports	Created Date
1.	  EMD Phase Complete_quantity.zip	Quantity Data Report		02/03/2022
2.	  EMD Phase Complete_flexfile.zip	FlexFile	3.  Export FF Pivot Data	02/03/2022

[Download All](#)

D&A- Individual Submission

Submission Files

File Name	File Type	Exports	Created Date
  EMD Phase Complete_quantity.zip	Quantity Data Report		02/03/2022
  EMD Phase Complete_flexfile.zip	FlexFile	 Export FF Pivot Data	02/03/2022

[Download All](#)

Parsed 1921-Series Reports

Report Name	Derived From	As Of Date	Subtotal, At Complete (\$k)			% Complete	Actions
			NR	Rec	Tot		
Delivery Order 1 - EMD Phase	EMD Phase Complete_flexfile.zip EMD Phase Complete_quantity.zip	03/31/2017	0.00	0.00	0.00		4. 5.   
Delivery Order 2 - LRIP 1	EMD Phase Complete_flexfile.zip EMD Phase Complete_quantity.zip	03/31/2017	0.00	0.00	0.00		  

D&A- Individual Submission

1. Quantity Excel Template

- Excel representation of the Quantity data model and will include all the information associated with the Quantity File
- This will include all the Quantity File tables and the structure of this excel will not change

2. FlexFile Excel Template

- Excel representation of the FlexFile data model and will include all the information associated with the FlexFile
- This will include all the FlexFiles tables and the structure of this excel will not change

3. Export FF Pivot Data

- Contains ONLY Actual To Date (ATD) data in a denormalized structure so the user has the capability to pivot to the ATD Data
- This will contain all the lower level data associated with the FlexFiles
- This data is in a zipped file with .csv data and a predefined excel template

4. 1921 Formatted File

- This a 1921 formatted excel representation of an *individual* Order or Lot in a FlexFile and Quantity File

5. 1921 Series Flat File

- This a 1921 flat excel representation of an *individual* Order or Lot in a FlexFile and Quantity File

Data & Analytics: Bulk Downloads



Search for CSDR Data

CSDR Browse

Browse CSDR submissions (1921s, SRDRs, FlexFiles) with enhanced searching

Bulk Exports SRDR & FlexFiles

Export all published SRDR data and flattened, pivot-friendly FlexFile data

Quick Downloads

Bulk download CSDR submission files for a given Service or Commodity

Enter CSDR Browse

D&A- Bulk Downloads

Submissions (6) 1.

CCDR Reports (18)

SRDR Data

Page 1 of 2

<input checked="" type="checkbox"/>	Report Name	Program	Model	Contract Task	As Of	Contract Number	Pri/Sub	Reporting Contractor	Submission Event	Report Type	Report Cycle
<input checked="" type="checkbox"/>	Delivery Order 1 - EMD Phase	Cerberus	Cerberus Autonomous Vehicle	Cerberus EMD, LRIP 1-2	4/1/2015	Z123D4-15-D-7890	Prime	Con-Tractor, LLC	Contract Award	FlexFile, Quantity Data Report	Initial
<input checked="" type="checkbox"/>	Delivery Order 2 - LRIP 1	Cerberus	Cerberus Autonomous Vehicle	Cerberus EMD, LRIP 1-2	4/1/2015	Z123D4-15-D-7890	Prime	Con-Tractor, LLC	Contract Award	FlexFile, Quantity Data Report	Initial
<input checked="" type="checkbox"/>	Delivery Order 2 - LRIP 2	Cerberus	Cerberus Autonomous Vehicle	Cerberus EMD, LRIP 1-2	4/1/2015	Z123D4-15-D-7890	Prime	Con-Tractor, LLC	Contract Award	FlexFile, Quantity Data Report	Initial
<input checked="" type="checkbox"/>	Delivery Order 1 - EMD Phase	Cerberus	Cerberus Autonomous Vehicle	Cerberus EMD, LRIP 1-2	4/30/2016	Z123D4-15-D-7890	Prime	Con-Tractor, LLC	Annual Submission 2016	FlexFile, Quantity Data Report	Inte...
<input checked="" type="checkbox"/>	Delivery Order 1 - EMD Phase	Cerberus	Cerberus Autonomous Vehicle	Cerberus EMD, LRIP 1-2	3/31/2017	Z123D4-15-D-7890	Prime	Con-Tractor, LLC	EMD Phase Complete	FlexFile, Quantity Data Report	Inte...

Rows per page: 10

Export CCDR Data

Download Source Files

Export Metadata

 Select up to 500 CCDR Reports to Exports

D&A- Bulk Downloads

Enter Bulk Exports: SRDR & FlexFiles

Search for CSDR Data

CSDR Browse

Browse CSDR submissions (1921s, SRDRs, FlexFiles) with enhanced searching

Bulk Exports
SRDR & FlexFiles

Export all published SRDR data and flattened, pivot-friendly FlexFile data

Quick Downloads

Bulk download CSDR submission files for a given Service or Commodity

Bulk Exports

CUI // PROPIN // FEDCON Defense contractor data is proprietary and must be protected from unauthorized disclosure or distribution

SRDR Data

Analysts can bulk export all submitted SRDR data using the buttons below.

Export SRDR Dev Data

6 Software Development Reports (3026-1), last updated 03/24/2022.

Export SRDR Maint Data

No SRDR Maint reports available.

Export SRDR ERP Data

No SRDR ERP data available.

Export Legacy SRDR Data

No SRDR Legacy data available.

FlexFile Data

This export provides the time-phased actual-to-date data for all FlexFiles in a flattened, pivot-friendly format. The data for each FlexFile is provided as a CSV file which is then packaged into a collection of CSVs within a single ZIP file, identified by the CADE submission ID.

Export FlexFile Pivot Data

Multi-file FlexFile Export

2.

Representations of FlexFile data in CADE

□ There are two exports with **bulk** representations of FlexFiles:

1. **CCDR Bulk Export**

- This takes multiple FlexFiles and integrates the FlexFile with traditional CCDR (1921 series) data
- The FlexFile is represented at a higher level- WBS Level with quantity data integrated

2. **FlexFile Bulk Pivot Export**

- This takes multiple FlexFiles and allows them to be exported at the lowest level of their data- contractor account level
- The FlexFile is represented at the lowest level of data

Potential Use Cases of FlexFile Exports



Attribute	Individual Exports		Bulk Exports	
	The FlexFile (JSON or Excel)	FlexFile Pivot Export (CSV)	CCDR Export (Excel)	Bulk FlexFile Pivot Export (CSV)
CADE Metadata			X	X
Contractor Metadata	X	X	X	X
Actual-To-Date Costs and Hours	X	X	X	X
Forecast-At-Completion Costs and Hours	X		X	
Recurring/Nonrecurring Costs and Hours	X	X	X	X
Costs and Hours by Order/Lot	X	X	X	X
Costs and Hours by Unit/Sublot	X	X	X	X
Costs and Hours by End Item	X	X		X
Costs and Hours by Account	X	X		X
CADE Standardized Functional Categories	X	X	X	X
Contractor Reported Functional Categories	X	X		X
Allocation Method ID	X	X		X
Allocation Components (Order/Lot, End Item, WBS, or Unit/Sublot, and % Value)*	X			
Additional Tags	X	X		X
Reporting Period Start Dates & End Dates	X	X		X
Quantity Data- from Quantity Report			X	

*Allocations are already applied to the FlexFile pivot export

Potential Use cases of CADE Individual Exports

❑ FlexFile JSON or Excel Template

- ❑ The FlexFile includes all elements of the contract's FlexFile so if you are trying to understand a FlexFile as a whole (i.e. Reporting Configuration, allocation methods, WBS Dictionaries) the individual FlexFile has all of this information
- ❑ *Things to note:* This will not have any CADE Metadata so if you are going to do analysis on a large amount of FlexFiles then you may not have normalized metadata due to Contractor entered naming conventions

❑ Individual FlexFile Pivot

- ❑ The individual pivot comes with a template that can be used to roll up the WBS structure to emulate a 1921 series. This template data can also be used to look at both lower level detail and rolled up information across a singular FlexFile
- ❑ *Things to note:* This is an individual file without CADE Metadata so you would be getting the lowest level of information with only the Actuals To Date

Potential Use cases of CADE Bulk Exports

☐ **CCDR Bulk Export:**

- ☐ This can be used to look across programs that span many years. The user has the capability to come FlexFiles and 1921 Legacy Series in a correct and accurate manner at a higher level while also getting an opportunity to look at the quantity data associated with both the legacy series as well as the FlexFile & Quantity data
- ☐ *Things to note:* The CCDR Bulk Export incorporates only higher level data (i.e. no account level data for FlexFiles) due to the integration of CCDR data and FlexFile data

☐ **FlexFile Bulk Pivot Export:**

- ☐ This takes multiple FlexFiles and allows them to be exported at the account level of the data. This allows users to look across FlexFile submission to compare previous submission to new submissions
- ☐ *Things to note:* This will only include Actual to Date account level data due the Forecasted At Completion level data being captured at a much higher level

**Both exports can be integrated to get lower level data as well as higher level FAC data*

FlexFiles Views and Nuances



Pivot Table Template Example – REC/NRE to Date

Recurring / Non Recurring To Date By WBS

Actual To Date (Dollars)	Column Labels		
Row Labels	NONRECURRING	RECURRING	Grand Total
TOTAL	12,605,528,204	12,426,772,570	25,032,300,774
Subsystem 1.1	10,103,913,302	10,123,613,365	20,227,526,667
Subsystem 1.2	133,355,674	127,722,937	261,078,611
Subsystem 1.2	133,355,674	127,722,937	261,078,611
Subsystem 1.3	1,272,886,648	1,160,647,449	2,433,534,097
Subsystem 1.3.1	1,039,243,795	928,388,113	1,967,631,908
Subsystem 1.3.2	172,522,418	168,112,630	340,635,048
Subsystem 1.3.3	61,120,435	64,146,706	125,267,141
Subsystem 1.4	841,462,234	754,716,610	1,596,178,844
Subsystem 1.4	841,462,234	754,716,610	1,596,178,844
Subsystem 1.5	253,910,346	260,072,209	513,982,555
Subsystem 1.5	253,910,346	260,072,209	513,982,555
Grand Total	12,605,528,204	12,426,772,570	25,032,300,774

Recurring / Non Recurring To Date By CLIN/End Item

Actual To Date (Dollars)	Column Labels		
Row Labels	NONRECURRING	RECURRING	Grand Total
CLIN 1	4,983,155,115	5,010,693,625	9,993,848,740
Variant A	2,497,021,739	2,499,480,176	4,996,501,915
Variant B	2,486,133,376	2,511,213,449	4,997,346,825
CLIN 2	5,124,875,709	4,891,529,619	10,016,405,328
Variant A	2,532,796,593	2,476,183,592	5,008,980,185
Variant B	2,592,079,116	2,415,346,027	5,007,425,143
CLIN 3	2,497,497,380	2,524,549,326	5,022,046,706
Variant A	1,256,671,890	1,257,162,395	2,513,834,285
Variant B	1,240,825,490	1,267,386,931	2,508,212,421
Grand Total	12,605,528,204	12,426,772,570	25,032,300,774

Pivot Table Template Examples – CLIN/WBS Relationship

CLIN / WBS Relationship

Actual To Date (Dollars)	Column Labels		
Row Labels	NONRECURRING	RECURRING	Grand Total
TOTAL	12,605,528,204	12,426,772,570	25,032,300,774
Subsystem 1.1	10,103,913,302	10,123,613,365	20,227,526,667
Subsystem 1.2	133,355,674	127,722,937	261,078,611
CLIN 1	49,636,240	54,975,963	104,612,203
CLIN 2	55,319,526	48,782,405	104,101,931
CLIN 3	28,399,908	23,964,569	52,364,477
Subsystem 1.3	1,272,886,648	1,160,647,449	2,433,534,097
CLIN 1	525,955,805	439,802,971	965,758,776
CLIN 2	497,280,879	479,573,658	976,854,537
CLIN 3	249,649,964	241,270,820	490,920,784
Subsystem 1.4	841,462,234	754,716,610	1,596,178,844
CLIN 1	328,463,449	308,470,488	636,933,937
CLIN 2	345,831,910	293,998,581	639,830,491
CLIN 3	167,166,875	152,247,541	319,414,416
Subsystem 1.5	253,910,346	260,072,209	513,982,555
CLIN 1	115,741,930	89,704,972	205,446,902
CLIN 2	92,158,084	112,555,184	204,713,268
CLIN 3	46,010,332	57,812,053	103,822,385
Grand Total	12,605,528,204	12,426,772,570	25,032,300,774

Actual To Date (Dollars)	Column Labels		
Row Labels	NONRECURRING	RECURRING	Grand Total
CLIN 1	4,983,155,115	5,010,693,625	9,993,848,740
Subsystem 1.1	3,963,357,691	4,117,739,231	8,081,096,922
Subsystem 1.2	49,636,240	54,975,963	104,612,203
Subsystem 1.3	525,955,805	439,802,971	965,758,776
Subsystem 1.4	328,463,449	308,470,488	636,933,937
Subsystem 1.5	115,741,930	89,704,972	205,446,902
CLIN 2	5,124,875,709	4,891,529,619	10,016,405,328
Subsystem 1.1	4,134,285,310	3,956,619,791	8,090,905,101
Subsystem 1.2	55,319,526	48,782,405	104,101,931
Subsystem 1.3	497,280,879	479,573,658	976,854,537
Subsystem 1.4	345,831,910	293,998,581	639,830,491
Subsystem 1.5	92,158,084	112,555,184	204,713,268
CLIN 3	2,497,497,380	2,524,549,326	5,022,046,706
Subsystem 1.1	2,006,270,301	2,049,254,343	4,055,524,644
Subsystem 1.2	28,399,908	23,964,569	52,364,477
Subsystem 1.3	249,649,964	241,270,820	490,920,784
Subsystem 1.4	167,166,875	152,247,541	319,414,416
Subsystem 1.5	46,010,332	57,812,053	103,822,385
Grand Total	12,605,528,204	12,426,772,570	25,032,300,774

Pivot Table Template Examples – Standard Categories

Standard Categories By WBS

NonrecurringOrRecurring_ID	RECURRING
Row Labels	Actual To Date (Dollars)
⊖ DIRECT_ENGINEERING_LABOR	6,207,404,106
Subsystem 1.1	5,057,018,865
Subsystem 1.2	63,783,840
Subsystem 1.3	579,583,346
Subsystem 1.4	377,067,080
Subsystem 1.5	129,950,975
⊕ DIRECT_MANUFACTURING_OTHER_LABOR	1,221,971,052
⊕ DIRECT_MANUFACTURING_TOUCH_LABOR	1,261,312,135
⊕ DIRECT_MATERIALS	1,241,153,706
⊕ ENGINEERING_LABOR_OVERHEAD	620,637,316
⊕ FACILITIES_CAPITAL_COST_OF_MONEY	124,120,188
⊕ GENERAL_AND_ADMINISTRATIVE	1,241,131,429
⊕ MANUFACTURING_OPERATIONS_LABOR_OVERHEAD	248,224,616
⊕ MATERIAL_OVERHEAD	124,187,398
⊕ OTHER_DIRECT_COSTS	124,217,158
⊕ OTHER_OVERHEAD	12,413,466
Grand Total	12,426,772,570

Contractor Categories vs. Standard Categories

NonrecurringOrRecurring_ID	RECURRING
Row Labels	Actual To Date (Dollars)
⊖ DIRECT_ENGINEERING_LABOR	6,207,404,106
Direct Engineering Labor (1)	1,241,140,137
Direct Engineering Labor (2)	1,241,213,842
Direct Engineering Labor (3)	1,241,999,794
Direct Engineering Labor (4)	1,241,165,702
Direct Engineering Labor (5)	1,241,884,631
⊕ DIRECT_MANUFACTURING_OTHER_LABOR	1,221,971,052
⊕ DIRECT_MANUFACTURING_TOUCH_LABOR	1,261,312,135
⊕ DIRECT_MATERIALS	1,241,153,706
⊕ ENGINEERING_LABOR_OVERHEAD	620,637,316
⊕ FACILITIES_CAPITAL_COST_OF_MONEY	124,120,188
⊕ GENERAL_AND_ADMINISTRATIVE	1,241,131,429
⊕ MANUFACTURING_OPERATIONS_LABOR_OVERHEAD	248,224,616
⊕ MATERIAL_OVERHEAD	124,187,398
⊕ OTHER_DIRECT_COSTS	124,217,158
⊕ OTHER_OVERHEAD	12,413,466
Grand Total	12,426,772,570

Pivot Table Template Example - Phasing

NonrecurringOrRecurring_ID	RECURRING										
StandardCategory_ID	DIRECT_MA	FACTURING_TOUCH_LABOR									
Column Labels											
Sum of ActualToDate_Hours											
Row Labels	1/31/2016	2/29/2016	3/31/2016	4/30/2016	5/31/2016	6/30/2016	7/31/2016	8/31/2016	9/30/2016	10/31/2016	
Subsystem 1.1.1	1836	1744	1938	1798	1896	1836	1859	1861	1812	1905	
Subsystem 1.1.2	4617	4395	4704	4484	4713	4528	4566	4660	4506	4589	
Subsystem 1.1.3	13302	12521	13657	13046	13117	13327	13269	13449	12782	13275	
Subsystem 1.1.4.1	99222	95144	100177	96730	100964	96857	97071	99524	97963	100469	
Subsystem 1.1.4.2	179482	166996	182764	173528	181660	174058	174122	180150	174986	179585	
Subsystem 1.1.4.3	2041	1886	2043	1956	2027	1994	1951	2057	1978	2016	
Subsystem 1.1.4.4	86795	83206	89393	83393	89485	86520	86138	87478	85786	87978	
Subsystem 1.1.4.5	9610	9085	9756	9418	9659	9383	9457	9714	9296	9735	
Subsystem 1.1.4.6	46096	43921	46584	43915	46997	45697	45349	46374	44890	46117	
Subsystem 1.1.5.1	1490	1426	1534	1472	1535	1449	1482	1507	1475	1511	
Subsystem 1.1.5.2	2737	2571	2737	2632	2768	2655	2688	2703	2671	2744	
Subsystem 1.1.5.3	2823	2667	2928	2752	2844	2827	2759	2882	2790	2906	
Subsystem 1.1.5.4	6262	5898	6411	6083	6376	6118	6145	6364	6075	6311	
Subsystem 1.1.5.5	2132	1966	2160	2003	2175	2088	2088	2105	2078	2112	
Subsystem 1.1.5.6	13627	12588	14020	13195	13675	13374	13363	13876	13012	13493	
Subsystem 1.2	6229	6201	6516	6127	6556	6271	6318	6431	6212	6401	
Subsystem 1.3.1	39929	37209	40340	38046	39936	39503	38541	40509	38443	39964	
Subsystem 1.3.2	7317	6894	7557	7001	7598	7178	7100	7392	7294	7292	
Subsystem 1.3.3	3142	2979	3133	3028	3130	3103	3065	3114	3086	3091	
Subsystem 1.4	34155	32634	34136	32784	34297	33855	33081	34831	33030	34319	
Subsystem 1.5	10065	9285	10209	9638	10011	9921	9863	9897	9818	9994	
Grand Total	572909	541216	582697	553029	581419	562542	560275	576878	559983	575807	

Unit/Sublot Reporting in Excel Template Export

- Why are these columns blank?!

Order or Lot ID	CLIN ID	End Item ID	WBS Element ID	Account ID	Functional Category ID
	1100		1.1.1.1	QYOL00000115	ENG_1_SR
	1100		1.1.1.1	QYOL00000115	ENG_2_MID
	1100		1.1.1.1	QYOL00000115	ENG_3_JR

Order/Lot and End Item appear to be omitted...

...but they are included in the **Unit/Sublot** table

- The “missing” fields are *implied* by Unit/Sublot tag*
- Bottom line: Beware when Pivoting the FlexFile Excel export!
 - Pivot Export remedies this gap
 - Can also utilize Excel Data Model

Units or Sublots				
ID	End Item ID	First Unit Number	Last Unit Number	Order or Lot ID
1	2_GPV	1		1 Z123D4-15-F-0001
2	2_GPV	2		2 Z123D4-15-F-0001
3	2_GPV	3		3 Z123D4-15-F-0001

* = “Missing” fields for Order/Lot, End Item, and WBS also occur if Allocations are utilized



COST ASSESSMENT DATA ENTERPRISE

FlexFile Visualization Examples



\$1,230,309,661

Total Contract Cost



Jan. 1, 2012 - April 1, 2014

Period of Performance

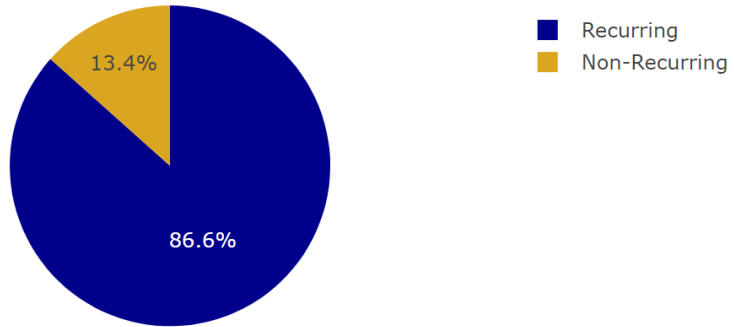


11.2%

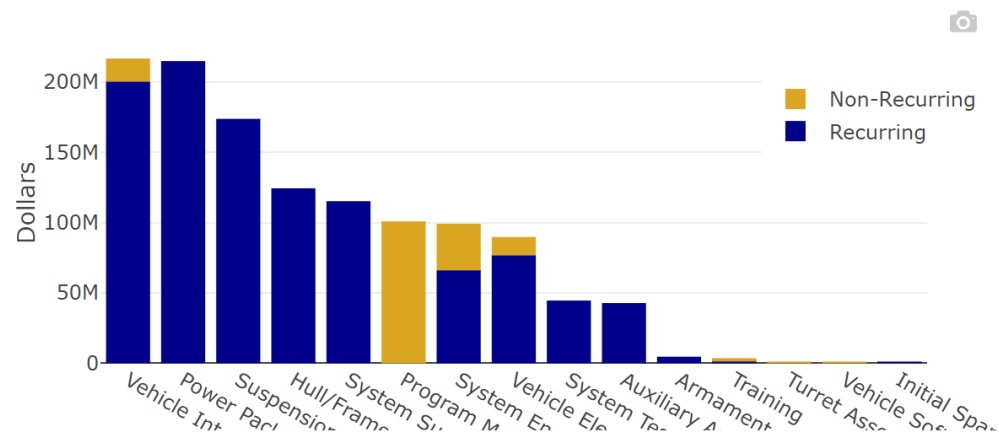
Contractor Reported Profit



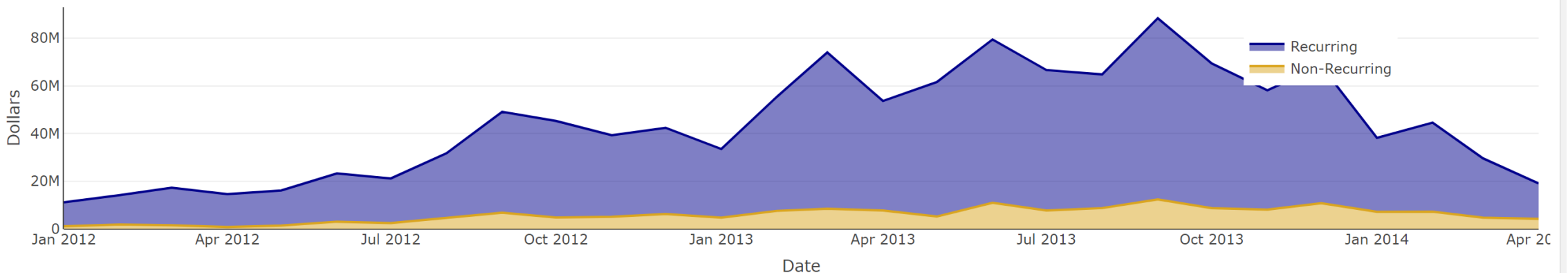
Contract Costs by Cost Type



Contract Costs by WBS



Costs Over Time





\$1,230,309,661

Total Contract Cost



Jan. 1, 2012 - April 1, 2014

Period of Performance

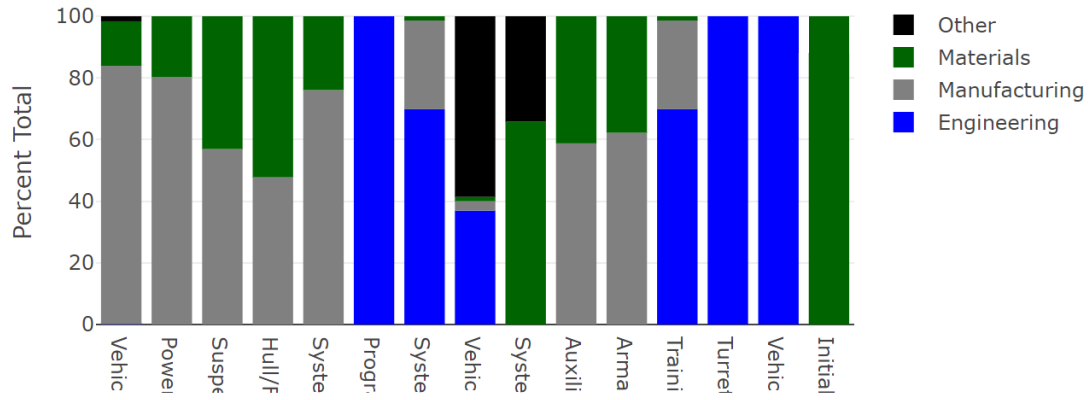


11.2%

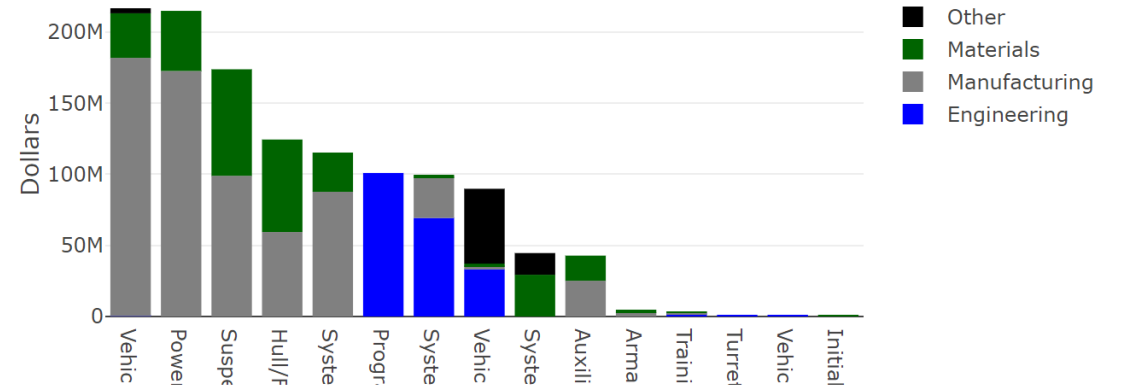
Contractor Reported Profit



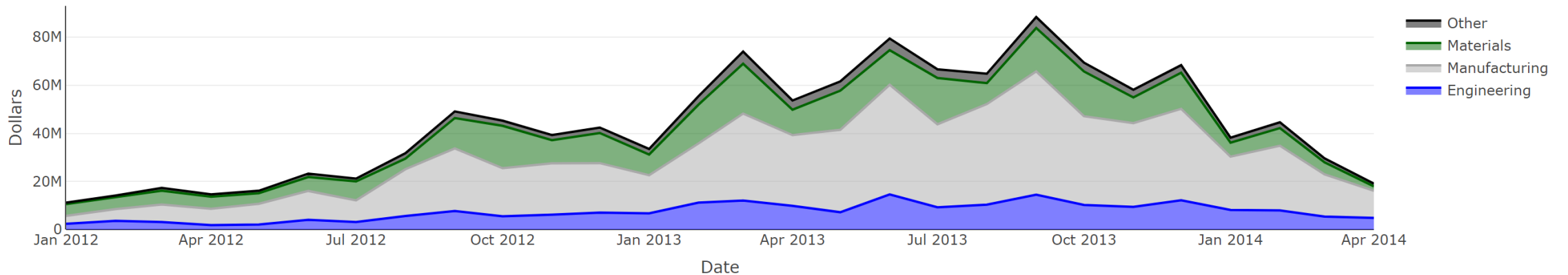
Functional Element by Percent of WBS Element



Contract Costs by WBS



Costs Over Time





\$1,230,309,661

Total Contract Cost



Jan. 1, 2012 - April 1, 2014

Period of Performance

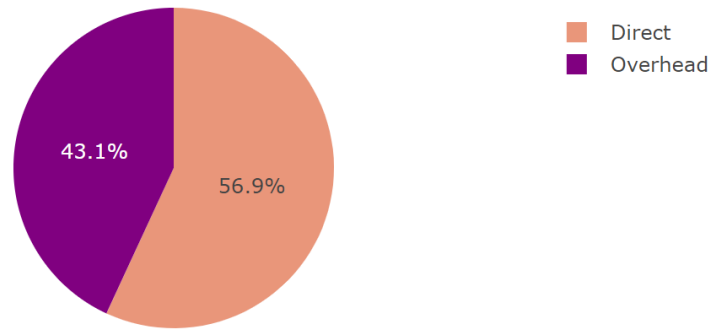


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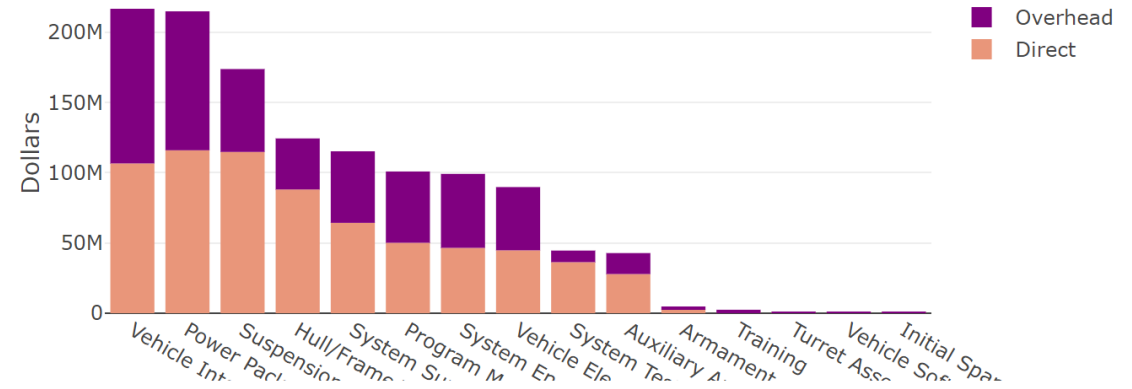
Contractor Reported Profit



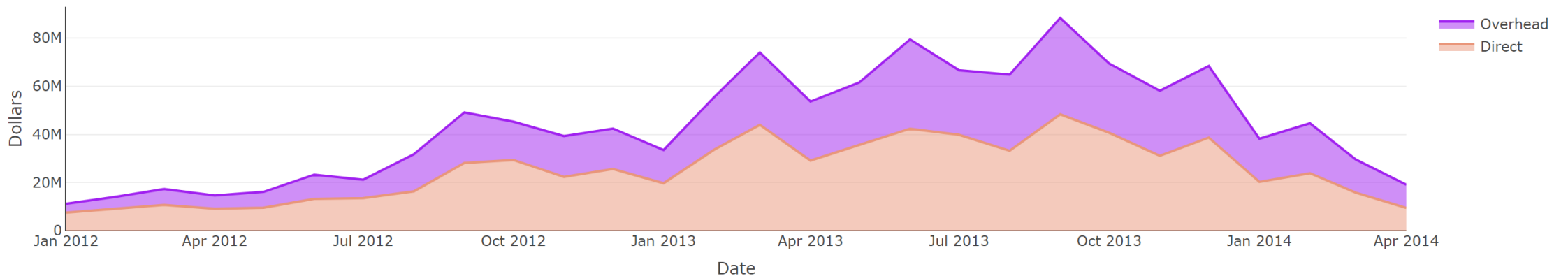
Contract Costs by Cost Type



Contract Costs by WBS



Costs Over Time



\$1,230,309,661

Total Contract Cost



Jan. 1, 2012 - April 1, 2014

Period of Performance

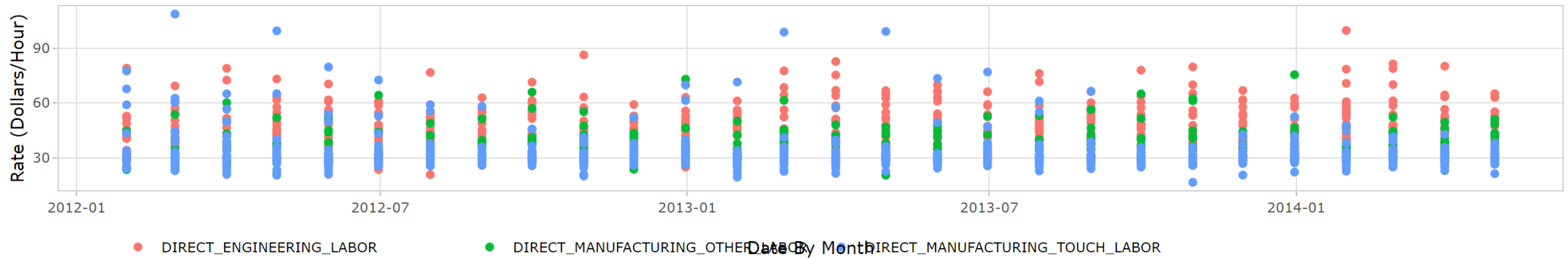


11.2%

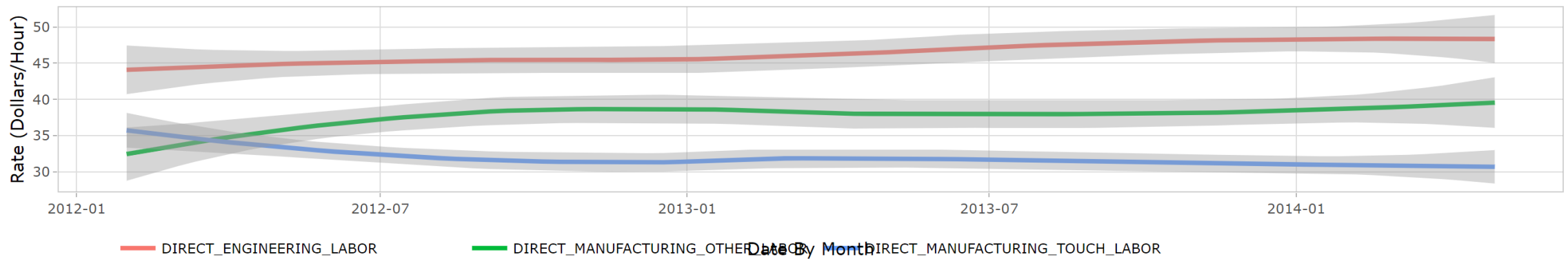
Contractor Reported Profit



Contractor Category to Functional Category Mapping



Contract Rates Over Time



\$1,230,309,661

Total Contract Cost



Jan. 1, 2012 - April 1, 2014

Period of Performance



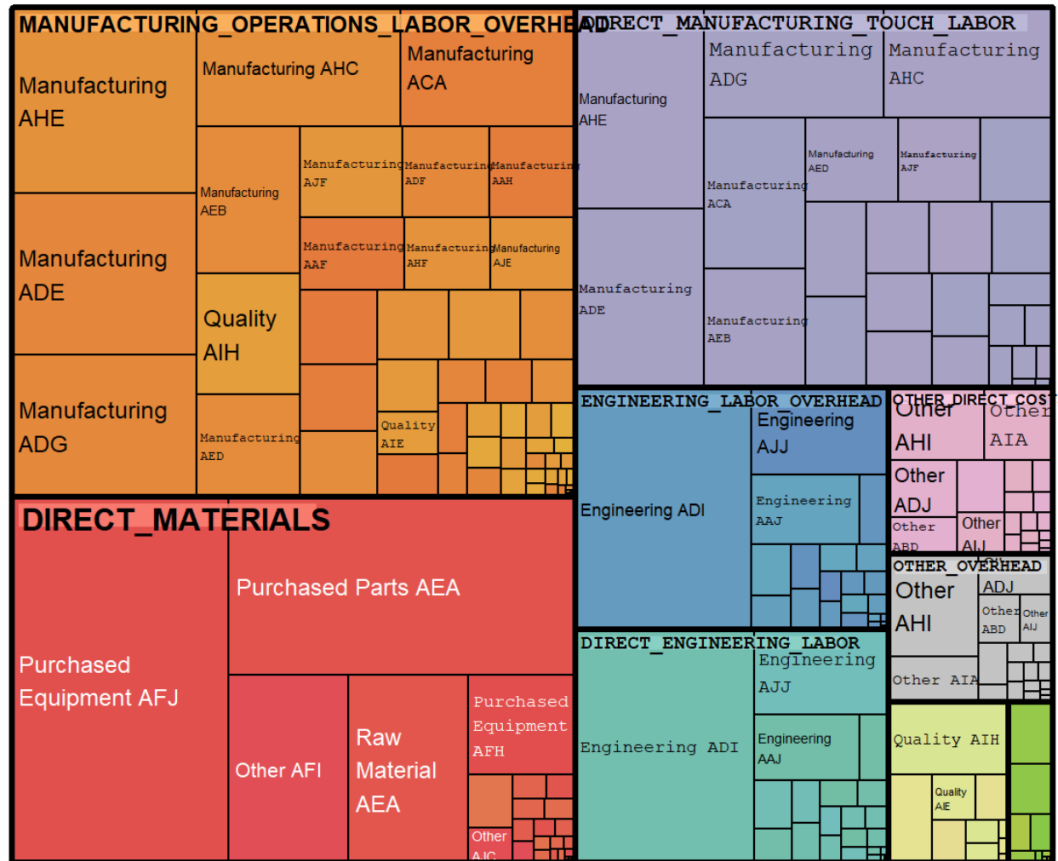
11.2%

Contractor Reported Profit

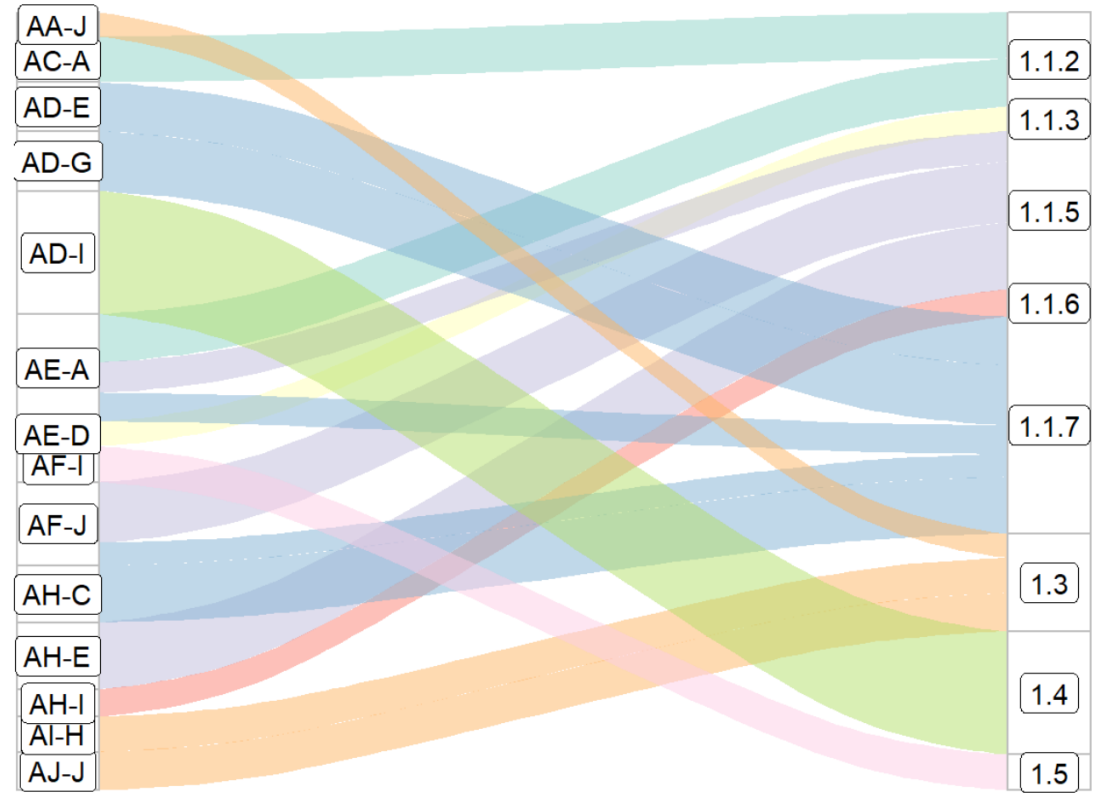


Contractor Category to Functional Category Relationship

=====

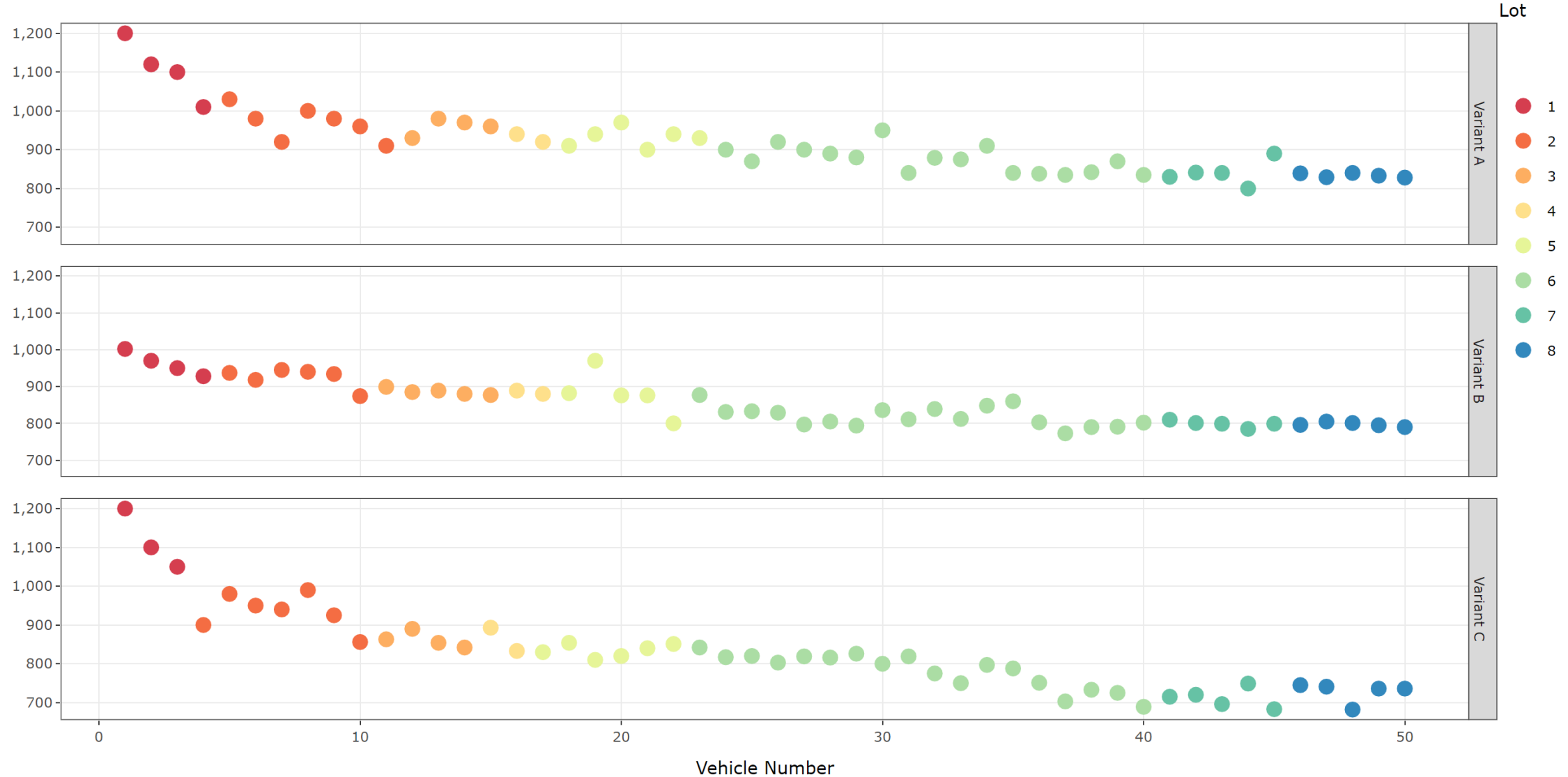


Account to WBS Relationship



Learning Curve

Direct Labor Hours per Vehicle, by Variant and Lot

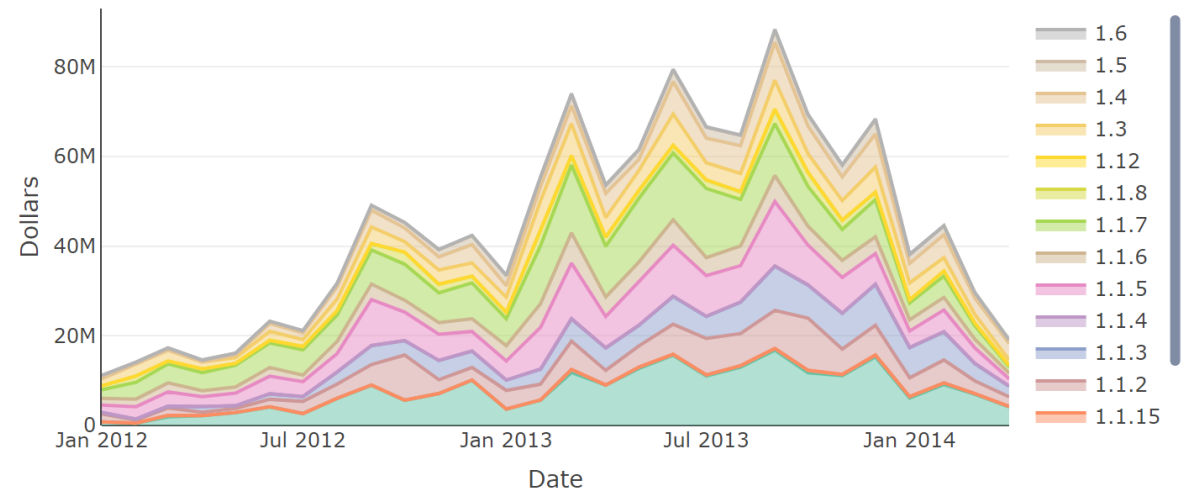




Data Table WBS Over Time

WBS ID	WBS Element Name	Date	Total Dollars
1.1.1	Vehicle Integration, Assembly, Test and Checkout	2012-01-01	\$793,086.44
1.1.10	Armament	2012-01-01	\$368.03
1.1.2	Hull/Frame/Body/Cab	2012-01-01	\$1,801,513.03
1.1.3	System Survivability	2012-01-01	\$342,479.08
1.1.5	Suspension/Steering	2012-01-01	\$1,613,654.02
1.1.6	Vehicle Electronics	2012-01-01	\$1,511,928.99
1.1.7	Power Package/Drive Train	2012-01-01	\$1,898,772.69
1.1.8	Auxiliary Automotive	2012-01-01	\$902,464.19
1.12	Initial Spares and Repair Parts	2012-01-01	\$-2,499.98

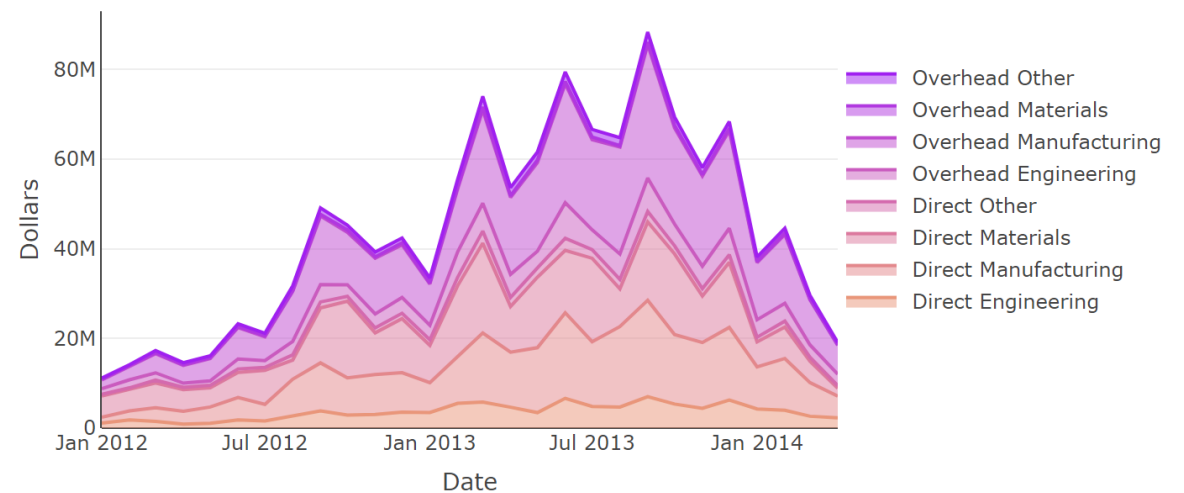
WBS Over Time



Data Table Overhead and Direct Over Time

Category	SFC	Date	Total Dollars
Direct	Engineering	2012-01-01	\$1,143,949.00
Direct	Manufacturing	2012-01-01	\$1,304,707.00
Direct	Materials	2012-01-01	\$4,703,055.00
Direct	Other	2012-01-01	\$364,037.00
Overhead	Engineering	2012-01-01	\$1,261,306.00
Overhead	Manufacturing	2012-01-01	\$1,966,525.00
Overhead	Materials	2012-01-01	\$169,998.00
Overhead	Other	2012-01-01	\$249,898.00
Direct	Engineering	2012-02-01	\$1,812,258.00

Overhead and Direct Costs Over Time



FlexFile Visualizations Using R: reviewcsdr

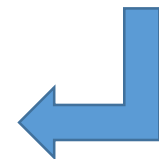


Instructions to Access in CADE: Data & Analytics > DTM Hub > {reviewcsdr} R Package > download /access (zip) and userguide

Important functions include:

- **validate_flexfile()** runs a series of validation rules against a Flexfile and optionally a Quantity Data Report. Results are returned in a tibble with the rule details and status.
- **write_review_powerpoint()*** creates a set of visualizations and writes them into a PowerPoint file. This file is not intended to be used directly for analysis, but rather as a visual look at the data to assist with validation and understanding of the files.
- **write_result_output()** writes the cleaned validation results to an Excel file.

*Following 11 slides are example output



{reviewcsdr} Output

reviewcsdr v1.0.1



This report was automatically generated by the {reviewcsdr} R package. It is the responsibility of the analyst who ran the validation script to add/include appropriate portion markings based on the data which was passed to the write_review_powerpoint() function when this report was generated. If this report was generated using a CSDR submission from a contractor, than all following slides should be treated as CUI Categories: PROCURE, PROPIN and potentially SSEL. Review local guidance and update the following slides accordantly before distributing any results included within this file.



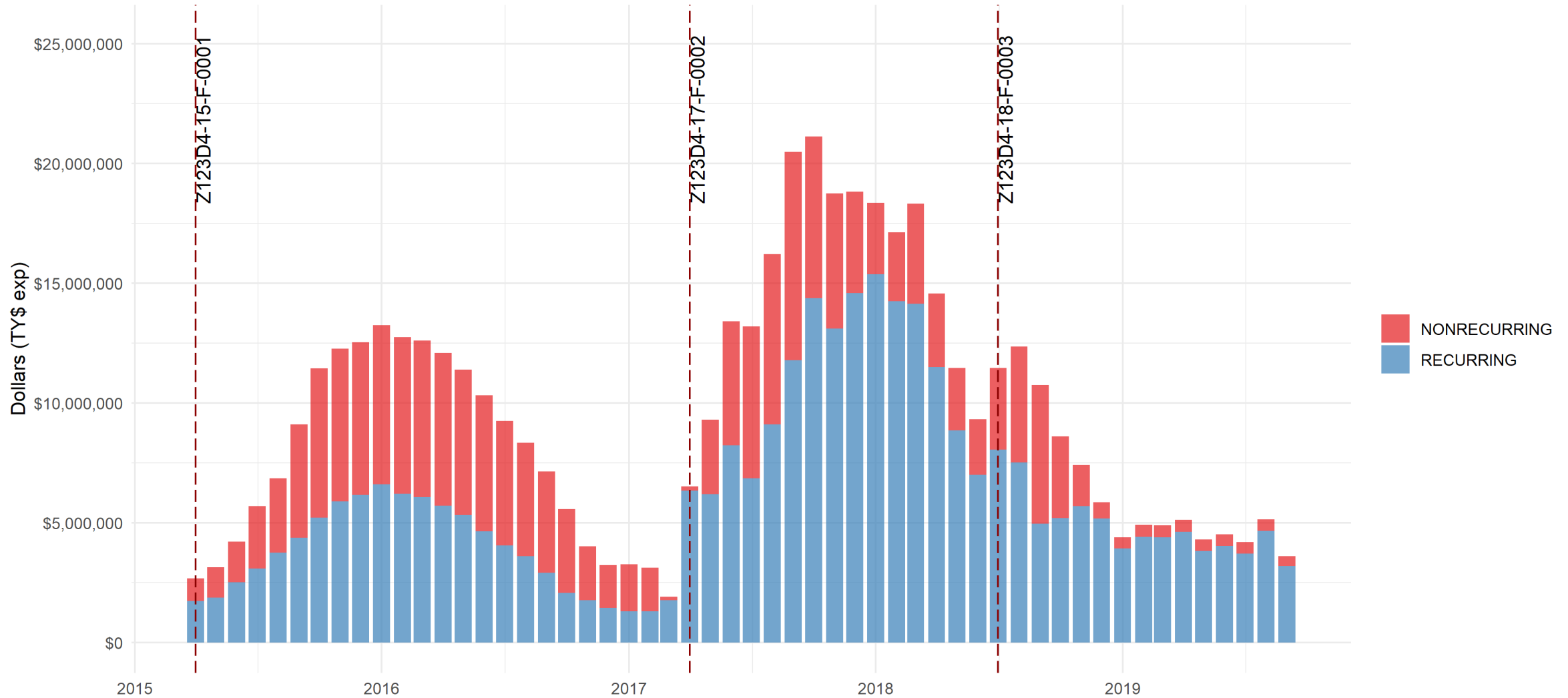
- Generated: 2022-12-22 08:18:39
- File Info
 - flexfile: Contract Complete_flexfile
 - quantityreport: Contract Complete_quantity
- Session Info
 - Platform: x86_64-w64-mingw32
 - Version: R version 4.1.2 (2021-11-01)
- Package Versions
 - reviewcsdr: 1.0.1
 - readflexfile: 0.4.0
 - ggplot2: 3.3.5
 - officer: 0.4.1
 - dplyr: 1.0.7

Report Metadata

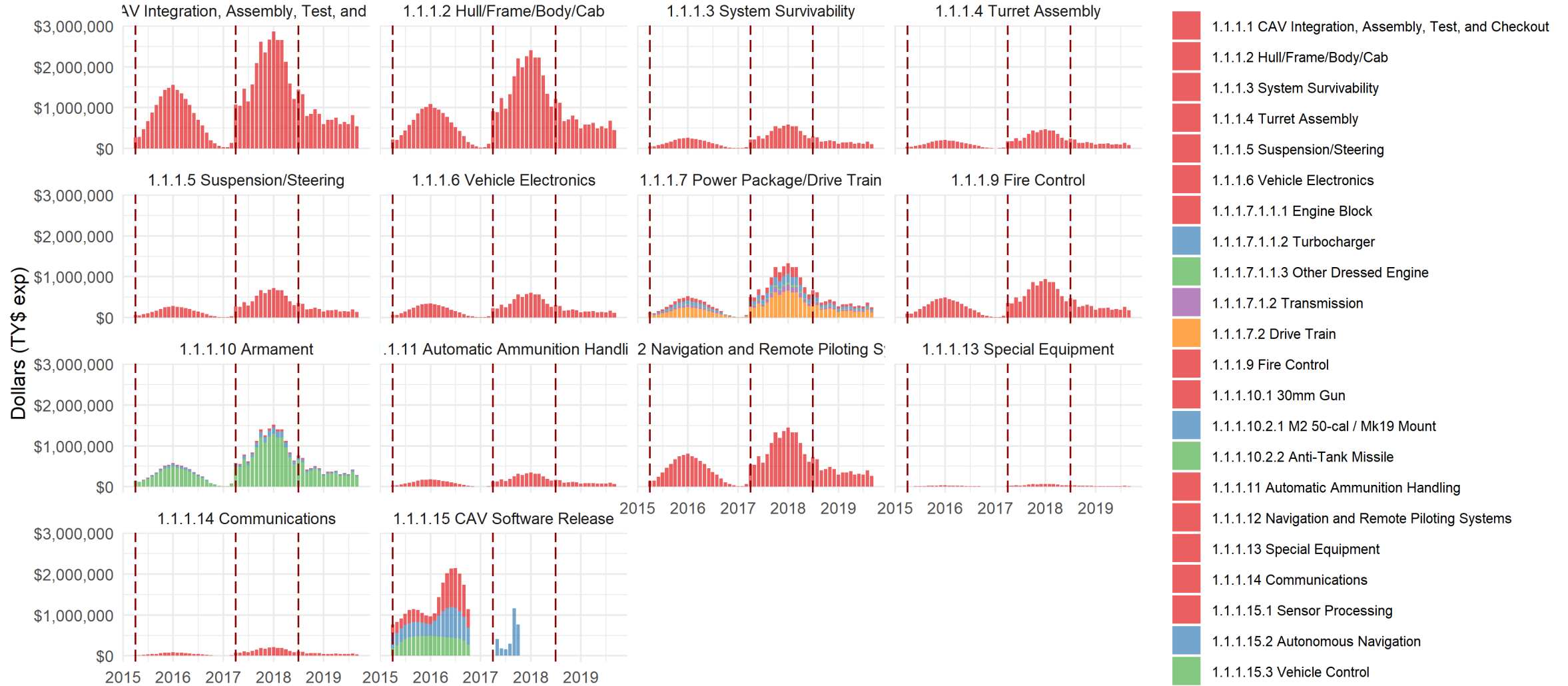


Field	Value
ProgramName	Cerberus Autonomous Vehicle Program
PhaseOrMilestoneID	MULTIPLE
PrimeMissionProduct	Cerberus Autonomous Vehicles
ReportingOrganization_OrganizationName	Con-Tractor, LLC
ApprovedPlanNumber	Z-99-C1(R2)
ApprovedPlanRevisionNumber	3
ContractPrice	\$569,332,344
ContractNumber	Z123D4-15-D-7890
SubmissionEvent_Name	Contract Complete
FinalPeriod	2019-09-01 to 2019-09-30

Total Contract Costs - Cerberus Autonomous Vehicle Program (Z-99-C1(R2) Submission 6.0)



Prime Mission Product Elements - Cerberus Autonomous Vehicle Program (Z-99-C1(R2) Submission 6.0)



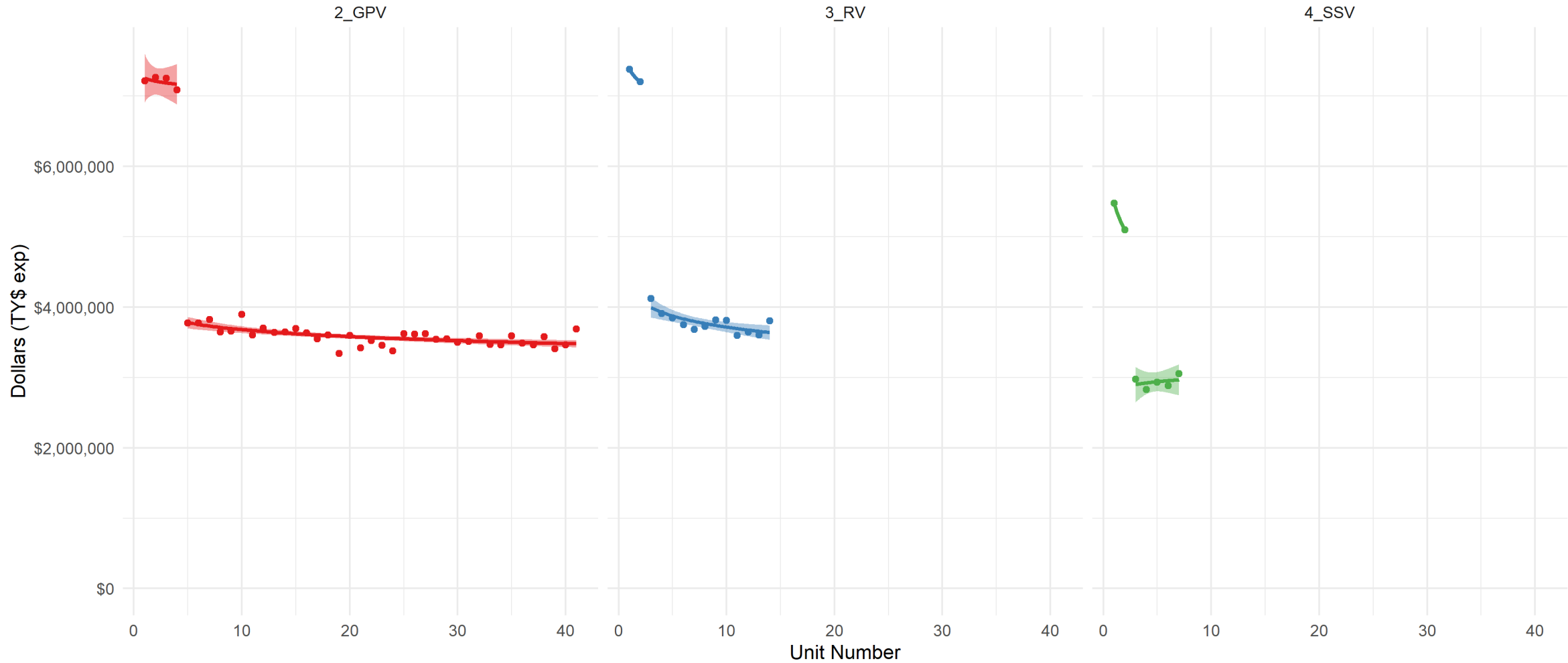
Support Elements - Cerberus Autonomous Vehicle Program (Z-99-C1(R2) Submission 6.0)

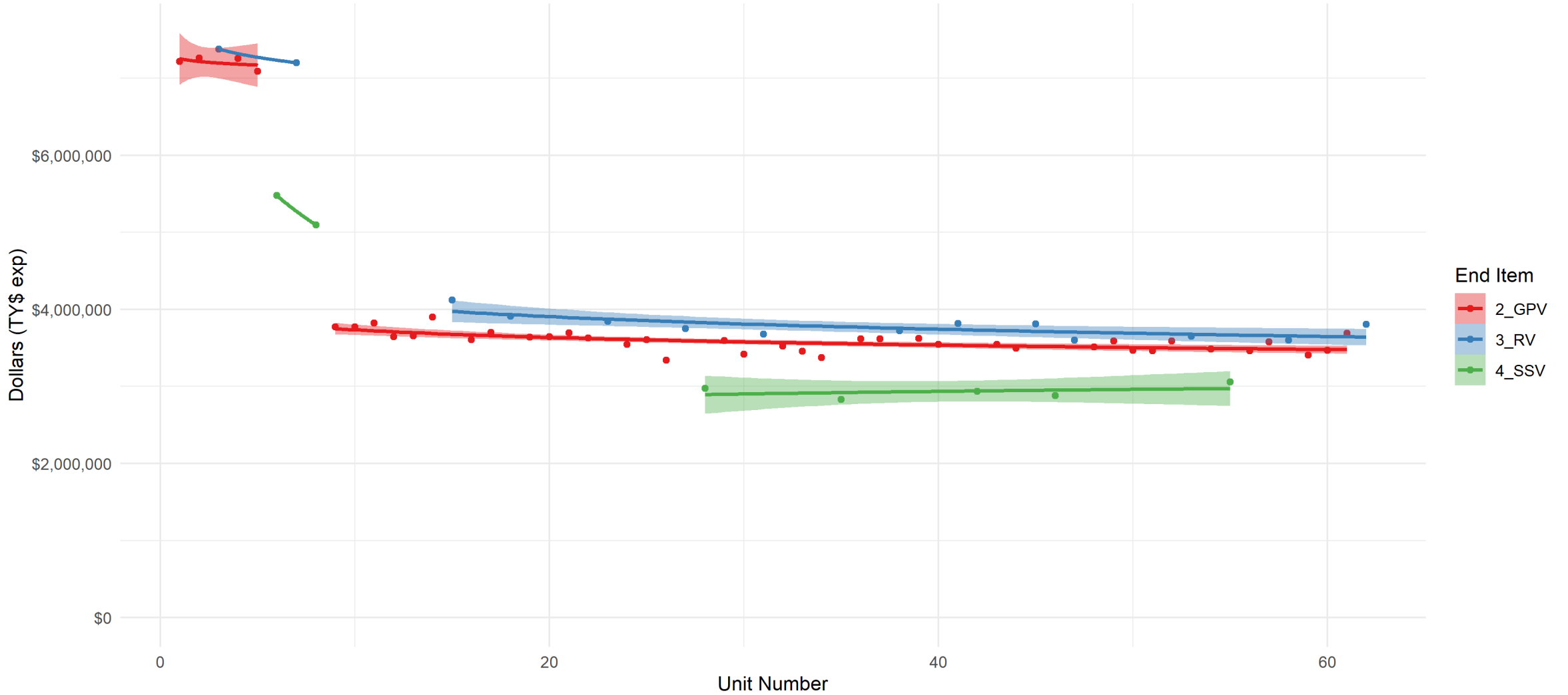


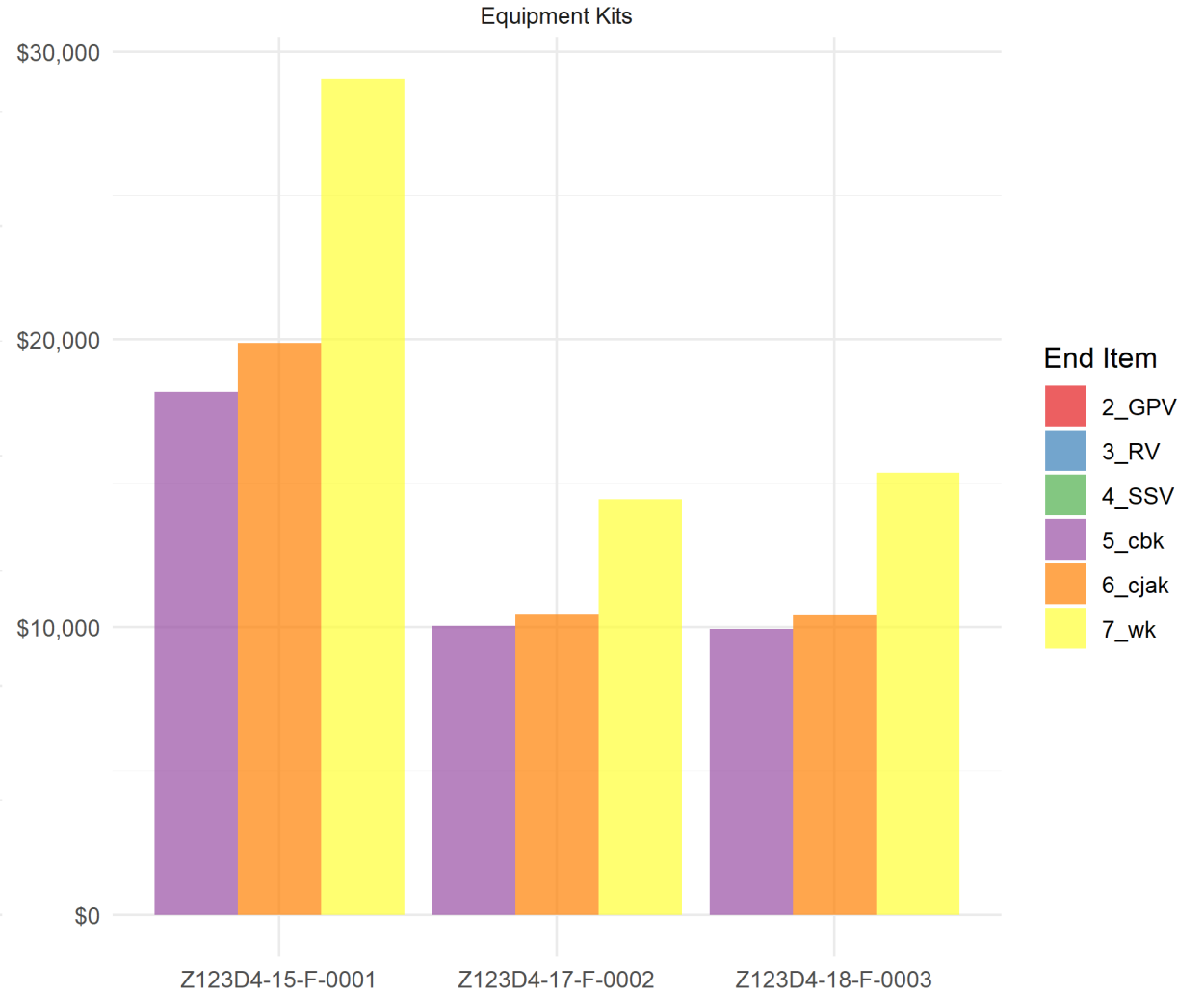
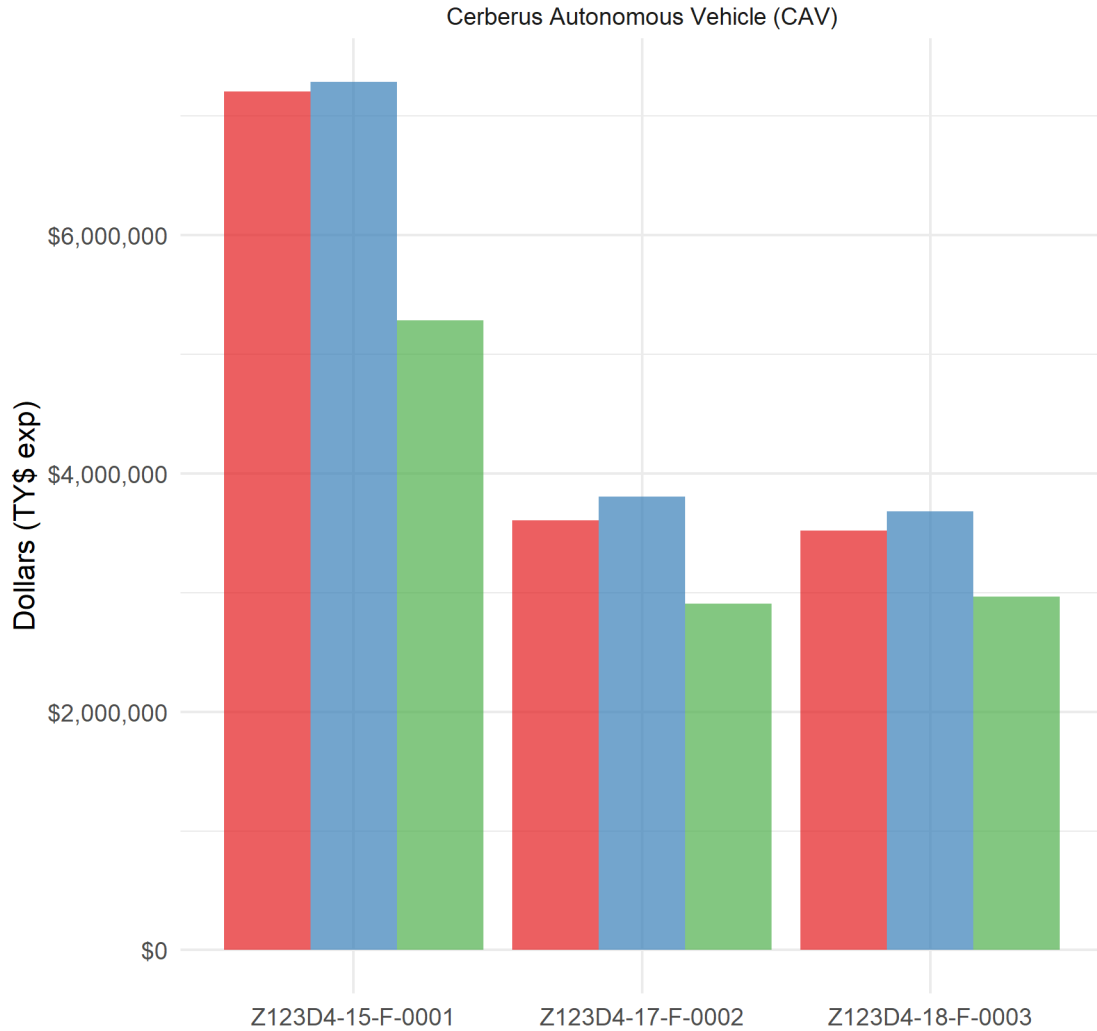
Unit Costs (By End Item) - Cerberus Autonomous Vehicle Program (Z-99-C1(R2) Submission 6.0)



one or more unit may still be in progress

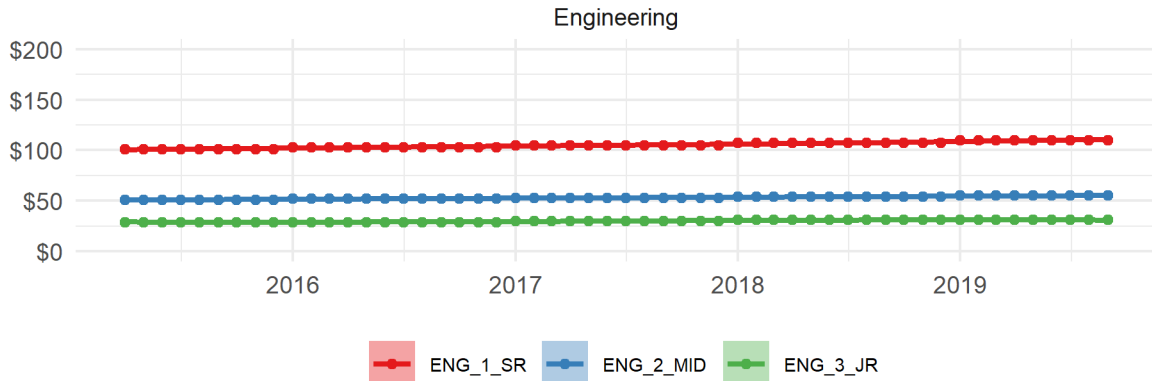




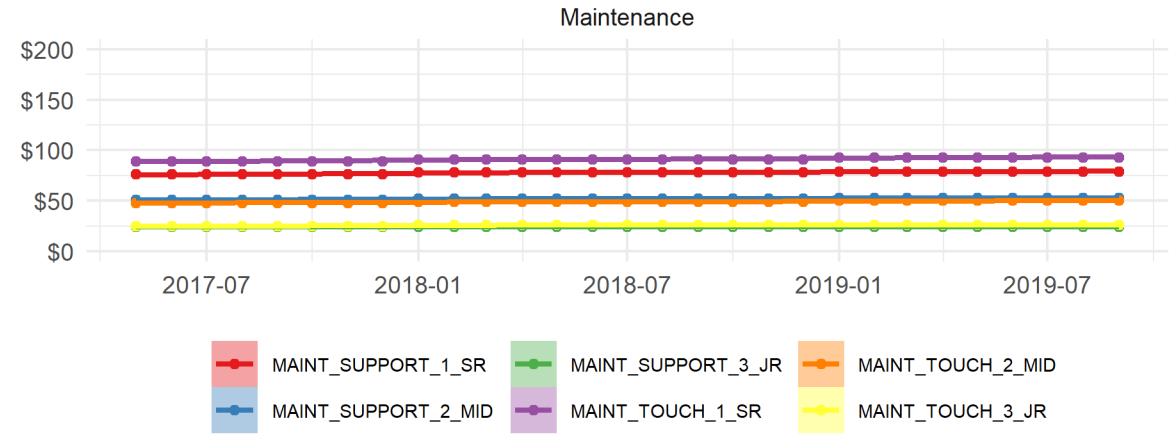




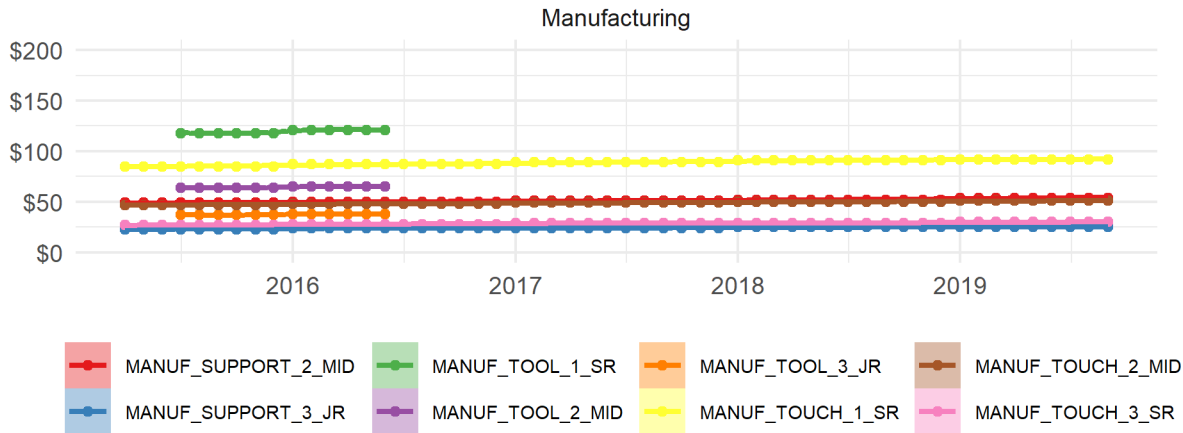
Engineering



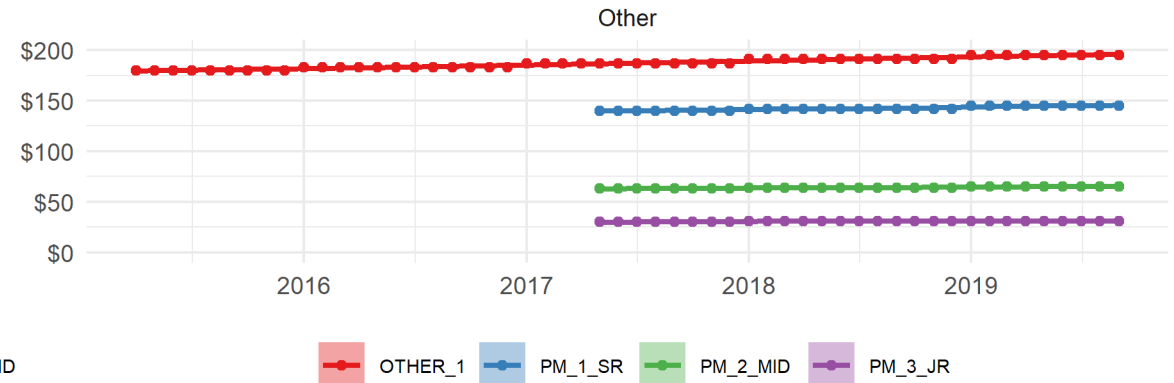
Maintenance

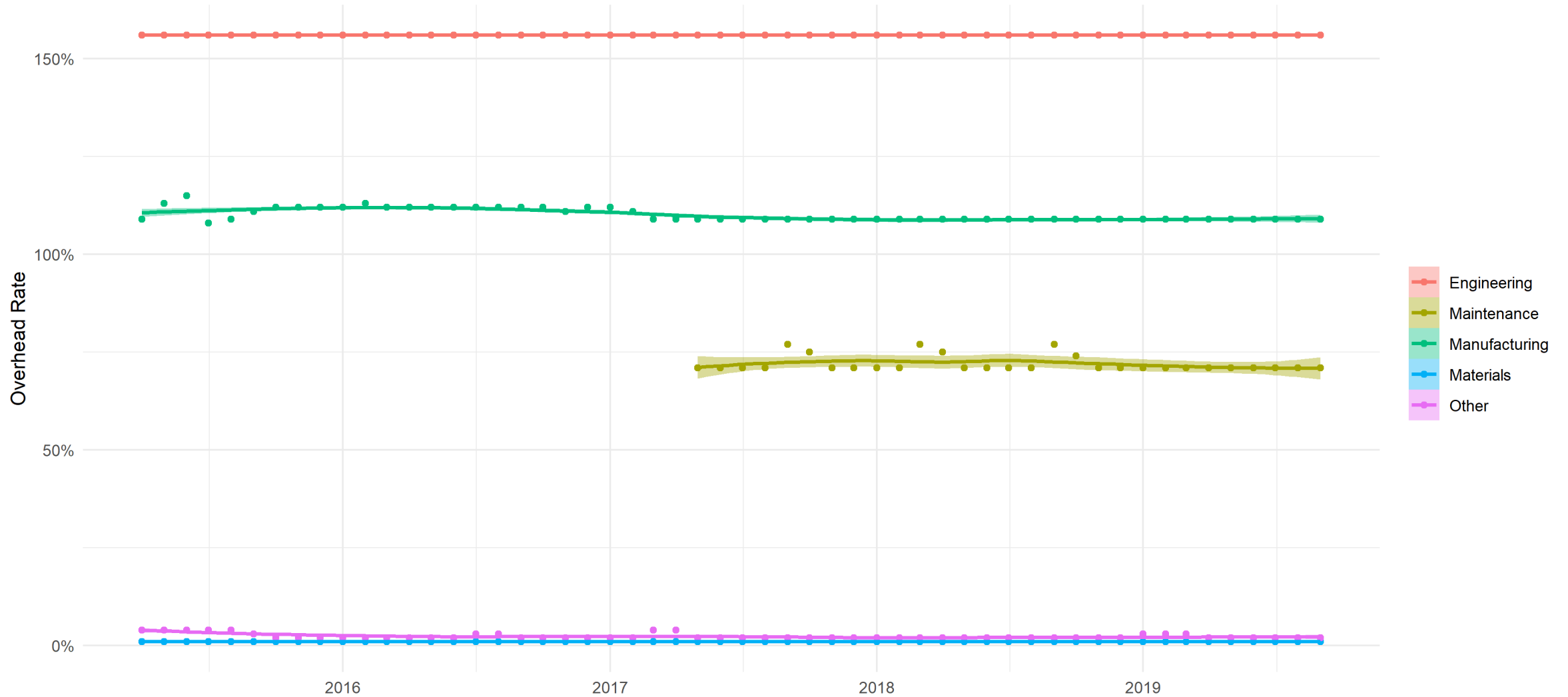


Manufacturing



Other







COST ASSESSMENT DATA ENTERPRISE

Resources



Next Steps for YOU



The screenshot shows the top navigation bar of the CADE website. The CADE logo is on the left. The navigation menu includes: About CADE, CSDR Reporting Guidance (highlighted with a green box), Cost Estimating Guidance, Tools & Training (highlighted with a green box), News, and Calendar. On the right side of the navigation bar, there are three buttons: 'Request CADE Account How to Register' (highlighted with a green box), 'CADE Portal' (with a lock icon), and 'FACADE' (with a graduation cap icon). Green arrows point from text labels above to these elements: 'Policy & Guidance' points to 'CSDR Reporting Guidance'; 'Tools for CSDR success' points to 'Tools & Training'; 'Register for an account' points to 'Request CADE Account How to Register'; and 'Log in!' points to 'CADE Portal'.



CADE

<https://cade.osd.mil>

is the authoritative source
for **defense contractor cost data**



All documents can be found at <https://cade.osd.mil/>

- ✓ Report DIDs (FlexFile, Quantity Data Report, SRDR, and Tech Data Report)
- ✓ Report Implementation Guides
- ✓ Instructions for completing DD 2794
- ✓ DD Form 2794 Format
- ✓ Draft CDRL Language

See <https://cade.osd.mil/support> for training material and information on upcoming training events