OFFICE OF THE SECRETARY OF DEFENSE
COST ASSESSMENT AND PROGRAM EVALUATION

Sustainment Reviews

Policy, Data Availability, and Lessons Learned

November 9, 2022

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Agenda

- Sustainment Review Overview
- 10 Data Elements
- Implementation
- Data Availability
- 2021-2022 SR Summary
- Lessons Learned from the SRs

Overview

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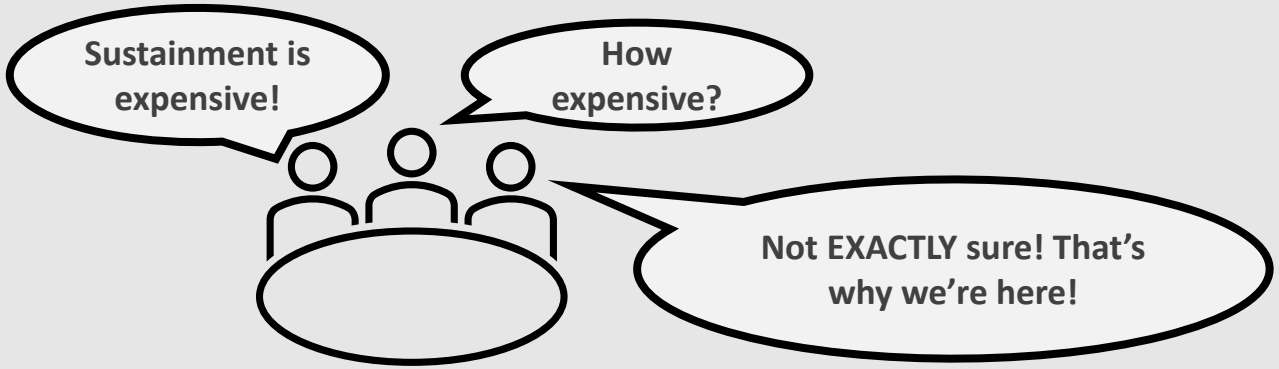
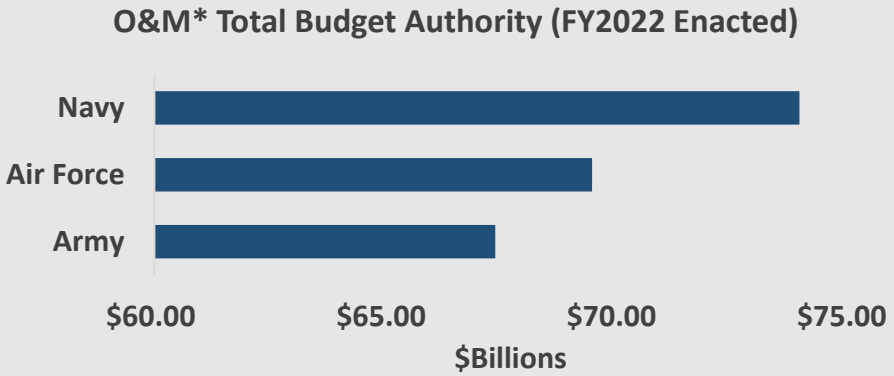
- A **sustainment review (SR)** is an in-depth examination of the **performance** and **cost effectiveness** of the weapon system's product **support strategy**
  - Conducted not later than 5 years after declaration of initial operational capability (IOC) and throughout the life cycle of the weapon system
- SR language was included in prior NDAAs and executed to varying degrees across the Services, but the 2021 NDAA revised existing SR statute to add several requirements (10 U.S. Code § 4323):
  - A requirement to **submit SRs to Congress**, not later than 30 September of each fiscal year
  - A new **critical operating and support cost growth metric.** Critical Growth is defined as:
    - A: at least 25 percent more than the estimate documented in the **most recent independent cost estimate or**
    - B: at least 50 percent more than the estimate documented in the **original Baseline Estimate** (generally MS B)
    - For programs that exhibit critical growth, a requirement to submit a remediation plan to reduce O&S costs or a certification by the Secretary concerned that the growth is necessary to meet national security requirements
  - Updated program applicability – includes **both MDAPs and major MTAs**
- Sec. 802 of the FY 2021 NDAA also requires a **GAO review of 10 SRs per year** with a focus on cost growth





*O&M ≠O&S; chart used to convey magnitude of sustainment

10 Data Elements

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10 U.S. Code § 4323: Sustainment Review Statute requires the MILDEPs to address the following, at a minimum:

- **An independent cost estimate for the remainder of the life cycle of the program.**
  - **Critical Growth is assessed using this ICE**
- A comparison of actual costs to the amount of funds budgeted and appropriated in the previous five years, and if funding shortfalls exist, an explanation of the implications on equipment availability.
- A comparison between the assumed and achieved system reliabilities.
- An analysis of the most cost-effective source of repairs and maintenance.
- An evaluation of the cost of consumables and depot-level reparables (DLRs).
- An evaluation of the costs of information technology, networks, computer hardware, and software maintenance and upgrades.
- As applicable, an assessment of the actual fuel efficiencies compared to the projected fuel efficiencies as demonstrated in tests and operations.
- As applicable, a comparison of actual manpower requirements to previous estimates.
- **An analysis of whether accurate and complete data are being reported in the cost systems of the military department concerned, and if deficiencies exist, a plan to update the data and ensure accurate and complete data are submitted in the future.**
- As applicable, information regarding any decision to restructure the life cycle sustainment plan for a covered system or any other action that will lead to critical operating and support cost growth

Each program must address these data elements in the SR package that goes to Congress

Implementation

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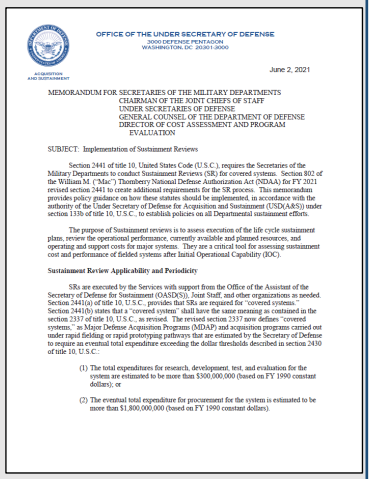

OFFICE OF THE UNDER SECRETARY OF DEFENSE
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ACQUISITION AND SUSTAINMENT

June 2, 2021

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
DIRECTOR OF COST ASSESSMENT AND PROGRAM EVALUATION

SUBJECT: Implementation of Sustainment Reviews

Section 2441 of title 10, United States Code (U.S.C.), requires the Secretaries of the Military Departments to conduct Sustainment Reviews (SR) for covered systems. Section 802 of the William M. ("Mac") Thornberry National Defense Authorization Act (NDAA) for FY 2021 revised section 2441 to create additional requirements for the SR process. This memorandum provides policy guidance on how these statutes should be implemented, in accordance with the authority of the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) under section 133b of title 10, U.S.C., to establish policies on all Departmental sustainment efforts.

The purpose of Sustainment reviews is to assess execution of the life cycle sustainment plans, review the operational performance, currently available and planned resources, and operating and support costs for major systems. They are a critical tool for assessing sustainment cost and performance of fielded systems after Initial Operational Capability (IOC).

Sustainment Review Applicability and Periodicity

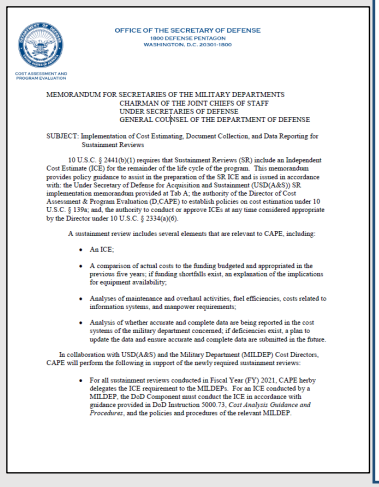
SRs are executed by the Services with support from the Office of the Assistant of the Secretary of Defense for Sustainment (OASD(S)), Joint Staff, and other organizations as needed. Section 2441(a) of title 10, U.S.C., provides that SRs are required for "covered systems." Section 2441(b) states that a "covered system" shall have the same meaning as contained in the section 2337 of title 10, U.S.C., as revised. The revised section 2337 now defines "covered systems," as Major Defense Acquisition Programs (MDAP) and acquisition programs carried out under rapid fielding or rapid prototyping pathways that are estimated by the Secretary of Defense to require an eventual total expenditure exceeding the dollar thresholds described in section 2430 of title 10, U.S.C.:

(1) The total expenditures for research, development, test, and evaluation for the system are estimated to be more than $300,000,000 (based on FY 1990 constant dollars); or

(2) The eventual total expenditure for procurement for the system is estimated to be more than $1,800,000,000 (based on FY 1990 constant dollars).

In June 2021, **USD(A&S)** released a memo providing supplemental direction for the implementation of SRs

- SRs occurs in coordination with a revalidated Product Support Business Case Analysis (PS BCA) and an updated LCSP
- SRs occur 5 years after IOC and every 5 years throughout the lifecycle
- The Services will provide an updated list of covered systems every year with a planned SR schedule
- For programs with critical cost growth, the Service will brief their planned response to Congress at the SR
  - Response must include reasons for cost growth (OPTEMPO, increased qty, maintenance costs, system life, etc.)
- The Services will upload SR briefings, documentation, and remediation plans or certification letters to Acquisition Information Repository (AIR)



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COST ASSESSMENT AND PROGRAM EVALUATION

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE

SUBJECT: Implementation of Cost Estimating, Document Collection, and Data Reporting for Sustainment Reviews

10 U.S.C. § 2441(b)(1) requires that Sustainment Reviews (SR) include an Independent Cost Estimate (ICE) for the remainder of the life cycle of the program. This memorandum provides policy guidance to assist in the preparation of the SR ICE and is issued in accordance with: the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) SR implementation memorandum provided at Tab A; the authority of the Director of Cost Assessment & Program Evaluation (D.CAPE) to establish policies on cost estimation under 10 U.S.C. § 139a; and, the authority to conduct or approve ICEs at any time considered appropriate by the Director under 10 U.S.C. § 2334(a)(6).

A sustainment review includes several elements that are relevant to CAPE, including:

- An ICE;
- A comparison of actual costs to the funding budgeted and appropriated in the previous five years; if funding shortfalls exist, an explanation of the implications for equipment availability;
- Analyses of maintenance and overhaul activities, fuel efficiencies, costs related to information systems, and manpower requirements;
- Analysis of whether accurate and complete data are being reported in the cost systems of the military department concerned; if deficiencies exist, a plan to update the data and ensure accurate and complete data are submitted in the future.

In collaboration with USD(A&S) and the Military Department (MILDEP) Cost Directors, CAPE will perform the following in support of the newly required sustainment reviews:

- For all sustainment reviews conducted in Fiscal Year (FY) 2021, CAPE herby delegates the ICE requirement to the MILDEPs. For an ICE conducted by a MILDEP, the DoD Component must conduct the ICE in accordance with guidance provided in DoD Instruction 5000.73, *Cost Analysis Guidance and Procedures*, and the policies and procedures of the referred MILDEP.

In June 2021, **OSD CAPE** released a memo to provide policy and guidance for the cost components of the SR

- Memo served to delegate FY21 SR ICEs to the MILDEPs
  - ICEs must be conducted in accordance with the DoDI 5000.73
- MILDEPs are responsible for submitting SR files to CADE in accordance with 10 U.S.C § 2337(a)
  - **CADE enhancements for SR upload coming soon**
- CAPE will **review cost data sources** for each SR to determine accuracy and availability of historical data
  - Information used to improve EVAMOSC
- CAPE will **review Cost and Software Data Report (CSDR) compliance** to increase availability and quality of cost data
- CAPE will **review the Services' SR package** and **submit a report of findings** to the Secretary of each MILDEP

Data Availability

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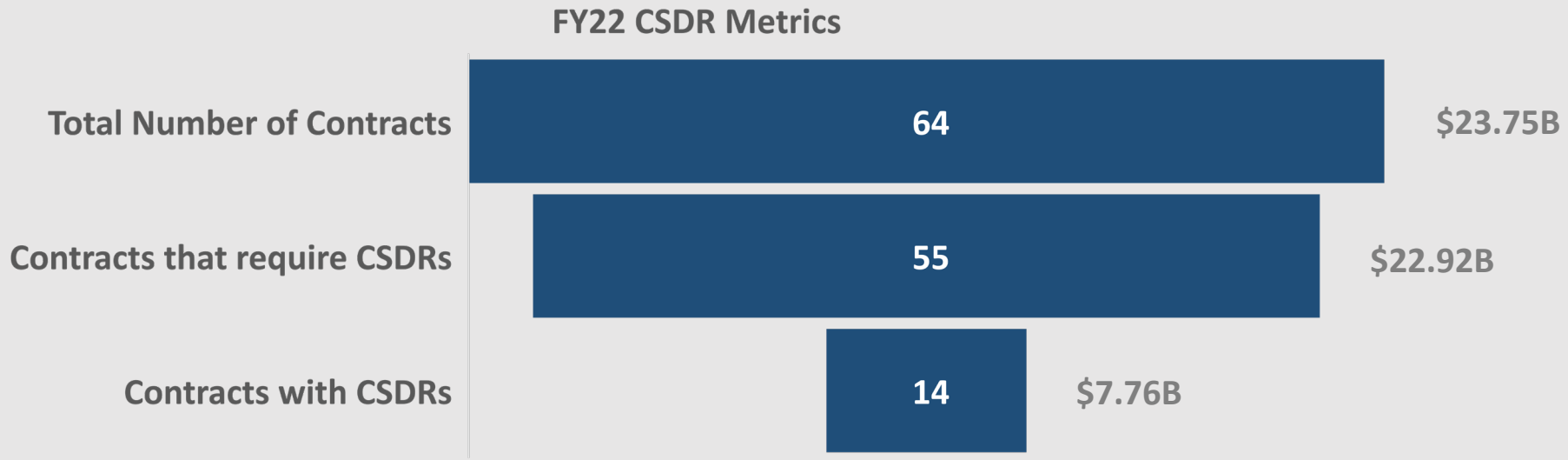
- Most programs are using the Service's VAMOSC system for a portion of the ICE
  - Programs are finding deficiencies in the VAMOSC systems, but are using the opportunity to correct the issues
  - In FY23+, EVAMOSC will be used to inform select ICEs, as applicable
- Programs using Contractor Logistics Support (CLS) have less available cost data
- In order to collect consistent CSDR information, CAPE provided a CSDR data collection template in the FY22 SR CAPE memo*
  - Most programs do not have CSDRs on all applicable sustainment contracts
  - CSDR data collection template will be used to continue to collect and track CSDR metrics to support the SRs



CSDR metrics represent data reported by the Services in the FY22 SRs. There are additional sustainment contracts that are not included in the chart.

**CSDR data collection template will also be included in FY23 CAPE memo*

2021-2022 SR Summary

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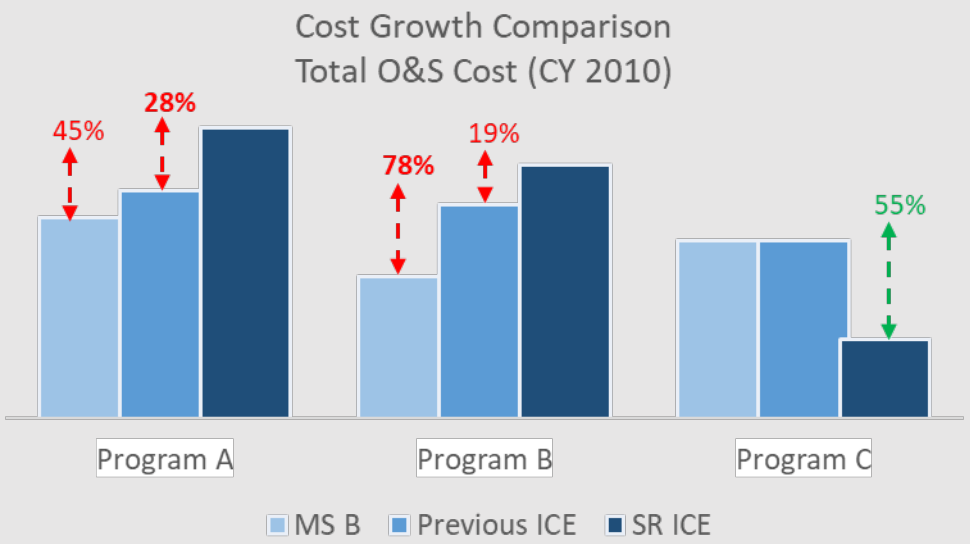
FY 21 SR Overview	Army	Air Force	Navy
Number of Programs	4	9	0
Number of Programs with Critical Growth	2	0	0

FY 22 SR Overview	Army	Air Force	Navy
Number of Programs	8	6	8
Number of Programs with Critical Growth	4	0	3

FY 23 SR Planning*	Army	Air Force	Navy
Number of Programs	9	5	6

**Subject to change*



- In the notional example above, Program A has a **Category A** critical cost growth and Program B has a **Category B** critical cost growth
- In FY21, only 3 programs (out of 13) were able to complete a Category B comparison
- In FY22, 11 programs (out of 22) were able to complete a Category B comparison

- Each Service has their own review SR development and review process
- Quality of SR materials has already increased significantly
- Similar issues and concerns across the Services

Lessons Learned from the SRs

General SR Documentation

- SRs are a significant effort for the Services and require participation from multiple disciplines
  - Product support managers, logisticians, cost analysts, system engineers, business management, etc.
- The 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
  - CLS vs Organic
  - Sustainment budget process

ICE and Cost Growth

- ICE and SR assumptions should be communicated early and often across stakeholders
  - Availability of original baseline and previous ICE for cost growth calculations
  - Scope of estimate (variants, modifications, ongoing investment or production, etc.)
- The comparison to the original baseline (Category B growth) is challenging and may not always be meaningful
  - Growth is based on total, not a unitized comparison
  - Changes in quantity, OPTEMPO, or system life can drive a large delta; may not be an effective indicator of cost health
  - Many programs have changed significantly since MS B; may not have comparable scope or may require partial comparisons
  - Difficult to find old cost models and model assumptions, which is necessary for a meaningful growth explanation
- Inconsistent application of the CAPE Inflation and Escalation Handbook across the Services

Availability of Data

- CSDRs are often excluded from sustainment contracts/efforts
- VAMOSC systems have deficiencies, but it is an opportunity to learn and improve for EVAMOSC

Q&A