# COMMISSION ON PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION REFORM

## INTERIM REPORT

AUGUST 2023

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# SECTION I - EXECUTIVE SUMMARY

**The Commission on Planning, Programming, Budgeting, and Execution (PPBE) Reform has found through its research and interviews that while the current PPBE system has its strengths, significant improvements can be made. Based upon a range of research which has occurred over the past year, the Commission is publishing this Interim Report specifically seeking feedback on potential recommendations under consideration that require additional stakeholder feedback and assessment to inform the Commission's Final Report and identifying actions where implementation could begin as soon as feasible.**

**These potential recommendations and actions are designed to improve:**
• PPBE-related relationships between the Department of Defense (DoD) and Congress;
• PPBE processes to enable innovation and adaptability;
• Alignment of budgets to strategy;
• PPBE business systems and data analytics; and
• Capability of the DoD PPBE programming and budgeting workforce

Section 1004 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2022 created an independent "Commission on PPBE Reform" and directed the Commission to assess all four phases of the PPBE process and make recommendations for improvements with findings in an Interim and Final Report.  To fulfill this directive, the Commission and its staff have completed more than 560 interviews to date gaining insight from experts in the PPBE process and related fields that include current and former personnel from Congress, the DoD, industry, academia, and research organizations.  The Commission has also benefited from research performed both by its own staff and several outside research organizations.  Finally, the Commission has held 29 formal meetings and has heavily relied on the knowledge and experience of its 14 Commissioners and the Commission staff.

Based upon the research and analysis conducted to date, the Commission has concluded that the PPBE process can be improved in ways that better accomplish the five broad goals articulated above.  This Executive Summary describes potential recommendations on which the Commission seeks additional stakeholder feedback and key actions that can be implemented now (see Summary Tables below for a list). The text of the Interim Report articulates additional potential recommendations and actions for implementation which can be found in summary in Section IX.

# SUMMARY TABLES

These Tables Identify Only the KEY Potential Recommendations and KEY Actions That Can Be Implemented Now.  Others Appear in the Main Text in Chapter Nine.

The Commission identified several key areas in which major reforms could dramatically improve the effectiveness and efficiency of the PPBE process. For each of these areas, the Commission identified a range of potential changes and requests congressional and DoD stakeholder input before making recommendations in its Final Report.

## Potential Recommendations Requiring Congressional and DoD Stakeholder Feedback

- Color of Money and Budget Structure
- Year of Execution Agility
- Availability of Appropriations
- Strengthening the Defense Planning Guidance (DPG) with Analytics for Big Decisions

The Commission also identified a series of actions that would improve the PPBE process and could begin implementation in the near future.

## Actions That Can Be Implemented Now

- DoD Mid-Year Update Briefing to Congress
- Systematic Review and Consolidation of Budget Line Items (BLI)
- Accelerate Office of the Under Secretary of Defense Comptroller (OUSD(C)) and Cost Assessment and Program Evaluation (CAPE) Information Technology (IT) System Consolidations
- Establish Classified and Unclassified Enclaves for DoD-Congressional Information Sharing
- Improve Recruiting and Retention of PPBE Personnel

## Improve PPBE-Related Relationships Between DoD and Congress

The Commission recognizes that the DoD and Congress have worked together successfully to meet United States (U.S.) national security needs. The Commission also recognizes that some PPBE-related issues that divide the DoD and Congress result from the U.S. system of government with separate executive and legislative branches as well as disagreements between political parties and members. Those issues fall outside the charter of this Commission; however, Congressional and DoD stakeholders expressed other concerns which, if addressed, could help improve relationships and make the PPBE process more effective in providing timely responses and capabilities to meet warfighter needs while supporting congressional oversight responsibilities.

**Mid-Year Update Briefing.** The Department transmits a vast quantity of detailed budgetary information along with the President's Budget (PB). However, the Department's subsequent transmission of information is episodic, sometimes late, and not always consistent with other information provided by DoD personnel. ***As one of its key actions that can be implemented now,*** **the Commission urges that DoD provide an annual mid-year update briefing covering budget execution and identifying new developments that impact the budget proposal currently before Congress.** The update briefing should be led by the Under Secretary of Defense Comptroller (USD(C)) and Service representatives. The budget proposal portion of this briefing would provide all the congressional defense, intelligence, and military construction committees with the same information about new events and program status changes that would affect their review of the budget, perhaps including innovation opportunities, but would be designed to not constitute a formal budget amendment.

## Improve PPBE Processes to Promote Innovation and Adaptability

**Year of execution agility.** Flexibility to adjust to emergent needs and warfighter requirements during the year of execution is critical in the DoD, especially for high-tech programs whose technology can change and evolve quickly in the more than two years often required to complete the PPBE process and congressional review. The Commission frequently heard Program Managers (PM) say they did not have the needed agility in the year of execution to ingest new technology and innovation or pivot effectively to an unplanned requirement without disrupting already spoken for resources. In response, the Commission is considering several alternatives to modify reprogramming authorities and policies, such as authorizing below-threshold reprogrammings (BTR) at the account level and speeding up new start approvals. ***The Commission seeks further input from appropriate Congressional and DoD stakeholders on this potential recommendation.***

**Availability of appropriations**. The DoD also faces significant challenges with the availability of its appropriations. For example, operation and maintenance (O&M) and military personnel (MILPERS) funding typically must be obligated in the year for which they are appropriated. This policy creates incentives to obligate any remaining funding quickly at the end of the fiscal year to avoid losing the money to other internal DoD priorities or back to the U.S. Treasury, often called "use it or lose it," which can result in year-end spending on lower priority projects or activities and is especially problematic when budgets are enacted months after the fiscal year has already started.  The Commission may recommend allowing two years to obligate these types of funds or selective carryover of funds into the next fiscal year.  Some federal agencies with this kind of authority are highlighted in Section X of this report.  ***The Commission seeks further input from appropriate Congressional and DoD stakeholders on this potential recommendation.***

**Mitigating Issues Caused by Continuing Resolutions (CR).** The late enactment of appropriations and the use of lengthy CRs also hinder DoD's ability to execute budgets effectively. The Commission is considering several alternatives to mitigate the negative effects of CRs while still maintaining congressional oversight, including allowing new starts and reprogrammings under a CR if approved by the defense committees in their respective bills.  This approach would be implemented through an informal agreement between Congress and DoD, just as reprogrammings are handled today.  ***The Commission seeks further input from appropriate Congressional and DoD stakeholders on this potential recommendation.***

**Review and consolidate BLIs.**  The DoD's budget structure consists of numerous budget lines and accounts that sometimes make it difficult for DoD to manage defense programs and for Congress to clearly track and understand them.  **As an action that can be implemented now, the Commission recommends that Congress and DoD initiate an effort to work together to review and restructure budget lines and accounts where appropriate.**  This effort should be undertaken on a rolling basis over a period of years, to enable thoughtful consideration of each budget portfolio.

## Improve Alignment of Budgets to Strategy

**Strengthening the DPG with analytics for big decisions.**  The Commission heard criticisms regarding DoD's success in linking budgets to strategy.   The DPGs have often been formally issued after the programming phase of the PPBE process has started, which limits their usefulness.   The DPG also sometimes lacks specificity and avoids the hard decisions that would facilitate better decision-making during the programming phase.   Formal efforts to provide the analysis necessary to make linkages between budgets and strategy have varied in their effectiveness over time.   The DoD budget structure itself further buries direct insight into the strategic alignment of resources to deliver

capabilities to the warfighter. The Commission understands that the DoD seeks to strengthen the DPG, including ensuring delivery of the latest DPG in a timely fashion and commends the Department's actions.

The Commission is examining ways to strengthen the DPG to provide greater specificity, particularly in terms of areas for taking risk, linking the DPG to force sizing and shaping constructs, areas to invest in or divest of capabilities, and roles and missions for the Services. The Commission is also examining ways to improve analysis through greater use of operational measures, such as holistic execution phase reviews beyond financial metrics; using strategic goals, objectives, and measures of operational performance; and linking metrics back to the strategy to facilitate a more continuous planning process. ***The Commission seeks further input from appropriate DoD stakeholders on these potential recommendations.***

**Budget structure transformation.** The Commission may recommend a substantial transformation of the budget structure designed to clarify the budget's linkage to the strategy. This transformation would begin with the military Services as the primary budget building block, then show major force capabilities within a Service, followed by programs in the major force area including some or all the specific platforms, and then show all colors of money associated with the platform, rather than prioritizing the phase of the program development and fielding. This transformed structure should help both DoD and Congress better understand where and what a program's funds are being spent on and how that spending relates to the strategy, maintain the level of information provided in budget justification materials, and would be designed with provisions to preserve congressional oversight. ***The Commission seeks further input from appropriate Congressional and DoD stakeholders on this potential recommendation.***

**Color of money.** The DoD must finance programs with the correct color of money, meaning use of Procurement; Research, Development, Test and Evaluation (RDT&E), or other types of appropriations as required by law and policy. The challenge of determining which appropriation(s) to use, especially for software and other digital requirements, can lead to delays in programs if the right color of money has not been requested or if after the request there is determination that, for example, the change is no longer a patch (O&M) but is now an upgrade (RDT&E). In response, the Commission's Final Report may propose that color of money be aligned to an organization's purpose or mission, rather than the activities performed specifically with the money. For example, a procurement-focused organization like an acquisition program office could use Procurement dollars to fund all its activities in support of its mission vice a multitude of appropriations. The Commission may also recommend that a single color of money be used for software development,

procurement, and upgrade activities while including provisions to preserve Congressional oversight. ***The Commission seeks further input from appropriate Congressional and DoD stakeholders on these potential recommendations.***

## Improve PPBE Business Systems and Data Analytics

The PPBE business systems and analytics capabilities are critical to improving the overall PPBE process.  The DoD is making important progress in this area, including greater use of advanced data analytics platforms to improve real time data availability and analysis, along with implementation of budgeting systems to consolidate data used during the programming and budgeting phases into one system.  However, some PPBE systems and communication approaches remain antiquated, such as transmitting PDF documents and hard copies. Years of technical challenges along with systems and management changes, such as the disestablishment of the Chief Management Officer (CMO), have sometimes resulted in questions as to who is in charge as well.  The culture within the financial management community focuses on getting resources to the warfighter, as it should, but sometimes not enough emphasis is applied to improve resource management processes using new and more efficient technology.

**Accelerating system consolidation and establishing new communication approaches.**  The OUSD(C) and OSD CAPE have historically used separate databases and separate tracking systems as they develop the defense program and budget.  As a result, decisions may have to be entered multiple times in different formats and the Department lacks a single authoritative database reflecting program and budget decisions.  The Department has begun a process to reconcile the separate budget and accounting systems, but this process has yet to be completed. **As an action that can be implemented now, the Commission recommends DoD continue, and if possible, accelerate consolidation of the data systems used by the OUSD(C) and CAPE so that one system handles all data during both the programming and budgeting phases**.  To the extent possible, the consolidated system should also be reconciled with the separate systems used by the Military Departments.

**Establish classified and unclassified enclaves for DoD-Congressional information sharing.**  Most of the budget information transmitted by the Department to Congress continues to be sent in static form such as on paper or in electronic documents, such as PDFs.  Similarly, congressional actions and requests for information are generally transmitted in paper form or as static documents.  **As an action that could be implemented now, the Commission recommends that the DoD establish both classified and unclassified enclaves to share information electronically between DoD and Congress**, to include the electronic transmission of budget justification books in a manner that makes

them searchable, sortable, and able to be updated electronically by both the Congress and DoD.

## Improve the Capability of the DoD Programming and Budgeting Workforce

In accordance with statutory guidance, the Commission assessed the sufficiency of the workforce in the Office of the Secretary of Defense (OSD) and CAPE to conduct budgetary and program evaluation analysis. Both CAPE and the Programming and Budgeting (P/B) organization inside the DoD Comptroller's office have struggled to fill open billets. As a result, 12 to 18 percent of their positions currently remain unfilled as of the first quarter of FY 2023. There is also considerable stress on the workforce, especially in P/B where the responsibility for oversight of both the budgeting and execution phases of PPBE, along with seemingly endless crises such as funding for support to Ukraine, means there is little downtime for training, leave, and a reasonable work-life balance, leading to recruiting and retention challenges.

**Improving recruiting and retention.** <u>**As an action that can be implemented now,**</u> the Commission recommends continued efforts to recruit and retain personnel for both CAPE and P/B, including seeking approval for new approaches such as direct hires, incentives, and bonuses. Continued efforts to reduce workload and improve analytic capabilities, perhaps through greater use of open architecture analytic platforms such as Advana (Advanced Analytics), should also be pursued. While not required by Section 1004 of the NDAA for FY 2022, in its Final Report, the Commission will also assess the workforce sufficiency in the programming and budgeting organizations within the Services and Military Departments.

## Required Assessments

In addition to making recommendations, Section 1004 required that several assessments be provided in this Interim Report. These assessments range from PPBE timelines and when program changes can be made, to new and agile program and budget techniques, to the sufficiency of OSD's workforce that conducts programming and budgeting. While not required for the Interim Report, the Commission is including the initial assessment of some other federal agencies and countries. These assessments can be found in Section X of this report. Results from some of the assessments have informed the Commission's findings.

# SECTION II - BACKGROUND AND RESEARCH APPROACH

## Background

Section 1004 of the NDAA for FY 2022 established an independent "Commission on Planning, Programming, Budgeting, and Execution Reform." Specifically, this Commission is composed of "14 civilian individuals not employed by the Federal Government" with proven experience and expertise "in one or more of the following: the DoD's PPBE process; innovative budgeting and resource allocation methods of the private sector; iterative design and acquisition process; or budget or program execution data analysis".

In accordance with this language, the Commission's mandate includes the following tasks:

- Conduct a comprehensive assessment of the efficacy and efficiency of all phases and aspects of the PPBE process;
- Review the DoD financial management systems, including an assessment of the DoD budget and programming workforces;
- Compare the DoD PPBE process with similar processes of private industry, other federal agencies, and other countries;
- Review the budgeting methodologies and strategies of near-peer competitors to understand if and how such competitors can address current and future threats more or less successfully than the United States; and
- Develop and propose recommendations to improve the effectiveness of the PPBE process.

As amended by section 1057 of the NDAA for FY 2023, the Commission is tasked to present the results of its investigation in two reports: an Interim Report to be delivered in August 2023 and a Final Report in March 2024. For further details on these two reports, see the Section below. The Commission submitted a Status Update on its activities in March 2023. This document constitutes the required Interim Report.

## Research Approach

Since its establishment, the Commission has held 29 formal in-person Commission meetings, each of which included a majority of Commissioners along with many of the Commission's professional staff. The Commission has depended heavily on the experience and expertise of its Commissioners and its professional staff, many of whom have extensive experience with PPBE in Congress, in DoD, or both.

The Commission interviewed over 560 individuals and organizations with knowledge and expertise of the DoD PPBE process and related topics.

These meetings include 15 engagements with professional staff of the congressional defense committees. The Commission's interviewees have included current and former senior congressional professional staff, current and former senior officials from across the DoD, current DoD and industry practitioners from all phases of the PPBE process, and industry executives (See Appendix C).

The Commission staff has conducted extensive research on topics related to the PPBE process to further inform the Commission's Interim and Final Reports. This included interviews with industry on their processes, a review of the DoD Financial Management Regulation (FMR) and other PPBE related guidance, a case study on Facilities Sustainment, Restoration, and Modernization (FSRM) funding, an in-depth analysis of reprogramming actions, an analysis of innovation funds, an analysis of DoD's programming and budget structure, and an assessment of the OSD Comptroller and CAPE workforces. In addition, understanding the importance of interacting with the entirety of the PPBE ecosystem, Commission staff have actively engaged the public through social media platforms to further conversations regarding PPBE reform and keep the public apprised of the Commission's progress. Commissioners and Commission staff have engaged with other stakeholders and practitioners by speaking at a number of professional forums and events, discussing the Commission's work and research areas. The Commission has also engaged with several media outlets who have contributed to furthering this dialogue with DoD and congressional stakeholders. As a result, the Commission has gained an extensive understanding of the current PPBE process to date and suggested areas in need of reform.

At the Commission's request, research has also been conducted by Federally Funded Research and Development Center (FFRDC) experts from the Institute for Defense Analyses (IDA), the RAND Corporation, and the MITRE Corporation. The Commission is also leveraging academia through the National Security Innovation Network (NSIN) and DoD's Acquisition Innovation Research Center (AIRC) to assist in research efforts. Members of the Commission staff and academia are also working together to complete a review of the DoD's financial management systems as they relate to internal controls and auditability, the results of which will be included in the Commission's Final Report. A high-level list of research activities being supported by these organizations are provided as listed on the following page.

# FFRDC RESEARCH

## Completed Work

**The RAND Corporation:** Comparison to PPBE processes in other countries and Federal Agencies.

- Allied Countries: Australia, Canada, and the United Kingdom
- Strategic Competitors: China and Russia
- Other Federal Agencies: Department of Homeland Security (DHS), Department of Health and Human Services (HHS), National Aeronautics and Space Administration (NASA), and the Office of the Director of National Intelligence (ODNI)

**IDA:** Examination of PPBE documents, timelines involved for each phase, and ability to make changes.

- Development of Key PPBE Documents: The DPG, the Program Objective Memorandum (POM), the Future Years Defense Program (FYDP), the Budget Estimate Submission (BES), and the President's Budget
- Analysis of Timelines Associated with Each Phase and the FYDP
- Examination of Reprogramming Actions

## On-Going Work

**The RAND Corporation:** Comparison to PPBE processes in other Countries and Federal Agencies.

- Other Federal Agencies: Department of Veterans Affairs (VA) and Department of Energy's (DOE) National Nuclear Security Administration (NNSA)
- Allies and Partners: France, Germany, Sweden, Japan, and Singapore

**The MITRE Corporation:**

- General Use of Metrics and Performance Measures
- Correlated Change in Budget Structure versus Strategy
- Structural Incentives on Spending Behavior

# ACADEMIC RESEARCH

## Completed Work

NSIN: the College of William and Mary and the University of Virginia

- Innovation and the Small Business Innovation Research Program
- Aligning Budgets to Strategy

## On-Going Work

**AIRC:** George Mason University and Stevens Institute of Technology

- Case Studies of Technology Transition
- PPBE Process Portfolio Budgeting, Justification Books, Selected Acquisition Reports, and Integrated PPBE/Requirements/Acquisition Reform
- Options for Restructuring the DoD's President's Budget
- Alternative Obligation and Expenditure Target Curves

In addition, the Commission was provided with papers related to PPBE reform from several universities including: The Naval Postgraduate School, Duke University Sanford School of Public Policy, Defense Resources Management Institute, and the George Mason University Center for Government Contracting.

# SECTION III - THE PLANNING, PROGRAMMING, BUDGETING, AND EXECUTION (PPBE) PROCESS

The Planning, Programming, and Budgeting System (PPBS) was originally established in early 1961 to give the Secretary of Defense a way to make strategic and cost-effective decisions on force structure and major acquisition programs, while also setting the funding and personnel requirements each of these would entail. The system got a revised name – the PPBE process – in the early 2000s to reflect increased emphasis on the importance of execution and evaluation as a feedback loop into the process. The new centralized system introduced in 1961 became feasible in part because of the merging of the separate Services into a united DoD in 1947. It also benefited from research on defense decision-making in the 1950s. The new process made major changes in defense budgeting practices including debating budget issues in program areas such as strategic forces, bringing analytic information to bear on decisions, and considering budgets over multiple years.

Changes to the PPBS began not long after its introduction, and some of those changes shaped the system this Commission is considering today. In the 1970s, for example, Secretary of Defense Melvin Laird decided that the system Secretary of Defense Robert McNamara had introduced in 1961 over-centralized control in the Office of the Secretary of Defense and that more autonomy needed to be restored to the Services in building and designing forces. This led to more significant involvement by the Services, which shapes many of today's PPBE processes.

Congress also tightened controls on DoD budgeting in ways that have shaped PPBE. For example, even before PPBE, informal agreements between Congress and DoD permitted the Department to move funds among programs during the execution phase of PPBE through reprogramming actions, but Congress has gradually restricted those movements over the years. Nevertheless, the reprogramming of funds during the year of execution still provides a key source of budgetary flexibility for DoD and is an important issue the Commission has researched and discussed extensively.

Starting in 1977, Congress decided to change the end of federal fiscal year from June 30th to September 30th, an important shift designed to give Congress more time to authorize programs and enact appropriations. Unfortunately, this change has not solved the problem of late budgets which is another focus area the Commission has examined and debated. These and other changes, applied to the basic provisions of the PPBS put in place in 1961, have created the

current PPBE processes the Commission is assessing. The current PPBE process consists of four phases which are outlined in further detail below.

**Planning Phase:** This phase involves the identification of necessary updates to DoD military strategy, policy, and force manning, training, and equipping, given the evolving strategic environment. During this phase, key DoD missions and goals are translated into prioritized military objectives. Reviews of existing and programmed capabilities, force structure, and global posture are conducted to assess the sufficiency of the joint force to achieve the strategy and identify current and future warfighting requirement priorities.

This is a joint effort by both civilian and uniformed officials of the DoD (Under Secretary of Defense (USD) for Policy (USD(P)), Chairman of the Joint Chiefs of Staff (CJCS), military Services, and Combatant Commands (COCOM) and is guided by three documents: the National Security Strategy (NSS) as determined by the President of the United States; the National Defense Strategy (NDS) issued by the Secretary of Defense; and the National Military Strategy (NMS) issued by the CJCS. This phase of the process informs preparation of the DPG. The USD(P) oversees preparation of the DPG, which goes to all DoD Components and guides development of their program and budget recommendations.

**Programming Phase:** This phase is intended to focus decision-making on analytically based trade-offs about future end states.[1] It includes an analysis and decision process that produces a detailed multi-year force and financial plan (the FYDP) that is the bridge to that future end state. This can involve identifying, prioritizing, and resourcing the DoD's manpower (including military end-strength and civilian full-time equivalent work years), acquisition and sustainment programs, facilities, and forces (identified as either items of equipment or combat units) that are required to deliver the future capabilities and forces, all within a fixed topline. This phase begins with the issuance of Fiscal Guidance (FG) from the Deputy Secretary of Defense to each of the Military Departments and to the Principal Staff Assistants for their organizations and DoD Components under their purview.

The Director of CAPE oversees this process at the OSD level on behalf of the Deputy Secretary Defense. The Services, United States Special Operations Command (USSOCOM), and the Missile Defense Agency spend at least a year developing their Program Objective Memoranda (POM) and then formally submit them to OSD. The POM describes how they want to allocate funding, how they comply with the requirements set forth in the DPG and specific service and component program guidance, and how they meet the priorities and objectives outlined in the various strategy documents released in the planning phase. The submission and presentations of the POM to CAPE and

[1] Alain Enthoven and Wayne Smith, How Much is Enough: Shaping the Defense Program 1961-1969, 1971, republished by the RAND Corporation, 2005

OSD leadership begins the Program and Budget Review (PBR) during which CAPE evaluates the POM and the Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) evaluates the BES in coordination with the OSD Secretariats, military Services, Joint Staff, COCOMs, and Defense Agencies.

After analyzing the POM submissions and upon approval from the Deputy Secretary of Defense, the Director, CAPE issues draft Program Decision Memorandums (PDM) (they have also been called Resource Management Decisions (RMD)) that direct changes to the POM submissions, document approved manpower changes, and direct appropriate program reports and studies.   This phase concludes with the Deputy Secretary of Defense's signature of the final, approved PDMs that are then incorporated into the PB.

Throughout the programming process, adjustments to programs, projects, funding type, and amounts can be made until the OSD Comptroller budget database is locked.  Of course, an increase in funds in one part of the program will have to be offset elsewhere as the Department's top line cannot exceed the level established in FG by the Deputy Secretary of Defense.

**Budgeting Phase:**  The purpose of this phase, which is overseen by OUSD(C), is to develop and then prepare documentation to describe a budget that reflects the President's and the Secretary's priorities and is balanced at the topline provided by the President's Office of Management and Budget (OMB). Budgeting is done in coordination with the CAPE Program Review and requires significant involvement from Service, Agency, and OUSD(C) analysts. Using the Service and other DoD Component BESs as its basis, along with changes made during the POM process, OUSD(C) reviews and appropriately adjusts the BES inputs to ensure the correct phasing and pricing of programs, compliance with laws and regulations, and assesses the executability of programs within the appropriation lifecycle (obligations and expenditures).  In addition, OUSD(C) reviews and adjudicates numerous funding requests not covered in the Program Review, typically single Service or command requests, and late breaking or war-related issues.  The budgeting phase also features preparation of the complex and voluminous documentation (Justification Books or J-books) that accompanies the budget when it is formally submitted to Congress.   While PDMs should be completed during the programming phase, they have routinely been issued during the budgeting phase due to concurrent reviews and delayed decisions.

The budgeting phase includes the OUSD(C) review and issuance of draft Program Budget Decisions (PBD) (they have also been called RMDs) which direct changes and shape the final DoD portion of the PB.  During this time, the OMB participates in the OSD-level review of the DoD budget and provides further guidance known as "Passback" to the Department on programmatic issues, Administration priorities, economic assumptions, and final topline

guidance.  These changes often happen very late in the process due to real world events or issues that arise during execution.  As in the programming phase, changes can be made up until the last minute in the budgeting phase, but typically require OSD and sometimes OMB leadership support to ensure that previous decisions are not inadvertently overturned in the final days and hours before the PB submission to Congress.

The DoD budget, along with other federal agency budgets, are statutorily due to Congress the first Monday in February for the next fiscal year, which begins on October 1st of that same calendar year.  This phase completes inside the Department with the submission of the DoD budget to OMB for inclusion in the PB to Congress and the Department's delivery of that budget to the congressional defense, intelligence, and military construction committees. Review of the defense budget continues with congressional hearings with Department civilian and military leadership, detailed rollout briefings from the Services, Combatant Commands, and other DoD Components to professional staff members on the congressional defense, intelligence and military construction committees, and congressional committee markups of that PB reflected in NDAAs and DoD Appropriations Acts.

**Execution Phase**:  The DoD has always executed budgets, but in May 2003, execution formally became the fourth phase of the PPBS changing it to the PPBE process.  This phase was added to highlight the importance of managing execution and performance by providing a feedback loop to inform future program and budget decisions.  The phase encompasses everything from the initial apportionment of funds from OMB (even while under a CR) and issuance of Treasury Warrants; reconciling enacted changes (marks and adds) against the request; realigning and reprogramming of funds to meet emergent needs; tracking, reporting, and balancing of the accounting systems for those resources; and a review of overall performance as communicated in the Annual Performance Report (required by the 1993 Government Performance and Results Act (GPRA) and GPRA Modernization Act of 2010).  It is important to note that the execution phase is always in process for many different years at the same time.  Contracting for services and products is an important part of budget execution, which is provided by the Defense Acquisition System, though it is not formally part of the PPBE process.  Congressional staff, members, and oversight organizations, such as the Government Accountability Office (GAO) and the DoD Inspector General, are also active during the execution phase of previously passed appropriations, performing their mandated oversight duties.

The execution phase for a particular year begins on October 1st with the start of the fiscal year, even if that year starts under a CR, proceeds in full force once funds have been appropriated, and concludes on September 30th when that

fiscal year closes. However, because programs have one to five years to get funds on contract (depending on the appropriation) and another five years to make final payments, at any point in time DoD is executing funds from 10 different fiscal years. Analysis of execution includes determining how well current appropriations are being spent compared to programmatic and financial plans, ensuring alignment to DoD's stated requirements, and determining if resources need to be realigned or reprogrammed to meet emerging or unplanned year of execution needs. The Services and DoD Components conduct monthly execution reviews at the program and Command level and more formal quarterly reviews with higher headquarters. These reviews and assessments feed into the formal mid-year review with the OUSD(C) which informs the realignment requests contained in the Omnibus reprogramming submission due annually by the end of June, as well as provide useful analysis and information to inform future budget decisions. Close monitoring of execution and reprogramming actions continue through the remainder of the fiscal year, especially for annual appropriations to ensure that the 80/20 Appropriations Act General Provision for O&M funding (statutory requirement for meeting the 80 percent obligation rate by the end of July every year) is sufficiently met and that funds will be appropriately executed for the highest priorities before the fiscal year closes.

## PPBE Strengths...But Also a Need for Change

The Commission found that the PPBE process serves a critical role in identifying key budget issues, bringing analytic information to bear on budgetary decisions, making sure that a wide variety of voices are heard, establishing and adjudicating priorities, ensuring consideration of budgetary impacts of funding decisions over multiple years, enabling senior leaders to guide the course of the Department, and developing consensus proposals that can be defended before the Congress. These aspects of the PPBE system should be preserved in any reform effort. At the same time, however, almost everyone the Commission spoke with, even those who praised aspects of today's PPBE process, agrees that ***changes are needed.*** There is also an extensive body of research that underscores the need for improvements in PPBE. Most of the Commission's work, and the remainder of this Interim Report, focus on issues that have been discussed, potential recommendations being considered but needing further analysis and feedback from stakeholders, and actions that can be implemented now.

The following sections of the Interim Report discuss the Commission's findings and recommendations to strengthen the PPBE process. The report discusses, though sometimes only in general terms, potential recommendations that the Commission is considering for its Final Report including key recommendations that are of particular importance. These potential recommendations, some of which may become recommendations in the Commission's Final Report, would

benefit from stakeholder feedback and require further assessment. The Commission believes there are actions ready to begin implementation now or that can begin the implementation process. This includes key actions that are identified in the Executive Summary and noted in the discussion below. The Commission believes that these key actions are particularly important ways to improve PPBE.

The Commission has chosen to group its recommendations under the following *five broad goals that characterize the key issues* that need to be addressed in the PPBE process in order to improve:

- PPBE-Related Relationships between DoD and Congress
- PPBE Processes to Enable Innovation and Adaptability
- Alignment of Budgets to Strategy
- PPBE Business Systems and Data Analytics
- Capability of the DoD Programming and Budgeting Workforce

# SECTION IV - IMPROVE PPBE-RELATED RELATIONSHIPS BETWEEN DOD AND CONGRESS

## What the Commission has Heard and Learned

Today, as in the past, the DoD and Congress continue to work together to meet national security needs. However, representatives of both organizations indicated to the Commission that problems exist that, if solved, could improve these relationships, and foster a more productive working environment, to the benefit of our military readiness and national defense.

Congressional defense committee professional staff told the Commission that Congress receives a great deal of information about the defense budget during the annual submission of the PB but, after that, information is only received occasionally and only when specifically requested, thereby reducing Congress's ability to track and follow the larger picture or react to changing programmatic and budgetary needs. The Commission was also told that congressional requests for information (RFI) can take months to process, in part because of the need for coordination within DoD itself. A GAO report from February 2022 depicted an increase in "congressional reporting requirements for DoD directed reports and briefings on topics ranging from risk management in acquisitions to air and missile defense in Guam.[2] According to DoD data, the number of new reporting requirements from Congress has more than doubled from 513 in FY 2000 to 1,429 in FY 2020" (See Figure 1).[3] The Commission was also told that not all requests can be easily answered quickly due to the processes involved. They can take considerable time to research, compile the response, and then staff for approval. The Commission also heard that there is no incentive for congressional staff to decrease the number of questions they ask, and that there could be a greater review of RFIs to ensure they are current and improve proper oversight.

Figure 1: Number of New DoD Congressional Reporting Requirements over Time, as identified by DoD (Source: GAO analysis of DoD Data)
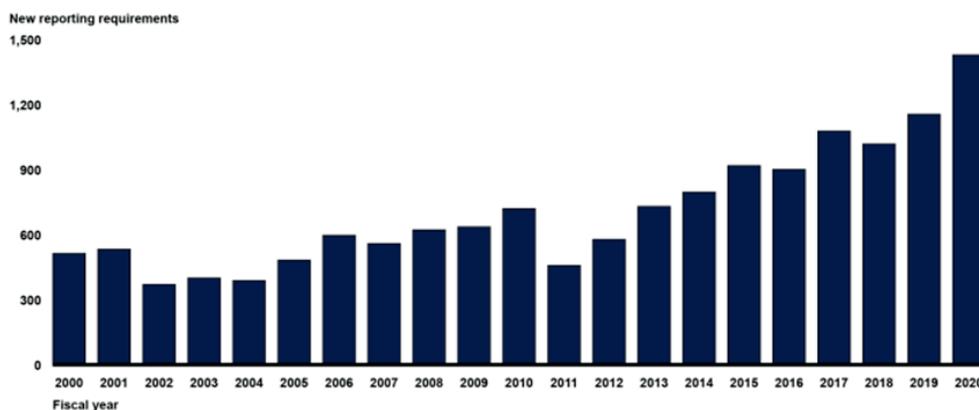


[2] GAO-22-105183, Report to Congressional Committees, "DoD should collect more stakeholder input and performance data on its congressional reporting policies", February 2022, https://www.gao.gov/assets/gao-22-105183.pdf.
[3] Ibid.

Professional staff from congressional defense committees specifically expressed concerns about the quality and timeliness of information they receive in the DoD's formal justification books or J-books—the principal source of information for Congress regarding DoD's rationale for funding specific programs and the principal deliverable from the Department to Congress on all the details to justify the PB request.  Furthermore, the Commission has heard that information in budget justification books varies widely in content and length; some smaller programs by dollar value receive much more attention than larger ones.  For example, in the FY 2024 Space Force Procurement budget justification materials, the National Security Space Launch (P-1 #18 and Line-Item Number NSSL00) has nine pages to justify $2,143 million in requested funding in comparison to the Army's Production Base Support (P-1 #34 and Line-Item Number 3270GC0050) which has 88 pages to justify a $115 million request.

There are tens of thousands of pages of justification materials that the DoD provides to Congress at all classification levels to explain how the Department intends to invest its allocated resources.  The Congress, including member offices and leadership staff, and defense, intelligence, and military construction committee professional staff use those justification materials, as well as formal committee hearings, detailed rollout briefings, staff and member on site visits, and additional meetings, to ask questions and evaluate the proposed allocation of resources, make changes to those allocations, and then enact NDAAs and DoD Appropriations bills.

There are DoD personnel at all levels who conduct engagements with various parts of Congress to explain the fiscal year's PB request. Information is presented and provided through detailed program rollout briefings which include detailed financial and procurement plans, responses to hundreds of questions on cuts, adds, previous legislative direction, and new legislative proposals all the way through conference and enactment, all in support of garnering the resources for the next fiscal year.  However, as noted above, Congressional staff have concerns about the quality and timeliness of some of this information.

The Commission heard some concerns from the DoD about the length of authorization bills and the number of required reports, both of which add to the administrative workload of the Department.  The average NDAA bill length has increased from an average of 416 pages from 2000-2005 to over 876 pages from 2018-2022.[4] Late budget submissions constituted another concern.  Some in Congress expressed concerns about the late submission or missing justification material of the PB (including the DoD budget) even in years other than those involving a change of Administration.

The last seven years, from FY 2018-2024, the PB request has been submitted an average of 49 days late. [5]

Regarding congressional action, senior DoD leaders expressed strong concerns about budgets that are enacted after the beginning of the fiscal year. In recent years late budgets have become more frequent and have been enacted later. From FY 2010 through FY 2023, the DoD appropriations bill has been enacted an average of 113 days after the beginning of the fiscal year on October 1st. Similarly, the NDAA has been enacted an average of 75 days after the beginning of the fiscal year. In the absence of a full-year appropriation, Congress often enacts CRs that reduce DoD's ability to execute budgets effectively and on time since generally the DoD cannot begin new activities, start new programs, or increase production capacity until full-year appropriations and authorizations have been enacted. The Commission recognizes that late budgets sometimes reflect political disagreements, which is beyond the scope of this report; however, the Commission is considering changes that may reduce problems associated with executing late budgets.

The Commission was also told that DoD and Congressional relationships sometimes depend on personal relationships that enable an imperfect system to function more effectively. However, those benefits can be lost when those personnel move to other jobs, which occurs frequently inside the National Capital Region.

While some issues probably cannot be resolved by DoD and defense professionals in Congress, others can be resolved in ways that would promote better working relationships. In this Interim Report, the Commission makes three specific recommendations to improve relationships between DoD and Congress and discusses others that will be addressed in the Commission's Final Report.

## Actions that Can be Implemented Now

**Action #1 (Key): Institutionalize a mid-year budget update briefing with key staff on the congressional defense committees related to both the DoD budget proposal and budget execution.**

The DoD already provides periodic updates to the Congress after submission of the PB; however, the Commission recommends that DoD institutionalize a mid-year update on the budget dealing with both the pending DoD budget proposal and current-year budget execution. The update should start with a briefing by the OSD Comptroller and Service Comptrollers and include extended time for a discussion with congressional defense committee staff.

[5] PB release based on "Budget of the United States Government" data from the GPO; https://www.govinfo.gov/app/collection/budget. Note: changes in administration can skew these averages; see Section XII of this report for additional details.

The update should occur around June or July in a year with normal schedules, with adjustments to that timing as needed.

The mid-year update briefing should discuss the annual Omnibus reprogramming, indicating its overall intent and how it relates to DoD strategy. The update should also discuss how current-year activities have affected the PB request including factors such as technology changes and program shifts that have altered resource needs. This information would allow Congress to make changes, if it wishes, that could speed innovation adoption and reduce the need for future execution-year changes. The update should provide a forum for supplying information and answers to Congressional questions that reflect DoD-wide policy. While the update would identify program changes, its discussion of the budget proposal would stop short of providing a list of program increases and decreases that would constitute a formal budget amendment. The update briefing would need to be coordinated with the OMB.

To make this mid-year update briefing effective, the DoD should establish a working group, cross-functional team, or similar collaborative process with the goal of enhanced, institutionalized transparency to do two things. First, the Department should identify areas in which new information or new opportunities might justify changes in the current PB that, if agreed to by Congress, would promote innovation (e.g., implement new technologies), minimize the need for reprogramming changes during execution, or improve the budget proposal in other ways. Second, the Department should identify to the USD(C) key above-threshold reprogramming candidates and promote their timely approval, paying special attention to ensuring they are paired with reasonable sources to offset the increases since the identification of sources is what typically slows the reprogramming process. The DoD should use the mid-year discussion to highlight the importance of key proposals in the Omnibus reprogramming and indicate how they relate to DoD's strategy.

This mid-year update briefing would be led by the USD(C) and the Services, with representatives from other key stakeholders within the DoD, such as the USD for Acquisition and Sustainment (A&S) and USD for Research and Engineering (R&E). The first prototype of this panel should commence by June after publication of the Commission's Final Report in March 2024, with the first mid-year discussion focused on the Omnibus reprogramming. A process should be in place by the following September to implement the entire recommended action, with a full mid-year update beginning in 2025. The success of the process should be measured by its adherence to the prescribed timeline and from informal feedback from defense committee staff directors and clerks (both majority and minority).

**Action #2:  Restructure the justification books to provide needed content in a common format.**

The current budget justification books vary widely in scope and content, with some large program writeups providing limited information while some smaller programs provide extensive detail.  The Commission recommends that DoD work with Congress to establish common formats and content for the justification books.  More specifically, where there are cross-cutting programs and activities, like in the RDT&E Science and Technology (S&T) account and the O&M readiness accounts, there should be consistent language and depth of budgetary and programmatic content.  To accomplish this restructuring, DoD and Congress should establish a joint working group including representatives from DoD (OSD and the Services) and from the congressional defense committees.  The working group should debate and strive to agree on content and format; the DoD should implement all agreed-to changes.  The working group should also take into consideration the use of these budget materials by industry, taxpayer advocates, and the public, as the justification books represent one of the few windows on the details of how the government plans to spend taxpayer resources.

The USD(C) should lead efforts to implement this recommendation, assisted by the Military Department comptrollers and other representatives as appropriate.  The working group should be established within four months after publication of the Commission's Final Report and should seek to complete its work in no more than one year after its establishment.  Successful implementation of this recommendation should be assessed based on senior leader attention to the issue, resources allocated for the effort, adherence to these timelines, and from informal assessment provided by members of the working group.

The Commission will continue research in this area and provide additional thoughts on justification book formats and other budget justification materials in the Final Report.

**Action #3:  Improve training for preparation of budget justification materials.**

Budget justification materials serve multiple purposes in the PPBE system. They are used to provide Congress with needed information and to help convince Congress to approve DoD budgets.  They are also used to develop a common understanding of the purpose of requested funds; after an appropriation is enacted, budget justification materials become a key document to ensure that funds are expended in accordance with their intended purpose. Today there is limited training that teaches DoD personnel the importance of the budget justification materials or how to develop and write the descriptive narratives that provide Congress needed information and the

Department with appropriate guidance on the expenditure of funds. While the Commission has been told that some training in writing J-books may be available in parts of the Department, it appears that "on-the-job" training is the rule – and that repeating last year's J-book language is common practice.

The Commission recommends creation of training courses for various types of budget justification materials, including J-books, data files, and staffer briefings. Course material for inclusion in existing courses or individual courses should be created for financial management (FM) and acquisition personnel and for other groups as needed. For FM personnel the course(s) should be offered through the FM Certification Program while acquisition and other functional specialties would utilize their own training certification programs and processes. The training should also be offered to Congressional staff and personnel on a voluntary basis.

The USD(C) should take the lead on this recommendation, starting with creation of a tiger team including representatives from USD(A&S), USD(R&E), and appropriate organizations within the military Services and other DoD Components. The tiger team would identify the specifics of training to be conducted and then, for FM personnel, personnel in charge of the FM Certification Program would create a course. The tiger team should be identified within four months after publication of the Commission's Final Report and should complete its work within six months, if possible, but no later than after one year. Success in implementation of this recommendation should be judged by adherence to the deadlines and by student feedback on the resulting courses.

**Ensure justification material narratives do not create unintended consequences**. Depending on how they are written, J-books can enable or restrict flexibility to address new technological opportunities. While intended to be as descriptive as possible to provide appropriate insight, the way justification materials are written can have unintended consequences. For example, writing justification narratives to buy nine-inch yellow hexagonal lead pencils with integrated pink erasers is a good description, but what if there was a better price on blue round pencils during the year with green erasers? Depending on how strict an interpretation one wants to make, the round pencils could be considered a new start that would then require congressional notification. Instead, it might be more effective to discuss procuring lead pencils, or just a writing utensil, and avoiding the unintended delay while looking for a legal opinion and potentially having to notify Congress of a new start. This is in no way meant to suggest that less information or detail should be provided in justification material narratives but acknowledges that sometimes the narrative is written so prescriptively that any change could be constituted as requiring notification.

Overall, the Commission believes that J-books should be written in a manner that does not unnecessarily constrain innovation and improvement of ongoing programs but still provides insight to Congress on what is being funded. The Commission is aware of a best practice to include language supporting technology insertion and product improvement opportunities that arise in the year of execution, including through Preplanned Product Improvements and risk reserves.

**Action #4:  Improve training for DoD liaisons.**

The DoD liaisons to Congress serve a very important role that can be used to further improve the relationship between the DoD and Congress, especially in the context of all the interactions related to PPBE.  They are in a unique position that allows them access to member personal staff, as well as the committee professional staff who attend the rollout briefings, hearings, and mark up the PB request.  Currently, there is no standardized training across the DoD for anyone who serves in a liaison position; however, there are best practices across the Services and other DoD Components that should be formalized.

The OSD Legislative Affairs, in coordination with OSD Comptroller Budget and Appropriations Affairs (BAA), should provide standardized and structured training that adopts best practices from the Services and DoD Components for both DoD appropriation and authorization legislative liaisons to enhance cross-communication between both branches.  Creating this training and exchange of best practices would encourage and enable more informed conversations between the DoD and Congress to provide first-hand understanding of congressional processes, procedures, and culture.  There are existing classes the Services use that could be modified to include this topic.  This training should also include a PPBE primer course, as well as an understanding of Congressional timelines, to best prepare these personnel for the position in which they will serve and provide an understanding of the environment in which they will operate.  In addition to best practices, the training should include some "dos and don'ts" to better empower legislative liaisons to advise leadership on fostering positive relationships with Congress.

## Way Forward

While this Interim Report includes some actions that can be implemented now, the Commission will consider making additional recommendations in its Final Report, including some of the potential recommendations discussed in this Interim Report.  For example, the Commission is examining the impacts of late budget requests and delay in enacting final appropriations and expects to present recommendations in its Final Report.

The Commission will also continue to research justification materials, to include the format and various methods for developing and transmitting data between the DoD and Congress as further discussed in Section VII of this Interim Report.

# SECTION V - IMPROVE PPBE TO PROMOTE INNOVATION AND ADAPTABILITY

**What the Commission has Heard and Learned**

One of the most consistent messages the Commission has heard over the past year and a half is the complaint that the rigidity of the current PPBE process limits the Department's ability to be flexible—to better respond to changing threats, unanticipated events, and incorporate emerging technologies in a timely manner. This message has been reiterated in statements from current and former senior DoD officials, from program budget and acquisition officials at all levels, and from both traditional and non-traditional industry providers. For example, a current DoD leader told the Commission that the lengthy lag in funding built into the PPBE process gives an innovation advantage to U.S. adversaries. Another official reported that the time-consuming nature of the PPBE process makes it difficult to modify or upgrade existing designs and to pivot toward new threats.

The Commission identified six aspects of the current PPBE process that contribute to this perception of inflexibility: (1) the length of the process; (2) the inflexibility of the budget structure; (3) the hierarchical nature of the PPBE process; (4) a bias for existing programs and approaches; (5) inflexibility in the year of execution; and (6) a lack of awareness and use of innovative new authorities and practices.

The Commission is aware of mechanisms available to the Department, and efforts by DoD leaders to use those mechanisms to mitigate each of the six potential problem areas. For example, senior leaders can intervene late in the process to direct funding toward high-priority initiatives and emerging needs. The Department and Congress have worked together to rationalize budget line items for some high-priority efforts. Effective commanders, Program Executive Officers (PEO), and PMs have been able to cut through the hierarchy to raise urgent concerns to DoD leadership. The DoD leaders and Congress have also established numerous mechanisms to fund emerging technologies and non-traditional industry partners to expand the defense industrial base. Congress has established a reprogramming process to enable the Department to move funds in the year of execution. While reprogramming actions have been effective in a number of cases, it is time consuming (it can take more than six months at times). The DoD and congressional leaders have also worked to build awareness of technology initiatives, innovation funds, software factories, and other creative acquisition strategies and funding approaches.

Unfortunately, most of these mechanisms are dependent on action by DoD and congressional leaders, who have vast responsibilities and limited bandwidth,

making the mechanisms slow to operationalize; however, senior DoD officials can cut through the bureaucracy to jump-start important initiatives and congressional leaders can approve the movement of money. With a defense budget of over $800 billion with hundreds of line items, however, these leaders can only address a limited number of issues.

## Understanding Root Causes

In its research, the Commission identified six major root causes relating to PPBE's problems in promoting innovation and adaptability.

### 1. Time-consuming programming and budgeting processes.

The PPBE process is designed to allocate funding to specific programs, projects, or efforts through a rigorous competitive process that takes place more than two years in advance of expenditures. The process involves "a serial, time-compressed set of hand-offs from one organization to another."[6] This structured process enables a wide array of voices and interests to be heard as trade-offs are made between competing priorities, but the time-consuming nature of the process is antithetical to moving at speed and funds may have already been claimed by defined requirements that have gone through the rigor of the requirements process. Emerging S&T development efforts do not always map to a warfighter requirement, are not scrutinized by appropriate leadership, and game-changing innovations may not be anticipated or funded.[6] As a former DoD official explained, there is a two year wait before being able to do anything new unless you are able to take advantage of limited flexibility available in the system.

Numerous personnel told the Commission that the current PPBE process provides limited windows for DoD, particularly the operational community, and Congress to appropriately react to useful and game-changing technologies or services once they are identified. The PPBE process makes it difficult to provide timely resources for further RDT&E, procurement, or sustainment to providers of such goods and services as needs change and develop. Some businesses are built to work in this process and are resourced to wait for the availability of funds; however, smaller firms and non-traditional industry partners may not have sufficient capital to wait on the DoD to secure adequate funding. Both innovation and geopolitical dynamics can change substantially between programming and execution. The PPBE process does include authorities, such as reprogramming or the Rapid Acquisition Authority, that permit the Department to respond to innovations and program changes during budget execution, but these tools also have limitations on their availability.

A former senior DoD official told the Commission that time-consuming DoD processes lead companies to walk away, depriving the Department of significant opportunities. The Commission also heard from small businesses

[6] Commission Interview with Subject Matter Experts

that the technology they were developing did not exist when the budget for that year was being built, and that waiting two or three years for funding is not a viable strategy for most small businesses. [7]

## 2. Inflexibility of budget structure.

The DoD requests funding in rigid and highly specified BLI structures divided into "48 unique investment budget activities across 23 different appropriations that constrain transfers, as well as 1,700+ budget items with a median size of $35-40 [million]."[8] Fiscal laws and regulations designed to safeguard Congress' power of the purse further require that funds be expended only for the purposes for which they are appropriated.  A single major acquisition program often has multiple budget lines and budget activities (BA), making it difficult for Congress to track the entire program, and even more difficult for the Department to manage the program.  While these BLIs were all developed for a reason—they reflect congressional, Department, regulatory, historical requirements, and precedent—it is not always clear that the historic reasons for developing a separate BLI still apply today.

The BLI structure particularly affects RDT&E, where BLIs less than $50 million make up the majority of lines (Figure 2).  The preponderance of small BLIs in the RDT&E account is significant because of reprogramming thresholds that limit the amount of money that can be moved without the prior approval (PA) reprogramming process.  Below threshold reprogrammings (BTR) for RDT&E are currently limited to $10 million or 20 percent of the BLI, whichever is less. The percentage further constrains flexibility in BLIs less than $50 million because moving $10 million in or out of one of those BLIs would require a PA reprogramming since it exceeds the 20 percent threshold.

Figure 2: Count of RDT&E PEs/BLIs Source: OUSD(C) Budget Materials [9]

| Count of BLIs for RDT&E | Fiscal Year Request | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Size (Based on Request) | 1980 | 1985 | 1995 | 1999 | 2001 | 2010 | 2020 | 2021 | 2022 |
| Less than $50M | 615 | 604 | 437 | 552 | 476 | 474 | 548 | 544 | 555 |
| Greater than $50M | 53 | 101 | 146 | 199 | 164 | 280 | 359 | 350 | 379 |
| Total | 668 | 705 | 583 | 751 | 640 | 754 | 907 | 894 | 934 |

The use of funding in these BLIs is further constrained by the justification book narratives supporting the budget that describe the purposes for which money is requested. J-books are frequently written in an overly detailed and prescriptive manner that unnecessarily constrains the ability of the Department to effectively execute its programs and missions. Language may not adequately explain the entire program, only the portion that pertains to the specific type of funding requested.

[7] Commission Interview with Industry Subject Matter Experts
[8]  Commission interview with subject matter experts.
[9] Data based on request for all of DoD; excludes where funds may have been previously enacted, but the request was zeroes out; excludes classified programs and other anomalies.

A senior DoD official described the J-books as "archaic," saying the Department needs to move to a database model (See Section IV).

The budget structure presents additional challenges for software, which is further described in the Required Findings section of this report (Section X). Software programs are often forced to use different funding sources for the development, fielding, testing, and sustainment of a capability, but requires continuous shifting across those activities post-initial deployment since software is continually modified to reflect security, performance, and interoperability updates. As one industry official told the Commission, "Software is never done. It gains new requirements tomorrow based off the problems that we solved the day before." Other federal agencies have different budget structures that allow them to develop, procure, and sustain software with greater flexibility, which are discussed elsewhere in Section X of this report.

**3. Hierarchical programming and budgeting process results in absence of delegation of authority.**

The program and budget cycle starts as a bottoms-up build process, but "locks" at successive hierarchical levels, making it increasingly difficult to adjust when changes are necessary. The extended programming and budgeting process pulls the ability to make timely adjustments in the RDT&E and Procurement appropriations of individual programs away from those PMs and PEOs with the best and most current knowledge and gives it to those at the top, who have less knowledge of program particulars and no responsibility for execution. For example, a PM may be responsible for executing to a technical and schedule baseline for a multi-billion-dollar program but does not have the authority to reprogram substantial sums between accounts within his or her own program without prior approval. There are exceptions to these findings, especially for high-priority programs, but these limitations often persist.

Senior leaders have the authority to intervene late in the PPBE process to address changing circumstances and emerging needs; however, the number of issues that can be addressed in this manner is constrained by bottlenecks in gaining the attention of senior leaders. For example, the Commission was told that if a command has 20 or 30 major budget concerns, the Command leadership is likely to bring only a fraction of these to OSD. If OSD has 20 or 30 major issues, it is likely to bring only a fraction to Congress. Similar staffing and senior leader bottlenecks also occur in Congress. This kind of triaging at every level means that even where authorities exist, many issues fall off the table and do not get addressed. As a result, PMs and other working level officials choose to self-censor modification requests and feel forced to wait for another year to pursue ideas.

### 4. Bias toward existing and traditional programs and approaches.

The linear PPBE process begins in the Services and other DoD Components which disadvantages joint solutions and novel approaches that are not follow-ons to existing programs. Enabling technologies that serve multiple programs are difficult to fund because they do not fit into neat program boxes, though the PPBE process in theory, is structured to support joint programs designed to serve multiple needs. The PEOs, PMs, and other stakeholders have incentives to request continued funding for existing programs and activities, sometimes irrespective of their continued value or priority. Because they are already in the program baseline, they have a "leg up" in the PPBE process.

In the programming phase, this advantage is counterbalanced by the tendency of senior leaders to drive toward change; however, in the budgeting and execution phases the focus is not on changing programs, so this counterbalance is less evident and effective. Faced with a choice between buying down risk and improving performance on existing program content or taking on additional risk by spending money on new, untested program content, most Services seem likely to choose the conservative option. Because of the requirement to show measurable cost, schedule, and performance today, and the accompanying skepticism that in a "use it or lose it" budgetary environment (typically seen with one year O&M appropriations, see Section XII), current officials are not properly incentivized to spend money on new, innovative solutions that are riskier and need more time to develop.

The difficulty of using innovative financial instruments and arrangements under the PPBE system also hinders the Department in its ability to attract private sector capital into the defense sector, especially in emerging technology areas where commercial RDT&E investment is much larger today than government investment. Figure 3 illustrates trends in commercial compared to government R&D investment over time.

Figure 3: Ratio of U.S. R&D to gross domestic product, by source of funds for R&D, 1953-2021 [10]
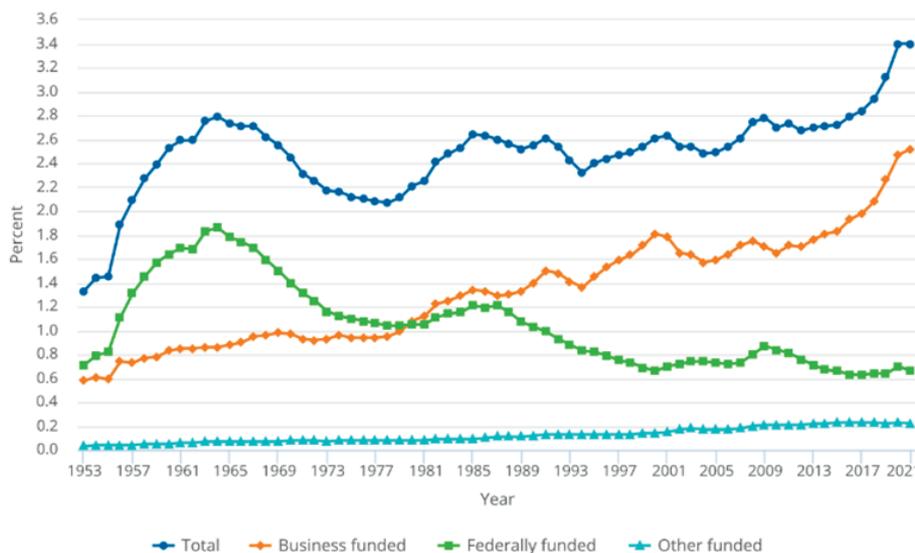


[10] National Center for Science and Engineering Statistics, "U.S. R&D Increased by $51 Billion in 2020 to $7,171 Billion; Estimate for 2021 Indicates Further Increase to $792 Billion." National Science Foundation. July 25, 2023, https://ncses.nsf.gov/pubs/nsf23320.

Several people the Commission interviewed indicated that the opaque and unresponsive nature of the PPBE process is antithetical to the kind of commitment and certainty that they need to attract private investment supporting development of emerging technologies or manufacturing capacity that could meet future defense needs.

The Commission was also told that the PPBE process is not well suited for signaling the credible possibility of a return on private investment in defense or in dual-use R&D through future DoD procurement of goods and services. Small businesses and non-traditional vendors struggle to understand the complex PPBE process and instead rely on cash flow as an indicator of success, but cash flow often does not materialize quickly under current PPBE processes. A former senior DoD official made an analogy between the DoD budget and a castle without doors. The big prime contractors have rooms in the castle, so their budget issues are routinely addressed. The Department has tried to build doors for non-traditional industry partners through organizations like the Defense Innovation Unit (DIU) and USSOCOM's innovation platform (SOFWERX), but these doors only go to the foyer, and it turns out that there is often no door from the foyer into the castle.

**5. Inflexibility in the year of execution.**

For many years, DoD has used reprogramming techniques to make needed changes in programs during execution, and reprogramming remains a key mechanism to increase the effectiveness of DoD budgets by responding to changed requirements. However, larger reprogramming proposals like PA actions require approval at several echelons within DoD, the OMB, and the approval of all congressional defense committees, in accordance with guidance in the Joint Explanatory Statement of the DoD Appropriations Act. Smaller realignments like BTRs do not require congressional approval, but the thresholds are set by Congress at relatively low levels and even those levels have been reduced in recent years. As a result, reprogrammings – while they remain an important and often effective technique – can require months of effort, especially for larger changes. As one DoD official explained during a Commission meeting:

> *"Current thresholds are out of alignment with the growth in the defense budget over the past twenty years. Thresholds haven't changed in 10 to 20 years, [and] unnecessarily restrict our flexibility. Based solely on economic changes, current thresholds should increase 50 to 100 percent depending upon the appropriation."*

The BTR thresholds have not kept pace with inflation or increasing defense budgets and have in fact been decreased by Congress in recent years. Figure 4 below presents the value of BTR thresholds since FY 1999 adjusted to FY 2022 dollars. Every appropriation type shows a decrease due to inflation over the past two decades.

Figure 4: BTR Thresholds in FY 2022 Constant Dollars ($M) [11]
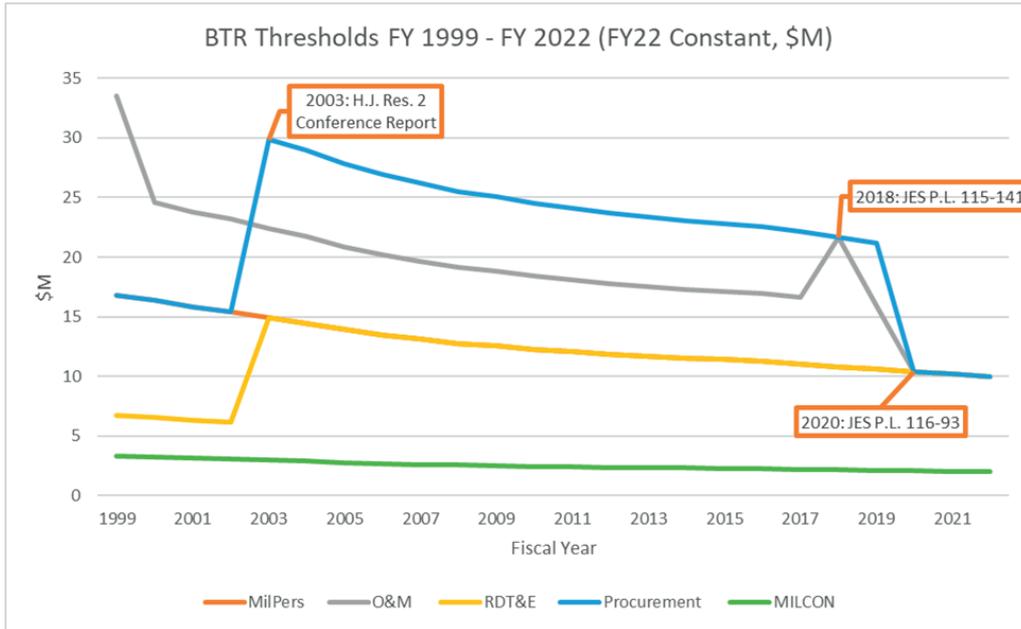


Callout boxes represent notable congressional action on threshold levels.

Congress has previously increased thresholds in response to inflation and budget increases and timing, such as in 2003 and 2018.[12] The Commission notes that in their markups of the FY 2024 PB for DoD, the House Appropriations Committee proposed increasing the BTR threshold for the Military Personnel (MILPERS) and O&M appropriations to $15 million, an increase for MILPERS and a return to the pre-2020 level for O&M, and the Senate Appropriations Committee proposed increasing the BTR threshold for the O&M, Procurement, and RDT&E appropriations to $15 million, an increase for RDT&E and partial restoration to the pre-2020 level for Procurement.[13] The two Committees will reconcile their respective differences as part of the conferenced Appropriations Act.

A former DoD official told the Commission, "The reprogramming process is not fast or agile, it's almost as cumbersome as the budget itself." This phrase reflects a common frustration heard by the Commission that is valid though overstated: reprogramming requests typically take months to be approved while the entire PPBE process from planning to execution takes years (See Section XII, Appendix D2 – Reprogrammings for additional details). As also noted above, sometimes descriptions in the budget justification books given to Congress further limit flexibility. A former DoD official stated that the Department must accommodate last-minute changes to justification books made within DoD and then go to great lengths to manage within the resulting limitations.

[11] OUSD(C), National Defense Budget Estimates for FY 2022, August 2021, 68-69. https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY22_Green_Book.pdf. Staff analysis based on deflators provided by OUSD(C).
[12] H. Rept 108-10 Making Further Continuing Appropriations for the Fiscal Year 2003, and For Other Purposes, February 13, 2003, 1499, https://www.congress.gov/108/crpt/hrpt10/CRPT-108hrpt10.pdf and Consolidated Appropriations Act, 2018, Committee Print of the Committee of Appropriations U.S. House of Representatives on H.R.1625/Public Law 115-141, 2018, 342. https://www.govinfo.gov/content/pkg/CPRT-115HPRT29456/pdf/CPRT-115HPRT29456.pdf
[13] H. Rept. 118-121 Department of Defense Appropriations Bill, 2024, June 27, 2023, 6, https://www.congress.gov/118/crpt/hrpt121/CRPT-118hrpt121.pdf

New start rules and definitions – which generally require congressional approval for new programs, either in budget submissions or execution – can make it particularly difficult to shift funds to foster innovation. Limitations on new starts under a CR can affect industry decisions, with one industry interviewee noting that the new start rules "prevent us from investing on a multiyear budget cycle." The DoD also requests new starts in the year of execution, either through letter notifications or prior approval reprogramming requests. Most new starts are small, with almost three quarters of those requested between FY 2015 and FY 2022 falling below $50 million in total cost, but even small new starts can be important in fostering innovation in the defense budget (see Figure 5).

Figure 5: Reported New Start Total Cost of Effort, Prior Approval Reprogramming Requests, FY 2015 - 2022[14]

| Total Cost of New Start Efforts ($ in M) | Number of New Starts | Percentage of Total New Starts |
|---|---|---|
| 0-50 | 137 | 70.6% |
| 50-100 | 24 | 12.4% |
| 100-150 | 4 | 2.1% |
| 150-200 | 7 | 3.6% |
| 200-250 | 4 | 2.1% |
| 250-300 | 1 | 0.5% |
| 300-350 | 3 | 1.5% |
| 350-400 | 2 | 1.0% |
| 400-450 | 3 | 1.5% |
| 500-550 | 1 | 0.5% |
| 550-600 | 1 | 0.5% |
| 600-650 | 1 | 0.5% |
| 850-900 | 1 | 0.5% |
| 950-1,000 | 1 | 0.5% |
| 1,700-1,750 | 1 | 0.5% |
| 1,950-2,000 | 1 | 0.5% |
| 2,000-2,050 | 1 | 0.5% |
| 14,750-14,800 | 1 | 0.5% |

The DoD conducts assessments of the adequacy of financial execution (using obligation and expenditure benchmarks coupled with reviews by acquisition leaders) to ensure that resources are used where they can be executed effectively. However, the increasing frequency and length of CRs distorts spending rates by crowding the obligation and execution of funds into the later parts of a fiscal year, shortening timelines for contract actions, and delaying new start programs, contributing to less-than-optimal spending patterns and higher costs to the Department. The CRs have become more common in recent years, as is illustrated in Figure 6 below that shows when defense committees and subcommittees passed defense bills over the past two decades.

[14] Staff analysis of information provided by OUSD(C).

In recent years, House defense appropriations have tended to pass both at the subcommittee and full committee level but Senate appropriations, which tend to occur later in the process, have been delayed while Congressional leaders sought overall agreements on federal spending levels.

Figure 6: Congressional Action Defense Appropriation and Authorization Acts, FY 2004-2024.

| Fiscal Year | Appropriations | | | | | | | Authorization | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HAC-D | SAC-D | HAC | SAC | House Passed | Senate Passed | Presidential Approval | HASC | SASC | House Passed | Senate Passed | Presidential Approval |
| 2024 | 6/15/2023 | | 6/22/2023 | 7/27/2023 | | | | 6/22/2023 | 7/11/2023 | 7/14/2023 | 7/27/2023 | |
| 2023 | 6/15/2022 | | 6/22/2022 | | | | 12/29/2022 | 7/1/2022 | 7/18/2022 | 7/14/2022 | | 12/23/2022 |
| 2022 | 6/30/2021 | | 7/13/2021 | | | | 3/15/2022 | 9/10/2021 | 9/22/2021 | 9/23/2021 | | 3/15/2022 |
| 2021 | 7/8/2020 | | 7/14/2020 | | 7/31/2020 | | 12/27/2020 | 7/9/2020 | 6/23/2020 | 7/21/2020 | 7/23/2020 | 1/1/2021 |
| 2020 | 5/15/2019 | 9/10/2019 | 5/21/2019 | 9/12/2019 | 6/19/2019 | | 12/20/2019 | 6/19/2019 | 6/11/2019 | 7/12/2019 | 6/27/2019 | 12/20/2019 |
| 2019 | 6/7/2018 | 6/26/2018 | 6/13/2018 | 6/28/2018 | 6/28/2018 | 8/23/2018 | 9/28/2018 | 5/15/2018 | 6/5/2018 | 5/24/2018 | 6/18/2018 | 8/13/2018 |
| 2018 | 6/26/2017 | | 6/29/2017 | | 1/30/2018 | | 3/3/2018 | 7/6/2017 | 7/10/2017 | 7/14/2017 | 9/18/2017 | 12/12/2017 |
| 2017 | 5/11/2016 | 5/24/2016 | 5/17/2016 | 5/26/2016 | 6/16/2016* | | 5/5/2017 | 5/4/2016 | 5/18/2016 | 5/18/2016 | 6/14/2016 | 12/23/2016 |
| 2016 | 5/20/2015 | 6/9/2015 | 6/2/2015 | 6/11/2015 | 6/11/2015 | | 12/18/2015 | 5/5/2015 | 5/14/2015 | 5/15/2015 | 5/14/2015 | 11/25/2015 |
| 2015 | 5/30/2014 | 7/15/2014 | 6/10/2014 | 7/17/2014 | 6/20/2014 | | 12/16/2014 | 5/13/2014 | 6/2/2014 | 5/22/2014 | | 12/19/2014 |
| 2014 | 6/5/2013 | 7/30/2013 | 6/12/2013 | 8/1/2013 | 7/24/2013 | | 1/17/2014 | 6/7/2013 | 6/20/2013 | 6/14/2013 | | 12/26/2013 |
| 2013 | 5/8/2012 | 7/31/2012 | 5/17/2012 | 8/2/2012 | 7/19/2012 | | 3/26/2013 | 5/11/2012 | 6/4/2012 | 5/18/2012 | 12/4/2012 | 1/2/2013 |
| 2012 | 6/1/2011 | 9/13/2011 | 6/14/2011 | 9/15/2011 | 7/8/2011 | | 12/23/2011 | 5/17/2011 | 6/22/2011 | 5/26/2011 | | 12/31/2011 |
| 2011 | 7/27/2010 | 9/14/2010 | | 9/16/2010 | | | 4/15/2011 | 5/21/2010 | 6/4/2010 | 12/17/2010 | | 1/7/2011 |
| 2010 | 7/16/2009 | 9/9/2009 | 7/22/2009 | 9/10/2009 | 7/30/2009 | 10/6/2009 | 12/19/2009 | 6/18/2009 | 7/2/2009 | 6/25/2009 | 7/23/2009 | 10/28/2009 |
| 2009 | 7/30/2008 | 9/10/2008 | | | | | 9/30/2008 | 5/16/2008 | 5/12/2008 | 5/22/2008 | 9/17/2008 | 10/14/2008 |
| 2008 | 7/12/2007 | 9/11/2007 | 7/25/2007 | 9/12/2007 | 8/5/2007 | 10/3/2007 | 11/13/2007 | 5/11/2007 | 6/5/2007 | 5/17/2007 | 10/1/2007 | 1/28/2008** |
| 2007 | 6/7/2006 | 7/18/2006 | 6/13/2006 | 7/20/2006 | 6/20/2006 | 9/7/2006 | 9/29/2006 | 5/5/2006 | 5/9/2006 | 5/11/2006 | 6/22/2006 | 10/17/2006 |
| 2006 | 5/24/2005 | 9/26/2005 | 6/7/2005 | 9/28/2005 | 6/20/2005 | 10/7/2005 | 12/30/2005 | 5/20/2005 | 5/17/2005 | 5/25/2005 | 11/15/2005 | 1/6/2006 |
| 2005 | 6/2/2004 | 6/22/2004 | 6/16/2004 | 6/22/2004 | 6/22/2004 | 6/24/2004 | 8/5/2004 | 5/14/2004 | 5/11/2004 | 5/20/2004 | 6/23/2004 | 10/28/2004 |
| 2004 | 6/18/2003 | 7/8/2003 | 6/26/2003 | 7/9/2003 | 7/8/2003 | 7/17/2003 | 9/30/2003 | 5/16/2003 | 5/13/2003 | 5/22/2003 | 5/22/2003 | 11/24/2003 |

Current as of July 28, 2023. Red indicates years without passage of defense legislation. Sources: CRS Appropriations Status Tables, Congress.gov, and DoD History and Library and Directorate "DoD Authorization and Appropriation Laws: National Defense Authorization Laws (NDAA)". HASC date based on date reported by Committee on Armed Services Committee; SASC date based on date introduced. *Senate vote to consider House legislation failed; House passed a second appropriations act 3/8/17. **1st NDAA was vetoed.

At one of the Commission's open mic events, several PMs indicated that the existing benchmarks are used to judge the adequacy of budget execution are unrealistic, especially regarding RDT&E funding, and result in some PMs taking counterproductive actions in order to obligate and expend funds quickly. On the other hand, Commissioner and staff experience suggests that some form of measurement of program execution, perhaps improved and data-based benchmarks that are subject to modification based on judgements by acquisition leaders, are needed to be sure that DoD funds are executed effectively.

The final concerns regarding lack of flexibility during execution may be one of the most important. The Commission feels strongly that the rules requiring obligation of all O&M and MILPERS funds during the year in which they are appropriated constitutes a serious problem. The one-year period of availability creates incentives to obligate funds in the final days of a fiscal year to avoid losing the use of those funds (so-called "use-it-or-lose-it" effect). Sharp spikes in year-end funding sometimes lead in turn to use of the funds for lower priority programs or projects (Figure 7). Sometimes efforts to meet the one-year availability leads to obligation of funds in excess of what may be required since the final bills are not known. For example, obligating funds to pay utility bills that are not yet final until after the end of the fiscal year.

Figure 7: DoD Action Obligations by Month, FY 2012 - 2016 Monthly percentage of fiscal year total. Gray lines indicate September obligations. Source: CRS "End Year DoD Contract Spending" 2017
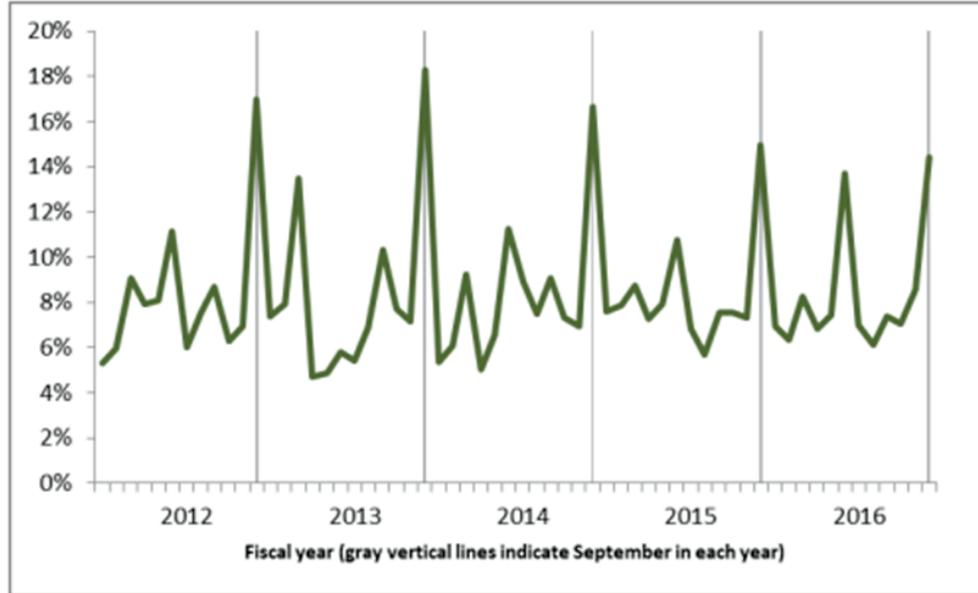


For this and other reasons, use-it-or-lose-it contributes to much higher fund cancellations of O&M funds, that is, funds that were obligated but then not used and so were eventually cancelled and lost to DoD (Figure 8). The rush toward year-end funding drives less than optimal year-end spending decisions[15] and does not provide contracting officials enough time to create quality contracts, as one study of the effects of use-it-or-lose-it suggested.[16] All of these problems are exacerbated by late budgets that mean all operating funds must be obligated in less than a year, sometimes much less than a year. The hasty obligation of funds at the end of a fiscal year can result in the later de-obligation and loss of buying power, especially for operating funds that are available for obligation for only one year.

Figure 8: Cancelled Funds By Appropriation, FY 2018-2022
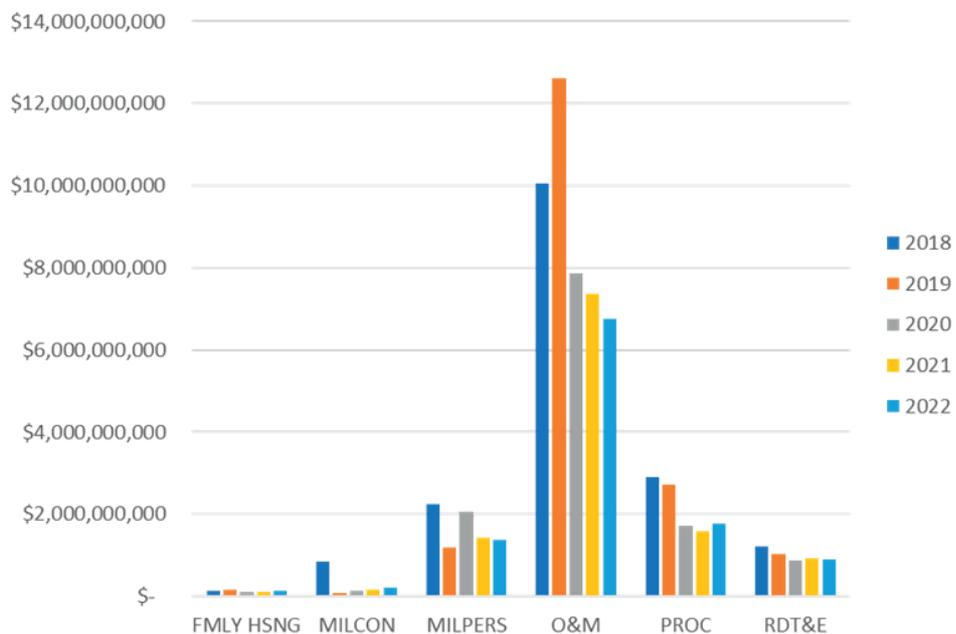


[15] Robert Hale, "Bad Idea: The "Use-It-Or-Lose-It" Law for DoD Spending," Defense360, Center for Strategic and International Studies, December 15, 2020, https://defense360.csis.org/bad-idea-the-use-it-or-lose-it-law-for-dod-spending/
[16] Laurent Belsie,. "Use-It-or-Lose-It Budget Rules," National Bureau of Economic Research, March 2014, https://www.nber.org/digest/mar14/use-it-or-lose-it-budget-rules

In the words of one DoD official, the current use-it-or-lose it rules for O&M create an incentive for officials to do "some crazier things to try and get some of the money obligated and spent." The Commission expects to propose changes to address use-it or lose-it in its Final Report, highlighted below as potential recommendations.

**6. Lack of awareness of innovative new authorities and practices.**
Executive and Legislative branch personnel engaged in PPBE sometimes lack knowledge of changes in fiscal and program authorities, sometimes due to delayed updates to policies and guidance such as the FMR, which creates ambiguity and hinders scale of use.  Several interviewees expressed concern about whether relevant personnel in the acquisition and contractor communities are even aware of the innovative authorities that may be available to them.  Incentive structures for DoD personnel also sometimes reward them for being risk averse and disincentivize use of new or underused approaches, such as Other Transaction Authority or Middle Tier of Acquisition (MTA) pathway, though in recent years DoD leaders have strongly emphasized the importance of innovation.  Despite this emphasis, there have been challenges in realizing the use of flexible authorities to support innovation.  The GAO found that while flexibilities exist, "DoD has not broadly communicated information about available financial flexibilities throughout the agency."[17]

## Potential Recommendations Requiring Stakeholder Feedback and Further Assessment

In this Interim Report, the Commission is considering a range of potential recommendations to ensure that the PPBE system is prepared to respond to changing threats and incorporate emerging technologies in a timely manner. These include potential recommendations to adjust funding rules, rationalize BLIs, modify reprogramming requirements, address problems caused by CRs, and otherwise enhance the Department's ability to address changed circumstances and new opportunities in a timely manner.  These potential recommendations may result in Commission recommendations in the Final Report.

**Potential Recommendation #1 (Key):  Appropriation availability.**

The Commission is considering recommendations to address challenges associated with current appropriation availability.  The Commission feels strongly that changes should be made to make one-year appropriations available for long enough to permit effective execution.  As described above, the expiration of unobligated O&M and MILPERS funds at the end of a fiscal year can lead to counterproductive actions to quickly obligate funds to avoid

[17] Government Accountability Organization (GAO), GAO-23-105822 Research and Development: DOD Benefited from Financial Flexibilities but Could Do More to Maximize Their Use, June 29, 2023, 12, https://www.gao.gov/assets/gao-23-105822.pdf.

expiration. This challenge is further exacerbated by the Department's need to hold funds until the end of a fiscal year to cover late-breaking bills for items like undefined permanent change of station (PCS) moves, utility bills, FSRM projects, and to avoid Anti-Deficiency Act (ADA) violations. The Commission is considering recommendations to address challenges related to availability including:

- Two-year minimum availability for all appropriation accounts, which would reduce use-it-or-lose it pressure and allow for reprogramming of expiring funds, particularly O&M, reducing lost buying power due to expiration and cancellation.

- Two-year availability for certain appropriation account activities, which would allow for targeted relief for certain accounts, such as for PCS costs and FSRM projects.

- Carryover of a percentage of MILPERS and O&M to cross a fiscal year, which would allow for greater congressional control and the ability to rescind/mark where appropriate. Authority to carryover three to five percent of expiring funds into the next fiscal year would reduce the risk of expired funds and ADA violations.

The Commission notes that other federal agencies and parts of DoD like the Defense Health Program currently have O&M carryover authority. Carryover and longer availability periods for other federal agencies, such as two-year availability for non-construction NASA appropriations and DHS authority to carry over half of its unobligated balances of some of its annual appropriations, are discussed in Section X in this report. In addition to supporting innovation, this potential recommendation relates to those presented in Section VI regarding budget structure.

Before making a final recommendation, the Commission seeks input from existing stakeholders, DoD PEOs and PMs, and the Appropriation and Authorization Committees on appropriate carryover percentages and PPBE process and system requirements to support carryover or two-year appropriations.

**Potential Recommendation #2 (Key):  Modify internal DoD reprogramming requirements.**

The difficulty of moving funds in the year of execution to address changed circumstances and emerging needs is of particular concern for both DoD and industry representatives who met with the Commission. The Commission recognizes the vital constitutional significance of Congress' power of the purse and the need for the Department to ensure that funds are spent in a manner consistent with congressional directives.  Nonetheless, the Commission believes that a number of steps could be taken to improve the responsiveness of the PPBE process in the year of execution to include measures that the Department could take to improve its own internal processes, as well as measures that would require congressional support.

Several people who spoke to the Commission tended to blame Congress for the Department's difficulty in moving money in the year of execution.  There is also reason to believe that the Department's own internal processes may be unnecessarily restrictive.  Even in cases where Congress has authorized the Department to move money on its own, such as BTRs for example, Commission staff were told that hierarchical DoD approval processes can average as long as a month-and-a-half to two-months to navigate, and even longer if it is necessary to find sources to finance the reprogrammings.  The DoD's use of General Transfer Authority (GTA) varies, ranging from 35.5 to 100 percent utilization between FY 2011 and FY 2021.[18] At the same time, program-level officials told the Commission that they have become discouraged by cumbersome internal processes and frequent refusals, and as a result may not even bother requesting a reprogramming that would use GTA.

Accordingly, the Commission is considering two potential recommendations to streamline the Department's internal reprogramming procedures.  First, the USD(C) could delegate a share of GTA to the Military Departments on an annual basis to increase the ease of reprogramming by removing an echelon from the decision-making process.  The USD(C) would, of course, need to retain some GTA to meet valid Department-wide objectives such as meeting overall readiness needs.  Second, the USD(C) could delegate BTR authority, to specified dollar levels, to agency heads, commanders, and PEOs who seek to move money within their own portfolios.  Both these changes are designed to encourage the Military Departments to become more involved in speeding up and improving the reprogramming process.

[18] OUSD (C), General Transfer Authority and Special Transfer Authority Report to Congress required by the Explanatory Statement for H.R. 133 Consolidated Appropriations Act, 2021, Committee Print of the Committee on Appropriations U.S. House of Representatives on H.R. 133/Public Law 116-260, March 2021, 388-389, https://www.congress.gov/117/cprt/HPRT43749/CPRT-117HPRT43749.pdf. See Section XII for additional details.

**Potential Recommendation #3 (Key): Modify thresholds for BTRs.**

As burdensome as it may be to go through the Department's internal reprograming procedures, the time and effort required for PA reprogrammings appears to increase substantially when Congress becomes involved, as it does now for larger reprogrammings. Not only are timelines lengthened, but uncertainty is introduced into the process, as the proponents of a change can never be certain whether a reprogramming will be approved at all, let alone when it will be approved. The Commission is considering several recommendations as potential ways to alleviate this situation while maintaining Congressional oversight.

**Allow reprogramming of a small percentage of an appropriations account with regular congressional briefings and oversight in lieu of advance congressional approval.** The more far-reaching approach under consideration by the Commission would replace existing BTR thresholds with an approach that would allow the Department to move a small percentage of the funds within an account in the year of execution with a quarterly report to the congressional defense committees. In lieu of case-by-case threshold determinations, for example, the Department could be authorized to reallocate funding within appropriations accounts, perhaps up to 0.1 percent of MILPERS accounts, 0.5 percent of O&M accounts, 1.5 percent of RDT&E accounts, and 1.5 percent of Procurement accounts. To ensure that this authority is available where it is needed, the Department would have to delegate a share of the authority to the Military Departments and the Military Departments could have to delegate a share of the authority to subordinate commands and PEOs.

The Commission understands that a proposal along these lines would require strong provisions to protect congressional oversight. For example, there would have to be a prohibition on using the authority to terminate programs, cut items of special congressional interest, or initiate new starts. Programs would have to be executed in accordance with specifications in the budget justification books, though as noted above, these should be written to provide reasonable flexibility for DoD PMs. A mechanism would have to be developed to ensure regular reporting to the congressional defense committees, with meaningful briefings on the rationale, especially for larger transfers. Further, the Department would have to develop a formal delegation of authority, with appropriate safeguards, to ensure that commanders, PEOs, and other appropriate senior officials have the authority to transfer funds where they control both the source and the use. Nonetheless, the Commission believes that this approach is worthy of consideration and solicits input from interested parties.

**Adjust existing thresholds to levels more commensurate with historic authority and current needs**. A less far reaching but still useful alternative would retain the existing framework for BTRs but raise BTR levels to a level at least consistent with historic norms in addition to upward adjustments to take inflation into account. Some organizations have recommended even more substantial increases in BTR thresholds. For example, the Atlantic Council recently recommended an increase in the RDT&E threshold to $40 million and the Procurement threshold up to $100 million. An adjustment of this magnitude would give the Department greater ability to adjust spending in light of changed circumstances and emerging needs without changing the overall reprogramming framework but would have to be accompanied by provisions to ensure Congressional oversight.

**Simplify new start notifications.** As described above, new starts require congressional notification, even if the amount to be moved is below the threshold for congressional notification and approval. Notify-and-wait letter notifications are allowed for requests below certain dollar limits. While a letter notification may not appear burdensome, it adds several layers of time-consuming bureaucracy to the reprogramming process.[19] As noted above, the Commission believes that the Department can take some steps to address this issue on its own, by providing standardized guidance for the writing and interpretation of J-books to minimize the number of new start notifications required, for example, by ensuring that minor modifications of existing efforts are not interpreted as constituting new starts.

One of the objectives of the Commission is to foster innovation in the Department. The Commission believes that impediments to new starts are likely to burden innovation. For this reason, the Commission is also considering several alternative potential recommendations to modify the new start process itself to make it easier to incorporate new ideas and approaches into DoD programs. These potential recommendations include: (1) substituting a quarterly briefing on all new starts below a threshold for the current case-by-case congressional notification requirement; (2) raising the threshold for prior approval reprogramming for new starts to $50 million over the life of the program; and (3) increasing the threshold for letter notification of new starts.

**Potential Recommendation #4:  Address problems caused by CRs.**

The Commission understands the view of the Appropriations Committees that easing the burdens imposed by CRs would reduce the pressure to enact regular appropriations bills. The Commission further understands that it is in the interest of both the Department and the Congress to enact such bills. In recent years; however, CRs have become a regular way of doing business for both branches of government. An approach that may be appropriate at a time when

[19] Budget Execution Flexibilities and the Reprogramming Process, OUSD(C),  January 13, 2021, 4, https://comptroller.defense.gov/Portals/45/Documents/execution/Budget_Execution_Tutorial.docx

a CR is an undesired stopgap measure may no longer be appropriate when a CR has become a standard part of the funding process.  For this reason, the Commission is considering two potential recommendations to ensure that the Department can continue to respond to developing circumstances and take advantage of emerging opportunities during a CR.

First, the Commission is considering a recommendation that would permit select new starts under a CR, in the limited circumstances where the program to be initiated is included in the PB request and has not been disapproved in an Authorization or Appropriation Bill under consideration in either chamber.  In this case, the new start would be permitted to proceed with available funds at the level of the lowest mark assuming both defense authorizing committees and appropriations and military construction subcommittees have acted on the budget request.  This recommendation would be implemented through an informal agreement between Congress and DoD, in the same way that congressional approvals of reprogrammings are handled today.

Second, the Commission is considering a recommendation that would allow limited reprogrammings during a CR, under similar circumstances and implemented through an informal agreement.  Under the approach being considered by the Commission, reprogrammings would be permitted if both the program receiving added funds and the source for those funds were included in the PB request and neither has been disapproved in an Authorization or Appropriation Bill in either chamber, again assuming both defense appropriations subcommittees and both authorizing committees have acted on the budget request. The Commission may also consider recommending that programs at a point in their lifecycles when large increases are requested, such as a new weapon system just moving into production would be permitted to increase funding with the same limitations applied to reprogramming.

**Incorporate emerging technologies**. The Commission also continues to consider recommendations related to improving the ability to insert emerging technologies in the programming and budgeting process at later stages of the PPBE process.  This could include competition for an out-year funding wedge for OSD, the Services, and other DoD Components or including out-year funding in anticipation of successful technology maturation for high-priority research and development initiatives and procurement of dual use technologies.  Such recommendations would address challenges associated with transitioning prototypes to production in a timely manner.

## Actions that Can be Implemented Now

**Ensure justification material narratives do not create unintended consequences (see Section IV, Action #3 for details).**

Improved and more consistent J-books could benefit the Congress by providing better program information and benefit the Department by providing improved guidance and appropriate flexibility.  As highlighted in Section IV - Action #3, the Commission recommended improved training for preparation of budget justification materials.  Better justifications should be developed to minimize the need for new start requests and to maximize flexibility to address new opportunities arising in the year of execution.

**Action #5 (Key):  Systematic review and consolidation of BLIs.**

The DoD should systematically review BLIs and work with the congressional defense committees to rationalize and consolidate BLIs where appropriate. Successful consolidation of BLIs requires collaboration between Congress and the DoD. Recognizing the limited bandwidth of DoD and congressional staff, the DoD could conduct reviews of portfolios of BLIs on a rolling basis over a five- to ten-year cycle.  After initial consultation with the committees regarding a portfolio, the comptrollers of the Military Departments would review and prepare a proposal to rationalize the BLI structure for the portfolio in consultation with responsible acquisition leaders.  The proposal would then be presented to the congressional defense committees and an agreement reached on what changes, if any, to implement.

Under this approach, each review would address cases in which programs or systems have been subdivided into multiple BLIs making them more difficult to manage; identify cases in which multiple programs or systems intended to provide a common capability could be combined into a single BLI (as has been done, for example, in the Large Aircraft Infrared Countermeasures and Family of Medium Tactical Vehicles programs); and identify cases in which the consolidation of BLIs could result in improved performance.

The Commission notes that the Department has previously attempted to consolidate BLIs, with mixed success.  Successful efforts, such as the consolidation of some USSOCOM O&M, Procurement, and RDT&E BLIs, are characterized by sustained engagement and collaboration with the congressional defense committees even before consolidation occurs.  Between 2010 and 2020, the USSOCOM consolidated 36 Procurement BLIs into 26, 27 RDT&E BLIs into 14, and 14 O&M informal BLIs to eight formal BLIs.[20]

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[20] Additional details are provided in the Appendix accompanying this report (See Section XII, Appendix D1:  Reprogrammings).

Information provided to Congress in justification books remained the same, it was just in fewer BLIs. The Commission encourages the Military Departments and other DoD Components to follow the USSOCOM best practice for BLI consolidation.

**Action #6: Systematically review and update PPBE-related guidance documents.**

The Commission has heard repeatedly about the undue burden and confusion caused by unclear guidance, which creates increased workloads for the legal community and ultimately delays moving at the speed necessary to support modern warfighting requirements. A key component in enabling the PPBE process is providing clear, consistent, and current guidance that enables efficient and effective decision-making at the lowest levels. This includes systematic updates and revisions of key finance, acquisition, and program guidance documents, such as the FMR, to provide a more useful and timely resource to DoD managers. As an action that can be implemented now, the Commission recommends the USD(C) dedicate staffing to ensure sufficient review and more frequent updates to PPBE-related guidance documents, with an update at least every three years. This includes a systematic revision and update of the FMR, as well as and DoDD 7045.14, "The Planning, Programming, Budgeting, and Execution (PPBE) Process," which establishes policy and assigns responsibilities for the PPBE process.

**Review and update the FMR.** As part of this review of guidance documents, the Commission recommends the USD(C) establish a dedicated tiger team to review and issue updates to the FMR. The tiger team should include finance, acquisition, and program stakeholders to systematically revise and update the FMR to remove obsolete and unnecessary language, clearly communicate intent, and limit the FMR to binding rules while placing transient guidance or advice in other documents. The tiger team should also coordinate with the congressional defense committees. The initial review should be conducted on a rolling basis over a period of three years with broad input from affected parties, including those outside the Department. After the completion of the initial review, the Department should establish a process to systematically maintain and update the FMR on an ongoing basis. Recommended actions in support of this initiative include updating volumes with last review date in addition to indicating the last update date; developing an expedited staffing plan for the acceptance of the updates to remain timely; and Congressional direction to the DoD to provide a report on the initial establishment and composition of the tiger team and the roadmap to keep the FMR current within 180 days of issuance of the Commission's Final Report. Updating the FMR will constitute a major effort. The DoD should consider the use of contractor staff

to orchestrate this process, and if possible, outside subject matter experts with DoD fiscal law knowledge to assist DoD in accomplishing this action.  The tiger team should seek to start the update within nine months of issuance of the Commission's Final Report.

## Way Forward

The Commission will continue to deliberate on the potential recommendations described above, as well as consider additional recommendations to address ways to promote innovation, provide additional flexibilities in execution, and enable adaptability through the PPBE process.  Research is ongoing examining technology transition in support of joint efforts, capabilities, and platforms across lifecycles and issues related to the "valley of death."  The Commission welcomes input on these topics from stakeholders, including industry, Congress, and DoD practitioners.

# SECTION VI - IMPROVE ALIGNMENT OF BUDGETS TO STRATEGY

A clear and direct linkage of the budget to strategy was one of the primary objectives for originally establishing the PPBS.[21] Over time, the principle of aligning defense resource decisions to larger national security objectives and interests has also been a consistent theme of PPBE changes and reforms.[22] To identify and propose recommended improvements for strengthening the linkage between budgets and strategy, the Commission focused its research efforts on assessing how the PPBE process currently functions, identifying problems and understanding their root causes. This section begins with an overview and then proceeds to more specifics regarding this complex topic.

## What the Commission has Learned and Heard

**Overview.** Currently, the DoD relies on several layers of strategic guidance documents to inform its work during the PPBE process. These include the NSS, NDS, NMS, DPG, FG, and Military Department or DoD Component planning guidance as discussed in Section III of this report.

Of these documents, the NSS,[23] NDS,[24] NMS,[25] and DPG [26] are required by law. Each document has a regular cadence provided in law; however, in practice these cadences are largely not adhered to (Figure 9).

[21] History and Library Directorate, Information Paper: A Brief History of the Planning, Programming, Budget, and Execution System, OSD Historical Office, February 18, 2022, 9

[22] See "How Much Is Enough? Shaping the Defense Program, 1961-1969," the RAND Corporation, 2005, https://www.rand.org/pubs/commercial_books/CB403.html and Lawrence J. Korb "The Process and Problems of Linking Policy and Force: Structure through the Defense Budget Process," Policy Studies Journal, 8, no 1 (September 1979): 92-98, https://doi.org/10.1111/j.1541-0072.1979.tb01044.x.

[23] 50 United States Code (U.S.C.) §3043 "Annual national security strategy report" https://uscode.house.gov/view.xhtml?req=%22national+security+strategy%22&f=treesort&fq=true&num=35&hl=true&edition=prelim&granuleId=USC-prelim-title50-section3043

[24] 10 U.S.C. §113 "Secretary of Defense" https://uscode.house.gov/view.xhtml?req=%22national+defense+strategy%22&f=treesort&fq=true&num=0&hl=true&edition=prelim&granuleId=USC-prelim-title10-section113. In years when an NDS is not required, the Secretary of Defense is required to provide an assessment of NDS implementation and if NDS revision is required. The USD(P) also has responsibilities for the NDS, provided in 10 U.S.C. §134 "Under Secretary of Defense for Policy" https://uscode.house.gov/view.xhtml?req=under+secretary+of+defense+policy&f=treesort&fq=true&num=161&hl=true&edition=prelim&granuleId=USC-prelim-title10-section134.

[25] 10 U.S.C. §153 "Chairman: functions" https://uscode.house.gov/view.xhtml?req=%22national+military+strategy%22&f=treesort&fq=true&num=5&hl=true&edition=prelim&granuleId=USC-prelim-title10-section153. The CJCS is required to decide on the need to prepare a new NMS or update an existing NMS each even-numbered year.

[26] Ibid. The USD (P) also has responsibilities for the DPG, provided in 10 U.S.C. §134 "Under Secretary of Defense for Policy" https://uscode.house.gov/view.xhtml?req=under+secretary+of+defense+policy&f=treesort&fq=true&num=161&hl=true&edition=prelim&granuleId=USC-prelim-title10-section134.

Figure 9: DoD Statutory Strategic Guidance Documents

| Guidance Document | Statute | Statutory Cadence | Primary Responsible Officer | Publicly Available Release Dates |
|---|---|---|---|---|
| NSS | 50 U.S.C. §3043 | Annual with submission of the budget to Congress and 150 days after date a new President takes office | President | 12 October 2022 18 December 2017 |
| NDS | 10 U.S.C. §113 | January, every four years (Except: Year after presidential election, as soon as possible after Secretary of Defense appointed and confirmed) Intermittently as appropriate | Secretary of Defense (with military advice and assistance of the CJCS) | 27 October 2022 19 January 2018 |
| NMS | 10 U.S.C. §153 | Not later than February 15 of even numbered year (if applicable) | CJCS | 8 May 2022 12 July 2019 |
| DPG (classified) | 10 U.S.C. §113 | Annually in February | Secretary of Defense (USD(P)) | No public release |

As required by Title 10, U.S. Code (U.S.C), the DPG is an annually prepared document "establishing goals, priorities, including priorities relating to the current or projected risks to military installation resilience, and objectives, including fiscal constraints, to direct the preparation and review of the program and budget recommendations of all elements of" DoD.[27]

The document should include:

- Priority military missions, including assumed force planning scenarios and constructs;
- Force size and shape, force posture, defense capabilities, force readiness, infrastructure, organization, personnel, technological innovation, and other defense program elements that support the NDS;
- Projected resource levels; and
- Discussion of changes in the NDS and assumptions underlying the NDS.

While the DoD has generally been fully supportive of the Commission's work, when the Commission requested access to current or historical DPG documents to understand and evaluate the linkages between budgets and strategies carried out in current and prior years, the DoD declined to provide

[27] "Secretary of Defense." 10 USC § 113. https://uscode.house.gov/view.xhtml?
req=defense+planning+guidance&f=treesort&fq=true&num=30&hl=true&edition=prelim&granuleId=USC-prelim-title10-section113

access, citing the Commission's status as a legislative entity. The Commission continues to call on DoD to provide the requested access so that the Commission can fulfill its statutory responsibilities. Lack of access to the DPG has limited the Commission's ability to assess how recent DPGs have informed budgetary decisions. However, the Commission has been able to draw on extensive Commissioner and staff experience with past DPGs. It also used interviews to examine current practices and processes with regard to strategic guidance documents and how effective they are in shaping the DoD's budget submission.

In interviews held last year, the Commission was told that Department-level strategic planning guidance is often formally issued after the Services have begun the programming phase and that strategic guidance documents also sometimes lack sufficient specificity and prioritization, particularly for areas of risk and divestiture, which can help to shape the direction of budgetary decision-making. In this regard, the Commission heard that Service planners provide guidance, based on prior year guidance or draft versions of the forthcoming DPG, to Service programmers who must start their work prior to receiving official OSD-level guidance to meet deadlines.[28] This can have a negative impact on ongoing programming efforts and decisions when there are significant changes to OSD guidance from fiscal year to fiscal year. It also reflects an ongoing tension between the demanding PPBE schedule and the timely release of strategic planning documents that are supposed to underpin the PPBE process.[29]

Similarly, efforts to provide the analysis necessary to inform linkages have varied over time. For example, the Dynamic Commitment Series of wargames in the 1990s and the early 2000s sought to provide common data and model foundations to support strategic thinking about future conflicts and contingencies. That information could help establish priorities among possible DoD investments. However, these efforts did not become permanent approaches to aligning budgets to strategies. Large scale, strategically driven joint analysis efforts tend to rely heavily on civilian and contractor staff that are often targets for cuts during periods of more constrained budgets.

In response to the 2018 NDS Commission and a 2019 GAO report dealing in part with analysis in the planning process, the DoD established the Analysis Working Group (AWG)—co-chaired by Joint Staff, the USD(P), CAPE, and the Chief Data and Artificial Intelligence Office (CDAO). The AWG, which came into being in April 2021, sought to "reform and reinvigorate DoD's analytic expertise, set standards for joint analysis, and ensure that senior leaders have solid analytic foundations for resourcing decisions." [30]

[28] Commission Interview with subject matter experts, January 2023.
[29] Commission Interview with subject matter experts, April 2023.
[30] Report to Congress. "Effectiveness of the Office of Cost Assessment and Program Evaluation." January 30, 2023. 11.

Among other endeavors, the AWG provided a control case for joint strategic analysis supporting program review decision-making.[31] More broadly, the establishment of the AWG reflects an effort by the DoD to strengthen the links between strategy and budget, beginning with the FY 2023 budget.[32] From that perspective, the Commission is interested in seeing how the AWG continues to approach this direction and how it will guide and impact future reforms.

Other processes and analyses that DoD has implemented for linking budgets to strategy are described in detail in Section X. These include CAPE-led Strategic Portfolio Reviews (SPR) that analyze complex, strategic, and joint issues by the start of each annual program review and program review reforms to focus analysis and senior leader decisions on strategic priorities and courses of action.

The DoD is also using new technological advances, such as the creation of Advana, to improve strategic performance measurement. Advana is a "big data platform for advanced analytics" that draws on data from business systems across DoD, and commercial applications and solutions, to support decision-making.[33] The Advana Pulse capability is an executive analytics capability that draws on authoritative data across the DoD to provide leaders with a dashboard-view of performance against priorities[34] and provides DoD senior leaders with insight into NDS implementation.[35]

Overall, the Commission heard that the DoD has processes and mechanisms to link budgets to strategy, although these are not always consistent or fully institutionalized in their application or reporting mechanisms across the DoD.

**The Impact on Industry.** Strategic guidance documents can be helpful to industry, though they do not always meet industry's needs. The recent security environment, especially the conflict in Ukraine, has highlighted the close relationship between DoD strategy and the industrial base. Recognizing this, the FY 2024 PB requested multi-year procurement authority for munitions to address industrial base stability and capacity as well as to meet operational requirements for munitions necessary for use in Ukraine.[36]

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[31] Report to Congress. "Effectiveness of the Office of Cost Assessment and Program Evaluation." January 30, 2023. 11.

[32] Interview with subject matter experts, December 2022.

[33]"Data Analytics." Acquisition Office of the Assistant Secretary of Defense, Accessed July 11, 2023, https://www.acq.osd.mil/asda/ae/ada/data-analytics.html.

[34] "DoD Strategic Management Plan Fiscal Year 2022-2026," Department of Defense, 19, https://media.defense.gov/2023/Mar/13/2003178168/-1/-1/1/DOD-STRATEGIC-MGMT-PLAN-2023.PDF and Commission conversation with DoD officials, May 2023.

[35] Ibid. The DoD continues to mature Pulse capabilities for monitoring NDS implementation.

[36] "Defense Budget Overview United States Department of Defense Fiscal Year 2024 Budget Request," OUSD(C)/Chief Financial Officer, March 2023, 4, 12, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY2024_Budget_Request_Overview_Book.pdf. For additional information on multi-year procurement see Ronald O'Rourke, R41909 "Multiyear Procurement (MYP) and Block Buy Contracting in Defense Acquisition: Background and Issues for Congress," Congressional Research Service, August 24, 2022, https://crsreports.congress.gov/product/pdf/R/R41909/116.

However, publicly available DoD strategic guidance documents alone do not provide clear enough signals to industry to drive research and supply chain investments. Instead, while industrial actors acknowledge the existence of strategic documents and public statements, their own concrete investment decisions tend to be driven by the lagging indicators of budgets and contracts, rather than their interpretation of strategic guidance documents.

Commission interviews with companies doing business with the DoD highlighted the importance of how money is allocated and requested in budgets as a much more actionable signal of DoD intent outside of strategic documents or public statements. The interviews also highlighted the benefits of longer-term contracts to incentivize industry investment in supply chains and infrastructure improvements as a means to link industrial capacity to larger strategic objectives.

Sometimes the nature of appropriations can provide signals to industry. For military equipment with long build timelines, the Congress has enacted special appropriations periods of availability that signal stability to the industrial base. For example, the Shipbuilding and Conversion, Navy appropriation allows for five and sometimes six years of funds availability, to account for ship construction timelines. Multi-year procurement authorization and advance procurement can also provide savings and stability to industry for major weapons system programs.[37]

The Commission also learned about examples of allied countries using mechanisms for longer-term (10 years) industry signaling such as Australia's Integrated Investment Program and Defence Industrial Capability Plan and Canada's Defence Investment Plan and Defence Capabilities Blueprint,[38] which provide long-term plans and goals for investment in the industrial base. The recent trilateral Australia-United Kingdom-United States partnership is a prime example of how the U.S. and its allies can signal across international defense industrial bases.[39]

Overall, the Commission understands that this Administration believes it is making significant progress toward linking budgets to strategy. The Commission looks forward to learning more about those efforts as it moves towards the Final Report.

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[37] Heidi M. Peters and Brendan W. McGarry, IF10599 Defense Primer: Procurement, February 7, 2020, 2, https://crsreports.congress.gov/product/pdf/IF/IF10599/5
[38] For additional details, see the RAND Corporation, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 2, 2023.
[39] White House, FACT SHEET: Trilateral Australia-UK-US Partnership on Nuclear-Powered Submarines, March 13, 2023, https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/13/fact-sheet-trilateral-australia-uk-us-partnership-on-nuclear-powered-submarines/

### Understanding Root Causes

Based on what it has heard and learned, the Commission identified root causes related to linking budgets to strategy.

**Problems with the DPG.**  Within the planning phase, the NDS lays out a strategy but requires additional steps to make it actionable.  The Commission was told that the DPG does not always address these steps and so becomes a consensus-driven document that often does not make hard choices, is overly broad, and lacks explicit linkages to prioritized goals, timeframes, risk assessments, and resource allocations.[40] Strategic analyses are not completed until the summer, arriving too late to fully inform the DPG and the Military Department strategic programming processes.  This appears to be a persistent problem with the DPG that occurs across administrations and across eras, though the Commission was informed that the current Administration is working to produce more timely analyses.  The Commission found that the DPG is built without a systematic mechanism for incorporating execution feedback on progress toward strategic objectives and does not include metrics to track NDS implementation success.  Instead, the Department's strategic management processes tend to focus on monitoring the broad NDS objectives rather than more concrete goals articulated in the DPG.  There is no clear mechanism to evaluate and assess how the DPG has shaped PPBE outcomes.  The timing and frequency of past guidance documents have often been out of sync with PPBE timelines.  The DPG is less useful if it is released after the Services and DoD Components have begun their POM build (see Section X for additional details).  There is also no forcing function for the USD(P), who is responsible for producing the DPG,[41] to produce the document in a timely manner to inform Department resourcing decisions, which then further affects the subsequent phases and timelines.  Department senior leaders are often reluctant to provide firm guidance about hard choices at an early stage in the resourcing process because they lack the detailed insight to know how tight resource pressures will be and just what choices are required.

Overall, Commissioner experience suggests there has been a lack of authoritative and transparent analysis and assessment of the joint forces required by the force planning construct and associated joint warfighting assessments through wargaming, modeling, simulation, and diverse knowledge bases.  This hinders DoD's ability to judge sufficiency of the capability, capacity, and readiness of the force to fully inform force structure, readiness, posture, investment and divestment decisions during the PBR.[42]

[40] Charlotte Bradsher, Rory Burke, Rohit Raguram, and Keeghan Sweeney, Bringing DOD's Budget into Alignment with its Stated Strategy: PPBE Reform Commission Research and Recommendations, 2.

[41] 10 U.S.C. §134 "Under Secretary of Defense for Policy" https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section134&num=0&edition=prelim#:~:text=%C2%A7134.,and%20consent%20of%20the%20Senate and OUSD(C), Department of Defense Directive 7045.14 "The Planning, Programming, Budgeting, and Execution (PPBE) Process," August 29, 2017, 5, https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/704514p.pdf.

[42] The Joint Staff (JS) is responsible for a range of documents related to planning, investment, and readiness, including assessments of budget and FYDP resources to meet military requirements. The Joint Staff (J-8 Force Structure, Resources, and Assessment Directorate) is also responsible for reviewing PPBE and warfighting documents, providing analysis, and preparing JS program/budget input, including the Chairman's Program Recommendation and JCIDS Capability Gap Assessment.

While there are force structure analyses and force sizing and shaping assessments, these do not directly support the PPBE process and NDS formulation.[43] These types of strategic choices stand out from most investment decisions the DoD makes because they take time to consider and to be effective, and therefore they require insertion at the beginning of the PPBE process. The sequencing of strategy and analysis in defense resourcing has been a longstanding issue, with the 2003 Joint Defense Capability Study noting that "[t]he resourcing function focuses senior leadership effort on fixing problems at the end of the process, rather than being involved early in the planning process."[44] A lack of actionable force sizing and shaping guidance, as well as reductions to joint analytic capability, such as reductions to DoD's headquarters staffs, to include CAPE's joint analytic decision support capacity, amid budget pressures and DoD internal priorities in the 2010s have all contributed to this problem.

Commissioner experience suggests there is thus a tendency for narrow resource allocation choices, rather than larger strategic decisions, to become the focus in programming, which limits the time available to consider strategic direction and implications for resource allocation. Some highly consequential information will continue to be available later in the process, such as certain economic assumptions including the Employment Cost Index that shapes military and civilian pay raises, and will require the PB request to be adjusted at the end of the PBR. Major strategic choices can occur in programming absent the DPG; however, providing as much guidance as possible as early in the process as possible allows OSD to better shape the overall process from the beginning, keeping the primary focus on strategic rather than narrow budgetary choices.

Others have recognized this problem and are working to respond. Efforts such as the U.S. Air Force's operational imperatives seek to explicitly identify operational capabilities and functions for modernization required to respond to the strategic environment and then use those imperatives to create the POM.[45] At the DoD-level, the AWG developed principles and standards to guide strategic analysis and provide a common analytic basis for strategic decisions.[46]

[43] For example, see Figure 5 "JSPS Products – Translating Strategy to Outcomes" for Joint Staff Planning System products. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3100.01E Joint Strategic Planning System, Joint Staff, May 21, 2021, H-2, https://www.jcs.mil/Portals/36/Documents/Library/Instructions/CJCSI%203100.01E.pdf?ver=H90hq7r7eGlYzL40AeUp0w%3D%3D

[44] Joint Defense Capabilities Study: Final Report, Joint Defense Capabilities Study Team, December 2003, 2, https://apps.dtic.mil/sti/pdfs/ADA533685.pdf

[45] For example, see discussion of operational imperatives in (Frank Kendall, Charles Q. Brown, Jr. , and Chance Saltzman, "Department of the Air Force Posture Statement Fiscal Year 2024," Department of the Air Force, https://armedservices.house.gov/sites/republicans.armedservices.house.gov/files/Joint%20FY24%20Posture%20Statement%20-%20Final.pdf and "Department of the Air Force Operational Imperatives," Department of the Air Force, March 31, 2022, https://www.af.mil/Portals/1/documents/2023SAF/OPERATIONAL_IMPARITIVES_INFOGRAPHIC.pdf

[46] Deputy Secretary of Defense, "Principles and Standards for Analysis Supporting Strategic Decisions," February 2, 2022.

**Improved feedback loops needed.** The Commission also found that execution and operational outcomes of the PPBE process are not fed back into the beginning phases of the process in a consistent way. There are limited mechanisms for operators and industry to provide feedback and information to programmers during the execution phase to substantially influence the POM. The Commission repeatedly heard that there are challenges in connecting execution and programming data, particularly given the timing of each of these phases in the process.[47] Late budget enactment creates timing challenges for linking execution and programming, as programming decisions are made to maintain the PPBE process schedule before operational units and programs can report execution outcomes from the previous year's enacted budget.  On the other hand, there are several important financial execution metrics, such as obligations and expenditures, that are consistently tracked and reported and can be analyzed to inform future POM development.  There are also other measures that are tracked in a timely manner.  The DoD's military readiness, for example, is tracked through the Defense Readiness Reporting System, which issues regular reports to Congress, along with other readiness reports.[48]  The Department is also working to incorporate Strategic Management Plan (FY 2022 – FY 2026) metrics and objectives with the POM to improve the alignment of resources to strategy and incorporate performance feedback into future POM decisions.[49]

However, there are other areas where additional feedback should inform planning and programming.  These include:

- performance of current weapon systems in the field (including availability and O&M costs);
- lessons learned on shortfalls and successes from exercises;
- progress on personnel issues impacting readiness;
- environmental impacts on current training and basing;
- unanticipated maintenance issues;
- program execution delays (e.g., program/contractor problems, CR timing, congressional queries, etc.);
- progress on implementing key Secretary of Defense initiatives, such as cloud migration or munitions production; and
- schedule, development, and procurement cost data for emerging capabilities.

As discussed elsewhere in this report, the Department is currently adopting a number of new commercial technologies that provide enhanced analytic, modeling, and autonomous capabilities to leaders at all levels that also support and strengthen the linkage of strategic and programmatic factors.

[47] Interviews with subject matter experts, January 2023 and March 2023.
[48] Luke A Nicastro, IF12249 Military Readiness: DOD Assessment and Reporting Requirements, Congressional Research Service, October 26, 2022, https://crsreports.congress.gov/product/pdf/IF/IF12240
[49] Interview with subject matter experts, June 2023.

These systems, and the underlying DoD IT infrastructure, provide an opportunity to integrate more quantitative metrics into the linkage between execution and programming, and can strengthen the feedback loops between phases.

**Limits imposed by budget structure.** The Commission also found that the current budget structure limits the ability to be responsive to strategy direction and changes. For example, the budgets presented to Congress bury direct insight into the strategic alignment of resources in dozens or hundreds of BLIs scattered across many parts of the budget. The current top-level "color of money" structure of the budget (i.e., Procurement, RDT&E, O&M, MILPERS, and Military Construction (MILCON)) does not produce useful insight into strategic choices. This is not surprising, since national defense issues tend to be cross-cutting, involving people, investment, and facilities, rather than fitting narrowly into the current appropriation categories. For example, in 2020, when Congress established the Pacific Deterrence Initiative in the NDAA for FY 2021, in part to improve budget transparency and oversight, it noted, "[t]he conferees believe that the availability of budgetary data organized according to regional missions and the priorities of the combatant commands is critical for the ability of the Department and the Congress to assess the implementation of the National Defense Strategy." [50]

In its most recent report to accompany the Defense Appropriations Act for FY 2024, the House Appropriations Committee directed submission of an alternative view of the budget request for the U.S. Space Force, and noted with respect to aligning budgets to capability portfolios, "that there may be potential benefits to an approach that more directly connects national security strategy and goals to the Department's budget priorities, program plans, and ultimately to capabilities. Such an approach may also bring greater transparency and accuracy to the true total cost and resources needed to accomplish mission goals." [51] The current appropriations account structure prioritizes classical budgetary oversight, such as through execution targets for discrete program elements and RDT&E budget activities that align to program phases; however, it also generates oversight constraints by complicating the task of viewing programs holistically across all the applicable colors of money to see how resources align against desired strategic outcomes.

The Commission also found that the current budget structure leads to time consuming translation of resource information between the programming and budgeting phases. This distracts from mutual decision-making, communication, and clarity between the Department and Congress. As an example, the formal

[50] H. Rept. 116-617 William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 Conference Report to Accompany H.R. 6395, December 3, 2020, 1790, https://www.congress.gov/congressional-report/116th-congress/house-report/617/1
[51] H. Rept. 118-121 Department of Defense Appropriations Bill, 2024 Report of the Committee on Appropriations together with Minority Views to accompany H.R 4365, June 27, 2023, 14, https://www.congress.gov/118/crpt/hrpt121/CRPT-118hrpt121.pdf

justification materials further disaggregate budget information based on specific appropriations and the BLIs in which those funds are appropriated. Congressional staffers then receive additional program and budget rollout briefings that may present major acquisition programs by total cost with all colors of money captured in one place, which provides greater clarity as to the entire cost of a program. The programming and budgeting processes present data for senior leader review in still different formats - Program Review articulates programmatic changes by year compared to the POM submission, whereas the Budget Review articulates changes compared to the previous enacted budget or BES requested position. By contrast, other federal agencies like NASA use their budget structure to align outputs with broader capability areas, allowing for more consistency in reporting to Congress and a more transparent connection to strategy-aligned mission outcomes.[52]

Finally, the current segmented budget structure does not align with today's technological and development environment, where systems, especially their software, are constantly improved, rather than an Industrial-Age model where systems are designed, delivered, and then operated with the same capabilities for their lifetimes. This is further described in Section X of this report.

**Limitations on available calendar time.** Another consistent challenge is that the budget formulation process occurs too often in the midst of "time crunches." Prior phases may run late, and major resourcing decisions are not made until the end of the PBR, compressing the budgeting process and schedule even further as addressed in Section X of this report. The lack of a common database that is used throughout the PPBE process creates further confusion. In this regard, CAPE and the OUSD(C) have been working to transition capability for collection of POM/BES/PB submissions from legacy stand-alone systems to a new integrated programming and budgeting system called the Next Generation Resource Management System (NGRMS); NGRMS achieved initial capability in 2022 and was used successfully in the FY 2024 PBR cycle.

During the PBR, CAPE and the OUSD(C) prepare separate decision documents, and CAPE transfers program decision information electronically to the OUSD(C) systems. Both organizations make changes that affect the budget and program years, but to get a complete program and budget review picture, data must be transferred between CAPE and the OUSD(C) systems. There are ongoing efforts to further consolidate the OUSD(C) and CAPE program and budget systems and develop analytic tools.

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[52] For NASA appropriation accounts see H.R. 2617 Consolidated Appropriations Act. December 29, 2022, 87-90, https://www.congress.gov/117/bills/hr2617/BILLS-117hr2617enr.pdf

## Potential Recommendations Requiring
## Stakeholder Feedback and Further Assessment

This Interim Report does not make any final recommendations related to aligning budgets to strategy more effectively; the Commission anticipates making recommendations in its Final Report.  At this date the Commission is considering a range of potential recommendations that address the identified challenges inherent with aligning budgets and strategy.  They include long-term fundamental reforms, along with near- and medium-term changes, keeping in mind that near- and medium-term changes may have to be reconciled if long-term reforms are adopted.

The Commission is considering recommending fundamental changes to the current appropriations structure because it believes they could:
- enhance congressional oversight;
- improve transparency of how the budget connects to and supports strategy;
- provide greater consistency of data presentation throughout programming and budgeting inside DoD and through congressional deliberations and enactment of appropriation and authorization bills; and
- align the budget structure to today's technological and development environment.

Alternatively, the Commission is also considering less dramatic approaches, including aligning colors of money to an organization's purpose or mission rather than to specific activities performed, or modifying rules regarding colors of money to allow the use of any color of money for a continuous cycle of development, prototyping, testing, fielding, troubleshooting, revision, and sustainment of software.  The Commission recognizes these changes would require time, resources, and further development and refinement with all stakeholders, particularly in Congress and the DoD.  For that reason, the Commission requests that the Military Departments, other DoD Components, congressional defense committees, industry, and other stakeholders provide views on how the potential recommendations, if implemented, would work with respective operational and organizational structures, recognizing that there is currently significant variation with regard to how these activities occur today.

**Potential Recommendation #5 (Key):  Budget structure transformation.**

The Commission is considering a potential reform that would transform the structure of DoD appropriations, reorganizing appropriation, account, program, and lifecycle (colors of money) levels.

Such a transformation could:
- Enhance congressional oversight by providing unified views of programs and activities;
- Better align the budget structure to how decisions are made;
- Improve the ability to balance and trade between capabilities;
- Highlight the relationship between programs and capabilities across the Joint Force; and
- Update the budget structure to match 21st century technology development and production cycles that do not move sequentially through research, procurement, operations, and sustainment.

The proposed transformation would create new categories for organizing the structure of the budget:

| Current Structure | Proposed Structure |
|---|---|
| Life Cycle Phase (RDT&E, Procurement, O&M, MILPERS) | Service/Agency |
| Service/Agency | Capability/Major Activity Area |
| Account | System/Program |
| Program | Life Cycle Phase (RDT&E, Procurement, O&M, MILPERS) |

Within the proposed structure (see chart below), there are also several options being considered for controlling life cycle phase, operations, and personnel costs.

Under Option 1, all life cycle phase costs including personnel and operational costs would align to their respective system/program.  Under Option 2, O&M and MILPERS costs would each be presented as a standalone program within each capability/major activity area, with appropriate reporting breakdowns provided within those programs.  Under Option 3, O&M and MILPERS costs for each Service would be a stand-alone appropriation, at the same level as the major capability areas.

The points below indicate how congressional oversight would be protected under this proposal:
- Transfer authority would be required to move funds across the Service or Capability level (e.g., from the Navy to the Army, or from the Navy Surface capability area to the Aviation capability area).

- Reprogramming would be required to move funds across the System/Program level (e.g., from Destroyers to Ammunition Ships)
- Capability area leaders would have flexibility to move resources between development, procurement, and operations expenses, funded within the same system/program, but the Department would provide breakdowns of expected expenditures across these phases and execution reporting.
- New start rules would remain in effect, with Congress retaining its ability to authorize and appropriate funds for programs and set quantities.
- The DoD would continue to be required to execute systems and programs consistent with submitted budget justification documents, which would be presented using the new budget structure.

Figure 10: Budget Structure Transformation Notional Examples

| Option 1 – Most Ambitious | Option 2 – Ambitious | Option 3 – Least Ambitious |
|---|---|---|
| Service/Defense-Wide<br>• Capability/Major Activity Area<br>  • Various Systems/Programs, each with<br>    • RDT&E<br>    • Procurement<br>    • O&M<br>    • MILPERS | Service/Defense-Wide<br>• Capability/Major Activity Area<br>  • Various Systems/Programs<br>  • Operations<br>  • Personnel | Service/Defense-Wide<br>• Capability/Major Activity Area<br>  • Various Systems/Programs<br>  • Operations<br>  • Personnel |
| **Examples** | | |
| Navy<br>• Surface<br>  • Program A<br>    • RDT&E<br>    • Procurement<br>    • O&M<br>    • MILPERS | Navy<br>• Surface<br>  • Program A<br>  • Surface Operations<br>  • Surface Personnel | Navy<br>• Surface<br>  • Program A<br>  • Navy Operations<br>  • Navy Personnel |
| **Appropriation Paragraph** | | |
| Navy, Surface | Navy, Surface | Navy, Surface<br>Navy, Operations<br>Navy, Personnel |

The Commission recognizes that the DoD's current budget includes missions and activities that might not fit within the proposed budget structure transformation changes and welcomes input in advance of the Final Report from the Department on capability/major activity areas that would align to their respective organizational models. The changes described above also present implications for appropriation availability by collapsing currently distinct appropriation accounts with different periods of availability. This issue is discussed in Section V in this report.

Before making any recommendation in its Final Report, the Commission seeks to engage with the Military Departments, requesting that they provide a draft budgetary structure that breaks down their major activities in a way that would support leadership resource decision making and transparency for Congress into the strategic choices embodied in the budget.

It is also worth noting that the less ambitious versions of the proposed budget structure would effectively adopt the capability area approach for certain portions of the budget, for example, investment accounts for acquisition

projects, while maintaining much of the current budget structure in areas like centralized MILPERS and O&M appropriations.

The Commission is also aware of FY 2024 congressional language calling for a mission-area budget exhibit for the Space Force.[53] Similar efforts by the Military Departments and DoD Components would provide potential models for fundamental budget structure reform and identify productive disruption opportunities.

The Commission believes that this potential recommendation might, if deemed workable, significantly improve the ability of DoD and congressional leaders to match the budget to the strategy while maintaining Congressional oversight. But the Commission also recognizes that this proposal could introduce substantial disruption to the financial structure of the Department. Additional potential recommendations, while not as far-reaching, are described below and elsewhere in this report, with respect to budget structure, colors of money, and appropriation availability.

**Potential Recommendation #6. RDT&E BA consolidation.**

Another potential recommendation related to budget structure would consolidate the RDT&E BAs to reflect current technology development paradigms and improve agility for programs. Such a consolidation would be helpful but is not as ambitious as the fundamental transformation discussed above.

Current technology funding and development timelines are not aligned. Rigid lines between BLIs and BAs pose a constant challenge for PMs. If a technology advances faster than the budget cycle or requires a longer timeframe in each development stage, a program or office cannot get money to fund the proper development cycle of that given technology. This results in start-stop funding that delays technological deployment. In this regard, Service and DoD Component program offices shared their challenges in trying to align colors of money and the budget process to support timely technology adoption with the Commission.[54]

To address this problem, one possible RDT&E restructuring model would be:

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[53] H. Rept. 118-121, 14-15.
[54] Interviews with subject matter experts, November 2022.

| Current BA Structure | Proposed BA Structure |
|---|---|
| BA-01 - Basic Research | BA-01 - Fundamental Science |
| BA-02 - Applied Research<br>BA-03 - Advanced Technology Development, Non-Programs of Record<br>BA-04 - Advanced Component Development and Prototypes | BA-02 - Technology and Development |
| BA-04, BA-05 - System Development and Demonstration<br>BA-07 - Operational System Development (Programs of Record) | BA-03 - Acquisition |
| BA-06 - RDT&E Management Support | BA-04 - Capabilities Support |
| BA-08 - Software | BA-08 - Software |

This model would preserve Congressional oversight of a technology's transition into a program of record, what is currently a move between BAs 02 and 03, while also maintaining congressional visibility into the adoption of S&T to DoD goals and missions, particularly for basic research in BA 01. This model could be adopted simultaneously with the first option discussed above, but in that case would apply only to the reporting totals presented by the Department in its budget and execution reporting.

**Potential Recommendation #7 (Key). Addressing colors of money.**

The Commission is also considering several potential alternatives to address challenges associated with the current color of money construct.

One approach would be to align color of money to an organization's purpose or mission, rather than the activities performed with the money on a specific contract. For example, under this potential recommendation a procurement-focused organization like an acquisition program office would use Procurement dollars to fund all its activities in support of its procurement mission.

This would be analogous to how R&D laboratories and the Defense Advanced Research Projects Agency (DARPA) fund civilian salaries with RDT&E funds. Other federal agencies request and expend funds in this manner.

This proposal would need to be accompanied by limits to ensure Congressional oversight. Those might include requiring new start approval, requiring execution consistent with the budget justification books, and others.

This would bring DoD practices into closer alignment with the audit standards where the cost of a program office is considered part of the capitalized value of the acquired equipment. If the definitions were aligned like this, the auditor's valuation of a new asset would equal the sum of the Procurement obligations in that BLI as presented to Congress. This would dramatically improve the usefulness of the audit to Congress and significantly reduce the labor required by DoD to value its systems.

This would also reduce the management complexity faced by the responsible DoD official, by allowing him or her to manage only one color of money at a time. It could also enhance congressional oversight by providing Congress with a more holistic view of an organization, rather than breaking up an organization's budget into component appropriations, and thus often across different staffs, as is currently done.

An alternative approach would revise existing rules on color of money to allow Procurement, RDT&E, or O&M funds to be used for the full cycle of software development and acquisition. Multiple sources informed the Commission that effective software acquisition takes place through a continuous cycle of development, prototyping, testing, fielding, troubleshooting, revision, and sustainment. The requirement to use different accounts for research and development, procurement, and sustainment appears to be a poor fit with this cycle. The BA 08 Single Appropriation for Software and Digital Technology Pilot Program, which is further described in Section X, is an effort to address this issue that is currently limited in scale. As it considers increased implementation of this pilot program, the Commission must consider not only the merits of using a single color of money for software but also the risks of drawing new funding barriers between software and hardware within programs.

The OUSD(C), working with Congress, could revise the FMR to provide guidance that funding requested for software refreshes or upgrades would be available to develop, prototype, test, field, troubleshoot, redevelop, procure, and sustain in a complete cycle regardless of whether the funding is requested as O&M, Procurement, or RDT&E. In this scenario, funding for new software systems fielding would be requested in the primary appropriation of the program requesting the funding and would continue to be available for the

same activities over the life of the program.  Funding requested in this manner could also be used for development and testing of hardware incidental to the development of software.

**Potential Recommendation #8 (Key):  Create continuous planning, analysis, and operational measures to inform all PPBE phases.**

In a period of sustained strategic competition, rigorous analysis to understand and respond to the threat environment is necessary to make resource-informed decisions and ensure defense investments accomplish strategic objectives.

Currently, CAPE is responsible for providing "resource planning, analysis, and advice on matters relating to the planning and programming phases." [55] With this in mind, the Commission is considering ways to create an ongoing planning process with robust analytic processes and metrics aligned with strategic guidance, to inform all phases of PPBE in a timely manner.  This would include:

- Holistic execution phase reviews beyond financial metrics, such as strategic goals and objectives, operational performance, and other current-year emerging issues that should be reviewed and inform future budget decisions.  In this regard, the Commission commends the Department's ongoing efforts to track NDS implementation through Advana Pulse and the establishment of the AWG.
- A select number of reviews (similar to SPRs) led by CAPE, the USD(P), and the Joint Staff J8 Force Structure, Resources, and Assessment Directorate that would be re-phased to occur before, and to inform, future POM builds.
- Improved joint warfighting assessments and analysis to conduct improved iterative, rapid, joint wargaming, modeling, and analysis for concept development, decision support, and warfighting assessments.  This could include outyear assessments of FYDPs against force sizing and shaping constructs to understand how programs and budgets support strategic objectives; additional workforce could be required to execute this function as intended.
- Regular analysis of supporting areas, such as critical infrastructure and industrial base and supply chain readiness and resiliency.
- Continuous planning to support strategic decision-making at the beginning of the defense resourcing process.  This would be done by providing analysis and information for strategic decisions, rather than concentrating on budget-driven, less strategically significant decisions later in the resourcing process.
- Department IT modernization to support modern analytic, wargaming, and modeling and simulation capabilities.

[55] DoD Directive 5105.84 Director of Cost Assessment and Program Evaluation, Office of the Chief Management Officer of the Department of Defense,  August 14, 2020, 5, https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/510584e.pdf?ver=2020-08-14-122443-813

**Potential Recommendation #9 (Key): Strengthening the Defense Planning Guidance.**

The Commission continues to consider ways for the Department to produce actionable, prioritized strategic guidance in relevant timeframes for the PPBE process. The Commission believes guidance documents should include mechanisms to incorporate execution year feedback, including measures of meeting strategic goals, relevant inputs from the Joint Staff and DoD Components, and end-of-FYDP joint force capabilities assessments.

The Commission believes that using the revised process described above will generate better guidance and decision information that in turn would allow DoD to strengthen the DPG to provide greater specificity, particularly in terms of areas for risk-taking, and linking to force sizing and shaping constructs.

The Commission is also considering possible changes to the phasing and frequency of guidance documents associated with the PPBE process; current Title 10, U.S.C requires the DPG to be produced annually in February. The Commission is considering changes designed to ensure that the DPG can be produced and provided to the Department in time to better inform the programming and budgeting phases.

**Streamlining programming and budgeting.** Current duplication between the programming and budgeting phases could be reduced to create a more streamlined process. This would reduce potentially conflicting outcomes caused by overlapping Program and Budget Review and reduce system and organizational complexity overall.

In addition, part of the challenge of the current budget structure is that it requires translation between the programming and budgeting phases. Consolidation of OSD programming and budgeting IT systems, as discussed in Section VII of this report, could create systems and potential workforce efficiencies to support broader structure, process, and decision-making reforms. A consolidated, authoritative source for PDMs and PBDs could reduce the possibility of conflicting or contradictory decisions by using the same source for different outcomes. Budget structure transformation as discussed above would also help address duplication and timing challenges by reducing the need for separate systems and processes to track and record data through programming and budgeting.

## Actions That Can Be Implemented Now

**Action #7:  Improve understanding of private sector practices.**

The Commission recommends that those personnel heavily involved in PPBE become more familiar with private sector issues that could influence their work. Increasingly, DoD needs the assistance of the private sector, including small business and venture capital firms, to provide the innovation needed to meet warfighter requirements.  The Commission believes that PPBE personnel should be better informed about private sector firms and their incentive structures to increase DoD's understanding about how PPBE decisions impact private firms and make better decisions during the PPBE process.  Familiarization information should include, but not be limited to, issues such as financial management in private sector companies including profit and loss considerations, market analyses that private enterprises use to make decisions about DoD projects, timelines faced by private sector firms including the short timelines faced by some small businesses, and differences in the overall culture between private firms and DoD.

A course of action to achieve needed familiarization with private sector practices would be based on a renewal of site visits by PPBE personnel to private companies, which the Commission understands to have been discontinued in some cases as a result of reduced travel budgets.  The Commission recommends that the USD(A&S) take the lead on formulating a familiarization program perhaps built on site visits for PPBE personnel most involved with the private sector.  The program should be available within one year from publication of the Commission's Final Report.  Those formulating the program should reach out to industry associations for advice and assistance.

## Way Forward

At this point in its work, the Commission continues to rely on ongoing research in this area by Commission staff, the MITRE Corporation, and others regarding the linkages between strategy and budget.  It also anticipates further deliberation to shape additional recommendations and implementation options. Through the end of 2023, the Commission will continue to consider and refine potential recommendations described above, particularly for fundamental reforms to the budget structure.  Overall, the Commission understands that DoD believes it is making significant progress toward linking budgets to strategy and looks forward to learning more from DoD regarding ongoing efforts to improve linkages between budgets and strategy.  The Commission welcomes feedback from stakeholders on these issues. The Commission's work on other areas in this Interim Report will also continue to inform its conclusions regarding strengthening the linkage between budget and strategy.

# SECTION VII - IMPROVE PPBE BUSINESS SYSTEMS AND DATA ANALYTICS

## What the Commission has Heard and Learned

The Commission has discussed issues related to PPBE business systems and data analytics with DoD personnel and industry experts. It has also relied on the experience of its Commissioners and staff who have worked extensively in DoD financial management, technology, and reform, and well as various congressional experience. Based on this research and experience, the Commission has reached several conclusions related to PPBE business systems and data analytics.

The Commission believes that defense business system transformation is critical to reforming, accelerating, and providing agility to the PPBE process. It is not enough to just innovate for warfighting capabilities. The DoD must ensure its business processes, and the technology that enables those processes, can support decision-making at speed to deliver outcomes on the battlefield. The Commission recognizes that the management of defense business systems, which include PPBE business systems, is a challenging and complex task within the DoD. For the purposes of this Interim Report, PPBE business systems refers to financial and financial data feeder systems used for execution, to include logistics, contracting, installation management, human resource management, and training and readiness systems, as well as any specific planning, programming, and budgeting systems. Because of time limits, the Commission focused on selected systems that most influence the PPBE process.

The systems being used today to complete the Department's many complex tasks run the spectrum from antiquated databases to new and proven commercial systems, platforms, and tools that leverage artificial intelligence (AI)-enabled commercial-off-the-shelf (COTS) technologies. Streamlining these systems, processes, and workflows is essential to enabling personnel to focus more on critical analysis and less on navigating outdated systems and processes, leading to increased efficiencies and better warfighter outcomes. The Department should assign personnel to value-added analytical tasks requiring critical thinking instead of data entry and spreadsheet comparisons that are prone to error and labor intensive.

The Commission acknowledges the significant body of work and critical senior leadership involvement that has supported enterprise deployment of the open architecture analytics capability, Advana. According to the FMR, "Advana" (derived from the term "Advancing Analytics") is a common enterprise data repository for the DoD required by the NDAA for FY 2018. Advana is a

centralized data and analytics platform that provides DoD users with common business data, decision support analytics, and data tools.  It was developed by the OUSD(C) and is now maintained by the CDAO.  The ADVANA platform and program supports the NDS by amassing data that is accessible, understandable, and usable across the defense enterprise, and by advancing analytic capabilities to address the complex challenges of the Department." [56]

The Department has also made significant strides with enterprise resource planning (accounting) system implementation over the past two decades.  However, the sporadic modernization and consolidation of business systems has no clear leader driving modernization, standardization, and reconciliation for the enterprise.  It may sound ideal to seek a single end-to-end authoritative system to govern all PPBE data, processes, and tasks; however, the Commission finds it cannot recommend nor endorse such a solution at this time, due to the complex security environment and decades of technical and functional debt.  While the Commission continues to research and review the DoD PPBE business systems landscape, which is ripe for digital transformation, it has identified two lines of effort for DoD to build on:  (1) modernizing internal DoD PPBE business systems and (2) increasing data sharing between the DoD and Congress.  Within these two lines of effort, the Commission has identified four actions that can be implemented now to support further defense business system and infrastructure reform.

## Modernizing internal DoD PPBE business systems

The DoD has many disparate, siloed, and antiquated data sets, platforms, systems, and tools which make it challenging to share information and provide analysis for timely and informed decision-making.  Because of this, DoD's business systems have been on the GAO High Risk List since 1995,[57] and the challenges of this environment are well documented in over 12 reports issued by the GAO.  The Commission recognizes that recommendations outlined in this section must build on efforts by the GAO and others to drive the modernization of DoD's business systems architecture and applications.  The following are several root causes that have led to this situation.

**Lack of clear responsibility and authorities.**  The defense business ecosystem has thousands of siloed systems, platforms, and tools and no one has the complete site picture, as evidenced by the lack of an enterprise business and IT architecture.  The shifting assignment of roles and responsibilities between organizations for defense business systems has created disconnects in ownership and leadership of business system responsibilities.

[56] DoD 7000.14-R Financial Management Regulation Volume 1, Chapter 10 "ADVANA – COMMON ENTERPRISE DATA REPOSITORY FOR THE DEPARTMENT OF DEFENSE", last modified June 2023, https://comptroller.defense.gov/Portals/45/documents/fmr/current/01/01_10.pdf.
[57] Government Accountability Office, High-Risk Series – "Efforts Made to Achieve Progress Need to Be Maintained and Expanded to Fully Address All Areas", published April 20, 2023, https://files.gao.gov/reports/GAO-23-106203/index.html.

For example, the DoD CMO, established in 2017, had responsibility for all defense business systems, yet the USD(C) had functional responsibility for financial management systems. With the disestablishment of the CMO position and office,[58] all defense business systems responsibility has been transferred to the DoD Chief Information Officer (CIO) and the USD(C).[59] The recent establishment of the CDAO and its authorities and responsibilities has also added another layer of uncertainty as their data governance role and effort with Advana are central to the ecosystem. The Commission has continually heard that this shift in responsibility has left the enterprise questioning the balance between overarching rationalization and functional management of business systems.

**Years of technical and functional debt.** Current legacy systems and processes do not enable an exclusively digital process within the Department, impeding data flow and creating duplication and inaccuracies. For example, some portions of the PPBE process rely on "flat files" (i.e., Word, PDF, and Excel) to transmit data. This means data is not always searchable or sortable; can contain errors that become embedded from one format to another and are difficult to correct; and can become outdated by the time it is received.

The Commission acknowledges that unique security requirements for DoD programs can also deter the evaluation and adoption of common digital solutions. The Commission interviewed many commercial providers who cited significant challenges trying to navigate the defense business system environment, which is especially true of acquisition timeline barriers such as authority to operate and Federal Risk and Authorization Management Program requirements, which can prevent vendors from operating within the DoD Information Network.

In addition, investing in the underlying business systems that enable mission execution is not always seen as a priority for resources or attention from management.[60] Although there will be a long-term payback, in most cases the Department would prefer to invest in high priority operational needs. This challenge is not unique to DoD though, as indicated by the December 2022 event where the Southwest Airlines reservation system went offline, stranding thousands and cost the airline over $1 billion, due to a lack of investment in its IT infrastructure.[61] Such events should serve as a warning to DoD to make the critical investment upfront in addressing the technical inefficiencies of PPBE related infrastructure.

[58] Public Law 116-283 Section 901. Of the William M. (Mac) Thornberry NDAA for FY 2021, January 1, 2021 https://www.congress.gov/116/plaws/publ283/PLAW-116publ283.pdf
[59] Public Law 117-263 Section 902 of the NDAA for FY 2023, December 23, 2022, https://www.congress.gov/117/plaws/publ263/PLAW-117publ263.pdf.
[60] United States General Accounting Office, "DoD Business Systems Modernization – Billions Continue to Be Invested with Inadequate Management Oversight and Accountability", May 2004, https://www.gao.gov/assets/gao-04-615.pdf.
[61] Radauskas, Gintaras. Cybernews. "Southwest Airlines incidents prove companies need to deal with technical debt – now", Updated on April 26, 2023, https://cybernews.com/editorial/technical-debt-southwest-airlines-software/.

**Shortfalls in DoD education and digital culture.** Due to the lack of clear authority for DoD business systems, there is a tendency for DoD Components to develop or purchase individual systems for individual needs even though commercial solutions leveraging a modular open system approach[62] is the preferred method. This includes customizing commercial systems to conform to preferred workflows, rule sets, or data elements instead of modernizing those things to meet the requirements of the new system, thereby negating the benefits of going to the COTS solution. The DoD must make efforts to minimally modify COTS solutions to preserve the future ability to upgrade DoD systems with the new version of that COTS capability, instead of having to significantly tailor COTS upgrades to maintain bespoke DoD solutions. The Commission believes that there is an opportunity to increase communication and education to industry about the process and security constraints imposed on DoD to achieve a compromise that allows for DoD's greater use of COTS systems.

**Seeing opportunity in PPBE business systems reform.** The Commission believes the goal of DoD business systems reform should be to provide DoD leaders with continued access to automated, current, accurate, relevant, complete, secure, and integrated data that will enable informed decision making at the speed of relevance.

While the Department currently seeks to manually link the annual budget request to strategies, such as the NDS, and to the DPG, the Commission believes harnessing data and visualization platforms can aid leadership decision-making at speed and strengthen the link of resourcing down to the BLI back to the overall strategy. Likewise, robust performance metrics from the execution phase should be leveraged to inform the following fiscal year's planning, programming, and budgeting phases.

Leaders at all levels should have standard data and tools for data analysis that will allow them to make real-time trade-offs for resourcing decisions. At the same time, increased automation and informed workflows with appropriate checks and balances will enable personnel to spend their time on more meaningful analytic tasks, rather than endlessly searching for information; creating customized charts for specific requests; cross-checking disparate databases and spreadsheets; and navigating archaic processes and tools. Systems and tools alone are not sufficient, the DoD must also seek to strengthen the training and education of the workforce to be able to fully leverage such capabilities in a meaningful way.

[62] DoD – Defense Standardization Program, "Modular Open Systems Approach (MOSA), https://www.dsp.dla.mil/Programs/MOSA/.

## Actions That Can Be Implemented Now

The actions outlined in this section will help the Department move towards a foundation and open architecture upon which to build additional capabilities that will directly support continuous modernization of the PPBE process. Nothing from this section shall be construed as a means to decrease insight or visibility by the private sector or public into the DoD budget. The DoD and Congress should ensure that that any changes retain or enhance current transparency by providing access to the same data provided publicly today, adhering to operational security requirements where appropriate.

**Action #8 (Key): Continue consolidation of the OSD programming and budgeting systems.**

The OUSD(C) and Director of CAPE should continue to accelerate efforts to consolidate OSD-level programming and budgeting systems as well as analytic capability, including providing appropriate enterprise access to PDMs and PBDs. A single authoritative, integrated, analytic, digital environment for OSD programming and budgeting will allow increased efficiencies during PBR, reduce duplication of effort and inaccuracies of data, support better capability trade-off analysis, and provide clarity for final Department-wide programming and budgeting decisions. The OUSD(C) and CAPE should also consider co-location or consolidation of OUSD(C) and CAPE IT offices, including the Comptroller Enterprise Financial Transformation office (EFT), the Comptroller NGRMS program located in the Program and Financial Controls Directorate (P&FC), and the CAPE Program Resources and Information Systems Management (PRISM) Division. This change would further enable and accelerate systems consolidation and modernization for OSD programming and budgeting while creating potential resource efficiencies.

The Commission commends initial efforts made by the OUSD(C) and CAPE to develop and deploy NGRMS, which will allow a more consolidated view of programming and budgeting data. It also recognizes that it is easy to underestimate the many technical and functional challenges to system consolidation. These include dependencies on cloud and on-premise infrastructure, multiple classification networks, standardization of data, and Application Program Interface (API) connections to authoritative accounting systems. The Commission encourages the OUSD(C) to continue to retire additional legacy systems and to leverage existing COTS products for the expansion of NGRMS capabilities according to its existing roadmap.[63] This should include analytics tools, cloud offerings, and AI capabilities.

The Commission also commends Service efforts to date to more closely link programming to budgeting by implementing their own COTS single

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[63] Roadmap provided to the Commission by OUSD(C) during a briefing on NGRMS.

authoritative systems. This recommendation should allow the Services and DoD Components to maintain appropriate autonomy until their POMs are submitted, as is current practice.

## Action #9: Expand PPBE Analytics via Advana

The Commission recommends the CDAO, the OUSD(C), and the Director of CAPE provide an implementation plan for the expansion and enhancement of Advana capabilities to support enterprise PPBE analytics. Such a plan should include an assessment of the ability for NGRMS to integrate and leverage Advana capabilities for the PBR process. Ensuring all organizations are leveraging the same authoritative, transaction-level data will drive more meaningful data-informed decisions while maintaining appropriate controls. The Advana platform offers over a hundred existing commercial solutions; open architectures to bring in additional commercial solutions; development, security, and operations (DEVSECOPS) practices; existing connections to authoritative accounting systems for continuous or near-continuous data feeds; and analytic technologies. As more organizations leverage Advana for pre-decisional analytics, it will be imperative for CDAO to expand its capabilities for segmentation and access management.

Since much of the DoD enterprise currently leverages Advana as the authoritative data management and analytics platform,[64] this would further enable a more informed and integrated PPBE process for planning and programming and budgeting decisions based on prior year's execution and operational test data, and well as provide capability for cost forecasting for inflation and other price adjustments. Leveraging Advana during execution reviews could support the Department's ability to assess performance of a given program, assess obligation and expenditure rates, reprogrammings, and other year of execution changes, to inform the following year's programming process. In addition, capabilities like GAMECHANGER,[65] an AI and natural language processing application within Advana, could support the financial management community in the navigation, implementation, and modernization of relevant PPBE policies or guidance. The Advana platform could also support reconciliation of data across disparate systems including disbursing, obligation, funding, and entitlement to general ledger systems and can enable quarterly dormant account reviews.

The Commission applauds the Navy's investment in Jupiter, the Navy's Advana dashboard, and encourages the Services, USD(C), and CAPE to leverage the existing infrastructure and analytic capability provided by Advana to the maximum extent practical.

[64] Department of Defense, Memorandum from the Deputy Secretary of Defense "Creating Data Advantage", Issued May 5, 2021, https://media.defense.gov/2021/May/10/2002638551/-1/-1/0/DEPUTY-SECRETARY-OF-DEFENSE-MEMORANDUM.PDF.
[65] Defense Intelligence Agency, "GAMECHANGER - Where Policy Meets AI", February 7, 2022, https://www.dia.mil/News-Features/Articles/Article-View/Article/2926343/gamechanger-where-policy-meets-ai/

The Commission also applauds OSD's effort to implement the PULSE application as an executive performance analytics capability, which can provide senior DoD leaders with insight into NDS implementation, Strategic Management Plan implementation, and Business Health metrics. The Department should seek to expand the types of data, to include operational test data, leveraged in Advana to determine program performance and inform future programmatic and budgetary decisions.

Finally, the Commission recognizes and commends the Department's efforts to improve data integrity and standardization, as well as AI capabilities for PPBE systems and processes. The Commission encourages the CDAO, in coordination with the USD(C), to continue to seek, develop, and adopt commercial AI applications for use in PPBE business systems.

**Action #10:  The OUSD(C), in coordination with DoD Chief Information Officer (CIO), CAPE, and CDAO, should provide to the congressional defense committees an annual report and briefing on the Department's strategy for consolidating, rationalizing, integrating, and modernizing DoD PPBE business systems, feeder systems, platforms, databases, and tools used to support the PPBE process.**

Such a report should address:
- What has been accomplished in implementing the Department's strategy;
- The roadmap for future consolidation and modernization;
- The on-going process for assessing the PPBE business system environment;
- Efforts being made to provide training of personnel on new systems and processes related to PPBE.

The report and briefing should also include a progress update by the USD(C), Service, and DoD Component resources to support implementation of the strategy.  The Commission urges that the first briefing constitute a plan for future consolidation and modernization of PPBE systems, including resource needs and timelines for completion.  Recognizing that it will take time to create these plans, the Commission urges that the first briefing take place no later than six months after the Commission issues its Final Report.

Many business systems support the PPBE process.  As noted above, for the purposes of the scope of this Interim Report, PPBE business systems refers to financial systems, financial data feeder systems, and planning, programming, and budgeting systems – with a focus on specific issues related to the systems that most affect programming and budgeting.  However, the Commission encourages continued consolidation and modernization of all DoD business systems along the lines of the attributes already identified.  Further consolidation, and elimination of antiquated systems where practicable, will be

required to maximize financial data analytics for timely decision-making. Funding will be required to streamline PPBE business systems which must also be resourced.

While the USD(C) currently has authority over PPBE business systems within the DoD (10 U.S.C §2222,[66] the Chief Financial Officer (CFO) Act of 1990,[67] DoD Directive 5118.03,[68] and FMR Vol 1 Ch 1),[69] the Commission notes the fragmented nature of the current management environment for PPBE business systems; leadership from the most senior level is necessary to ensure true digital transformation is realized. A single responsible office must be identified to create focus, ownership, and decision authority to enable digital transformation at scale. It will also help to facilitate USD(C) and Service resources, manpower, and technical skillsets necessary for implementation.

The Commission believes the Department must update its instruction on business systems requirements and acquisition (DoDI 5000.75),[70] including the responsibilities of the OUSD(C), CAPE, CDAO, and DoD CIO for overseeing the business systems to avoid fragmenting the authority provided in the CFO Act. Congress should also consider the utility of streamlining and/or leveraging annual PPBE business system reporting requirements, including but not limited to 10 U.S.C §125a,[71] 240b,[72] and 240g[73] into a single annual requirement that could consolidate audit compliance and modernization efforts in a holistic reporting manner.

Significant training and education are critical for the implementation of any new system or process. The Commission acknowledges the current efforts underway across DoD to ensure that the workforce is prepared for the cultural and workflow shift that new systems and tools will bring. These efforts include OUSD(C) training on the NGRMS and CDAO efforts to establish Advana U, an online data analytics university, to help educate the DoD workforce further on leading data analytic applications, tools, and methods. These training and education efforts should be scaled to meet the needs of the broader workforce, as modernized systems and advanced analytics become a more regular part of the DoD business landscape.

[66] 10 U.S. Code Section 2222 - Defense Business Systems https://www.law.cornell.edu/uscode/text/10/2222
[67] Public Law 101-576, "Chief Financial Officers Act of 1990", November 15, 1990, https://www.congress.gov/bill/101st-congress/house-bill/5687/text
[68] DoD Directive 5118.03, "Under Secretary of Defense(Comptroller)/Chief Financial Officer, Department of Defense", April 4, 2023, https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/511803p.pdf
[69] Department of Defense Financial Management Regulation Volume 1 Chapter 1 "Chief Financial Officer of the Department of Defense", December 2020, https://comptroller.defense.gov/Portals/45/documents/fmr/Volume_01.pdf
[70] DoD Instruction 5000.75 "Business Systems Requirements and Acquisition", Last updated January 24, 2020, https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500075p.PDF.
[71] 10 U.S. Code Section 125a "Reform: Improvement of Efficacy and Efficiency", https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section125a&num=0&edition=prelim
[72] 10 U.S. Code Chapter 9A "Audit, https://www.law.cornell.edu/uscode/text/10/subtitle-A/part-I/chapter-9A
[73] Ibid.

The Commission encourages DoD to leverage platform and software-as-a-service (SaaS) commercial solutions and best practices for the purposes of modernization and integration of current accounting systems. Utilizing as-a-service offerings will allow DoD to leverage best-of-breed technology without having to invest in development and then be locked into custom solutions.

The Commission encourages the DoD to continue leveraging direct hire and enhanced pay authority to support the recruiting and retention of personnel with the necessary skillsets to carry out these efforts (see Section X for more details).

The Commission applauds the pathways outlined in the DoD Strategic Management Plan for FY 2022-2026,[74] the FY 2022-2026 DoD FM Strategy,[75] and the Military Department Financial Management Strategies for transformation of their individual PPBE business systems and encourages the Department to continue to establish robust metrics to track modernization of PPBE business systems.

Finally, the Commission applauds the DoD CIO for the revamped effort to modernize the Business Enterprise Architecture (BEA) and encourages them to include their focus on BEA in coordination with the USD(C) for the identification and rationalization of more than 400+ financial management systems, platforms, and tools currently in use in DoD.

[74] DoD Strategic Management Plan Fiscal Years 2022-2026, May 12, 2021,
https://media.defense.gov/2023/Mar/13/2003178168/-1/-1/1/DOD-STRATEGIC-MGMT-PLAN-2023.PDF.
[75] DoD Financial Management Strategy FY22-26,
 https://comptroller.defense.gov/Portals/45/Documents/DoDFMStrategy/DoD_FM_Strategy.pdf.

## Data sharing between the DoD and Congress

Each year the President submits a budget to Congress, requesting the authorization and appropriation of funding for the following year's activities. Congress requires an extensive amount of information and justification to understand and act on the budget request. Effective congressional oversight requires continuous transmission of appropriate, secure, and near real-time data. At present, there are several significant impediments to the smooth flow of data from the DoD to Congress.

**Culture and process for information sharing within DoD.** Checks and balances, and tensions between and among the Services and OSD, have driven the establishment of guardrails for data access and sharing of information between and within the executive and legislative branches. To avoid the release of pre-decisional information and ensure that statements and other information provided to Congress are consistent with Executive Branch policy, the Department has developed a significant coordination process for delivering answers to Congress, which often contributes to delays in delivery of information that may no longer be current or relevant. There can also be a difference among multiple stakeholders within DoD regarding a program's status or their beliefs as to what is pre-decisional versus sharable information, which can give Congress the impression that the information is incomplete, incorrect, or deliberately misleading even when that is not the intent.

**Complexity and volume of data.** Funding spread across multiple colors of money, hundreds of BLIs, and appropriated at different levels with varying periods of availability, makes it difficult for Congress to track the budget request for a particular program or effort in a given year, and particularly across fiscal years. The DoD also struggles to ingest changes made during the legislative process, such as congressional marks, reporting requirements, and legislative limitations.

**Antiquated methods for data sharing.** The current processes and methods for data sharing tend to be manual and labor intensive. They slow response time, are prone to error, and are not conducive to efficient real-time updates from either Congress or DoD. This prohibits real-time mutual transparency of budget data. Under the current system, DoD shares its information with Congress through spreadsheets, charts, documents, and PDFs. While these methods may be searchable, they are also time-consuming to populate, and make it difficult for Congress to extract the needed data. For example, Congress, through a congressional reporting requirement, requested DoD conduct an inventory on how much it is spending on AI. Due to a lack of easily tracked data, DoD spent considerable resources answering this single question for Congress. Likewise, Congressional markups of the DoD budget as well as

congressional language are returned to the Department in PDF tables which are not easily searchable, sortable, or ingestible. Partly for this reason, significant manual effort is required to locate and distribute all changes and accompanying report language.

**Seeing opportunity in DoD-Congress data sharing.**  The Commission believes that when DoD and Congress need to share data, such sharing should provide automated, searchable, and sortable access to data that is current, accurate, relevant, secure, and authoritative.  A digital, collaborative sharing environment would significantly improve data sharing between DoD and Congress, fostering a culture of transparency and partnership to deliver the best possible outcomes for both the Department and Congress. This collaborative environment will facilitate enhanced efficiency of DoD submissions to Congress and subsequent feedback from Congress to DoD, to the benefit of both.

## Actions That Can Be Implemented Now

**Action #11 (Key):  The CDAO, in coordination with the OUSD(C), should further develop both classified and unclassified enclaves to share appropriate budgetary information with Congress and for Congress to share information with DoD.**

The Commission applauds CDAO efforts to date to empower enhanced data sharing with Congress. The CDAO has been testing multiple avenues for sharing information with Congress, to include creating an enclave on the DoD Information Network. The CDAO is also currently experimenting with SUnet (Secure Unclassified Network), a DoD information platform, which is accessible by username and password, to provide access to select congressional staff to instances of DoD applications with appropriate and limited amounts of data for specific purposes. The Commission encourages CDAO to expand the SUnet platform for the purposes of the three PPBE applications below.

The Commission urges the CDAO to complete a plan for the implementation of these recommendations, including resourcing requirements and timelines for completion, within six months of the issuance of this Interim Report.

**Application for delivery of the PB request and budget justification materials**. The Advana platform has the foundation to provide a digital delivery of the PB request and justification materials through a searchable, sortable database. The DoD should consider implementation of such delivery in a one-to-three-year timeframe. Digitization of the annual PB request, leveraging the capabilities Advana can provide to share data and information with Congress, will ensure timeliness and accuracy and enable congressional staff to easily parse the request based on their portfolio.

In this scenario, J-book data would feed from authoritative J-book writing systems into a singular enclave that is searchable, sortable, and able to be updated. The enclave would also support the Commission's recommendations on standardization of justification materials and mid-year budget updates as discussed in Section IV. This is a practice used by other federal agencies, such as the Department of Homeland Security where agencies and components build their J-Books in disparate systems which aggregate into a single system.

**Application for congressional delivery of data to DoD.** The DoD and Congress should work together to develop a technical solution either directly leveraging or integrated with the above enclave, to share outcomes of the legislative process with the DoD in a digestible format, to include congressional marks to the annual PB request, as well as accompanying congressional report language. This would significantly reduce work hours and minimize discrepancies once DoD receives congressional marks, reporting requirements, and legislative limitations. As an interim step, Congress could deliver budgetary markups and congressional reporting requirements in an Excel format in addition to PDF to support an easier adoption of changes, while a better capability is being implemented.

**Application for reprogramming actions and execution reports.** Above threshold reprogramming (ATR) requests are a time-consuming administrative process, requiring the use of PDFs and email delivery to request DoD leadership, OMB, and Congressional approval. A common enterprise-wide coordination and tracking system for all stakeholders would significantly reduce process time, highlight source and requirement trends, and leverage automation to lessen errors, duplication, or misplacement. As an interim step, DoD could upload PDFs to the shared SUnet enclave and for Congress to upload approvals and denials while a better capability is implemented.

## Way Forward

During the Commission's research in support of the actions outlined in this section, the Commission identified additional areas for potential improvement that require further discovery, research, and analysis.

The Commission is concerned about the lack of databases, platforms, or tools to support the planning process. A digitally supported planning process will provide the necessary data for leaders to make informed planning decisions based on previous year's execution. The Commission will continue to work with stakeholders including the USD(P), Joint Staff, CAPE, Service planners, industry, and Congress to accurately characterize the current digital footprint for planning data, the process by which planning data leads into informed programming and budgeting decisions, and define the tools, processes, and

human capital necessary for a data-driven future. Digitization and automation of this process is imperative to fully understanding how resourcing decisions link to the overall strategic picture.

The Commission has had multiple conversations with DoD regarding the disparate justification material writing systems. Overwhelming feedback suggests that they lack standardization and the functionality necessary to support an integrated delivery of justification materials. The Commission will be reaching out to stakeholders to discuss ways to automate, standardize, and digitize justification materials for a more streamlined development and delivery process.

While standardization and consolidation of major business systems and improved analytics are a significant step forward, the Commission also believes additional speed and efficiency can be acquired through selective adoption of advanced technologies such as AI. In this regard, the Commission will continue its efforts to identify specific areas where PPBE would benefit from AI applications, to automate and streamline workflows and bolster data-driven decision-making to support outcomes on the battlefield. The Commission is interested in engaging with industry to understand current use cases and potential applications for AI to support business systems and the PPBE process.

# SECTION VIII - IMPROVE DOD PROGRAMMING AND BUDGETING WORKFORCE CAPABILITY

The law establishing the Commission requires that the Commission, in its Interim Report, provide an assessment of the adequacy of the portion of the OSD civilian workforce that focuses primarily on programming and budgeting – that is, civilian personnel in CAPE and the P/B part of OUSD(C). The details of that assessment can be found in Section X of this report. This section identifies recommendations stemming from that assessment as well as workforce issues the Commission expects to consider in its Final Report.

The civilian personnel considered in this section include all of CAPE (164 authorized billets).[76] The CAPE personnel support programming, strategic and operational analysis for planning, and acquisition support related to cost analysis and analyses of alternatives. Only a portion of OUSD(C) – the P/B organization— is included in this section given the focus on programming and budgeting. The P/B organization has 92 authorized billets, slightly over 50 percent of the total number of billets allocated to the OUSD(C). The other billets in the OUSD(C) are involved in financial management policies and audit (and so play a role in the execution phase of PPBE), legislative liaison for the appropriations committees, human capital and other support functions, and front office staff. The CAPE and P/B billets addressed in this section together are a tiny fraction of the total number of personnel involved in DoD programming and financial management. Today DoD has more than 50,000 civilian and military personnel working primarily in financial management. The CAPE and P/B personnel are equal to only about half of one percent of that total, though their position near the top of DoD's resource management pyramid often gives their work a significance that exceeds their numbers.

Much of the Department's resource management work is accomplished within the Military Departments and other DoD Components. This Interim Report focuses on the personnel who work in programming and budgeting within OSD consistent with the statutory direction given to the Commission.

The workforces in the offices of the Comptroller and CAPE are extremely productive and represent the Department and federal government well. Unfortunately, they are also among the most overworked. Readers are encouraged to read the details of the OSD workforce assessment provided in Section X. For those readers interested primarily in the Commission's recommendations, the following bullets summarize key aspects of the findings, with a focus on those that most influenced the recommendations:
- CAPE has the lead in the programming phase of PPBE while P/B has the lead in the budgeting and execution phases;

[76] Report to Congress. "Effectiveness of the office of Cost Assessment and Program Evaluation." 30 January 2023.

- CAPE is experiencing some recruiting challenges; about 18 percent of its authorized civilian billets were vacant, as of first quarter FY 2023;
- P/B is experiencing challenges with both recruiting and retention;
  - The current annual loss rate is about 16 percent, which is near the highest level in recent history; about 12 percent of P/B's authorized billets were vacant, as of first quarter FY 2023.
  - These figures suggest a P/B staff that is stressed because of a heavy workload; Commissioners were told that many P/B staff, especially Senior Executive Service (SES) staff, work extensive overtime, and year-round tasks leave little time for training, leave, and a reasonable work-life balance.
- The Commission may recommend PPBE improvements that will take effort to implement, and CAPE and P/B will have key roles in those implementation efforts, likely further exacerbating these challenges; and
- Despite these workforce challenges, the Commission assesses that both CAPE and P/B provide DoD with strong support during the PPBE process.

Based on its research and the knowledge of the Commissioners and staff, this Interim Report offers three actions for strengthening the programming and budgeting workforce in OSD and identifies one issue on which further research and deliberation is particularly warranted prior to issuance of the Commission's Final Report.

## Potential Recommendations Requiring Stakeholder Feedback and Additional Assessment

**Potential Recommendation #10:  Increased staffing levels.**

The Commission is concerned about staffing levels in CAPE and, to an even greater degree, in P/B.  The Commission is gathering more information and may make specific recommendations in its Final Report.

The Commission is especially concerned about staffing stress in the P/B organization, which has been occurring for many years and for a number of reasons.  The P/B staff levels have decreased since FY 2002 (from 98 to 92) even though the total defense budget, after adjustment for inflation, has grown by almost two-thirds since FY 2000.  The P/B staff levels do not need to increase in proportion to the defense budget, but much larger budgets generate additional needs for review and hence require some staff increases. The past couple of decades have also witnessed a number of crises that have generated needs for supplemental funding and other financial changes.  Crises have included 9/11, the Iraq and Afghanistan wars, sequestration cuts in  FY 2013, government shutdowns, regular CRs, the Red Hill Water Crisis, and most recently a series of supplemental appropriations to assist Ukraine.  Each of these events has added significantly to the P/B workload.

Because of these events, there are few periods when P/B workload is normal. The budget formulation phase gives way to defense of the budget before Congress, while during that same time and throughout the rest of the year P/B is overseeing and supporting execution of the current-year budget including accommodating seemingly ever-present financial crises. That results in little downtime for training, leave, addressing long-term issues (e.g., routinely updating the FMR), and general work-life balance. The assessment in Section X provides more detail on these trends.

Moreover, this Commission's recommendations and P/B's own plans may add to its workload. The Commission has already recommended a number of improvements in this Interim Report and will no doubt recommend more in its Final Report. A number of these recommendations will add to workload throughout the FM community, certainly including P/B. The P/B organization has its own proposed improvements to include enhancing NGRMS and making more use of Advana in ways that may eventually reduce workload and improve analyses; however, in the near term there will be workload increases to develop new techniques and train analysts on their use. The P/B organization also seeks billets to grow junior analysts.

Overall, the Commission is concerned that, unless changes are made, P/B will not have the capability to meet all its required workload while providing a reasonable working environment and work-life balance necessary to recruit and retain a high-quality workforce. One change as discussed above, would involve reductions in P/B workload. Also recommended is a rationalization of the P/B structure as well as a look between organizations like CDAO and P/B for ways to reduce workload and any overlap. Additional staff may also be needed. The Commission notes that DoD has not requested additional staff for P/B and urges DoD, the USD(C), and P/B leadership who have indicated a need for more staff, to provide the Commission with their assessment about whether staffing in P/B needs to increase. Based on these factors and information, the Commission will make a decision about whether to recommend additional staff for P/B in its Final Report.

The P/B organization also needs to consider new ways to fill its current vacant civilian billets (which today number about ten) along with any added billets. The Commission noted that P/B plans to improve recruiting and further recommends that P/B, where it can legally do so, make greater use of contractor personnel. Today CAPE has a total staff in excess of 300 personnel with roughly half of them being contractors. Contractor personnel cannot perform inherently governmental work or make budget decisions but can support such work. The P/B organization should determine if there are tasks that could be performed by qualified contractor personnel. Perhaps, as a start, P/B could consider whether contractors could gather information for

budgetary reviews, formulate options and implement plans for tasks including those related to proposals from the Commission, and train P/B analysts on new budget techniques.  In making these determinations, P/B must ensure that contractor personnel would not be performing inherently governmental work or closely related work.  While formulating recommendations for the Final Report, the Commission is interested in hearing more from the USD(C) and P/B leaders about ways to improve staffing levels by making more use of contractors.

## Actions That Can Be Implemented Now

### Action #12 (Key):  Continue the focus on improving recruiting and retention.

Both CAPE and P/B realize they need to recruit more personnel with the right analytic skillsets.  While continuing to recruit personnel from the Military Departments and DoD Components who have the appropriate analytic skills and experience, CAPE has been strengthening its recruiting pipelines, which include greater use of American Association for the Advancement of Science Fellowships; the Presidential Management Fellows Program; the John S. McCain Strategic Defense Fellows Program; Inter-government Personnel Act placements and details; and outreach to recent university graduates with advanced degrees.  For its part, P/B is considering trying to hire more junior analysts and provide holistic training in addition to recruiting senior personnel from the Military Services.  There are currently some Presidential Management and McCain Fellows who serve in P/B as junior analysts, which is promising.  If P/B can identify a few billets, it plans to try to keep some of these Fellows in financial management, seeking to broaden their skills and experience through service in the Services and DoD Components with the hope that some would eventually return to P/B.

The Commission commends these efforts and recommends that CAPE and the P/B portion of the OUSD(C) go further and seek support from the Department for incentives for recruiting and retention.  They could include:
- Pay enhancement authority that would permit paying senior or skilled personnel at higher rates;
- Recruiting and retention bonuses that would allow paying bonuses to new hires;
- Expansive use of Direct Hire authority to speed the process of hiring new personnel;
- Broader use of social media to make potential candidates better aware of opportunities in CAPE and P/B; and
- Providing modest telework opportunities as a recruiting and retention incentive.

**Action #13: Streamline processes and improve analytic capabilities to reduce workload.**

Ways to reduce demands on personnel involve streamlining processes and improving analytic capabilities. In P/B they could reduce some workload, for example, by asking for revisions in the policy that requires the USD(C) to review and coordinate on all congressional reporting requirements. In addition, other senior staff of SES members within the OUSD(C) could be the final approval authority for many documents and actions, instead of the current process that requires all packages be approved by the USD(C). This small change would eliminate many steps and save significant staff time spent working that coordination effort up through the USD(C) chain of leadership.

Also promising in terms of workload reduction is greater use of the NGRMS – a single system now being used to record changes in data made during both the programming and budgeting phases of PPBE. The P/B leaders indicated that the current version of NGRMS is already providing some help in reducing workload by avoiding data re-entry and corrections as there is no longer a need to reconcile between the two previous legacy systems it replaced. Later versions of NGRMS should assist P/B analysts during the budgeting phase, for example during pricing reviews, which should further reduce workload. More and better use of the Advana system should also help reduce workload as analysts become more familiar with its capabilities. The Advana platform has already helped in assembling data for submission of supplemental appropriations for Ukraine, and it has also been used to analyze spend plan variances. The plan is to broaden the use of Advana to do budgetary trend analysis. It will also be used to identify misreported transactions and support actions to improve the accuracy of spending reports.

The Commission also believes that workload could be reduced by streamlining the organization within P/B and the OSD staff. The USD(C) has created an EFT office in addition to the existing P&FC office. These offices appear to have some overlapping responsibilities, particularly in the management of the budget database and other IT capabilities. The DoD has also created the CDAO, which is responsible for speeding the adoption of data analytics and AI, providing the appearance to the Commission that there may be overlaps among these offices. Eliminating these overlaps may help P/B streamline its workload.

As noted in the Commission's assessment of the CAPE and P/B workforces, both offices appear to be providing strong support to the PPBE process (See Section X for further details). The recommendations in this section should further improve the analytic aspects of this support.

## Way Forward

In its Final Report, the Commission intends to address the programming and budgeting workforce in the Military Departments and Services to provide a more complete analysis of the sufficiency of the entirety of the PPBE workforce.

# SECTION IX - COMPLETE LIST OF POTENTIAL RECOMMENDATIONS AND ACTIONS

## Potential Recommendations Requiring
## Stakeholder Feedback and Further Assessment

**1. Appropriation availability.**
- The Commission is considering recommendations to address challenges associated with current appropriation availability including: (1) two-year minimum availability for all appropriation accounts; (2) two-year availability for certain appropriation account activities such as for MILPERS PCS costs and FSRM projects; and (3) carryover of a percentage of MILPERS and O&M to cross a fiscal year.
- Refer to Section V, page 35 for more detailed information.

**2. Modify internal DoD reprogramming requirements.**
- The Commission is considering recommendations to streamline the Department's internal reprogramming procedures: (1) USD(C) could delegate a share of general transfer authority to the Military Departments on an annual basis; and (2) USD(C) could delegate BTR authority, to specified dollar levels, to commanders and PEOs who seek to move money within their own portfolios.
- Refer to Section V, page 36 for more detailed information.

**3. Modify thresholds for BTRs.**
- The Commission is considering recommendations to include:  (1) allowing reprogramming of a small percentage of an appropriations account with regular congressional briefings in lieu of advance congressional approval with provisions to ensure Congressional oversight; (2) adjusting existing thresholds to levels more commensurate with historic authority and inflation; and (3) simplifying new start notifications.
- Refer to Section V, page 37 for more detailed information.

**4. Address problems caused by CRs.**
- The Commission is considering recommendations to ensure the DoD can continue to respond to developing circumstances and take advantage of emerging opportunities during a CR by:  (1) permitting select new starts in the limited circumstances where the program to be initiated is included in the PB and has not been disapproved in an Authorization or Appropriation Bill in either chamber; and (2) allowing limited reprogramming under the same circumstances.
- Refer to Section V, page 39 for more detailed information.

**5. Budget structure transformation.**

- The Commission is considering transforming the structure of DoD appropriations by reorganizing appropriation, account, program, and lifecycle (colors of money) to a proposed structure of Service/Agency, then Capability/Major Activity Area, then System/Program, then Life Cycle Phase with three options that range from the most ambitious to the least ambitious degree of change for the DoD and Congress to pursue.
- Refer to Section VI, page 54 for more detailed information.

**6. RDT&E BA consolidation.**

- The Commission is considering a recommendation related to budget structure and the consolidation of current RDT&E BAs to reflect current technology development paradigms and improve agility for programs.
- Refer to Section VI, page 57 for more detailed information.

**7. Addressing colors of money.**

- The Commission is considering recommendations to address challenges associated with the current color of money to include: (1) aligning color of money to an organization's purpose or mission, rather than the activities performed with the money on a specific contract; and (2) revising existing rules to allow Procurement, RDT&E, or O&M funds to be used for the full cycle of software development, acquisition, and sustainment.
- Refer to Section VI, page 58 for more detailed information.

**8. Create continuous planning, analysis, and operational metrics to inform all PPBE phases.**

- The Commission is considering ways to create an ongoing planning process with robust analytic processes and metrics aligned with strategic guidance, to inform all PPBE phases in a timely manner to include: (1) holistic execution phase reviews beyond financial metrics; (2) a select number of reviews led by CAPE, the USD(P), and the Joint Staff J8 (similar to SPRs) to inform future POM builds; (3) improved Joint warfighting assessments and analysis; (4) regular analysis of supporting areas, such as critical infrastructure and industrial base and supply chain readiness and resiliency; (5) continuous planning to support strategic decision-making at the beginning of the defense resourcing process; and (6) Department-wide IT adoption and modernization to support modern analytic, wargaming, and modeling and simulation capabilities.
- Refer to Section VI, page 60 for more detailed information.

**9. Strengthening the DPG.**

- The Commission continues to consider ways for the Department to produce actionable, prioritized strategic guidance in relevant timeframes for the PPBE process to include mechanisms to incorporate execution-year

feedback, including measures of meeting strategic goals, relevant inputs from the Joint Staff and Components, and end-of-FYDP joint force capabilities assessments.  The Commission is considering possible changes to the phasing and frequency of guidance documents associated with the PPBE process and ensuring the DPG is produced and provided to the Department in time to inform the programming and budgeting process.
- Refer to Section VI, page 61 for more detailed information.

**10. Increased staffing levels.**
- The Commission is concerned about staffing levels in the CAPE and OUSD(C) P/B organizations.  The Commission has recommended actions that can be implemented now, like the mid-year update, as well as potential recommendations that may add workload to these organizations, such as increased analytic support to the PPBE process.
- Refer to Section VIII, page 77 for more detailed information.

## Actions That Can Be Implemented Now

**1. Institutionalize a mid-year budget update briefing with key staff on the congressional defense committees related to both the DoD budget proposal and budget execution.**
- The mid-year update briefing should discuss the Omnibus reprogramming indicating its overall intent, how it relates to DoD strategy, and how current-year activities have affected the PB request including factors such as technology changes and program shifts that have altered resource needs.
- Refer to Section IV, page 19 for more detailed information.

**2. Restructure the justification books to provide needed content in a common format.**
- The DoD should work with Congress to establish common formats and content for the J-books.  There should be consistent language and depth of budgetary and programmatic content where there are cross-cutting programs and activities, such as the RDT&E S&T budget lines and the O&M readiness accounts.
- Refer to Section IV, page 21 for more detailed information.

**3. Improve training for preparation of budget justification materials.**
- The Commission recommends creation of training courses for various types of budget justification materials, including J-books, data files, and staffer briefings; course material should be created for financial management and acquisition personnel, and for other groups as needed.  This should include encouraging flexibility in justification material to address new opportunities.
- Refer to Section IV, page 21 for more detailed information.

**4. Improve training for DoD liaisons.**
- The OSD Legislative Affairs, in coordination with OSD Comptroller's BAA office, should provide standardized, structured training that adopts best practices from the Services and DoD Components for both appropriation and authorization legislative liaisons to improve engagement with Congress and cross-communication between both branches.
- Refer to Section IV, page 23 for more detailed information.

**5. Systematically review and consolidate BLIs.**
- The DoD could systematically review budget line items and work with the congressional defense committees to rationalize and consolidate where appropriate.
- Refer to Section V, page 41 for more detailed information.

**6. Systematically review and update PPBE-related guidance documents.**
- The OUSD(C) should dedicate staffing to ensure sufficient review and more frequent update to PPBE-related guidance documents, with an update at least every three years.  This includes a dedicated tiger team to review and issue updates to the FMR.
- Refer to Section V, page 42 for more detailed information.

**7. Improve understanding of private sector practices.**
- Personnel heavily involved in PPBE should become more familiar with private sector issues and incentives that could influence their work.
- Refer to Section VI, page 62 for more detailed information.

**8. Continue consolidation of the OSD programming and budgeting systems.**
- The USD(C) and Director of CAPE shall continue to accelerate efforts to consolidate OSD-level programming and budgeting systems, including providing appropriate enterprise access to PDMs and PBDs, and consider co-location or consolidation of OUSD(C) and CAPE IT offices, including the Comptroller EFT Office, the Comptroller NGRMS program located in the OUSD(C) P&FC Directorate, and the CAPE PRISM Division.
- Refer to Section VII, page 67 for more detailed information.

**9. Expand PPBE analytics via Advana.**
- The CDAO, USD(C), and Director of CAPE should provide an implementation plan for the expansion and enhancement of Advana capabilities to support PPBE analytics.  The OSD should continue to lower the barrier to entry by allowing the Services to leverage current infrastructure without direct investment or through an open blanket purchase agreement contract vehicle, as appropriate.
- Refer to Section VII, page 68 for more detailed information.

**10. The OUSD(C), in coordination with DoD Chief Information Officer (CIO), CAPE, and CDAO, should provide to the congressional defense committees an annual report and briefing on the Department's strategy for consolidating, rationalizing, integrating, and modernizing DoD PPBE business systems, feeder systems, platforms, databases, and tools used to support the PPBE process.**

- The report should address what has been accomplished in implementing the Department's strategy; the roadmap for future consolidation and modernization; the on-going process for assessing the PPBE business system environment; efforts being made to provide training of personnel on new systems and processes related to PPBE; and include an assessment of the sufficiency of OUSD(C), Service, and DoD Component resources and manpower to support implementation of the strategy.
- Refer to Section VII, page 69 for more detailed information.

**11. The CDAO, in coordination with the OUSD(C), should further develop both classified and unclassified enclaves to share appropriate budgetary information with Congress and for Congress to share information with DoD.**

- This should address applications in increments for delivery of the PB request and budget justification materials, congressional delivery of data to DoD, reprogramming actions, and execution reports.
- Refer to Section VII, page 73 for more detailed information.

**12. Continue the focus on improving recruiting and retention.**

- The CAPE and P/B organizations should seek support from the Department for a variety of recruiting and retention incentives.
- Refer to Section VIII, page 79 for more detailed information.

**13. Streamline processes and improve analytic capabilities to reduce workload.**

- The Commission suggests actions that could reduce workload in the OUSD(C) P/B organization such as reviewing coordination requirements, increased use of Advana, and streamlining the organization.
- Refer to Section VIII, page 80 for more detailed information.

# SECTION X -  REQUIRED ASSESSMENTS

This section of the Interim Report presents and summarizes findings required by Section 1004 of the NDAA for FY 2022 and which are sometimes discussed in greater detail in previous sections of this report or as part of the Commission's actions that can be taken now or potential recommendations requiring feedback.

## A. Key Documents, Processes and Outputs

The Commission examined the key PPBE documents and processes directed for review in Section 1004 as well as other processes.  This section discusses the documents and findings related to the PPBE steps that create the documents.  Findings reflect research prepared for the Commission as well as Commission interviews and the professional experiences of the Commissioners and Commission staff.  This section and the subsequent section benefits from research performed for the Commission by the Institute for Defense Analyses (IDA). The IDA's research results will be published separately.

Documents discussed in this section include:
- Defense Planning Guidance
- Program Objective Memorandum
- Fiscal Guidance
- Future Years Defense Plan
- Integrated Program and Budget Review Guidance
- Budget Estimate Submission
- President's Budget

The Commission has heard that the formal PPBE process tends to favor an Industrial-Age approach that better supports large capital expenditures for major weapon systems and discourages investments in software or smaller technologies.  The processes and timelines discussed in this, and the next section focus on the typical schedules; however, there can always be changes based on senior leader decisions and direction.

During Commission interviews and research, a number of concerns were raised about the planning phase of the current PPBE process including that the DPG document, produced at the end of the planning phase and due annually in February, is often delivered too late to reflect the DPG guidance in the Service POMs.  More fundamentally, critics expressed concern with the planning phase stating that the DPG did not identify force levels and capabilities or areas where risk could be taken, or at least broad options for these fundamental issues, leaving that task to be addressed in the programming phase.  Some critics also argued that the planning phase does not provide sufficient analysis of these issues, again leaving that effort to the programming phase.

The Commission did not have any access to planning materials, to include the DPG, which DoD regards as an internal pre-decisional document so was not available to a legislative Commission. However, some Commissioners and staff have had access to past DPGs and so have experience with them; the Commission was told that DoD is working to address these concerns.

The programming phase, and the POM submission that results from this phase, handle many of the tasks associated with translating planning guidance and strategy documents into specific programs. As discussed above, the programming phase must sometimes handle fundamental issues like determining force structure, which leaves organizations with less time to accomplish tasks like ensuring compliance with the DPG. The programming phase must sometimes accommodate changes in funding for the DoD, which can shift due to external influences like late congressional budget decisions that affect current and future budget levels. With its many burdens and the challenges of making difficult budgetary choices, the programming process often runs late and ends just a few weeks before the budget must be submitted, leaving little time for the budgeting phase of PPBE.

The Commission is considering these programming challenges and may make additional recommendations in its Final Report.

Lack of time to accomplish the budgeting phase of PPBE, which starts with the Component BES documents and ends with the DoD input to the PB request, has forced DoD to submit budgets that are not always as carefully priced, evaluated for executability, or documented to the degree the Department would prefer if there were more time. This challenge can be further exacerbated if there are sharp changes in funding limits that occur during the budgeting phase, which require revisiting earlier program decisions.

The Commission is considering these budgeting challenges and may make recommendations in its Final Report.

The last phase of PPBE, which focuses on managing execution and performance against established plans, must comply with many thousands of pages of laws and regulations. It is also during this phase that factors such as technology and fact of life changes can require rapid shifts in appropriated funds through realignments and reprogramming actions. Execution reviews are conducted at various echelons and the Mid-year Execution Review with the USD(C) supports large reprogramming decisions submitted in the Omnibus reprogramming, as well as informs out-year budget decisions. Programmatic and financial execution is closely monitored throughout the fiscal year, but especially during the last quarter. Annual funds must have sufficient funding in the right accounts to support a smooth fiscal year close, and the O&M accounts

must comply with the statutory 80/20 rule for execution.

The Commission is focused on how to provide the DoD with much needed flexibility to support adoption of innovation, faster delivery of capability to the warfighter, and respond to emergent changes while also maintaining congressional oversight. Figure 11 below summarizes information about the four phases.

Figure 11: Table created by Congressional Research Service (CRS) based on CRS In Focus IF10429, Defense Primer: Planning, Programming, Budgeting, and Execution (PPBE) Process; and DoD, Defense Acquisition University (DAU) references.

| Phase | Description | Lead Actor | Output(s) |
|---|---|---|---|
| Planning | Review strategic guidance<br>Assess threats<br>Evaluate takeaways from war games<br>Identify capability gaps and risks | Under Secretary of Defense for Policy | Chairman's Program Recommendations (CPR)<br>Defense Planning Guidance (DPG)<br>Fiscal Guidance (FG) |
| Programming | Translate planning decisions into program and resource requirements<br>Consider program alternatives<br>Develop five-year projections for forces, personnel, funding | Director, Cost Assessment and Program Evaluation (CAPE) | Program Objective Memorandum (POM)<br>Resource Management Decisions (RMDs; programmatic)ᵃ<br>Future Years Defense Program (FYDP) updates |
| Budgeting | Review budget justifications<br>Consider funding alternatives<br>Prepare budget submission | Under Secretary of Defense (Comptroller) | Budget Estimate Submission (BES)<br>RMDs (programmatic)ᵃ<br>FYDP updates (incorporating RMDs)<br>DOD portion of President's budget request |
| Execution | Assess output to planned performance<br>Adjust resources, as necessary | Multiple: Under Secretary of Defense (Comptroller) and DOD component financial managers | Assessments (internal reviews by OSD and DOD components)<br>Reprogramming actions and transfers (including external interactions with Congress) |

**Defense Planning Guidance.** Typically, a classified document, the DPG is developed annually by the Secretary of Defense, with the advice of the CJCS, USD(P), and OSD CAPE establishing "goals, priorities, and objectives, including fiscal constraints." [77] Due in February each year and informed by the NSS, NDS, and NMS, the DPG serves as the primary output of the planning process to inform development of the POM and BES. Specifically, the DPG includes:

- the priority military missions of the Department, including the assumed force planning scenarios and constructs;
- the force size and shape, force posture, defense capabilities, force readiness, infrastructure, organization, personnel, technological innovation, and other elements of the defense program necessary to support the [NDS];
- the resource levels projected to be available for the period of time for which such recommendations and proposals are to be effective; and

[77] U.S.C. §113(g)(2)(A).

- a discussion of any changes in the strategy and assumptions underpinning the [NDS]."[78]

Development typically begins with assessing strategic guidance, analytic products, and top-down guidance from the Secretary or Deputy Secretary of Defense to establish broad priorities. The process generally includes several opportunities for DoD senior leadership to provide input in what has been described to the Commission as a consensus-building process to include the input of as many stakeholders as possible.

In addition to issuing the NMS, the CJCS delivers the Chairman's Program Recommendation (CPR) to the Secretary of Defense. As described by the Congressional Research Service (CRS), the CPR serves as "the CJCS's direct input to the DPG and incorporates the CJCS's military advice on programming priorities... [and] is based in part on a capability gap assessment performed by the Joint Requirements Oversight Council, including priorities identified by combatant commanders known as Integrated Priority Lists and by the Chief of the National Guard Bureau." [79]

**Fiscal Guidance and Integrated Program and Budget Review Guidance.** The issuance of FG by the Deputy Secretary of Defense often kicks off the formal programming process with latest top-line information from OMB, key leadership assumptions, and projected timelines. This provides fiscal constraints or total obligation authority (TOA) controls to each Military Department, and to appropriate oversight stakeholders for the other DoD Components under their purview, for both the budget year and FYDP, along with any specific guidance on must-funds or priority directions. While the FG should be released in the February each year, many Components begin preparation of their POM several months sooner and adjust upon receipt of a formal top-line. The Army, for example, may begin their programming process and requirements validation as early as late summer or early fall prior to release of the FG.

The CAPE and the USD(C) issue integrated PBR guidance that is often over 100 pages long describing how the programming and budgeting phases will be conducted. This may include requirements for any changes in process, justification materials formats or information, CAPE Select and Native Programming Data (SNaP) exhibits or data, additional information the USD(C) may want to collect, and other goals of the Administration and the Secretary of Defense.

**Program Objective Memorandum.** The programming process largely seeks to balance requirements, or the DoD's wants and needs, with resources. The POM

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[78] U.S.C. §113(g)(2)(A).
[79] CRS Report based on. CJCSI 3100.01E Joint Strategic Planning System, Joint Staff, May 21, 2021, G4 to G-5, https://www.jcs.mil/Portals/36/Documents/Library/Instructions/CJCSI%203100.01E.pdf?ver=H90hq7r7eGlYzL40AeUp0w%3D%3D

is a formal proposal from the DoD components, including the Services, the USSOCOM, and the Missile Defense Agency to the OSD identifying TOA allocations by program to meet the intent of the DPG and additional Component-specific guidance. Based on toplines provided in the FG, the POM provides insight on how each Component intends to achieve intended goals and priorities across the FYDP.

The POM is typically based on a series of cost estimates and assumptions that includes requirements validation, investment or divestiture decisions, reduction options, and an analysis of alternatives. Once complete, the POM is sent to CAPE for Program Review as an electronic database with funding spreads by BLI by year. This submission is often accompanied by SNaP exhibits, found in the CAPE SNaP Input System, detailing specific, non-standard program and budget data information not found in the formal FYDP structure. This may include information such as total square footage, quantity of IT systems supporting a certain effort, or sub-BLI data such as expenditures on PFOS (perfluorooctane sulfonate) and PFOA (perfluorooctanoic acid) which may be funded in multiple BLIs. Decisions resulting from Program Review are documented in PDMs (they have also been called RMDs) which, during a year with normal timelines, inform budget review.

**Future Years Defense Program.** The FYDP is a forecast of recommended funding, manpower, and forces - aligned by DoD program - over a five-year period reflecting the "estimated expenditures and proposed appropriations included in that budget...cover[ing] the fiscal year with respect to which the budget is submitted and at least the four succeeding fiscal years." [80] The FYDP is a planning tool to allow the DoD to project outyear shifts in programming that may require a multi-year phased funding approach, advanced fiscal support, or funding tails. Examples may include a shift in research and development priorities, choosing a higher-priority procurement effort that may require a long lead time, or emerging priorities that may require resourcing over multiple years, such as achieving energy and climate initiatives by a certain fiscal year. The language in Title 10, U.S.C §221 further stipulates that the FYDP shall be submitted by the Secretary of Defense no later than five days after the PB is submitted to Congress. While the details of the FYDP, in aggregate, are classified, Section 1042 of the NDAA for FY 2018 (P.L. 115-91) -- matters relating to the submittal of the FYDP -- amended by 10 U.S.C §221 require each FYDP to be available electronically in the form of an unclassified database, and to deliver printed copies of each program to the congressional defense committees. [81]

Prior to the 1950s there was not a uniform budget structure, and the Military Departments designed their own specific appropriations. The Department under the Hoover administration designed a unified appropriation structure

[80] 10 U.S. Code §221
[81] https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf

that would provide appropriate oversight and help them manage and understand the linkage between the strategy and budget request.[82] Figure 12 below, as provided by the IDA, shows a hypothetical example of the format used for the FYDP, which is made up of Program Elements (PE) describing the resources allocated to activities and programs.[83]

Figure 12: DoD FYDP PE Example Source:  Institute for Defense Analyses



**DOD FYDP Program Element  Example**
**(PBR 2016 Notional Data)**

F-16 Squadrons Program Element *(0207133F)*

| Dollars - millions | FY14 | FY15 | FY16 | FY17 | FY18 | FY19 | FY20 | FY21-23 |
|---|---|---|---|---|---|---|---|---|
| Research & Development | 297 | 110 | 81 | 71 | 97 | 86 | 86 | |
| Aircraft Procurement | 624 | 240 | 298 | 542 | 512 | 298 | 298 | |
| Other Procurement | | 0 | 0 | 0 | 0 | 0 | 0 | |
| Military Construction | | 0 | 0 | 0 | 0 | 0 | | |
| O&M | 685 | 830 | 708 | 703 | 695 | 690 | 690 | |
| Military Personnel | 595 | 644 | 687 | 703 | 713 | 742 | 742 | |
| **Total Funding** | **2,205** | **1,823** | **1,774** | **2,019** | **2,017** | **1,817** | **1,817** | |
| *Manpower* | | | | | | | | |
| Active Officers | 1,150 | 1,153 | 1,135 | 1,135 | 1,135 | 1,135 | 1,135 | |
| Active Enlisted | 12,199 | 13,478 | 13,324 | 13,320 | 13,320 | 13,323 | | |
| Civilian - Direct Hire | 188 | 185 | 185 | 185 | 185 | 185 | 185 | |
| Civilian - Fgn Hire | 17 | 17 | 17 | 17 | 17 | 17 | 17 | |
| **Total Personnel** | **13,554** | **14,833** | **14,661** | **14,657** | **14,657** | **14,660** | **14,660** | |
| *Forces/Equipment* | | | | | | | | |
| F-16 Aircraft (PAA) | 420 | 420 | 414 | 414 | 410 | 400 | 390 | 390 |

The example provides the breakdown for a single PE for F-16 squadrons; PE 0207133F includes manpower authorizations, resources for peculiar and support equipment, necessary facilities and costs for wing headquarters, tactical fighter squadrons, avionics maintenance, field maintenance, consolidated aircraft maintenance, munitions maintenance, and weapons system security.

The FYDP is aggregated under 12 formal Major Force Programs (MFP) which are each a collection of TOA, manpower, and forces data. Each MFP consists of PEs of which the MFP is identified by the first two digits of the PE. The structure is further broken out by Component (military Service or Defense Agency, for example), and appropriation (e.g., Procurement or MILCON).  This combination of PE, Component, and appropriation includes thousands of unique values. Beyond the PE-level in the FYDP, each PE can further be broken down into BLIs, that are used to track, identify, and appropriate resources.  Not all appropriations use the same line item as their primary level of control.  For instance, the O&M appropriations use BAs (e.g., BA 01:  Operating Forces) and Sub-Activity Group (SAG) (e.g., SAG 131:  Base Operations Support) as the BLI. In contrast, the Procurement appropriations use the P-1 Line-Item Number and the Line Item Title(e.g., P-1 #4 and Line Number 0363G85200 is Stryker Upgrade) or the RDT&E appropriations use the PE as the BLI and primary

means of funds control. Using RDT&E as an example, the last digit identifies the Component responsible for that PE (e.g., A is Army and BB is USSOCOM).

This crosswalk of PEs to Components and appropriations allows for a multi-dimensional view of the DoD FYDP that is organized by functional or organizational resources.

**Budget Estimate Submission.** In a year with typical timelines, the BES is submitted to the USD(C) during the late summer which kicks off a formal Budget Review. The BES serves as a translation of the POM from program-level detail to the formal FYDP budget structure discussed above, which is different depending on the appropriation. For O&M, the SAG is the lowest level of detail; for RDT&E, the PE with details by project is the lowest level of detail; the lowest level of detail for Procurement is the line item; MILCON is submitted at the individual project level; and MILPERS is submitted by BA.

With guidance from OMB, the USD(C) reviews the BES for consistency with senior leadership direction and feasibility of execution within the budget year. Any resulting changes are documented in PBDs (they have also been called RMDs), which direct the Components to make changes. Similar to the POM, the BES is submitted through an electronic database from the DoD Components to the USD(C). The formal BES submission is typically accompanied with supporting budget justification material explaining resource allocations and decisions. The BES serves as the basis for Budget Review, which in turn becomes the PB request after incorporating all program and budget decisions.

**President's Budget.** As described in OMB Circular A-11, Preparation, Submission, and Execution of the Budget, the PB consists of several volumes that set forth the President's financial proposal and recommended priorities for allocating resources. The DoD's portion of the PB submission is the Executive Branch's request and estimate of federal government spending for the upcoming fiscal year, which is supported by justification material providing additional information and context. The DoD 7000.14-R, FMR, Volume 2A, Chapter 1 outlines instructions for the preparation of justification material for presentation to the congressional defense, intelligence, and military construction committees including, but not limited to, the requirement for separate justification books for each appropriation, how to handle classified material within each volume, and designation of required reports and schedules.

A complete list of all accounts and their lowest levels of details, as well as all unclassified budget justification materials for each year can be found on the OSD Comptroller's public website under the Budget Materials tab at

https://comptroller.defense.gov/Budget-Materials/. There are thousands of pages of justification books, links to Service budget materials, and supplementary information found on this website.

The PB is what Congress reviews, adjusts based on internal priorities published in committee markups, and then passes authorization and appropriation bills based on their conference position of those recommendations. Failure to pass appropriate appropriation measures typically results in a CR to keep the government running.
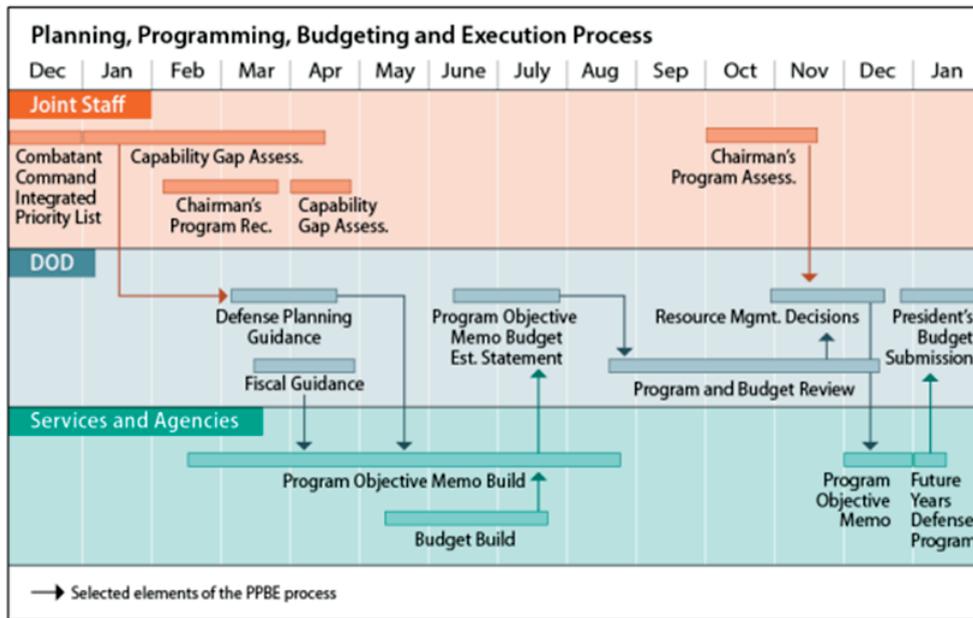
## B. Timelines

The Section 1004 language also directed the Commission to conduct an analysis of the timelines involved in developing an annual budget request and the FYDP, including the ability to make changes to such request or such program within those timelines. While each year follows the same general process and timeline, no two years are identical as the needs of the Department change each cycle. This is further complicated by the fact that multiple cycles often overlap, and therefore are being executed concurrently. For example, while the DoD is building POM26, it may also be planning for FY 2027+, finalizing the BES for FY 2025, defending FY 2024 on the Hill, and executing FY 2023 and prior year funding.

Any delay to a particular activity has impacts on assumptions and budgetary plans used in subsequent activities. For instance, a late DPG may delay program decisions or defer force structure decisions. Late appropriations or changes in administration also play a role in compounding the complexity of the PPBE process, often resulting in decisions being made on unknown top-lines for the POM and budget year. Figure 13 below is from the CRS shows a notional timeline that attempts to depict the intricacy of the annual PPBE system processes and timelines by mapping The Joint Staff in comparison to OSD and select Services and Agencies.[84]

[84] Image from Brendan W. McGarry R47178 DOD Planning, Programming, Budgeting, and Execution (PPBE): Overview and Selected Issues for Congress, CRS July 11, 2022, https://crsreports.congress.gov/product/pdf/R/R47178. Sources and Notes from CRS report: "Sources: Figure created by CRS based on Sean C. Sullivan, Planning, Programming, Budgeting and Execution Workbook, Naval War College Faculty Paper, updated 2015; and DOD, CJCSI 8501.01B, Chairman of the Joint Chiefs of Staff, Combatant Commanders, Chief, National Guard Bureau, and Joint Staff Participation in the Planning, Programming, Budgeting, and Execution Process, December 15, 2021, p. B-5, at https://www.jcs.mil/Portals/36/ Documents/Library/Instructions/CJCSI%208501.01B.pdf. Note: Timeline is notional."

Figure 13: DoD PPBE Process and Timelines Source: CRS, 2022



The Commission regularly heard concerns about the time required for a program to transit the PPBE process. It often takes two years, and sometimes four years or more, for an issue to go through all PPBE phases first at the Service, then at OSD, through Congress, and then finally the contracting process and execution. During this long period, technology and military requirements may change in ways that demand shifts in programs. Commission interviews suggested that selected key issues can be handled more quickly, and the PPBE process does provide the ability to make changes along the way. The DoD interviewees generally agreed that changes can be made even late in the DoD budget formulation process, but only for those issues where senior leaders believe changes are important enough and all parties agree on the nature of the change. As previously discussed in this Interim Report, the reprogramming process provides a forum for making changes during budget execution but can take many months, is limited in the amount of funds that can be shifted, and ATRs must be approved by all of the congressional defense committees before the change can be implemented.

It is also important to note how much earlier the Services start their POM and budget build compared to when strategic guidance is released and when OSD does its review of the Component POM or BES. The DoD interviewees also noted another timeline problem already discussed briefly above; the PPBE process does not provide enough time during the budgeting phase to ensure high-quality budgets and clear justification narratives; there is often only two to four weeks to complete the budgeting phase whereas six to eight weeks would be optimal.

Some interviewees argued that the PPBE process, especially within programming and execution phases, hinders defense programs, particularly modernization programs, because they take too long, especially for high-tech development and acquisition programs where technology may shift quickly. In the current environment it is especially challenging to try to predict how technology may change or what may be available in the next three to six months, let alone two to four years in advance. Other interviewees believed the problem was not within the programming and execution phases but rather in the planning phase, that sometimes fails to produce a program that can fit within likely FG, forcing constant and confusing changes during the programming, budgeting, and execution phases. The Commission is considering these insights as it fashions recommendations for improving PPBE.

## C. A review of the sufficiency of the civilian personnel workforce in the OUSD(C) and the Office of CAPE to conduct budgetary and program evaluation analysis.

Also required by the statute creating the Commission, the Commission has conducted "a review of the sufficiency of the civilian personnel workforce in the Office of the Secretary of Defense and the Office of Cost Assessment and Program Evaluation to conduct budgetary and program analysis" (Section VIII).

The workforce assessments looked at the organizational structure, the number of people onboard compared to authorized billets, staff skillsets, and financial resources. For CAPE, the assessment focused on the whole organization. For the OUSD(C), the focus was on the P/B portion of the organization given the nature of the direction to focus on budgetary analysis.

### The Office of CAPE Workforce

The Office of CAPE provides independent analytic decision support directly to the Secretary and Deputy Secretary of Defense on all aspects of the defense program, including the size, shape, and capabilities of the future joint force, as well as the corresponding allocation of resources. The organization's origins trace back to the Office of Programming within the OUSD(C), established in 1961 by then Secretary of Defense Robert McNamara. The office, comprised of a professional civilian analytic staff, was charged with providing the Secretary with analytic decision support on all aspects of the defense program. In 1965 the organization was renamed the Office of Systems Analysis and was made a standalone direct report to the Secretary of Defense. In the mid-1970s the office evolved into the Office of Program Analysis and Evaluation (PA&E) within the Office of the Secretary of Defense. In 2001, Secretary Rumsfeld briefly moved PA&E back under OUSD(C) but reversed that decision due to the extreme cultural differences between the organizations.

The Weapon Systems Acquisition Reform Act of 2009 (WSARA) subsequently created CAPE, transferred the PA&E staff into that organization, and expanded its mission to help support WSARA's overarching goal of improving defense acquisition and strengthening the rigor and validity of independent cost estimates (ICE) to support major defense acquisition program (MDAP) milestone decisions.  Organizational responsibilities are laid out in numerous sections of Title 10 U.S.C and enumerated in DoD Directive 5105.84, Director of Cost Assessment and Program Evaluation.

**Workforce.**  The entire CAPE workforce is described in this section, as CAPE's sub-organizations support each other.  The statutory direction for this review; however, is focused on the sufficiency of CAPE's civilian personnel workforce for program analysis.  The portion of CAPE's analytic workforce that directly supports program review are its Program Evaluation and Capability Enablers organizations, which collectively include 66 authorized civilian personnel.  For the whole of CAPE, as of December 2022, the staff of 314 consisted of 135 civilians against the 164 authorized billets, 21 military personnel, 11 detailees, and 147 contractors (executive administrative support, information technology support, data, modeling, and on-site FFRDC personnel).  Civilian personnel levels have varied from a period of growth to 150 personnel in FY 2011 with the additional missions and workload from the WSARA followed by a period of decline to a low of 120 personnel in FY 2020 due to headquarters reductions imposed by the exigencies of sequestration-driven budgets in FY 2012-2021.

It is a very experienced staff.  Of the 135 civilians on board, grades range from General Schedule (GS)-8/9 to SES with mostly GS-15s; 87 percent are operations research analysts, and the remainder are support staff.  Nearly half of the staff have been with the organization less than five years while 38 percent have been at CAPE longer than a decade; 54 percent of the staff have a master's degree and 40 percent hold a doctorate.  There has been about nine percent attrition every year and there have been some recruiting challenges.  In recognition of these trends, CAPE has been strengthening its recruiting pipelines, which include greater use of American Association for the Advancement of Science Fellowships; the Presidential Management Fellows Program; the John S. McCain Strategic Defense Fellows Program; Inter-government Personnel Act placements and details; and outreach to recent university graduates with advanced degrees.

**Core functions.**  The Office of CAPE has three core functions:

- Supporting the Secretary and Deputy Secretary of Defense in reviewing and recommending adjustments to the FYDP by leading the programming phase of PPBE;

- Producing strategic and operational analyses to inform development of strategic guidance such as the NDS and DPG, as well as subsequent resourcing decisions, and providing leadership in developing DoD's analytic priorities, standards, data, tools, and workforce; and
- Supporting acquisition on matters relating to cost analysis, including issuing guidance for Analyses of Alternatives (AoA) for MDAPs, producing Independent Cost Estimates (ICE) to support MDAP milestone decisions, and leading on improving analytical skills, competencies, tools, and data in support of cost assessment activities across the Department.

The Office of CAPE is organized into four deputates and has a front office and divisions for managing enterprise support and program resources and information systems.

Figure 14: Office of CAPE Organizational Chart
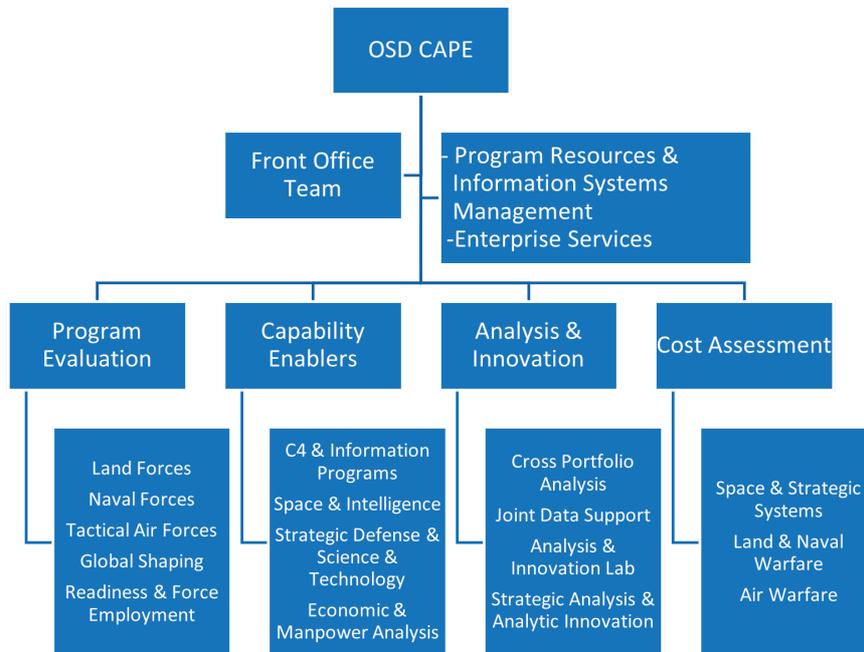


**Program Evaluation (PE) and Capability Enablers (CE).** The PE and CE staffs support CAPE's role in leading the programming phase of PPBE, perform analysis supporting the planning phase, and support the acquisition system by providing guidance and sufficiency assessments of AoAs; PE and CE are organized into divisions that are each responsible for a major DoD capability area.

The workload is cyclical. In years with normal budget schedules the Military Departments, USSOCOM, and the Missile Defense Agency submit their POM to OSD in the summer, after which CAPE leads the Program Review through the summer and fall. Analysts collaborate with stakeholders across the Department to identify issues, survey all relevant facts and viewpoints, and provide analysis and options to enable the Secretary and Deputy Secretary of

Defense to adjust the FYDP to align with the defense strategy and address gaps and redundancies in POM submissions. As Program Review concludes, the workforce turns their focus to analyses in support of the planning phase of PPBE for the following fiscal year; decision support to the Secretary and Deputy Secretary of Defense as required; and providing analysis and advice for other resource and capability planning in the Department such as issues under consideration in the Joint Requirements Oversight Council.[85]

There are 31 authorized civilian personnel billets in PE and 35 in CE.

**Analysis and Innovation (A&I).** The A&I staff produces strategic and operational analysis and analytic leadership and support for the planning phase of PPBE. This is designed to help the programming phase link budgets to strategy. The A&I staff supports CAPE's role as co-chair of the AWG along with the USD(P), the Joint Staff, and the CDAO. The Deputy Secretary of Defense established the AWG in 2021 to reform and develop DoD's analytic expertise, set standards for joint analysis, and improve the analytic foundations for decisions. The A&I staff also develops and manages data repositories, analytical methods and tools for strategic analysis, and conducts strategic and operational analysis to support development of strategic guidance and subsequent resourcing decisions. This includes analyses called Strategic Portfolio Reviews (SPR), conducted in collaboration with the PE and CE deputates, that are directed annually by the Deputy Secretary on cross-cutting, complex, strategic, and joint issues, at a rate of roughly four SPRs per year; SPRs are completed in time to inform the annual Program Review.

There are 32 authorized civilian personnel billets in A&I.

**Cost Assessment (CA).** The CA staff supports the Director of CAPE's role as principal official for ICE and cost analysis and primarily supports the acquisition system. The analysis, tools, and expertise related to those analyses feed directly back into the Service POM requirements and budgets for those systems, and the Department typically funds programs to the CAPE ICE. The staff conduct ICEs, review cost estimates and analyses related to MDAPs, review cost analyses of major programs to be procured using multi-year contract authority, prescribe policies and procedures for cost estimation and analysis in DoD, establish policies and procedures for reporting and collecting cost data, manage cost data repositories and tools for DoD, lead DoD cost analysis education and training, and review Service POMs for full funding of major acquisition programs.

There are 38 authorized civilian personnel billets in CA.

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[85] PE and CE also perform their duties for AoAs for MDAPs, based on when the Services initiate these programs.

**Leadership and support.** These organizations provide overall leadership and support to the entirety of CAPE starting with the Director and Front Office Staff. The PRISM division manages the scheduling, coordination, integration, and data requirements of PPBE, along with the production and dissemination of PDMs and the FYDP to record the program level of detail in the President's Budget. The Enterprise Services Division oversees all CAPE's human capital, administrative, contracting, and fiscal services.

There are 9 authorized civilian personnel billets in the Front Office, 9 in PRISM, and 10 in ESD.

**Challenges at the Office of CAPE.** When WSARA established CAPE in 2009, the organization was given a larger mission than its predecessor organization. Research provided to the Commission suggests that some critics believe CAPE needs to further expand its mission to provide more analysis of broad issues such as force structure and posture. The demand for CAPE's decision support has also risen with new threats, priorities, and fiscal pressures. For example, in the annual Program Review, an average CAPE analyst presented alternatives impacting over $1.5 billion, over five times as much as in 2011 (in constant dollars). Likewise, the number of direct Congressional study taskings to CAPE has increased almost fivefold since WSARA.

Staff levels have not always matched increases in mission. In the decade following the creation of CAPE in 2009, federal staff size declined, until it hit a low of 120 civilian personnel in FY 2020. This decline was part of a broader atrophy of capabilities for strategic analysis in DoD, that caused criticisms of DoD's lack of joint analytic capabilities for linking strategy to resources.[86] The Office of CAPE has since grown to 135 on board civilians and plans to continue to pursue its growth to 164 civilian personnel in FY 2023. While recent budgets have increased civilian authorizations, the process of recruiting the highly qualified individuals that CAPE requires will take time, as will the subsequent on-the-job development of these individuals.

The Commission found that the CAPE staff provides strong support to OSD leadership and to DoD as a whole, despite staffing issues. Today, the Office of CAPE plans sufficient growth to correct the challenges identified above for its current mission, but growth is hampered by recruiting challenges. The Commission believes CAPE has personnel with the right skillsets and the correct organization to support CAPE's mission for the Department. Actions to enhance recruiting and outreach, speed up the hiring process, and provide stability in civilian authorization levels would help build and sustain an effective CAPE workforce to meet the Department's needs.

[86] For example, see National Defense Strategy Commission, "Providing for the Common Defense: The Assessments and Recommendations of the National Defense Strategy Commission," 13 November 2018, https://www.usip.org/publications/2018/11/providing-common-defense; and Government Accountability Office, "Revised Analytic Approach Needed to Support Force Structure Decision Making," March 2019, https://www.gao.gov/assets/gao-19-385.pdf.

Recommendations to improve the CAPE organization are included in the Commission's broader recommendations on workforce reforms. If the Commission's Final Report recommends changes to PPBE that increase workload requirements for CAPE, then it may introduce corresponding workforce recommendations as well.

**The OUSD(C) P/B Workforce**

Title IV of the amended National Security Act of 1947 provided for three Assistant Secretaries, one of whom was designated as Comptroller of the Department; Section 401 specified that the Comptroller would be responsible for advising the Secretary on budgetary and fiscal matters, developing and executing the Defense budget, and overseeing financial management across the Department. The DoD Reorganization Act of 1986, most often identified as the "Goldwater-Nichols Act," changed the title of the position to DoD Comptroller; and the NDAA of 1985 upgraded the position to that of Under Secretary.[87]

The P/B organization is the component of OUSD(C) responsible for managing the review, formulation, presentation, and execution of the DoD budget while also working to achieve economy and efficiency in the operations of the Department through sound business judgment and effective fiscal planning and control.

There are four directorates, organized largely along appropriation lines, and an integration team:
- Operations Directorate – O&M and related appropriations for the Military Departments and Defense-Wide Components and contingency and international operations.
- Investment Directorate – Procurement and RDT&E appropriations.
- MILPERS and MILCON Directorate – MILPERS, Healthcare, and MILCON appropriations, and FSRM.
- P&FC Directorate - budget formulation and execution databases, apportionments, reprogramming actions, FMR management, and other cross-cutting support functions.
- Integration Team - Provides continuity and support on the review and management of Departmental budgetary matters, such as posture testimony and external products like the annual Secretary of Defense's Budget Overview Book.

[87] "A Brief History of the Comptroller's Office",
https://comptroller.defense.gov/Portals/45/Documents/OUSDC_History/OUSDC_History.pdf.

Figure 15: OUSD(C) P/B Organizational Chart

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                        ┌──────────────────┐
                        │    OUSD (C)      │
                        │  Program Budget   │
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              ┌──────────────────┤
        ┌─────┴──────┐           │
        │ Integration │──────────┤
        │    Team     │          │
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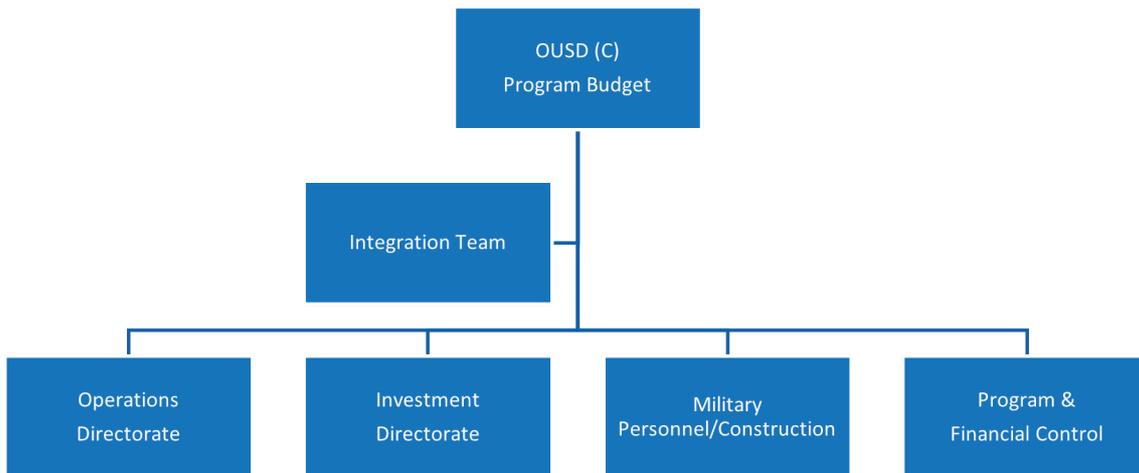
**Workforce.** The current size of the organization is 81 on board civilian personnel against the 92 authorized billets. There are no permanent military billets, although there is an agreement with the U.S Air Force to host a military fellow. There are five contractors that provide administrative support, and information technology support is provided by Joint Service Provider. Civilian personnel levels have fluctuated a bit over the last 20 years, but the 20-year average is around 80 on board personnel, ranging from a high of 91 in 2002 to lows of 72 in 2018 and 2019. Most of the recent reductions were driven largely by the management headquarters reductions required of the Department that affected the entire OSD staff in FY 2012-2018.

Overall, it is an experienced staff where the journeyman budget analyst grade levels are GS 13-15; 87 percent of the staff are budget analysts, another 7 percent are program analysts, and the remaining personnel are budget technicians and a financial analyst. The predominant government experience level is 21-30 years of service with 58 percent of the P/B staff having master's degrees or higher. Recent departures have resulted in a staff with less OSD experience than has been the norm; the current average staff tenure in OSD is five years. Turnover in 2021 was relatively high at 16 percent, although that number is not inconsistent with past experience and reflects retirements from a staff whose average federal service is 20 years or more. Recruiting is identified as a growing challenge but was generally described as manageable. However, the pool of highly qualified candidates appears to have decreased.

As with other members of the DoD financial management workforce, USD(C) analysts must have and retain the required financial management certification level. Given the persistently heavy workload, it has been an increasingly difficult challenge to achieve the 80 hours of continuing professional education every two years that is needed to maintain certification, much less seek outside training opportunities. There is currently no formal training program centered

on working for the P/B organization and is largely an "on-the-job" mentor-protégé style training process for new analysts.

An increasing issue in the recruiting and retention of a high-quality staff is balancing quality of life with the obligations of work, particularly as the COVID-19 pandemic placed significant emphasis on teleworking. Improved technology has offered the ability to do some classified work at home as well, which helps to ease some of the balance between work and home life; however, many other parts of the DoD and federal government can offer full-time telework positions, which is making it increasingly difficult to compete for the same talent. The USD(C) recently published a "DoD Financial Management Strategy 2022-2026" that established two significant imperatives for the workforce, among others. The first is to develop and sustain a skilled and inspired workforce, and the second is to empower a data-driven, fiscally informed decision-making process within that workforce.

**Core function – Budget Review.** One primary organizational task is the finalization of the DoD budget in support of the annual PB submission to Congress. The principal process used to achieve this function is the budget review of all BESs from the Military Departments and other DoD Components done in conjunction with the Program Review lead by CAPE. The Budget Review is also conducted as a joint review with the OMB.

In years with normal budget schedules, the annual Budget Review is conducted from September to December. It begins with the BES and concludes when the PB and all supporting information has been provided to Congress. The focus is on the budget year that begins on 1 October of the following year as well as the FYDP. In accordance with 31 U.S. Code, section 1105, the President must submit a budget for the following fiscal year to Congress no later than the first Monday in February, so all tasks track to that deadline in years with normal budget schedules. The staff also develops preparatory materials for the Secretary of Defense and other OSD senior leaders for the formal DoD budget rollout as well as any congressional posture hearings.

The Budget Review itself consists of the following:
- Making sure the budget conforms with current policies and strategies issued by the White House and DoD to ensure that Administration and Departmental priorities are followed; these policies and strategies are enunciated in documents such as the NSS, NDS, DPG, and other applicable policies;
- Compliance with budget policies as outlined in law, the FMR, OMB Circular A-11, and other budgetary guidance, for example ensuring the appropriate use of appropriations, known colloquially as color of money issues;

- Correct use of full funding versus incremental funding in the Procurement and RDT&E appropriations;
- Proper pricing of programs;
- Adjudication of requests for additional funding typically in the form of issue papers;
- Accommodation of the most recent Congressional actions or directions, which can be challenging if Congress has not completed the NDAA or Appropriations bills until near the end of the budget review or even later;
- Assessment of executability of how the identified schedules, dependent events, contracts, production capacity, and other related variables support the ability to spend the money within the required fiscal year period. Adjustments to the budget profile are made in accordance with that assessment; and
- Review or preparation of all general provisions and legislative proposals to accompany the PB; these typically number in the hundreds, every year.

Following PB finalization, the P/B staff takes the lead in preparing the Department's leadership for the annual posture hearings and meetings with congressional members and professional staffs. These hearings normally take place in the February/March time frame, although they can also extend into June. This requires an intensive process of preparing testimony, fact sheets, overview books, the J-books and other supporting materials, all of which falls on the P/B management and staff.

**Core function - Budget Execution.** Management of the budget execution process constitutes the other primary task of the P/B staff. A persistent complexity in recent years has been the need to manage through CRs until the defense appropriations are signed into law. While under CRs, the staff works with OMB and the Components to ensure the defense program continues its essential missions while ensuring adherence to CR rules on new starts, production rate increases, and other related funding limitations. Once the appropriations are enacted, the P/B staff reconciles the PB request with the Congressional reductions and adds within the bills to develop the DD1414 Base for Reprogramming Actions and works with OMB and the Components to apportion and then distribute the funding as outlined in the appropriations acts, to include withholding any funds if directed by congressional language.

The P/B staff also prepares monthly reprogramming actions to address time sensitive requirements. A mid-year review is usually conducted in the April-June timeframe, largely to inform the preparation of the annual Omnibus reprogramming action, due at the end of June. This requires a significant effort on the part of P/B. The staff uses information produced by the Defense Finance and Accounting Service's (DFAS) Defense Departmental Reporting System (DDRS) to ascertain the funding status of the full range of defense

programs. Increasingly, the staff uses the data analytics tool Advana to assess budget execution based on the detailed data from DDRS. In most, if not all, fiscal years, events such as international crises, natural disasters, or a pandemic response occur that demand additional funding. The P/B staff then must assess the funding requirement, assess whether a reprogramming action could satisfy the emergent need, work with the affected organizations, coordinate with OMB, and, if allowed by OMB, prepare one or more Supplemental budget requests. For example, support to Ukraine this year has resulted in a number of funding requests.

As each fiscal year reaches its end in September, the P/B staff works with the Components to address any last-minute funding requirements and close out the expiring funds, ensuring appropriations are executed within their legal limits. Other recurring tasks and responsibilities affecting the staff's workload include a requirement to represent the OUSD(C) at a multitude of working groups. The staff must also review and gain OUSD(C) coordination on all issues being formally debated by OSD and on all reports and responses to Congress. Lastly, the staff updates the FMR on an "as needed" basis.

**Challenges at the OUSD(C)**. Today's P/B staff is under stress. Workload has increased while the time available to accomplish the core budget review and execution functions has decreased. Many activities and responsibilities take place at essentially the same time. For example, the Department is trying to finalize the PB submission as the appropriations acts are passed that must then be incorporated into the PB documents, which generates considerable staff work to make those changes. The mid-year review happens at the same time as budget hearings and rollout if the budget is submitted late, and the year-end review takes place simultaneously with BES and Program Review. What used to be a cyclic workload has changed in recent decades as the intensive level of workload continues throughout the entire year now, leaving little staff time for additional research, travel, training, or taking leave. Senior P/B staff personnel also stated that the workload has led to substantial overtime requirements, especially for SES personnel.

Overlap of the PBR processes is also a challenge as late program decisions limit budget analyst time to conduct a thorough budget review, which often occurs over just two to four weeks even though P/B staff feel that four to six weeks is needed. The lack of time for budget review has resulted in a reduction in technical quality of budgets submitted to Congress, though collaboration and a close relationship with their CAPE counterparts help mitigate the limits on budget review time.

The result of OMB review, known as Passback, is usually provided to the DoD in late November or early December and can contain unanticipated budget

recommendations for specific programs, as well as changes in the DoD topline for the budget year and FYDP. Any significant change in the topline drives late program churn to accommodate the new topline, adding to workload. There has also been an impact when appropriations bills are not yet signed and the PB is held to incorporate those numbers.

It is important to note that the recommendations of this Commission, if acted upon, will require additional efforts on the part of the DoD financial management community, and many of those added efforts will become permanent P/B responsibilities. For example, P/B would have the lead role in conducting the mid-year update for Congress and restructuring of the budget justification books, recommendations in earlier sections of this Interim Report. These added responsibilities should help improve PPBE processes but will add to P/B workload.

There are signs, including a higher-than-normal vacancy rate, that it is becoming more difficult to recruit and retain a high-quality staff. This is no doubt in part because of the amount of workload that frequently requires significant over-time hours, including weekend work, as well as work during holidays. These hours are often not compensated since many personnel are already at the federal pay cap. As previously stated, the inability to offer full-time telework is also making it difficult to compete for talent when other organizations can offer that option. Filling existing vacancies for their authorized billets will alleviate some of that stress, and the OUSD(C) leadership has said that it is emphasizing the development and execution of a strategic human resources plan for the future that seeks to fill open billets. The "DoD Financial Management Strategy 2022-2026" will aid in those efforts. There may be ways to reduce non-budget workload by changing review processes and delegating decision authority to lower levels. There are also new processes and tools such as Advana that could help reduce some workload and allow staff to focus and dedicate more time to analysis.

The Commission found that the P/B staff continues to provide strong support to the OSD leadership and to DoD as a whole, despite the workload stress. The OUSD(C) leadership believes that despite the stress of added workload, it has a capable staff with the right skillsets to provide this important support but must adjust that staff to reduce the level of workload stress in the organization. To do so, the OUSD(C) needs to continue to focus on filling vacancies and adding to its on-board staff. The Commission fully supports ongoing P/B efforts to establish special career-ladder positions designed to better retain graduates of internship programs such as the Presidential Management Fellows and the McCain Fellows. Recommendations to improve the OUSD(C) organization are included in the Commission's broader recommendations on workforce reforms.

## D. Review of New and Agile Programming and Budgeting Techniques

The Commission was also asked to look at ways the DoD is developing more agile and flexible ways to organize its programming and budgeting efforts to counter strategic competitors more effectively.

**Overview.** Over the last decade, and most noticeably in recent years, commercial technologies have outpaced the Pentagon's innovation ecosystem, with commercial industry developing capabilities faster than the Department can adequately plan, program, or budget for them. During this same timeframe, some U.S. strategic competitors have invested heavily and moved quickly because senior leaders tend to unilaterally dictate actions, leading to a mix of positive and negative outcomes in capability delivery. To keep pace, the DoD will have to evolve its existing PPBE processes so that it can respond to challenges in a more effective and timely manner without altering the form of our government. The Department must overhaul its processes as a whole or find ways to inject agility and speed into the current programming and budgeting phases to address urgent requirements, ingest breakthrough and emergent technologies, and deliver trusted capabilities to the warfighter.

Making these changes is complicated because the PPBE process starts two or more years prior to the year of execution. In many cases commercial technologies being released in 2023 can't be bought, developed, or integrated into the Department's current site picture until 2025 at the earliest. Commission research found examples where PMs were able to take the initiative and find ways to quickly acquire priority capabilities that were necessary to preserve life and prevail in the battle space. But the Commission also heard other managers say that these examples are the exception and not the rule. While the DoD has significant control of its budget prior to the President's delivery of the budget to Congress in February of a normal budget year, the window to address all but the most critical emergent changes will close well before then.

The DoD does have several options in the year of execution such as BTR and ATR actions. These remain important sources of agility and flexibility within the current PPBE process even though the reprogramming process is often criticized as being too slow. While those options are further addressed in Section V of the Interim Report, this section is specifically focused on other ways the Department has adapted the current PPBE process to provide for more agile programming and budgeting.

There are clear intersections between the acquisition, requirements, and PPBE processes; however, acquisition and requirements reform lie outside of the scope of the Commission's work on PPBE reform. The Commission acknowledges and applauds the efforts made by Congress to expand flexible

acquisition authorities through the Rapid Acquisition Authority, Adaptive Acquisition Framework, Software Acquisition Pathway, and Middle Tier of Acquisition pathway. The Commission also acknowledges and supports on-going efforts by the DoD to revamp the internal Joint Capabilities Integration and Development System (JCIDS) requirements process, although the Commission does not have visibility into or an opinion on those efforts.

**Programming Reform Efforts**
DoD has undertaken recent efforts intended to strengthen the analysis that supports programming and focus Program Review on strategic priorities. Programming underpinned by agile, strategically focused analysis and decision support systems has the potential to speed re-direction of DoD plans and resources toward new or better capabilities against evolving threats.

**The AWG.** To strengthen the link between strategy and resourcing during the PBR, and to improve analytic decision support to Department senior leadership more broadly, the Department has recently taken steps to reinvigorate its strategic analytic capability.

Some critics argue that the Department's previous approach to strategic analysis, known as Support for Strategic Analysis, needed to do a better job of fully supporting senior leader decision-making because the products were overly detailed and cumbersome to use; the analysis didn't deviate significantly from programmed force structure; and the lack of joint force analysis.[88] In response to this, the Deputy Secretary of Defense established the AWG in 2021, and promulgated a set of principles—transparency, robustness, and well-designed/ tailored approach—and standards to govern joint campaign analysis. While relatively new, the AWG principals—CAPE, the USD(P), the Joint Staff, and the CDAO—are taking steps to institutionalize its principles and standards, including:
- Resourcing additional billets in the FY 2024 PB request for OSD CAPE and the Joint Staff to support the AWG rather than it being a collateral duty for existing personnel;
- Leading peer review among all DoD Components with analytic missions on shared analytic plans to enhance transparency, collaboration, and prioritization of efforts in calendar year 2023;
- Establishing analytical toolkits for improved modeling of cyber and space capabilities and collaboration with the Intelligence Community to improve modeling of adversary capabilities;
- Improving quality of and access to data, such as through release of the control inputs that include authoritative data, scenarios, and assumptions that enable DoD to compare analysis more easily across organizations;

[88] See, for example GAO, "Defense Strategy: Revised Analytic Approach Needed to Support Force Structure Decision-Making," GAO, GAO-19-385, March 2019, https://www.gao.gov/assets/gao-19-385.pdf and National Defense Strategy Commission, "Providing for the Common Defense: The Assessments and Recommendations of the National Defense Strategy Commission," 13 November 2018, https://www.usip.org/publications/2018/11/providing-common-defense

- Establishing a seminar series for AWG action officers to further train, collaborate, and provide transparency; and
- Drafting a forthcoming DoD Instruction to codify AWG roles, responsibilities, and practices.

Concurrent with these institutional reforms, initial analytic work by the AWG has included support for the 2022 NDS by characterizing strategic tradeoffs for the review. The AWG has also reconstituted and improved the Department's campaign analysis capability to be more agile and leveraged this capability to provide analytic support to the previous two cycles of SPRs.

**Strategic Portfolio Reviews**. Since 2013, CAPE has conducted SPRs annually that are cross-cutting analytic efforts on complex, strategic, and joint issues, directed by the Deputy Secretary of Defense. The SPR process uses a variety of analytical approaches and explores a range of potential futures. The Office of CAPE leads SPRs, taking in broad input across DoD, and has developed specialized models and tools to enable examination of hundreds or thousands of cases, as part of the review process. The SPRs are built into the planning phase of PPBE, are intended to ensure that robust analysis and programming options are reviewed to inform each programming cycle, and may affect multiple programming cycles over several years.

The SPRs are a valuable tool for providing robust analysis, driving programming decisions affecting multiple Services and capabilities that result in important operational or strategic effects; however, to be most effective, SPRs need to proceed in a timely manner to shape POM development.

**Program Review.** The annual Program Review includes bottom-up issues identified by DoD stakeholders and can include top-down issues reflecting leadership at the time. In recent years prior to the PBR for FY 2023 (PBR23), DoD stakeholders would identify bottom-up issues by reviewing the POM and then submit requests, known as issues, to adjust resourcing levels. The DoD leadership could also insert top-down issues into Program Review as well. The issues would then be combined into topic areas, reviewed by CAPE-led issue teams of stakeholders from across DoD, and presented for senior leader consideration and adjudication based on alignment with strategy (e.g., NDS). This desired outcome could be hampered because:

- Topic areas were not always aligned to strategic priorities or key operational problems, which rendered strategic framing and analytically driven trade-offs across issues challenging.
- Opportunities for strategic level discussion by leadership were limited due to the large number of issues submitted for consideration, many of which were not of strategic importance, but were still elevated for approval, modification, or denial by senior leaders.

To deal with these issues, beginning with PBR23, CAPE began implementing reforms aimed at elevating senior leader discussion to the strategic level and focusing on the most consequential resourcing requests. The PBR23 and PBR24 processes looked to shift focus away from deliberation of many loosely connected programmatic issues, to a smaller, tighter number of strategically aligned courses of action, with analysis providing the linkage. These reforms consisted of process changes, supported by changes in the products used to support the process and the reinvigoration of strategic analysis as described in the section on the AWG. Reforms began in PBR23. By PBR24, DoD had implemented two sub-processes:

1. **A top-down process**, driven by the NDS and the DPG that defined the topics to be discussed by the Deputy's Management Action Group (DMAG)—the 4-star body chaired by the Deputy Secretary of Defense—in alignment with strategic guidance. These topics, known as Focus Areas, were based on NDS priorities. For each Focus Area, DoD identified issues requiring resource decisions based on scoping papers for each Focus Area; prior strategic and operational analysis, such as findings from SPRs or other significant analyses; and stakeholder inputs, such as strategic priorities memos from the heads of DoD's Components, strategic issue papers, and other unfunded proposals aligned to the Focus Areas. The emphasis on strategy-driven resourcing via analysis was supported by modified briefing products for the Resource Management Group (RMG)—the subordinate 3-star body to the DMAG – and the DMAG. Specifically, the content of these briefings was structured as follows to show the link between strategy and resourcing:

- Strategic scene-setting via references to established guidance (e.g., NDS).
- Discussion of strategic and operational issues that need to be addressed in the specific Focus Area.
- Summary of analytic results relevant to these strategic and operational issues.
- Resourcing options that address these issues, each comprising a bundle of strategically-aligned investments.

2. **A bottom-up process**, driven by disparate resourcing issues submitted by DoD Components. This process was largely issue-driven rather than strategically guided. Issues were handled in one of three forums, depending on which organization submitted the issue for consideration: Military Department compliance (i.e.: adherence to previous decisions) issues, COCOM issues, and 4th Estate issues. Some issues were eventually reviewed by the RMG but not necessarily reviewed by the DMAG so the DMAG could focus its limited time on the strategic Focus Areas.

In addition to bifurcating the PBR process, PBR24 differed from typical cycles from recent years in that inputs from DoD stakeholders were solicited at multiple points during the process, instead of the limited issue submission at a single point in time in the past. In addition to issue submissions, stakeholder inputs were solicited at the outset of the review to help shape the Focus Areas and the subtopics to be discussed within them, as well as later in the process to gain a better understanding of stakeholder priorities. The intent of these additional touchpoints with stakeholders was to ensure that RMG and DMAG deliberations addressed stakeholder priorities, as well as allow for limited fact-of-life changes in priorities during the months-long review.

## Budgeting Reform Efforts

**The BA-08 Pilot Program.** The BA-08 Single Appropriation for Software and Digital Technology Pilot (hereafter referred to as the BA-08 Pilot Program) was established by Congress in coordination with the DoD to create a new BA in FY 2021 inside the RDT&E appropriations for the development, deployment, and sustainment of software capabilities at the speed of operational relevance. It is a single appropriation which provides for seamless budget execution for activities typically divided between multiple appropriations of RDT&E, O&M, and Procurement. This pilot program also simplifies the various laws, regulations, and policies that govern the development, acquisition, and sustainment of technology, which were designed to support a series of sequential steps for Industrial-Age capabilities. The rise of software as a larger share of total defense spending, and more specifically modern software development practices such as agile and DEVSECOPs, is often at odds with the linear budgeting process of the past.

Without BA-08, programs in the pilot would be required to shift their funding between RDT&E, Procurement, and O&M appropriations, depending on the stage of development and interpretation of guiding regulations. Such seams can create delay in capability delivery and inability to prioritize based on mission need, because the program has the wrong color of money for the type of activity being conducted. Now, all elements of the program are executed under one RDT&E appropriation, streamlining the funding process and allowing maximum flexibility within the program for execution of funds across development, acquisition, and sustainment.

The pilot is managed by the USD(A&S) and currently has seven program participants. Recent attempts by the DoD to expand participation in the pilot program have not been supported by Congress due to concerns that the DoD has not really discussed or adequately detailed the quantitative or qualitative benefits of the program. The Commission urges the USD(A&S) to engage with Congress on this subject and to highlight its benefits and limitations to the DoD.

Interviews with program offices with systems in the BA-08 Pilot Program argue that the single appropriation has allowed them to focus more on mission and schedule, delivering the required capabilities to the user and less on arbitrary moves between RDT&E and O&M funding based on interpretations of the activities being performed. Interviewees also stated that BA-08 Pilot Program removes the challenges with navigating the investment versus expense threshold criteria in the FMR, which dictates the use of RDT&E funding for development and significant upgrades to capabilities and O&M funding for sustainment activities. Given the nature of the work, the distinction between those two activities is blurred when it comes to software. The reality is the individual software developer does the same task whether it is labeled development or sustainment. Either term could appropriately and accurately describe the very same activity, while the FMR treats these efforts as two separate categories.

There are several obvious and common-sense benefits of the BA-08 Pilot Program for particular DoD programs, specifically software-intensive programs leveraging agile development practices such as:

- No uncertainty regarding appropriation type when meeting mission needs (i.e., either sustainment activities or development activities)
- Performance Work Statements can be designed around agile continuous delivery, with less differentiation between delivery, enhancement, and sustainment
- The two-year RDT&E appropriation provides additional stability compared with the one-year O&M period of availability

Through interviews and assessing the qualitative and quantitative data provided by the Department, the Commission concludes that the BA-08 Pilot Program provides needed stability for software-intensive programs, encourages the DoD to continue to share data-driven metrics with Congress, and conduct in-person briefings on a recurring basis to highlight these benefits. However, the BA-08 approach may not be suitable for all programs. For example, it is not suited for programs that have additional spending across hardware components and other mission requirements; BA-08 in this case would create an additional color of money to juggle for software, while maintaining other multiple colors of money for hardware or administrative efforts. Due to these challenges, the Commission is not currently recommending a single appropriation for DoD software. The underlying difficulties created by the seams between different colors of money must be addressed for software rather than providing a band aid solution; the Commission intends to address this issue in its Final Report.

**Innovation Funds.** Innovation funds have been a mechanism of interest in DoD for decades. They were introduced to enable in-year of execution spending on late breaking, cutting-edge capabilities in critical technology areas to speed delivery to the warfighter. In recent years, innovation funds have also been used to bridge the so-called "valley of death" between RDT&E and Procurement funding. More specifically, the former Rapid Innovation Fund or the current Accelerating the Procurement and Fielding of Innovative Technologies (APFIT) were and are used to either continue development of a given capability or sustain it until a program of record can pick it up and insert it into their program and budget. In some cases, innovation funds also support the transition of technology from a basic research or S&T stage (BA 6.1-6.3 RDT&E funding) to a prototype stage (BA 6.4 funding). As with other programs, capabilities can only be delivered as fast as the requirements and acquisition processes can support them. While specific recommendations about acquisition and requirements reform lie outside the Commission's mandate, the Commission notes that requirements reform and leveraging existing agile acquisition pathways could help realize the full agility provided by innovation funds.

Innovation funds have faced many challenges over the years, including lack of transition plans and development of a capability to a still "too low" technology readiness level (TRL) for the program offices. The Commission commends DoD's efforts to fix these problems.

The Commission also acknowledges OSD's efforts to aid transition of capabilities from current innovation funds with the establishment of the Director of Multi-Domain Joint-Operations (MDJO) under the USD(R&E), along with the Acquisition Integration and Interoperability Transition Office in the USD(A&S). These offices, among others such as the DIU, are working to help with the transfer of mature capabilities to the warfighter by supporting transition plan creation before experimentation begins, something which has not been a best practice in the past. The Commission urges the Services and other DoD Components to ensure there is a transition plan and sufficient funding for successful innovation fund projects, so those technologies do not get delayed due to funding challenges.

In the past, Congress has expressed concern with innovation funds being used as a way for the DoD to evade Congress's oversight regarding how the DoD spends its budget. In this regard it is also critical that DoD assume the responsibility of communicating the successes and failures of programs to Congress on a routine basis, so that Congress can allow DoD to assume risks in its funding of innovative technologies without fear that the only control Congress has when things go wrong is to put the program's entire funding on the chopping block. Ultimately, DoD must earn the trust of Congress through

proactive communication and in some cases, active engagement of Congress as a partner in investing in innovation.

The DoD submitted a FY 2024 legislative proposal to reestablish the Rapid Innovation Fund (RIF), which ceased to receive appropriations amid congressional concerns in FY 2020. The request was for $25 million for the purposes of transitioning technologies developed by small businesses from prototype to production. In addition, the DoD has recently created two funds based on lessons learned from past innovation funds, which aim to facilitate more rapid transition of capability to specific programs and have proven successful over the last two budget cycles.

**The Rapid Defense Experimentation Reserve (RDER).** Created in FY 2022 to address joint experimentation in alignment with the Joint Warfighting Concept, the RDER fund is currently divided among five RDT&E PEs, one in OSD with the USD(R&E) and the others in each of the military Services. The OSD provides funding for the overall program management and the Services provide funding for execution of the program. Some of the funding is embedded within PEs for other programs which does not allow for easy tracking of the funding. The funding resides within the Services and encourages Service buy-in and transition of successful experiments.

The RDER allows the Services to propose specific technologies for the funded experiments which are conducted at annual operational exercises. The alignment of RDER to existing operational exercises constitutes a good practice in testing and proving out higher TRL capabilities while also leveraging current assets to address real world operational scenarios. Program selection for RDER funding is made by the DMAG to ensure alignment with DoD strategy. In the FY 2024 PB, the DoD has requested $687 million to support these initiatives.

**Accelerating the Procurement and Fielding of Innovative Technologies (APFIT)**. The APFIT program was created in FY 2022 to support the transition from development to production of advanced TRL capabilities developed by small businesses or non-traditional companies. The APFIT goal is to provide a much-needed bridge in the process of moving technology from development to procurement, to allow the PPBE cycle to catch up and fully incorporate it. As a result, DoD officials have stated that APFIT funding is helping to deliver capabilities one to two years earlier than scheduled. The APFIT is a procurement innovation fund executed by the Director of MDJO in the USD(R&E). Programs are selected by the USD(R&E), the Services, and the DoD Small Business Innovation Research (SBIR) Program Offices with a focus on innovation, impact, and transition ability.

In FY 2022, DoD was appropriated $100 million, which allowed 10 awards for $10 million each to companies which already had procurement contracts in place.  The CR delayed the program and limited the USD(R&E)'s ability to get companies on contract quickly.  All FY 2022 projects have now been funded and the small business performers are on contract.  In some cases, all products have been purchased and delivered, such as the U.S. Air Force's V- BAT Unmanned Aerial Vehicle.  For others, deliveries are occurring and will continue to deliver over the next year or longer.  In FY 2023, Congress appropriated $150 million, which allowed 11 awards to 22 companies ranging between $10 million and $50 million.  In FY 2024, DoD requested $100 million to support these efforts.

The Commission assesses that the RDER and APFIT approaches appear to be promising although execution of these efforts is still in the early stages.  It is unclear to the Commission how the Department plans to reconcile efforts of RDT&E innovation funds, to include RDER, RIF, and Defense Innovation Acceleration, among other Department funds.   Initial Commission research suggests that innovation funds have provided the DoD with successes, and in some cases, a shorter timeline for development and deployment than the traditional programming and budgeting processes.  A more complete review of innovation funds past and present will be provided in the Commission's Final Report, along with an assessment of the efficacy of such funds in providing programming and budgeting agility in the year of execution.

**The Office of Strategic Capital (OSC).**   The OSC was established by the Secretary of Defense in December of 2022 to help the DoD partner with private capital investors.   The goal is to attract private capital to national security priorities and to scale private investment as it relates to the 14 Critical Technology Areas detailed in the DoD Chief Technology Officer's Strategic Vision.  By and large, venture capital investment is an underutilized tool by the DoD.  More than $6 to $11 billion flows annually from private capital into the defense market and is a dominant source of funding for new and emerging technologies.  Meanwhile, U.S. strategic competitors have already tapped into this tool, leveraging significant amounts of public-private capital into their defense markets.

The OSC aims increase the capital available to critical technology companies working in defense relevant areas and help them reach scaled production. Despite being newly established, the OSC has already kicked off two lines of effort and requested $115 million in the FY 2024 PB to support its efforts that include:

- Public-private fund matching:  The OSC will use public funds to match private funds for larger early-state investments in critical technologies. DoD

already has experience doing this, particularly through the U.S. Air Force SBIR Strategic Funding Increase and Tactical Funding Increase Program.

- Loans and loan guarantees:  The OSC will use public funds to extend loans or loan guarantees to scale production for critical technologies.  There are examples of the federal government already exercising this practice, such as the Department of Energy, at low cost to the taxpayer and high return on investment.

The goal is that these proven federal financial strategies will incentivize private capital providers to invest in our national defense to scale capability from prototype to production.

**Other Programing and Budgeting Agility Lines of Effort**

**Rapid Capability Offices (RCO).**  There are many other offices such as the U.S. Air Force RCO that have been established to speed delivery of capabilities, providing a reprieve from some of the constraints of the PPBE process.  While not specific to providing agility in the programming and budgeting process, such offices can be a mechanism for increased agility through a shortened decision chain, delegated authority, senior leader support, increased communication with leadership and Congress, and prioritized funding.

**Proposed DoD legislative changes for additional agility and flexibility.**  The DoD legislative proposal process provides the DoD with a formal way to ask for legislative changes via the NDAA.  The Office of Legislative Counsel (OLC) is responsible for this process and hosts a repository of all proposals submitted to Congress once reviewed and approved by the OMB.  This process can help the DoD formally advocate for additional agility or flexibility, or clear unnecessary legal barriers to deliver national security needs.

There are many current efforts to increase speed in delivering capability; aid efficiency and cost savings; and ensure that budgeting barriers are cleared through additional authority, increased thresholds, or increased flexibility. Examples of requested flexibilities in FY 2024 include, but are not limited to the following:

*Special Construction Authority to Use O&M in Friendly Foreign Countries:*  This proposal would provide the DoD with authority to use O&M funding for projects up to $15 million to allow for more rapid response than traditional MILCON appropriations.

*Rapid Response to Emergent Technology Advancements or Threats:*  This proposal would expand authority provided under §3601 of Title 10, U.S.C, which is limited to procurement, to be used in limited circumstances where a Service Secretary deems it vital to start early engineering and development activities

on an effort immediately.  The authority would be for up to $300 million annually to allow engineering and development activities of an effort to get started by redirecting already programmed funds, with the intent to actively engage Congress on long-term plans to transition the project to the normal appropriations process.

*Increase in Approval and Notification Thresholds for Repair Projects*:  This proposal would increase repair thresholds from $7.5 million to $15 million consistent with inflation of construction costs since the original establishment of the threshold in 2004.  Currently, packaging, reviewing, staffing, approving, and then notifying other authorities of these repair projects results in substantially greater project execution timelines as well as increased workload for personnel.

*Expansion of Defense Working Capital Fund Contract Authority:*  This proposal would allow DoD to award contracts in advance of the availability of specific working capital funds in order to avoid adverse operational impacts.  The inability to award contracts sufficiently in advance of the availability of funding can adversely impact ship operating schedules, for example, and often leaves maintenance efforts inefficient, more expensive, and even incomplete.

The Commission currently takes no position with respect to these legislative proposals, though they generally support the goal of speeding up the incorporation of innovative ideas into DoD programs.  A complete list of DoD's legislative proposals can be found on the OLC website at https://ogc.osd.mil/OGC-Offices/Office-of-Legislative-Counsel/.

**The Small Business Innovation Research (SBIR) program.**  The SBIR and Small Business Technology Transfer (STTR) programs (hereafter referred to as SBIR) have proven to be a useful tool to spur innovation and commercial technology adoption within the DoD.  As overseen by the Small Business Administration (SBA), SBIR is a government-wide program with the intent to stimulate technological innovation, meet research and development needs, increase private-sector commercialization of innovations and support small businesses.

The DoD program is funded annually through a mandated internal transfer of funds based on the amount of on extramural research and development spending after the DoD Appropriations Bill is signed.  With a minimum allocation of 3.2 percent, and an additional obligation of 0.45 percent from activities taking place in the STTR program, the total budget comes to roughly $2.5 billion in any given fiscal year.  This funding supports phases I and II of the SBIR program and is available for obligation for up to two years like any other RDT&E program.  This funding benefits from not having to be included in the traditional PPBE process, where it might be targeted for reductions by DoD

decision makers. It also benefits from not being subject to Congressional marks during the appropriations process.

The SBIR program is limited in scope; however, as it only allows small businesses[89] to participate, and phase I and II awards are limited in dollar amount and timeline for period of performance. The DoD, specifically through organizations like U.S. Air Force's AFWERX, the innovation arm of the Department of the U.S. Air Force, has been pushing the envelope on making larger awards with follow-on phase II efforts for successful projects. The AFWERX efforts are divided into the tactical funding increase and strategic funding increase that are aimed to not only increase the size of phase II funding grants, but to also bridge the gap between SBIR/STTR phase II and phase III scaling. Such awards also enable public-private matching and enable development of capabilities to a higher TRL that can then be picked up by a program office. It should be noted that DoD has the authority to request additional funding for transition of SBIR/STTR projects or supplementing the SBIR/STTR program budget using funds outside the traditional allocation process, but rarely does so.

By comparison with other programs, SBIR is an incredibly agile pot of money. It fully allows the DoD to conduct research and development in the year of execution without having previously programmed and budgeted for the effort. As a result, when someone in DoD has an idea for a specific research project and it is found suitable for SBIR, work can begin in a matter of months, with relatively few permissions needed to proceed.

A challenge SBIR faces is that promising phase II projects are not deployed as often as would be desired by the DoD, similar to the challenges experienced by the S&T efforts of organizations like DARPA and DIU, as well the Services. There are many reasons for this. Sometimes new technologies aren't adopted because of prioritization within the programs, for example, PMs would rather spend their limited money on other approved and established priorities instead of riskier or unproven technologies. More surprisingly, some PMs are not even aware of a relevant SBIR program, because of the organizational segregation of SBIR funding execution from their programs.

Another challenge is that SBIR awardees struggle to get access to buyers. For a SBIR technology to advance, someone with funding must either buy the technology outright or continue its development. Finding those buyers can be difficult. The SBIR technical points of contact are government researchers that provide assistance, but they do not always have additional funding to make available for successful transition of SBIR projects; nor do they always have sufficient time to concentrate on finding project buyers because this is only one small portion of their overall jobs.

[89] The Small Business Administration generally defines a small business as an independent business with fewer than 500 employees, and more specifically define small business for the purposes of government contracting through size standards. https://www.sba.gov/federal-contracting/contracting-guide/size-standards

Once a SBIR awardee does find a government buyer, the buyer often has difficulty putting the small business on contract. Since the DoD programs and budgets over multiple years and provides detailed justification for the use of requested resources, there is little to no room for late additions or changes.

Incorporating new technology in this way may even necessitate a new start notification to Congress, which requires additional internal DoD coordination and time. Once again, all these challenges to advancing successful SBIR projects can make it difficult for the DoD to rapidly deploy new and proven capabilities. The most obvious path to buying a new proven technology is to plug it directly into the next POM. But that can take years—time few small businesses can afford. Inserting the technology into the DoD budget in other ways can be faster and more agile, but it still may be too slow for small businesses and generally carries other costs, risks, and uncertainties as well, not to mention the delay in getting that technology to the warfighter.

The Commission is considering the merits of aligning the SBIR program to the DoD's overall S&T Strategy. This could facilitate the program being leveraged more strategically, rather than being treated as an additional duty to other activities and offices. Another best practice would be to address the insufficient transition planning by the DoD for phase III awards to phase II successes. Raising the visibility of these successes by the program offices will be key to ensuring successful capabilities make it into the hands of the right people. The DoD could also work with SBA to increase award ceilings and project timelines for SBIR and other offices to ensure technologies are developed enough for a program office to pick it up, and to support transition of successful projects into a program of record leveraging the existing programming and budgeting process.

### Way Forward

The Commission is considering a range of recommendations to amend the way the Department programs and budgets. Section V of this Interim Report describes additional challenges with DoD's ability to adapt to late-developing information or changed circumstances in a timely manner, and recommends actions that can be taken now, potential recommendations requiring stakeholder feedback, and additional issues under consideration which overlap with many of the challenges described above.

For the purposes of this section, the Final Report will expand on other agile programming and budgeting efforts, assess their merits, and include specific recommendations on how to insert more agility in the PPBE process to meet operational needs.

**E. A review of the frequency and sufficiency of budget and program execution analysis, to include any existing data analytics tools and any suggested improvements.**

As required by the law that established it, the Commission has examined program and budget execution along with new approaches to these tasks. This section of the report deals with both these topics. Both the P/B staff in Comptroller and CAPE staff analyze budget execution and use execution data in support of their roles in the PPBE process.

**The Office of CAPE.** For its programming and planning responsibilities, CAPE uses budget and program execution data when developing analysis and options for the annual Program Review, conducting strategic and operational analysis during the planning phase of PPBE, and supporting other decisions as required. For example, analysis of prior execution, execution of analogous programs, or historical cost data may inform funding and schedule options CAPE develops for program issues, and characterization of risk. The CAPE staff works with the USD(C) and the Services to get budget execution data and manages cost data in the Cost Analysis deputate. The CAPE also uses data on the strategic, operational, or performance outcomes of program execution in its analysis. Examples include data on deployments, readiness, maintenance, and acquisition programs. Such data comes from a wide variety of sources, such as the Joint Forces Activities Dataset that provides historical deployment data, the quarterly apportionment tables The Joint Staff produces for global force management, or Defense Acquisition Executive Summary reports and Selected Acquisition Reports for weapons programs.

The CAPE staff manages a centralized repository of programming and related data through its Defense Resources Data Warehouse and with the Joint Staff, maintains centralized repositories of data for strategic and operational analysis on the Joint Data Support site. As needed, CAPE requests data from the Services and other DoD Components. For much of CAPE's analysis of systems for high end combat, real world data on performance under intended use conditions does not exist, thus requiring extensive use of modeling. Models range from custom models CAPE analysts build for specific problems, to longstanding contracted modeling tools used widely in DoD. Examples of models CAPE uses include the Synthetic Theater Operations Research Model, which is a campaign simulation model and the Analysis of Mobility Platforms, which models deployment and distribution of forces and logistics.

For cost estimation in support of the acquisition process, CAPE's Cost Analysis deputate extensively collects and uses actual cost data as inputs. This includes the Cost Assessment Data Enterprise (CADE) system, which collects actual cost information directly from internal contractor business systems, curates the

data for cost estimates, and stores the data for the DoD cost community; CADE contains seven terabytes of data on some 850 weapon system programs and has over 3,000 government and industry users.  The CAPE is also developing the Enterprise Visibility and Management of Operating and Support Cost system, a network-based, enterprise-level data system for operating and support cost information.

Keeping pace with developments of new analytic software and updating existing software in support of execution and program analysis has been a challenge for DoD's IT infrastructure, especially for classified networks.

**The OUSD(C) P/B organization.**  Each budget analyst has a portfolio of appropriations and accounts that they are responsible for monitoring and analyzing.  The primary source of data to monitor budget execution is the accounting data produced by the DFAS based on input from organizations across the entire Department.  A variety of budget analytic tools (i.e., trend analysis, cost analysis, etc.) and information are used to assess the execution of the wide range of Defense programs.  There has been a focus in recent years on the use of modern data analytics tools to improve the quality of budget execution assessments.  Budget execution is monitored on a monthly basis to identify potential problems as early as possible.  For example, the accounting data can be used to ascertain whether planned events such as acquisition contract awards have occurred as planned.

The major event in the execution cycle is the mid-year review, which is normally conducted in the April-June time frame.  Each DoD Component conducts its own mid-year review for the accounts under their purview, and the P/B staff conducts an independent review of all DoD accounts.  The goal of this review is to ascertain which programs and efforts are executing as planned and expected; identify programs that appear to be overspending plans; and to focus attention on underperforming programs.  This review then results in the Omnibus reprogramming action, statutorily due to Congress by June 30th each year, that requests realignment of resources in order to balance the Defense program for the remainder of the fiscal year.  Decisions are made to add funds to programs that need additional resources and identify billpayers from underperforming or lower priority programs to cover those costs.  A recent example in FY 2022 was the need to reprogram funds to cover higher than budgeted fuel costs.

**Data analytics.**  Data analytics is a tool that already has and should continue to improve program and budget execution analysis. A centerpiece of the current effort is the Advana data analytics platform, a data collection and reporting solution that is intended to be the one-stop system for the analysis of budget execution performance.  The Advana platform currently provides reporting

capabilities, including a journal voucher reconciliation tool to promote full accounting transparency. The USD(C) has developed and implemented an Advana-supported dashboard that provides customized reports that can track budget data from budget preparation through budget execution and has the capability to provide trend analysis at the appropriation level as well as the BLI level.

The Advana platform includes a Spend Plan Module that identifies spend plan variances. The intent is for Advana to provide budget analytic tools that can reduce the need for manual data calls and improve financial visibility while also reducing the workload on related management and staff. With the tools, analysts can focus more on the analysis instead of working to compile and then display that data; these tools and capabilities are continuing to grow. The Advana platform also has the capability to conduct an automated mid-year review. This should allow for easier assessment of performance across the entire enterprise, which will also ease workload requirements. The USD(C) has also implemented a daily Defense Working Capital Fund cash dashboard, which provides transactional data at the business activity level to help identify possible execution issues earlier in the review cycle.

An example of the advantages Advana brings to data analytics is its use in managing the financial management of on-going assistance to the Ukraine. All the same, the USD(C) leadership acknowledges more evolution in the development of Advana's capabilities is needed. The Advana platform is heavily dependent on the quality of the accounting data that feeds it. Historically that has been problematic; however, the Services and DoD Components have taken great strides to improve the data, which is a significant improvement and a major step in the right direction.

**Assessment of execution reviews.** Overall, the CAPE and USD(C) staff perform their duties well in conducting program and budget reviews and using the results to inform and adjust the final OSD POM and PB submissions. However, there has been criticism that analytical capability has waned in recent years, which is largely due to decreases in manpower and limited timeframes to accomplish tasks. The requested increase to CAPE should significantly improve capability for joint strategic analysis and analytic decision support for DoD growth areas. The USD(C) P/B organization needs to widen its aperture for recruiting and consider offering incentives to recruit and retain personnel.

The Commission concluded that the continued development and use of tools like Advana will aid with speeding up the reviews and ultimately improve decision making. In addition to the OSD level execution reviews that are the specific focus of this section, it is worth noting that the Services and DoD Components conduct their own internal program and budget execution

reviews from the lowest echelon (monthly) to higher headquarters (quarterly). They then use the resulting information to finalize their POM and BES submissions to OSD.

## F. Case Studies on Other Federal Agencies and Countries

As required by Section 1004 of the NDAA for FY 2022, the Commission was directed to conduct "a comparison of the PPBE process of the DoD with similar processes of private industry, other Federal agencies, and other countries and a review of budgeting methodologies and strategies of near-peer competitors to understand if and how such competitors can address current and future threats more or less successfully than the United States." [90] The Commission contracted with the RAND Corporation to support this area of research and highlights of the findings are summarized in the sections that follow; RAND's full analysis and detailed findings will be published and released in separate report.

**Looking at other selected Federal Agencies.** For comparison of DoD's resourcing process to other federal agencies, the Commission had the RAND Corporation focus on the DHS, the HHS, the NASA, and the ODNI for its Interim Report. The Commission has since requested that the RAND Corporation look at additional non-DoD federal agencies, to include the VA and the Department of Energy's (DOE) NNSA. The analysis of these additional Federal agencies will be included in the Commission's Final Report.

The RAND Corporation research found that other U.S. government agencies originally looked to the DoD's PPBE process as a model for planning and resource allocation decision-making within their own systems. This was the case with NASA's PPBE process, ODNI's Intelligence PPBE (IPPBE) process, DHS's PPBE process, and HHS's budget process.[91] Their respective budget processes; however, have evolved differently since then and in accordance with each agency's missions, organizational structures, authorities, staff capacities, available resources, and many other factors. While the processes may vary by agency, they all fall within the same system of governance for appropriations and oversight as the DoD. The systems that these agencies are employing have both strengths and weaknesses as well as opportunities to apply lessons learned and best practices that could be of benefit to the DoD. Key examples of these opportunities include some flexibilities not currently available to the DoD, clear emphases on performance and evaluation, and consolidated IT systems.

Each agency has different flexibilities, either by design of their budget structure, or how it is appropriated by Congress. For example, NASA derives part of its flexibility by arranging appropriations by mission, theme, and specific

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[90] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, 2023
[91] Ibid.

programs instead of by appropriation categories of RDT&E, Procurement, and O&M.[92]   Also, since all of NASA's funds, except construction, are two-year funding appropriations, this helps NASA avoid the "use it or lose it" mentality of one-year funding availability, which also provides stability during uncertain times.

The HHS also derives agility through multi-year and no-year appropriations. "Discretionary HHS funds are overwhelmingly budgeted annually, but some discretionary programs receive multiyear or no-year appropriations…other major sources of multiyear and no-year discretionary funds are supplemental appropriations, which have different obligation periods depending on congressional intent and whether Congress has identified a dedicated purpose for the funds".[93] The HHS has also been provided with a Non-Recurring Expenses Fund (NEF) by Congress as a mechanism for more efficient obligations and to address department-wide technology and infrastructure needs.  The NEF allows HHS to take expired, unobligated funds and reallocate them to a department-wide capital investment account, but they may not be used for their original purpose.

The DHS has flexibility with carryover of 50 percent of unobligated balances of some annual appropriations.  This allows for obligations to be made through the end of the subsequent fiscal year.[94]

While each mechanism is different in nature, these flexibilities allow each agency to respond to needs within their organizations more efficiently and effectively.  These mechanisms also provide a higher level of budget certainty, especially under periods of CRs, which have become the norm over the past decade.

Both the ODNI and the DHS have, in their respective evolutions of PPBE, instituted a robust performance and evaluation process, with the former substituting evaluation instead of execution for the "E" in PPBE.  Both use the evaluations to inform other phases within their process.  The ODNI focuses on continuous evaluation across their enterprise and employs many tools in the process:

1. Strategic Evaluation Reports - independent evaluations of prior major issue decisions and intelligence investments to assess their effectiveness relative to expected outcomes, success measures, prior investments, cost benefits, and potential utility;

2. Budget and Performance Reports - assessments of Intelligence Community (IC)-wide budget, performance, and execution measures to enable performance-based budget decisions;

3. National Intelligence Strategy (NIS) Progress Assessment - an assessment of IC progress towards achieving the goals and objectives of the NIS to

[92] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 3, 2023
[93] Ibid.
[94] Ibid.

inform decisions and products in each phase of the IPPBE System; and

4. IC Strategic Assessment - an annual assessment of the implications for the IC of policy and strategy changes, long-term trends, and alternative future challenges to inform decisions and products in each phase of the IPPBE System.[95]

The DHS develops metrics for program assessment during the planning and programming phases in conjunction with their multiple components who provide quarterly reports detailing progress toward these performance goals. The components' strategic and performance assessments are intended to inform the following year's annual budget.[96] Each of these agencies are using a system that clearly ties and assesses the budget to their strategy and uses the performance metrics, as available, to help drive the decision-making within their respective resourcing systems.

The ODNI and the DHS are also utilizing consolidated IT systems to help manage the planning and programming phases. The ODNI leverages their Intelligence Resource Information System (IRIS), that while not directly interfaced across the multiple agencies, provides one common picture of the National Intelligence Program (NIP). The ODNI CFO manages IRIS to monitor budget inputs and conduct analyses, which automates information and reduces the need for manual inputs and data calls. The ODNI is currently building and testing the next generation of IRIS to replace an aging system that is not as powerful a tool as it could be.[97]

The DHS has launched their PPBE One Number system based upon a COTS product. This system was first rolled out at the DHS level and subsequently, most of the components within DHS have begun or completed migration to using this system. "The PPBE One Number system offers the DHS a consolidated tool for budget formulation, performance management, and monthly obligation planning while eliminating disparate tools and the need to reenter data into multiple systems and spreadsheets."[98] The DHS is also incorporating execution into One Number in order to better inform decision-making to ensure a more robust feedback loop is incorporated to improve and inform the next planning and programming cycle. Based on its overall analysis of DoD and non-DoD agencies, the RAND analysis found that "consolidated resource management information systems could improve visibility across the federated structures of government agencies." The RAND analysis further concluded, "DoD should examine the feasibility of implementing a consolidated PPBE information system and whether the benefits of doing so would outweigh the costs."[99]

[95] ODNI, ICD-116 INTELLIGENCE PLANNING, PROGRAMMING, BUDGETING, AND EVALUATION, 2011
[96] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 3, 2023
[97] Ibid.
[98] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 3, 2023
[99] Ibid.

**Looking at China and Russia.** The Commission contracted with the RAND Corporation, to provide case study analysis of the defense budgeting processes of both China and Russia, the U.S.'s two principal strategic competitors in terms of size of military forces and size of defense budget.

Both China and Russia have authoritarian political systems which give leaders the power to decide how much to spend on their armed forces and which programs to invest in with minimal legal oversight. What political incentives and constraints the leadership in these systems respond to is not readily apparent to external observers. However, the RAND Corporation found that Chinese and Russian leaders face many of the same challenges as their counterparts in Western democratic countries when it comes to resourcing their militaries. Key insights from the RAND Corporation's report focus on centralized decision-making, long-term plans with inherent flexibility, a supportive political system, the need to curb corruption, and the need for oversight.

Senior leaders in both Russia and China make top-down decisions about military priorities and resources. The centralized decision-making does not always yield the results leadership would expect. For example, the RAND Corporation found that in China's case "modernization efforts in areas such as jet engines and semiconductors have not yielded consistent outcomes". China made both national priorities and provided stable funding but still could not overcome the lack of technical expertise in the industrial base and the loss of funds to fraud, corruption and misallocation.[100] Likewise in Russia's case, "a significant increase in the defense budget for the war in Ukraine, along with the adoption of new mobilization laws, have run into limitations in industrial capacity, supply chain reliability, and the ability to call up required manpower even through conscription."[101]

Both China and Russia employ long-term plans but can make strategic changes along the way. The Chinese budgeting process focuses on investment in priority projects, which "allows for generous and consistent funding of priority projects over long periods."[102] Because the budget is always focused on long-term plans, this allows the Chinese government to spend on priority projects of high strategic value, over many years, without programs being left unresourced due to sudden cut-off or interruption of funding.[103] For flexibility during the year of execution, it allows for "lower-level managers to make decisions and adjust spending and acquisitions to better serve project needs".[104] Russia's process runs along a 10-year armaments program with three-year budgets and annual allocation of funds. However, the RAND Corporation noted in practice that the program is being updated every five years, and while this can enable flexibility and responses to technology, it can also lead to uncertainty in the defense industrial base. The war in Ukraine highlights Russia's ability to pivot to fulfill

[100] Ibid, Volume 1, 2023
[101] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 1, 2023
[102] Ibid.
[103] Ibid.
[104] Ibid.

different military procurement needs. As part of the response, Russia suspended their long-term plan and announced that it would commit more resources to the war.[105]

There is a natural friction built into the U.S. system of checks and balances between the separate branches of government which can add time and additional layers to resourcing decisions, whereas there is a lack of overt political opposition inherent in the Chinese and Russian forms of government. This allows for apparent ease of course corrections and support for the size and budget of the militaries. For Russia, this was apparent in the ability to shift resources and the mobilization of the defense industrial base to support the war in Ukraine. In China's case, historically strong economic growth has given political leaders the ability to greatly increase the People's Liberation Army's budget, and to provide stable and generous support for major modernization priorities, such as hypersonics and AI.[106] This indicates that the sheer scale of overall investment in the Chinese military over the past three decades means money is always readily available for advancing long-term strategic and modernization investments—without fear of political opposition or pushback.

The RAND Corporation research also found lots of problems with the Chinese and Russian budgeting systems. Both China and Russia have terrible records in dealing with corruption or ensuring the kind of transparency and quality control that is an important part of the execution phase of PPBE. As the RAND Corporation's analysis highlights, "The power dynamics and the structures of decision-making in these countries [i.e., Russia and China] provide limited guardrails for ensuring efficiency, effectiveness, or oversight of investments."[107] Chinese budgeting processes in particular are subject to favoritism and outright bribery, while state-owned enterprises are free to operate wastefully and inefficiently. In Russia, corruption and cronyism is all-pervasive. Reformers in both China and Russia have aimed to increase Western-style oversight over the budget and resource allocation process, with very limited success. In Russia's case, while funding is allocated annually in theory under the three-year budgeting outlay according to fiscally conservative principles, in practice there are few safeguards, little oversight, and meager quality control. Russia, however, even in relation to their military budgets are fiscally conservative at the federal level, avoiding deficits and engaging in little foreign borrowing.

Overall, the RAND Corporation concluded the U.S., Chinese, and Russian systems are so different in their political, economic, and cultural underpinnings, that the lessons to be learned for PPBE reform are few and far between. Considering these differences, there are two takeaways from China: "(1) finding ways to ensure sustained, consistent funding for priority projects over many years, and (2) delegating more authority and granting greater flexibility

[105]Ibid.
[106] ibid.
[107] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 1, 2023

to project and program managers, without compromising accountability, so that they can make changes to stay in alignment with guidance as technologies and programs advance."[108] Both points are consistent with what the Commission has heard from interviews and input from stakeholders within the U.S. DoD PPBE system. Both the DoD and the U.S. defense industrial base desire stability of budgets over multiple years in order to reduce risk for their priority programs. Program managers and PEOs, alike, have asked for increased flexibility to make the changes necessary to ensure budgets align with the strategy, to incorporate the newest technologies in their programs, and to adjust to unplanned or emergent requirements during the year of execution. The United States would surely not want to implement these improvements to PPBE by imitating the Chinese or Russian governmental systems, but they should look for other ways to garner the benefits of stability and flexibility.

**Looking at Other Countries.** The Commission also asked the RAND Corporation to provide case study analyses of the defense budgeting processes of a select list of allied and partner nations. For the Interim Report, the RAND Corporation focused on Australia, Canada, and the United Kingdom (UK). The Commission has since requested that the RAND Corporation look at additional allied and partner nations, including France, Germany, Sweden, Japan, and Singapore. The analysis of these additional countries will be included in the Commission's Final Report.

Unlike China and Russia, Australia, Canada, and the UK have shared Western democratic values with the U.S. As with the U.S., each country struggles to balance the needs of:

- Keeping pace with strategic threats,
- Executing longer-term plans,
- Employing deliberation processes with sufficient oversight,
- Encouraging innovation.[109]

The U.S. and its allies also enjoy convergent strategic visions. Accelerating DoD's agility in resource allocation would benefit allied and partner nations, as well.

Taken as a group, the Australian, Canadian, and British parliamentary political systems shape the roles and contours of resource planning in similar ways. In all three countries, for example, the Executive Branch is directly responsible to the Parliament for its power of the purse, which greatly reduces political friction over appropriations. Largely as a result, Australia, Canada, and the UK have less legislative intervention in budgeting processes, compared to the U.S. For example, "Canada's government is never at risk of a shutdown due to funding lapses," they have mechanisms in place that allow them to either

[108] Ibid.
[109] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 2, 2023

continue with prior year funding levels or if a government falls and an election is called before a budget is passed, special warrants can be issued, which are for Treasury Board and Cabinet approval but not House of Commons approval. These warrants cover normal operations, ongoing programs, and contractual obligations.[110] Australia institutes what is known as a "double dissolution". This can occur when a budget (or any) bill is presented by the House and is rejected twice by the Senate; this leads to a dissolution of the government and new elections are called. Likewise, parliamentary intervention in the specifics of the Ministry of Defence's (MoD) budget, or delaying budget approval, is largely unknown in the UK.[111] In addition, Australian, Canadian, and UK resource management systems are freer from partisan interference than in the U.S.[112]

Australia, Canada, and the UK also put a higher priority on budget predictability and stability than on agility. Australia's Department of Defence is assured of sustained funding for four years and plans investments as far out as 20 years. The UK MoD programs are normally guaranteed funding for three to five years, with estimates stretching out to ten years. In contrast, the U.S. Congress must revisit and vote on DoD's entire budget every year.

"Despite the common emphasis on stability," the RAND Corporation notes, "each [Partner Nation] system also provides some budget flexibility to address unanticipated changes."[113] The Australian Parliament can boost the defense budget in periods of national emergency or overseas military operations; in Canada's case, regular supplemental parliamentary spending helps to close unforeseen Department of National Defence (DND) funding gaps. The UK MoD has mechanisms (e.g., a virement process) for moving money between accounts and accessing additional funds within the same fiscal year.

An important mechanism for enhancing strategic convergence between the U.S. and its allies has been the U.S. Foreign Military Sales (FMS) program. Australia, Canada, and the UK rely on FMS to promote strategic convergence, as well as interconnectedness and interoperability. The RAND analysis found that one downside to this reliance is that exchange rate volatility can require budget adjustments.[114] Another downside is that relying on U.S. strategic guidance reduces the ability for allied countries to act independently and flexibly to perceived threats, in ways that could also relieve the U.S.'s own strategic burden.

[110] Ibid.
[111] Ibid.
[112] Ibid.
[113] RAND, Planning, Programming, Budgeting and Execution in Comparative Organizations, Volume 2, 2023
[114] Ibid.

"Jointness" in resource planning also appears to be easier in Australia, Canada, and the UK given the smaller size of their militaries. In each country, there is a greater level of joint financial governance than in the U.S., with less focus on meeting service-centric views and more focus on cross-governmental mechanisms and joint funds.

In recent years, all four countries including the U.S., have looked for ways to support agility and innovation despite the shared cultural aversion to risk. For example, after issuance of the latest Defence Strategic Review in April 2023, Australia launched the Australian Strategic Capabilities Accelerator (ASCA). The "ASCA is focused on supporting and assessing innovative defense solutions at relatively high [Technology Readiness Levels], where progression through acquisition into service has had limited success in the past. The ASCA will utilize governance arrangements to ensure that truly innovative systems can be introduced into service to enhance defense capabilities and will supersede and expand upon Australia's extant defense innovation processes and industry engagement, such as the Next Generation Technologies Fund and the Defence Innovation Hub." [115] In addition to the UK MoD's new Innovation Fund, which will "allow the department's chief scientific adviser to pursue higher-risk projects as part of the main research and development (R&D) budget," the MoD also uses "incubators, accelerators, and novel contracting practices" to foster innovation. [116] While, there is no specific, established innovation fund for Canada, their strategic plan states "exploit[ing] defense innovation" is a priority and they have been participating with the U.S. in the modernization of the North American Aerospace Defense Command (NORAD).

However, despite the push to accept additional risk as the price of increased flexibility and agility in resource allocation, the Australian, Canadian, and UK budgeting processes leave little room for experimentation or outputs outside the department bureaucracy. For example, Canada's political structure does not allow Parliament to drastically change funding for any departments, including DND, beyond what has been requested. The UK MoD's attempts at innovation have also fallen flat in the persistently risk-adverse culture.

Australia, Canada, and the UK all have independent oversight bodies for ensuring transparency, audits, or "contestability" of budgeting processes. In Australia's case it is the Australian National Audit Office, the Portfolio Budget Statement, the contestability function, and other reviews; in Canada it is the Auditor General, the Parliamentary Budget Officer, and at times the Library of Parliament; while the UK's MoD is externally vetted by the House of Commons Public Accounts Committee, National Audit Office, Comptroller, and Auditor General every year.

[115] Ibid.
[116] Ibid.

While the U.S., Australia, Canada, and the UK all have shared values and goals, there are distinct differences in the systems of government that change how each country approaches and executes the overall budgeting process for its militaries.  These allied nations have a shared interest in how the U.S. will reform the PPBE process, as many of their programs rely on FMS solutions with the U.S.  Overall, the RAND Corporation report concludes:  "The Commission on PPBE Reform will find many similarities across the U.S., Australia, Canada, and the United Kingdom, but one particular similarity that is ingrained in resource planning will be very tough to change:  The risk-averse resource planning culture across these countries will need to adapt to allow additional ways to innovate to counter threats."[117] The RAND Corporation's research results will be published separately.

[117] Ibid.

# SECTION XI - THE WAY FORWARD TO THE COMMISSION'S FINAL REPORT

To fulfill its Congressional mandate and release its Final Report in March 2024, the Commission is pursuing further research to support the five broad goals of PPBE reform as addressed throughout this Interim Report to improve: PPBE-related relationships between DoD and Congress; PPBE processes to enable innovation and adaptability; alignment of budgets to strategy; PPBE business systems and data analytics; and the capability of the DoD programming and budgeting workforce. Throughout this Interim Report there are specific potential recommendations where the Commission is looking for additional stakeholder input and needs to perform further assessment before finalizing its recommendations for the Final Report as well as actions that can be implemented as soon as feasible.

**Improve PPBE-Related Relationships Between DoD and Congress.** The Commission will continue to examine ways to restructure annual budget justification materials by assessing J-book formats for all appropriations.

**Improve PPBE Processes to Enable Innovation and Adaptability.** There are several lines of effort under consideration at this stage of the Commission's work. One is changes to the SBIR and STTR phases and dollar threshold structure to alleviate the alarming attrition rate of promising new technologies developed by smaller companies, start-ups, and scale-ups, known colloquially as the "valley of death." The Commission will also examine how organizations such as the USD(R&E), DIU, OSC, and Non-traditional Innovation Field Enterprises can further help the PPBE process move "at the speed of innovation and technology relevancy."

The Commission is considering how more systematic reforms, including major changes in color of money, budget structure, availability of appropriations, and reprogramming policies, can help to develop a more responsive, more agile, but also more robust and resilient, PPBE process.

**Improve Alignment of Budgets to Strategy.** The Commission is considering a range of potential recommendations concerning strategy to DoD budget linkage challenges, strengthening the DPG with analytics for big decisions, and further strengthening PPBE analytic support capabilities to better inform the planning process at the start.

**Improve PPBE Business Systems and Data Analytics.** The Commission and staff will continue research and analysis in the following areas relating to defense business systems: planning systems, J-book writing, AI applications, and future system and analytical tools implementation.

**Improve the Capability of the DoD Programming and Budgeting Workforce**. The Commission will continue its programming and budgeting workforce analysis by addressing these workforces in the Military Departments and Services.

**Continuing Research.**  The Commission has asked the RAND Corporation to extend its analysis and assessment of budgeting practices of additional allied countries and other U.S. federal agencies.  The MITRE Corporation will be working with the Commission to study how investments are informed today to satisfy strategic goals in the PPBE system to include making better use of portfolio reviews and leveraging new technologies and enterprise processes to inform investment planning that will deliver joint capabilities and meet DoD goals.

There are also directed topics in the Section 1004 language that will be addressed, such as the analysis of the similar processes of private industry and a review of the financial management systems of the DoD as they relate to internal controls and auditability.

As the Commission looks ahead to its Final Report, the Commission is committed to continuing to focus on driving out inefficiencies, reducing bureaucratic drag, accelerating time-to-decision, and moving toward a more Digital Age-based iterative model that will allow for the injection of innovation and change on a real-time basis across all phases of defense acquisitions and military operations.  The Commission would like to thank all the people who have supported its research to date and looks forward to continuing to engage with Congress, the DoD, and the plethora of interested stakeholders that participate in the entirety of the PPBE process to ensure our nation's defense by speeding the delivery of capability to the warfighter.

# Appendices

# APPENDIX A - COMMISSIONERS
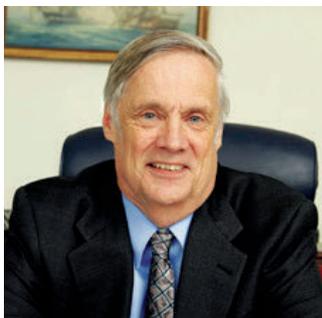


### Bob Hale - Chair

Hon. Robert Hale is a senior fellow at the Center for Strategic and International Studies and a Senior Executive Advisor at Booz Allen Hamilton. Most recently, Hale served as Comptroller and Chief Financial Officer at the Department of Defense. Hale also served as the Assistant Secretary of the Air Force (Financial Management and Comptroller). He spent 12 years at the Congressional Budget Office. Early in his career, he served as a Navy officer.



### Ellen Lord - Vice Chair

Hon. Ellen Lord served as the first Under Secretary of Defense for Acquisition and Sustainment from 2017-2021. Prior to her role at the Department of Defense, Lord served for more than 30 years in the automotive and defense industries, including as President and Chief Executive Officer of Textron Systems Corporation, a subsidiary of Textron Inc. from 2012-2017.



### Jonathan Burks - Commissioner

Mr. Jonathan Burks is Vice President for global public policy at Walmart. Previously, he was a partner at the Brunswick Group, the global critical issues consultancy. Burks spent nearly two decades in public service culminating in his service as the chief of staff to Speaker of the House Paul Ryan. His prior positions include advisor on budget and appropriations to Senate Republican Leader Mitch McConnell and policy director of the House Budget Committee.
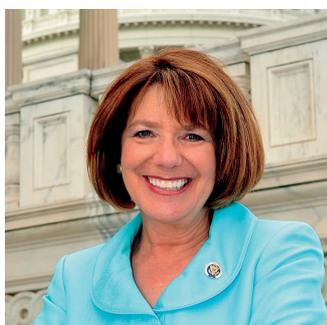


### Susan Davis - Commissioner

Hon. Susan Davis is the former U.S. Representative for California's 53rd Congressional District. During her tenure in the House of Representatives from 2001-2021, she was assigned to the United States House Armed Services Committee, where she served as the Chairperson and Ranking Member of the Subcommittee on Military Personnel from 2007-2016.

### Lisa Disbrow - Commissioner

Hon. Lisa Disbrow currently serves on the Board of Directors of Mercury Systems, BlackBerry, CACI, SparkCognition, NobleReach, the National Defense Industrial Association, and the Wounded Warrior Project. She is a Senior Fellow at the Johns Hopkins University Applied Physics Lab. Most recently, Disbrow was the 25th Under Secretary of the Air Force from Jan 2015-July 2017. She has also served as Air Force Financial Management and Comptroller and Vice Director of the Joint Staff J8 Directorate.



### Eric Fanning - Commissioner

Hon. Eric Fanning is President and Chief Executive Officer of the Aerospace Industries Association (AIA). Previously, Fanning served as the 22nd Secretary of the Army. He has also previously served as Chief of Staff to the Secretary of Defense, Acting Secretary of the Air Force and Under Secretary of the Air Force, and Deputy Under Secretary of the Navy/Deputy Chief Management Officer.



### Peter Levine - Commissioner

Hon. Peter Levine  a Senior Fellow at the Institute for Defense Analyses and Director of the Defense  Defense Management Institute.  Levine is the author of Defense Management Reform: How to Make the Pentagon Work Better and Cost Less (Stanford University Press, 2020). Levine has served as the Acting Under Secretary of Defense for Personnel and Readiness and Deputy Chief Management Officer. Levine served on the staff of the Senate Armed Services Committee from 1996-2015.



### Jamie Morin - Commissioner

Hon. Jamie Morin is Vice President of Defense Systems Operations at The Aerospace Corporation.  Morin also is executive director of the Center for Space Policy and Strategy, an adjunct professor of international relations at Georgetown University, a member of the Secretary of State's International Security Advisory Board, a member of the Board of The HALO Trust, USA, and serves as an advisor to DEFCON AI, LLC. Morin previously served as Director of Cost Assessment and Program Evaluation (CAPE) and Air Force (Financial Management and Comptroller).



### David Norquist - Commissioner

Hon. David Norquist is the President and Chief Executive Officer of the National Defense Industrial Association (NDIA). Mr. Norquist previously served as the 34th Deputy Secretary of Defense from 2019 to 2021, and the Under Secretary of Defense (Comptroller) from 2017 - 2019. Norquist served for six years with the House Appropriations Subcommittee on Defense as a professional staff member and was the first Senate-confirmed Chief Financial Officer for the Department of Homeland Security.

## Diem Salmon - Commissioner

Ms. Diem Salmon currently a Senior Director at Anduril Industries, a defense technology company, where she leads growth efforts for autonomy solutions. She is also an Adjunct Senior Fellow at the Center for New American Security (CNAS). Previously, Salmon was the Budget Director and Deputy Policy Director for the United States Senate Armed Services Committee. Salmon was also previously a Senior Policy Analyst at the Heritage Foundation and worked at the Avascent Group.

## Jennifer Santos - Commissioner

Ms. Jennifer Santos is currently the Principal Director for Strategic Initiatives at Draper. Most recently, Santos served as the naval research and development investment executive for the Department of the Navy. Previously, Santos served as the Deputy Assistant Secretary of Defense for Industrial Policy and as a professional staff member on the United States Senate Appropriations Committee Subcommittee on Defense.

## Arun Seraphin - Commissioner

Dr. Arun Seraphin is the Director of the Emerging Technologies Institute at the National Defense Industrial Association. Between 2014 and 2021, Dr. Seraphin was a Professional Staff Member with the United States Senate Committee on Armed Services. Dr. Seraphin previously served as the Principal Assistant Director for National Security and International Affairs at the White House Office of Science and Technology Policy (OSTP) and as Special Assistant for Policy Initiatives to the Director of DARPA.
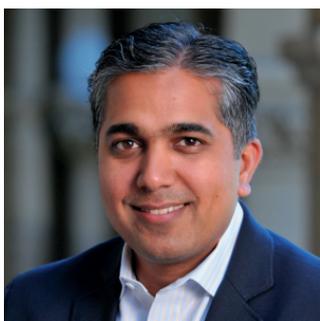
## Raj Shah - Commissioner

Mr. Raj Shah is the co-founder and chairman of Resilience, a cyber-security start-up, and managing partner for Shield Capital. Shah also serves as an F-16 pilot in the US Air Force, Air National Guard. Previously, Shah was the Director of the Pentagon's Defense Innovation Unit Experimental (DIUx). Shah was also previously senior director of strategy at Palo Alto Networks, which acquired Morta Security, where he was chief executive officer and co-founder. He also served as a consultant with McKinsey & Company.

## John Whitley - Commissioner

Hon. John Whitley served as Acting Secretary of the Army January to May 2021 and Assistant Secretary of the Army (Financial Management and Comptroller) September 2018 to May 2021. From August 2019 to May 2020, Whitley was the Acting Director of Cost Assessment and Program Evaluation (CAPE) for the Department of Defense. Prior to this role, Whitley was a Senior Fellow at the Institute for Defense Analyses.

# APPENDIX B

## COMMISSION STAFF

Lara Sayer
Executive Director

Elizabeth Bieri
Director of Research

Annie Crum
Director of Operations

Rachel Conway
Director of Outreach

Caroline Bledsoe
Senior Researcher

Dr. Greg Davis
Senior Researcher

Andrew Gallotta
Senior Researcher

Priya Harmon
Senior Researcher

Benjamin Klay
Senior Researcher

Kelle McCluskey
Senior Researcher

Brooks Minnick
Senior Researcher

Soleil Sykes
Senior Researcher

Jared Terry
Senior Researcher

Dr. Guy Weichenberg
Senior Researcher

Hannah Francis
Senior Consultant

John Roth
Senior Consultant

Dr. Arthur Hermann
Technical Writer

# APPENDIX C

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## RESEARCH PARTNERS

The Commission would like to thank Members of Congress, Congressional Staff, Department of Defense leadership and personnel, Federally Funded Research and Development Centers, University Affiliated Research Centers, industry professionals, academia, members of the public, and all others who participated in, advised on, or supported our research, highlighted on the next page.

## Industry

Science Applications International Corporation, Inc., AECOM, AAR Corporation, Exiger, Revere Federal Strategies, Govini, DecisionLens, Productable, Defense & Aerospace Competitive Intelligence Service, Definitive Logic, Catalyst Campus, Applied Intuition, Hermeus, Booz Allen Hamilton, Darkside Federal, UNISON, CSIS, Boeing, Palo Alto, PespiCo, Walmart, Parsons Corp, Lockheed Martin, Northrup Grumman, Huntington Ingalls Industries, Voyager Space,, Battelle, Ford Motor Company, Hawkeye 360, Resilience, Mercury Systems, Anduril, Palantir, Rebellion, Arete Associates, Continuum Dynamics, Corvid Technologies LLC, Critical Link LLC, Echelon Bio Sciences, EnergYnTech, First RF, FTL Labs, Indiana Microelectronics, IRFLEX Corp, Judd Systems Technologies, LOADPATH, SI2 Technologies, Spectral Sciences, Tier 1 Performance, Teqnovation LLC, Cypress International, VOXTEL, L3Harris Technolgies, CORAS, OneStream, Integrated Data Services, Raytheon, General Dynamics....and more!

## Department of Defense

- Deputy Secretary for Defense
- Secretary of the Air Force
- Under Secretary of Defense (R&E)
- Under Secretary of Defense (A&S)
- Under Secretary of Defense Policy
- Under Secretary of Defense Comptroller
- Director, CAPE
- Joint Staff
- Combatant Commands
- Military Department Comptrollers
- Service Programmers
- Service Planners
- Service Acquisition Executives
- NavalX, AFWERX, Office of Naval Research, PEO Digital, Office of Strategic Capital
- Innovation Steering Group
- PEOs and Program Managers
- Acquisition Innovation Research Center (UARC)

## Academia

- George Mason University
- Naval Postgraduate School
- Duke University
- The College of William and Mary
- University of Virginia
- Defense Acquisition University
- Stevens University

## Federally Funded Research and Development Centers (FFRDCs)

- RAND
- MITRE
- Institute for Defense Analyses
- Carnegie Mellon University Software Engineering Institute
- *More to follow*

## Broader Federal Government

- House Appropriations Committee - Full Committee and Defense Subcommittee
- Senate Appropriations Committee - Full Committee and Defense Subcommittee
- House Armed Services Committee
- Senate Armed Services Committee
- Various Members of Congress and their staff
- Government Accountability Office
- Office of Management and Budget

## Former Government Officials

- former Deputy Secretary of Defense
- former DoD Comptroller
- former Director, CAPE
- former Assistant Secretary of the Navy for Research, Development & Acquisition
- former Assistant Secretary of the Air Force for Acquisition, Technology and Logistics
- former Director, Air Force Rapid Capabilities Office
- former Commander, Air Force Materiel Command
- former Director, Defense Innovation Unit
- former Service Acquisition Executives and program managers
- former HASC, SASC, HAC-D, and SAC-D professional staff members
- former PPBE practitioners

## Associations

- American Society of Military Comptrollers
- Association for Uncrewed Vehicle Systems International
- Association of Government Accountants
- Silicon Valley Defense Group
- National Defense Industrial Association
- Federation of American Scientists/ Day One Project

## The Public

- Open Mic Session on Program Management
- Open Mic Session on Budgeting
- Open Mic Session on Valley of Death
- Open Mic Session on Programming
- Open Mic Session on Requirements
- Open Mic Session on Reprogrammings
- Social Media/Email Input

## Comparative Case Studies

- Countries: Russia, China, Australia, United Kingdom, Canada, France, Germany, Sweden, Japan, Singapore
- US Federal Agencies: Department of Homeland Security (DHS), Office of the Director of National Intelligence (ODNI), NASA, Health and Human Services (HHS), Department of Veteran Affairs, Department Of Energy's National Nuclear Security Administration

COMMISSION ON PPBE REFORM

# APPENDIX D - COMMISSION STAFF RESEARCH PAPERS

## Appendix D1 - Budget Structure

### Research Approach

This research primarily used publicly available budget data from the Under Secretary of Defense (Comptroller) (USD(C)) website, historical documents provided by the USD(C), information provided from the Department of Defense (DoD) to the Commission during meetings and open mic sessions, and government and academic reports.  Commission staff compiled data to analyze the budget structure over time, as well as to research specific case studies on Defense Advanced Research Projects Agency (DARPA), the U.S. Space Force, and the U.S. Special Operations Command (USSOCOM) to identify potential best practices or lessons learned.

Section 221 of Title 10, United States Code (U.S.C.) requires the Secretary of Defense to submit a Future Years Defense Program (FYDP) to Congress each year to cover the current fiscal year and at least the four succeeding fiscal years.  The FYDP is a mechanism to link DoD resources to strategy through three primary categories: (1) total obligation authority (allocated funding), (2) manpower (military end-strength and civilian full-time equivalent work years), and (3) forces (identified as either items of equipment or combat units).[118] These categories are further divided under 12 formal Major Force Programs (MFP), or an aggregation of the resources necessary to achieve DoD's strategic plans or objectives (see Figure 1), that include thousands of unique codes used to track and identify resources:  Operation and Maintenance (O&M) appropriations use Budget Activity (BA) (e.g., BA 01:  Operating Forces) and Sub-Activity Group.
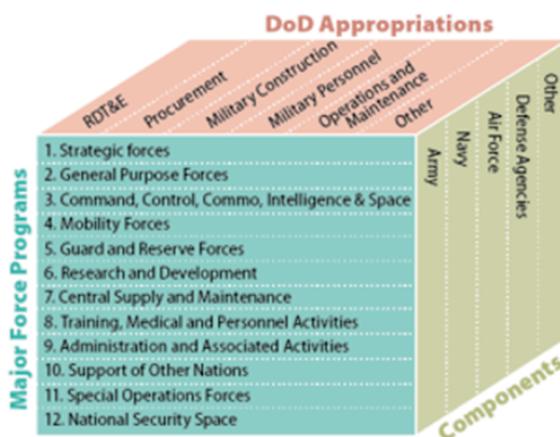


Figure 1:  Congressional Research Service (CRS) graphic based on Defense Acquisition University illustration.

[118] Brendan W. McGarry and Heidi M. Peters, IF10831 Defense Primer: Future Years Defense Program (FYDP), CRS, December 23, 2022, https://sgp.fas.org/crs/natsec/IF10831.pdf

(SAG) (e.g., SAG 131: Base Operations Support) as the budget line item (BLI); Research, Development, Test and Evaluation (RDT&E) appropriations use the program element (PE) as the BLI (see Figure 2); Procurement appropriations use the P-1 Line Number and the Line Item Title as the BLI (e.g., P-1 #4, Line Number 3484D15501 is Ground Mobility Vehicles in the U.S. Army); Military Personnel (MILPERS) appropriations use the BA and Budget Sub-Activity (BSA) as the BLI (e.g., BA 01 and BSA 005 is Pay and Allowances of Officers/Basic Pay); and Military Construction (MILCON) appropriations use the construction project number as the BLI (e.g., Construction Project 08905700 is an FY 2022 U.S. Army project for a Dining Facility at Fort Liberty, NC). This crosswalk of varied levels of control within the MFPs to military Components and appropriations allows for a multi-dimensional view of the DoD's budget structure that is organized by functional or organizational resources.
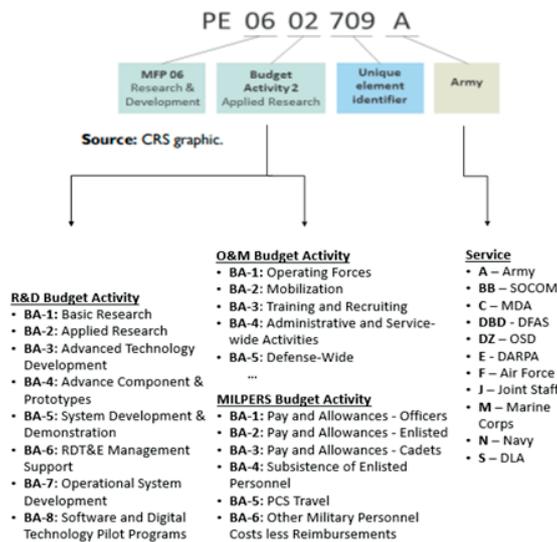


Figure 2: PE graphic based on CRS illustration.

## What We Have Heard

- The budget process is often criticized for being "not timely, not strategically aligned, not responsive, [and] not transparent." [119]
- "Transforming future concepts of operations into actionable decisions and resources requires an innovation construct that abandons the legacy lifecycle funding model where a technology moves linearly from RDT&E to Procurement, and concludes with O&M. The Department needs resource allocation mechanisms that can timely move funds to capture technology solutions and move them quickly from concept to fielded capability. This approach also forces a reevaluation of how DoD conducts oversight and management." [120]

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[119] Matt McGregor, Greg Grant, and Pete Modigliani, "Five First Steps to a Modern Defense Budgeting System," the MITRE Corporation, August 8, 2022, https://www.mitre.org/news-insights/publication/five-first-steps-modern-defense-budgeting-system
[120] Federation of American Scientists, "Next-Generation Defense Budgeting Project", April 21, 2023, https://fas.org/initiative/defense-budget/

- "Defense acquisition studies have repeatedly asserted the need to move away from program-centric stovepipes and toward portfolio-centric management… it allows organizations to adapt more quickly to changing information by making tradeoffs."[121]
- The "ultimate arbiter of the defense budget is Congress" and the defense budgeting system is a "technical approach to a political issue."[122]
- Former Secretary of Defense James Mattis – "To keep pace with our times, the Department will transition to a culture of performance and affordability that operates at the speed of relevance."[123]
- "I think it is most beneficial for "the Program Executive Officers [to have] the overall budget line for their program;" "gives the ability to reallocate funding without having to ask for permission, but [I] also understand the need to be transparent with what you are doing."[124]
- "[We] need to re-baseline to the Commander's intent" during the year of execution; "lose strategic linkage in year of execution in budget space;" should be doing outcome-based budgeting."[125]
- "[We] need predictability and stability in [the] budget process."[126]
- Need congressional support for what DoD is trying to achieve and how we need to do that – have been trying to link the changes in the budget to achieving strategy and showing members how a "cut" here can be followed with an "increase" later for things that are changing in their districts.[127]
- Identify where the budget can be restructured. Idea of establishing BLIs for upgrades of capabilities – this has been done to an extent, but not consistently across the DoD.[128]
- Weapon systems acquisition, science and technology (S&T), two-year budgeting requirements hinders labs, in particular; "Innovative disruptors."[129]
- PE consolidation has the potential to significantly mitigate many of the hassles. Can we reduce reprogramming needs? Endorse radical transparency. Maybe formulate the budget in a central system. Multiple lags in the FYDP database (multiple echelons). We don't adjust quickly enough with Congressional marks and other changes.[130]
- Shift from programs of record to capabilities of need; capability-based programming. Too many BLIs. We need a more fluid budget process [that is] more responsive to operational needs. You have to wait two years before you can do anything new unless the budget lines have some level of flexibility."[131]

[121] Eric Lofgren, "The DoD Budget Process: The Next Frontier of Acquisition Reform",
July 29, 2020, https://business.gmu.edu/news/2021-10/no-5-dod-budget-process-next-frontier-acquisition-reform
[122] Frederico Bartels, "Improving Defense Resourcing: Recommendations for the Commission on Planning, Programming, Budgeting, and Execution Reform", March 24, 2022, https://www.heritage.org/defense/report/improving-defense-resourcing-recommendations-the-commission-planning-programming
[123] Transcript, "Remarks by Secretary Mattis on the National Defense Strategy", January 19, 2018,
https://www.defense.gov/News/Transcripts/Transcript/Article/1420042/remarks-by-secretary-mattis-on-the-national-defense-strategy/
[124] Commission "Open Mic" session.
[125] Commission "Open Mic" session.
[126] Commission "Open Mic" session.
[127] Commission Interview with DoD.
[128] Commission "Open Mic" session.
[129] Commission "Open Mic" session.
[130] Commission "Open Mic" session.
[131] Commission "Open Mic" session.

## Budget Structure Over Time

### RDT&E Appropriations

The RDT&E count of PEs appears to have increased slightly over time from 741 in 1999 to 934 in 2022, an increase of about 20 percent (see Figure 3). This is in comparison to an increase in the RDT&E request of $68.2 billion (not adjusted for inflation), or an increase by about 60 percent. With 2022 as an example, over $39.3 billion is requested in 197 PEs (those between $100 million -$500 million), but 555 PEs are used to defend $8.6 billion (those less than $50 million) (see Figure 4). An RDT&E PE that is less than $50 million will always be subject to the "lesser" of 20 percent for below threshold reprogrammings (BTR) (see Figure 5).

Figure 3 – RDT&E PE count for select years from 1980 to 2022.

| Size (Based on Request) | Values | Request-FY 1980 | 1985 | 1995 | 1999 | 2001 | 2010 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|
| Less than $50M | Count of PE / BLI | 615 | 604 | 437 | 552 | 476 | 474 | 548 | 544 | 555 |
|  | Sum of Request | 5,932,970 | 8,039,052 | 7,359,892 | 8,237,454 | 7,309,422 | 7,741,905 | 9,196,277 | 8,423,927 | 8,588,424 |
| Between $50M and $100M | Count of PE / BLI | 31 | 61 | 81 | 94 | 89 | 138 | 126 | 124 | 149 |
|  | Sum of Request | 2,163,631 | 4,322,765 | 5,742,421 | 6,387,520 | 6,250,631 | 9,902,596 | 8,960,623 | 8,723,699 | 10,582,040 |
| Between $100M and $500M | Count of PE / BLI | 21 | 37 | 60 | 96 | 70 | 123 | 206 | 196 | 197 |
|  | Sum of Request | 3,556,766 | 7,524,921 | 12,526,733 | 19,139,656 | 13,438,550 | 26,334,691 | 42,798,763 | 40,921,127 | 39,260,850 |
| Greater than $500M | Count of PE / BLI | 1 | 3 | 5 | 9 | 5 | 19 | 27 | 30 | 33 |
|  | Sum of Request | 670,000 | 4,725,902 | 5,563,015 | 11,628,612 | 4,885,198 | 17,308,736 | 44,949,782 | 49,832,304 | 55,167,150 |
| Total Count of PE / BLI |  | 668 | 705 | 583 | 751 | 640 | 754 | 907 | 894 | 934 |
| Total Sum of Request |  | 12,323,367 | 24,612,640 | 31,192,061 | 45,393,242 | 31,883,801 | 61,287,928 | 105,905,445 | 107,901,057 | 113,598,464 |

Figure 4: RDT&E PE count and sum of request for select years from 1980 to 2022.

| Count of PE / BLI Size (Based on Request) | Request-FY 1980 | 1985 | 1995 | 1999 | 2001 | 2010 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|
| Less than $50M | 615 | 604 | 437 | 552 | 476 | 474 | 548 | 544 | 555 |
| Between $50M and $100M | 31 | 61 | 81 | 94 | 89 | 138 | 126 | 124 | 149 |
| Between $100M and $500M | 21 | 37 | 60 | 96 | 70 | 123 | 206 | 196 | 197 |
| Greater than $500M | 1 | 3 | 5 | 9 | 5 | 19 | 27 | 30 | 33 |
| Grand Total | 668 | 705 | 583 | 751 | 640 | 754 | 907 | 894 | 934 |

Figure 5: Defense Acquisition University (DAU) graphic on RDT&E BTR threshold; amount is cumulative over entire period of obligation availability.

## Below Threshold Reprogramming

Amounts are cumulative over Entire Period of Obligation Availability

| APPRN | MAX INTO | MAX OUT | LEVEL OF CONTROL | OBL AVAIL |
|---|---|---|---|---|
| RDT&E | Lesser of + $10 M or + 20% | Lesser of - $10 M or - 20% | Program Element | 2 Years |
| PROC | Lesser of + $10 M or + 20% | Lesser of - $10 M or - 20% | Line Item | 3 years SCN: 5 Years |
| O&M | + $10 M | - $10 M | Budget Activity (or Defense Agency) Some Sub-Activity Limitations on Decreases (see reference below) | 1 Year |
| MILPERS | + $10 M | - $10 M | Budget Activity | 1 Year |
| MILCON | Lesser of + $2 M + 25% | No Specific Congressional Restriction | Project | 5 Years |

Reference Sources: DoDFMR 7000.14-R, Volume 3, Chapter 6 (Sept 2015) and Chapter 7 (Mar 2011)
USD(C) Policy Memo Subject: DD1414 Base for Reprograming Action, Submission date 9 Jan 2020

## Procurement Appropriations

The number of P-1 line items appears to have remained steady over time relative to the growth in requested Procurement funds (not adjusted for inflation) (see Figure 6). A P-1 line item less than $50 million will always be subject to the lesser of 20 percent for BTRs. It appears that the Department has reduced smaller line items over time, and that between 2001 and 2010, there was growth primarily in larger BLIs (greater than $50 million) (see Figure 7).

Figure 6: Procurement P-1 line-item sum of request for select years from 1975 to 2022.

| Sum of ABS Value of Request | Request FY | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Size (Based on Request) | 1975 | 1980 | 1985 | 1995 | 1999 | 2001 | 2010 | 2020 | 2021 | 2022 |
| Less than $50M | 101,327 | 285,035 | 483,098 | 173,013 | 8,340,054 | 8,822,007 | 8,733,158 | 8,835,887 | 8,697,686 | 8,386,269 |
| Between $50M and $100M | 2,184,660 | 4,190,834 | 6,613,349 | 4,819,039 | 6,073,402 | 5,798,202 | 11,191,326 | 10,234,677 | 10,305,752 | 9,746,360 |
| Between $100M and $500M | 8,437,817 | 9,304,259 | 29,985,075 | 14,231,324 | 14,159,266 | 18,829,702 | 39,107,765 | 41,314,246 | 40,697,833 | 38,522,598 |
| Greater than $500M | 6,786,078 | 17,552,442 | 55,202,177 | 20,920,295 | 24,225,063 | 32,975,064 | 61,878,122 | 107,723,582 | 97,342,604 | 73,571,531 |
| Grand Total | 17,509,882 | 31,332,570 | 92,283,699 | 40,143,671 | 52,797,785 | 66,424,975 | 120,910,371 | 168,108,392 | 157,043,875 | 130,226,758 |

Figure 7: Procurement P-1 line-item count for select years from 1975 to 2022.

| Count of Line Item | Request FY | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Size (Based on Request) | 1975 | 1980 | 1985 | 1995 | 1999 | 2001 | 2010 | 2020 | 2021 | 2022 |
| Less than $50M | 16 | 20 | 27 | 7 | 751 | 695 | 520 | 516 | 509 | 479 |
| Between $50M and $100M | 30 | 56 | 97 | 70 | 84 | 81 | 155 | 146 | 144 | 133 |
| Between $100M and $500M | 38 | 51 | 140 | 71 | 73 | 84 | 188 | 199 | 189 | 195 |
| Greater than $500M | 8 | 18 | 36 | 11 | 18 | 18 | 50 | 57 | 59 | 56 |
| Grand Total | 92 | 145 | 300 | 159 | 926 | 878 | 913 | 918 | 901 | 863 |

## O&M Appropriations

The quantity of O&M SAGs has remained relatively constant from 2001 to 2022, increasing from 340 to 393, an increase of 13.5 percent (see Figure 8). Most of the growth appears to be in the largest category (greater than $500 million) with an increase of 63 SAGs from 2001 to 2010. This was coupled with reductions in SAGs between $10 million and $500 million (see Figure 9). The O&M appropriation maintains a $10 million BTR threshold.

Figure 8: O&M SAG count for select years from 2001 to 2022.

| Count of SAG / Budget Line Item (BLI) Title | Column Labels | | | | | |
|---|---|---|---|---|---|---|
| Row Labels | 2001 | 2010 | 2020 | 2021 | 2022 | Grand Total |
| Less than $10M | 57 | 86 | 75 | 73 | 79 | 370 |
| Between $10M and $50M | 63 | 35 | 46 | 47 | 52 | 243 |
| Between $50M and $100M | 47 | 26 | 26 | 30 | 23 | 152 |
| Between $100M and $500M | 123 | 104 | 117 | 114 | 117 | 575 |
| Greater than $500M | 50 | 113 | 119 | 121 | 122 | 525 |
| Grand Total | 340 | 364 | 383 | 385 | 393 | 1865 |

Figure 9: O&M SAG count and average request for select years from 2001 to 2022.

| | 2001 | | 2010 | | 2020 | | 2021 | | 2022 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Row Labels | Average of Request | Count of SAG / Budget Line Item (BLI) Title | Average of Request | Count of SAG / Budget Line Item (BLI) Title | Average of Request | Count of SAG / Budget Line Item (BLI) Title | Average of Request | Count of SAG / Budget Line Item (BLI) Title | Average of Request | Count of SAG / Budget Line Item (BLI) Title |
| Less than $10M | 3,076 | 57 | 1,768 | 86 | 2,220 | 75 | 2,676 | 73 | 2,206 | 79 |
| Between $10M and $50M | 27,234 | 63 | 25,079 | 35 | 26,124 | 46 | 27,765 | 47 | 27,815 | 52 |
| Between $50M and $100M | 71,966 | 47 | 74,070 | 26 | 69,236 | 26 | 70,456 | 30 | 73,707 | 23 |
| Between $100M and $500M | 254,695 | 123 | 252,357 | 104 | 254,333 | 117 | 252,342 | 114 | 254,294 | 117 |
| Greater than $500M | 1,448,869 | 50 | 2,435,238 | 113 | 2,184,102 | 119 | 2,121,423 | 121 | 2,110,205 | 122 |
| Grand Total | 320,719 | 340 | 836,216 | 364 | 764,578 | 383 | 750,840 | 385 | 739,220 | 393 |

## MILPERS Appropriations

There appears to be very little movement in MILPERS BAs over the last decade (see Figures 10 and 11). The MILPERS appropriations maintain a $10 million BTR threshold.

Figure 10: MILPERS BA count for select years from 2010 to 2022.

| Row Labels | 2010 Budget Activity | 2010 Requested Amount | 2020 Budget Activity | 2020 Requested Amount | 2021 Budget Activity | 2021 Requested Amount | 2022 Budget Activity | 2022 Requested Amount |
|---|---|---|---|---|---|---|---|---|
| Less than $10M | 44 | 128,125 | 53 | 151,784 | 54 | 161,449 | 51 | 135,031 |
| Between $10M and $50M | 38 | 1,110,988 | 36 | 932,188 | 37 | 1,010,515 | 38 | 1,082,467 |
| Between $50M and $100M | 26 | 1,743,847 | 33 | 2,368,351 | 30 | 2,270,025 | 27 | 1,983,424 |
| Between $100M and $500M | 66 | 15,765,039 | 62 | 15,334,251 | 62 | 15,966,321 | 65 | 16,091,392 |
| Greater than $500M | 57 | 131,810,185 | 56 | 138,256,966 | 56 | 145,296,389 | 57 | 149,265,395 |
| Grand Total | 231 | 150,558,184 | 240 | 157,043,540 | 239 | 164,704,699 | 238 | 168,557,709 |

Figure 11: MILPERS BA count for select years from 2010 to 2022.

| Row Labels | 2010 Count of Budget Activity | 2010 Average of Requested Amount | 2020 Count of Budget Activity | 2020 Average of Requested Amount | 2021 Count of Budget Activity | 2021 Average of Requested Amount | 2022 Count of Budget Activity | 2022 Average of Requested Amount |
|---|---|---|---|---|---|---|---|---|
| Less than $10M | 44 | 2,912 | 53 | 2,864 | 54 | 2,990 | 51 | 2,648 |
| Between $10M and $50M | 38 | 29,237 | 36 | 25,894 | 37 | 27,311 | 38 | 28,486 |
| Between $50M and $100M | 26 | 67,071 | 33 | 71,768 | 30 | 75,668 | 27 | 73,460 |
| Between $100M and $500M | 66 | 238,864 | 62 | 247,327 | 62 | 257,521 | 65 | 247,560 |
| Greater than $500M | 57 | 2,312,459 | 56 | 2,468,874 | 56 | 2,594,578 | 57 | 2,618,691 |
| Grand Total | 231 | 651,767 | 240 | 654,348 | 239 | 689,141 | 238 | 708,226 |

## MILCON Appropriations

The total of MILCON project numbers has fluctuated over the last few years, with even greater fluctuations the further back you look at the data. This is more indicative of the DoD's investment in construction than the budget structure (see Figure 12). The MILCON appropriation is subject to a BTR of the lesser of $6 million or 25 percent of the funded amount, whichever is less.

Figure 12: MILCON project number count for select years from 2018 to 2022.

| Row Labels | 2018_2018 | 2019_2019 | 2020_2020 | 2021_2021 | 2022_2022 |
|---|---|---|---|---|---|
| AF | 135 | 92 | 68 | 42 | 82 |
| ARMY | 95 | 70 | 64 | 52 | 51 |
| DEFW | 8 | 9 | 8 | 7 | 7 |
| DHA | 16 | 5 | 8 | 5 | 10 |
| DIA | 4 | 3 | 3 | 3 | 4 |
| DISA | 1 | 1 | | 1 | |
| DLA | 20 | 20 | 12 | 9 | 7 |
| DODEA | 7 | 6 | 4 | 4 | 5 |
| DTRA | | | | 1 | |
| MDA | 2 | 4 | 2 | 2 | 1 |
| NAVY | 67 | 78 | 57 | 49 | 48 |
| NGA | 1 | 2 | 1 | 1 | |
| NSA | 9 | 8 | 8 | 6 | 10 |
| OSD | 1 | | | | |
| SOCOM | 28 | 24 | 17 | 12 | 7 |
| TJS | 1 | 1 | 1 | 1 | 2 |
| WHS | 4 | 3 | 4 | | 4 |
| Grand Total | 399 | 326 | 257 | 195 | 238 |

**Portfolio Budgeting**

A common theme brought up across academic reports, in congressional comments, and the Commission's open mic sessions was a desire to move toward portfolio budgeting to increase flexibility, though each of these sources lacked consensus of what portfolio budgeting or flexibility actually means. Former Rep. William Thornberry (R-Texas) summarized the National Security Commission on Artificial Intelligence's (AI) recommendation to develop a pilot program to test the portfolio management approach of "managing similar programs and system as a group, instead of individually, to accelerate more prototyping, development, and integration of new technologies such as AI."[132] The Heritage Foundation also recommended pilot programs to give the DoD "more flexibility in those portfolios and programs where turbulence and change are more common."[133] The Section 809 Panel's 2018-2019 reports described a need to transition from "a program-centric execution model to a portfolio execution model."[134] The 2008 DoD Directive 7045.20, 'Capability Portfolio Management' directs the DoD to:

"Use capability portfolio management to advise the Deputy Secretary of Defense and the Heads of the DoD Components on how to optimize capability investments across the defense enterprise (both materiel and non-materiel) and minimize risk in meeting the Department's capability needs in support of strategy."[135]

While many organizations from DARPA to the U.S. Space Force have successfully adopted variations of portfolio management, it has yet to be implemented wide scale across the DoD.

**Budget Example:  DARPA's S&T Portfolio**

The DARPA is a DoD research and development organization that develops innovative technologies for the warfighter and national security.[136]  Established in February of 1958,[137] the FY 2024 President's Budget (PB) request for DARPA is $4.4 billion with a FY 2023 enacted budget of $4.1 billion.[138] All of DARPA's funding falls within the RDT&E appropriation, specifically within the BAs of Basic Research (BA 6.1), Applied Research (BA 6.2), and Advanced Technology Development (BA 6.3) (see Figure 13), which are further divided into 17 PEs.

[132] Former Rep. William "Mac" Thornberry, "How Congress must reform its budget process to compete against China in AI", June 25, 2021, https://thehill.com/blogs/congress-blog/economy-budget/560345-how-congress-must-reform-its-budget-process-to-compete/
[133] Frederico Bartels, "Improving Defense Resourcing: Recommendations for the Commission on Planning, Programming, Budgeting, and Execution Reform", March 24, 2022, https://www.heritage.org/defense/report/improving-defense-resourcing-recommendations-the-commission-planning-programming
[134] "Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations", January, 2019, https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume3/Sec809Panel_Vol3-Report_Jan2019_part-1_0509.pdf
[135] DoD Directive 7045.20, Capability Portfolio Management, Deputy Secretary of Defense, September 25, 2008, https://cryptome.org/dodd-7045-20.pdf
[136] "About DARPA", https://www.darpa.mil/about-us/about-darpa
[137] "The Sputnik Surprise", https://www.darpa.mil/about-us/timeline/creation-of-darpa#:~:text=Johnson%20recalled%20feeling%20on%20that,for%20defense%20at%20the%20front
[138] DARPA "Budget," https://www.darpa.mil/about-us/budget

The three BAs (6.1, 6.2, and 6.3) are typically referred to as the DoD S&T portfolio (see Figure 14). In FY 2023, the enacted DoD S&T budget was $22.5 billion, nearly double the FY 2017 level of $13.4 billion, and nearly ten times the FY 1978 level of $2.3 billion.[139] Defense S&T, in general, is of "particular interest to Congress due to its perceived value in supporting technological advantage and its importance to key private sector and academic stakeholders."[140] The DARPA's share of DoD S&T funding was approximately 17 percent in the FY 2022 enacted budget and has remained steady at between 21 percent and 25 percent from FY 2000 to FY 2021 (see Figure 15).[141]

Figure 13: DARPA RDT&E from FY 2020-2022 Budget Request.

| BudgetActivity | Budget Activity Title | PE / BLI | Program Element / Budget Line Item (BLI) Title | FY2020 | FY2021 | FY2022 |
|---|---|---|---|---|---|---|
| 01 | Basic Research | 0601101E | Defense Research Sciences | 432,284 | 479,958 | 395,781 |
| | | 0601117E | Basic Operational Medical Research Science | 54,122 | 53,730 | 76,018 |
| 02 | Applied Research | 0602115E | Biomedical Technology | 97,771 | 107,568 | 108,698 |
| | | 0602303E | Information & Communications Technology | 442,556 | 435,920 | 430,363 |
| | | 0602383E | Biological Warfare Defense | 34,588 | 26,950 | 31,421 |
| | | 0602702E | Tactical Technology | 337,602 | 233,271 | 202,515 |
| | | 0602715E | Materials and Biological Technology | 223,976 | 250,107 | 317,024 |
| | | 0602716E | Electronics Technology | 332,192 | 322,693 | 357,384 |
| 03 | Advanced Technology Developme | 0603286E | Advanced Aerospace Systems | 279,741 | 230,978 | 174,043 |
| | | 0603287E | Space Programs and Technology | 202,606 | 158,439 | 101,524 |
| | | 0603739E | Advanced Electronics Technologies | 128,616 | 95,864 | 116,716 |
| | | 0603760E | Command, Control and Communications Systems | 232,134 | 221,724 | 251,794 |
| | | 0603766E | Network-Centric Warfare Technology | 512,424 | 661,158 | 584,771 |
| | | 0603767E | Sensor Technology | 163,903 | 200,220 | 294,792 |
| 06 | Management Support | 0605001E | Mission Support | 68,498 | 74,334 | 73,145 |
| | | 0605502E | Small Business Innovative Research | - | - | - |
| | | 0605898E | Management HQ - R&D | 13,208 | 13,434 | 12,740 |
| Grand Total | | | | 3,556,221 | 3,566,348 | 3,528,729 |

Figure 14: Typically referred to by DoD as the Defense S&T portfolio.

**Table 1. DOD RDT&E Budget Activity Codes**

| Code | Description |
|---|---|
| 6.1 | Basic Research |
| 6.2 | Applied Research |
| 6.3 | Advanced Technology Development |
| 6.4 | Adv. Component Development and Prototypes |
| 6.5 | System Development and Demonstration |
| 6.6 | RDT&E Management Support |
| 6.7 | Operational Systems Development |
| 6.8 | Software and Digital Technology Pilot Programs |

**Source:** Department of Defense, *Financial Management Regulation (DoD 7000.14-R)*, Volume 2B, November 2017.

[139] John F. Sargent Jr., R45110 Defense Science and Technology Funding, CRS, February 21, 2018, https://crsreports.congress.gov/product/pdf/R/R45110
[140] Ibid.
[141] Defense Budget Materials, 2022, https://comptroller.defense.gov/Budget-Materials/, and Marcy E. Gallo, R45088 Defense Advanced Research Projects Agency: Overview and Issues for Congress, CRS, August 19, 2021, https://sgp.fas.org/crs/natsec/R45088.pdf

Figure 15:  DARPA funding as a share of DoD S&T funding; Source:  CRS Analysis of data from DoD, FY 1998-2022.
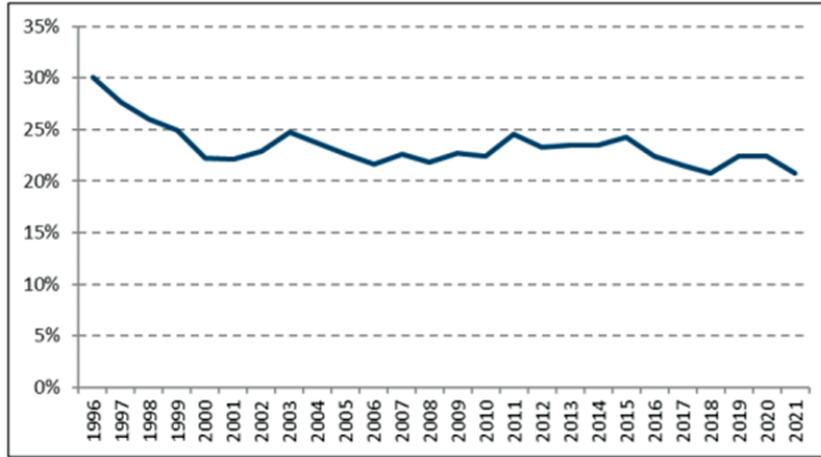


The "DARPA model" is often cited as a method to spur innovation through its research and development (R&D) investments.[142] While this may be partially attributed to DARPA's condensed budget structure, DARPA's relatively flat organization and trust with Congress are also significant factors.[143] Furthermore, DARPA's funding trends of each of the BAs has remained relatively constant over time, allowing for consistency in planning and programming assumptions (see Figures 16 and 17). The organization of DARPA's budget structure provides their program managers (PM) independence to enable and protect innovation: "within broad limits, they should also be able to reallocate and reprioritize spending within the group and among projects over time." [144]

Figure 16:  DARPA RDT&E S&T PE count and average amount ($M) by Service or Organization for FY 2020.

| Service/ Organization | Program Elements | | | Less than $50M | | Between $50M-$100M | | Between $100M-$500M | | Greater than $500M | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Count | Avg. Amount ($M) | Tot. Amount ($M) | Count | Avg. Amount ($M) | Count | Avg. Amount ($M) | Count | Avg. Amount ($M) | Count | Avg. Amount ($M) |
| Army | 50 | $73.7 | $3,686.4 | 30 | $16.0 | 11 | $76.2 | 8 | $171.5 | 1 | $995.0 |
| Navy | 25 | $87.9 | $2,355.6 | 9 | $17.7 | 8 | $65.3 | 8 | $209.3 | 0 | $0.0 |
| Air Force | 26 | $107.3 | $2,789.6 | 8 | $31.4 | 5 | $71.8 | 13 | $167.6 | 0 | $0.0 |
| DARPA | 14 | $245.9 | $3,442.8 | 1 | $31.4 | 1 | $76.0 | 11 | $250.0 | 1 | $584.8 |
| SOCOM | 2 | $69.4 | $138.2 | 1 | $44.8 | 1 | $93.4 | 0 | $0.0 | 0 | $0.0 |
| Space Force | 2 | $126.2 | $252.4 | 0 | $0.0 | 1 | $76.7 | 1 | $175.8 | 0 | $0.0 |

Figure 17:  DARPA funding by character of work, FY 1996-2021; Source:  CRS analysis of data from DoD, FY 1998-2022.
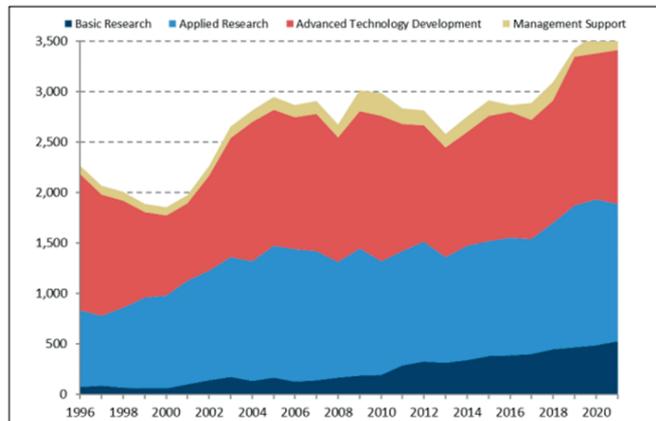
[142] Marcy E. Gallo, R45088 Defense Advanced Research Projects Agency: Overview and Issues for Congress, CRS, August 19, 2021, https://sgp.fas.org/crs/natsec/R45088.pdf
[143] Ben Reinhardt, "Why does DARPA work?," June, 2020, https://benjaminreinhardt.com/wddw
[144] Regina E. Dugan and Kaigham J. Gabriel, "'Special Forces' Innovation: How DARPA Attacks Problems," October, 2013, https://hbr.org/2013/10/special-forces-innovation-how-darpa-attacks-problems

## DARPA Research Findings

### 1. Budget Structure

The DARPA budget structure for the S&T portfolio has worked well in enabling year of execution shifts for DARPA between project-level data. They use an Enterprise Resource Planning (ERP) software that breaks down a PE by project level detail once a program is created; tracks it to the "nth degree;" and conducts a continuous optimization drill by portfolio so that funds can be realigned at a moment's notice within a portfolio, if needed. The DARPA tries to stay fluid as much as they can up until PB lock and have received support in doing so.
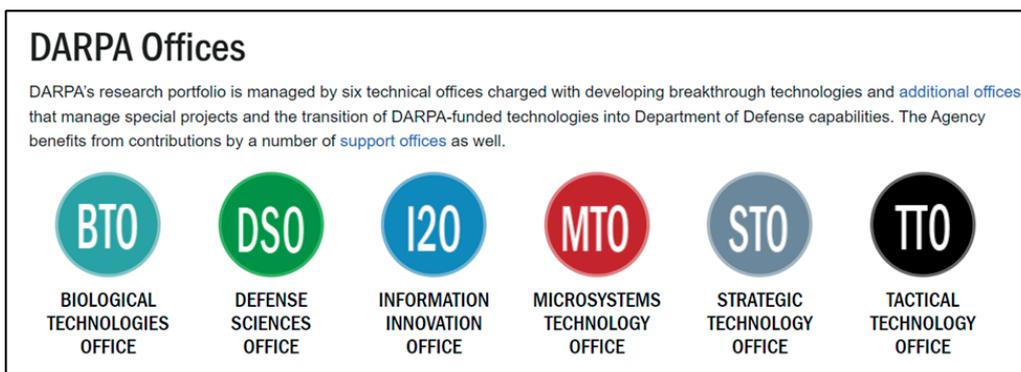
### 2. Management Structure and Culture

The DARPA PEs are aligned to the organization by structure and division (see Figure 18). The PMs with the greatest dollar amount take the lead for that category; extensive coordination is required to successfully execute this approach. There is an extensive learning environment (e.g., contracting folks have brown bags to teach how to write a performance work statement which encourages low turnover of the Associate Director PMs (AD-PMs); the AD-PMs serves as the continuity of the organization to teach the PMs (e.g., scientists that rotate in and out of academia) how to handle the DARPA culture and budget. Because of the organization's legacy and numerous job opportunities, DARPA can recruit people to come into these term positions that wouldn't otherwise work for the government and surround themselves with science and technical advisory staff to promote success. There is a mindset of constant examination and "re-innovation."

### 3. Communication with Congress

The DARPA directors historically have been effective communicators and the DARPA has built trust within the Office of the USD for Research and Engineering (R&E) to respond to congressional requests for information with autonomy. The RDT&E exhibits clearly establish movement within BAs or PEs, for example, the 6.2 exhibit will clearly state movement "from 6.2 to 6.3," while the 6.3 exhibit will clearly state movement "to 6.3 from 6.2."

Figure 18: DARPA organizational structure by technical office; Source: DARPA public website.



**DARPA Offices**

DARPA's research portfolio is managed by six technical offices charged with developing breakthrough technologies and additional offices that manage special projects and the transition of DARPA-funded technologies into Department of Defense capabilities. The Agency benefits from contributions by a number of support offices as well.

| BTO | DSO | I2O | MTO | STO | TTO |
|---|---|---|---|---|---|
| BIOLOGICAL TECHNOLOGIES OFFICE | DEFENSE SCIENCES OFFICE | INFORMATION INNOVATION OFFICE | MICROSYSTEMS TECHNOLOGY OFFICE | STRATEGIC TECHNOLOGY OFFICE | TACTICAL TECHNOLOGY OFFICE |

**Budget Example: U.S. Space Force (USSF), specifically the Space Development Agency (SDA) and Space Systems Command (SSC).**

The USSF was established in 2019 as a means to pursue "superiority in the space domain." [145] In a list of acquisition reforms submitted to Congress in 2020, then-Secretary of the U.S. Air Force Barbara Barrett requested a new space acquisition approach that "enables the USSF to rapidly leverage industry innovation to outpace space threats" through the consolidation of BLIs along mission portfolios instead of by platform. [146] At the Sea-Air-Space conference on 3 August 2021, Deputy Assistant Secretary of the Air Force for Space Acquisition and Integration Shawn Barnes further expressed a desire to manage by portfolios instead of programs of record, "instead of expecting a single platform or constellation to fulfill a mission, the Space Force should be able to pull together pieces from various organizations – the SDA, the National Reconnaissance Office and the Space Rapid Capabilities Office (SRCO), among others – to create a portfolio of capabilities for that mission," [147] also adding "it gives me some agility that I don't have when I talk about a single program of record." [148] This would, in theory, also help limit reprogramming requests to move funding between programs of similar capability, similar to how the SRCO operates to encourage rapid innovation. The USSF count of BLIs and enacted budget for FY 2021; however, painted a different picture that was not as aggressive and perhaps a compromise (see Figure 19).

Figure 19: USSF count of BLIs and sum of enacted FY 2021 funding by APPN

| Account Title | Count of Program Element / Budget Line Item (BLI) Title | Sum of FY 2021Enacted** |
|---|---|---|
| Procurement, Space Force | 17 | 2,291,892 |
| RDTE, Space Force | 46 | 10,540,069 |
| Operation & Maintenance, Space Force | 8 | 2,569,229 |
| Grand Total | 71 | 15,401,190 |

SDA Research Findings: Created in March 2019 under the USD(R&E) with a budget of about $900 million, SDA is recognized as the DoD's "constructive disruptor" for space acquisition through their motto of "Speed. Delivery. Agility." [149] They were established, much like the Missile Defense Agency or DARPA, to accelerate procurement of space capability by "rapidly deploying a threat-driven constellation of small satellites. The SDA aims to provide responsive and resilient space capabilities and support the joint force, increasing the warfighter's lethality, maneuverability, and survivability." [150] They use commercial development to deliver a "minimum viable product – on time, every two years – by employing spiral development methods." [151]

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[145] "United States Space Force History", https://www.spaceforce.mil/About-Us/About-Space-Force/History/
[146] Nathan Strout, "Space Force lays out acquisitions reforms in new report", May 21, 2020, https://www.c4isrnet.com/battlefield-tech/space/2020/05/21/space-force-lays-out-acquisitions-reforms-in-new-report/
[147] Nathan Strout, "The Space Force wants to manage acquisitions by portfolio," August 4, 2021, https://www.c4isrnet.com/battlefield-tech/space/2021/08/04/the-space-force-wants-to-manage-by-portfolio/
[148] Ibid.
[149] SDA, "Who We Are," https://www.sda.mil/
[150] Secretary of the Air Force Public Affairs, "Space Development Agency transfers to USSF," October 1, 2022, https://www.spaceforce.mil/News/Article/3176862/space-development-agency-transfers-to-ussf/
[151] SDA, "Who We Are," https://www.sda.mil/

- The SDA transferred to the USSF on 1 October 2022, as part of a planned realignment mandated by Congress in the NDAA for FY 2020. [152]
- "SDA will be key to rapidly delivering space capability to our warfighters. The SDA's proliferated low Earth orbit (LEO) constellation, as an integral part of the Space Force's force design, brings resiliency, accelerated capability delivery through spiral development, and rapid technology refresh," said Frank Calvelli, Assistant Secretary of the Air Force for Space Acquisition and Integration. "I fully support their strategy, and we will maintain their structure and culture to let them continue to move fast and do what they do best. I'm excited for this dynamic organization to join the Space Force team." [153]
- "As we transfer to the USSF, SDA looks forward to continuing our important work on the National Defense Space Architecture, which will deliver critical space-based capabilities to the joint warfighter," said Dr. Derek Tournear, Director of the SDA. "Our team is committed to carry on the same dedication to speed, delivery and agility that our agency has demonstrated in the past and we're grateful for the support of leadership to carry on our mission and maintain our values as part of the U.S. Space Force team." [154]
- As part of the USSF, SDA will report to the Assistant Secretary of the Air Force for Space Acquisition and Integration for acquisition matters and to the Chief of Space Operations for all other matters. [155]

## 1. Budget Structure

The SDA utilizes a very iterative, spiral development cycle by tranche where they have not launched the previous capability when launching planning of the next generation. The SDA is already working on the next spiral or tranche of capabilities while proving out the current one; this does not align with the linear PPBE process.

"SDA needs to be agile enough to incorporate new technologies and capabilities from the private sector within a program's lifetime through spiral development – launching new tranches of warfighting capabilities every two years, on schedule. This requires a shift away from a planning cycle that begins nearly two years before a fiscal year starts, and that locks in programs and budgets too early to accommodate the latest advances in the commercial market. The current PPBE process does not have a way to allow for capability refresh on a timeline that matches commercial innovation/agile development cycles." [156]

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[152] Secretary of the Air Force Public Affairs, "Space Development Agency transfers to USSF," October 1, 2022, https://www.spaceforce.mil/News/Article/3176862/space-development-agency-transfers-to-ussf/
[153] Ibid.
[154] Secretary of the Air Force Public Affairs, "Space Development Agency transfers to USSF," October 1, 2022, https://www.spaceforce.mil/News/Article/3176862/space-development-agency-transfers-to-ussf/
[155] Ibid.
[156] Interviews with SDA

This inherently requires 'wedges' in the outyears, which are not well served by the traditional 'PPBE' process. The SDA would benefit from a major change in the "planning and programming" portions of PPBE to encourage these spiral development cycles.

"SDA and SSC have worked together to identify major milestones/decision points where we'll have enough data about LEO and MEO [low and medium Earth orbit] tracking capabilities to help influence a decision about whether to end/replace existing legacy programs and capabilities. The discussion quickly moved to "when" we need to have those data points in order to influence the next POM process. Turns out that even with the speed at which we are getting capabilities on orbit and employing them in capability demonstrations with the warfighter, we've already missed the boat on influencing POM24, because it's being built now, and would have to have enough data by March/April 2023 in order to impact POM25. We would have to have enough data to influence a budget that starts in October 2024 by April 2023, 18 months prior to the start of FY25, if not sooner. That timeline doesn't align with the pace of innovation and commercialization we are trying to harness, and it just barely fits with our 2-year launch cycle. While there are additional opportunities to modify the POM before the budget is released to Congress, it's fairly misaligned with the Department's desire to incorporate and deploy new capabilities at the speed of industry." [157]

Through the use of commercial technology, SDA seems to have a greater ability to predict what funding will be needed in the outyears even if not well defined: "those fixed-price contracts have been reliable and proven that estimates are correct, which allows them to better predict what the outyears will look like." [158] In fact, per SDA, OSD CAPE is in the process of re-doing some of their models based on these contracts.

Through the use of portfolio management for space capability development, SDA benefits from being empowered as an organization to make cost, schedule, and technical trades throughout.

## 2. Management Structure & Culture

The SDA hosts monthly working groups at the action officer level, as well as a semi-annual 'warfighter council' at the 1-star or Senior Executive Service level that is co-chaired by the Vice Chief of Space Operations and SDA Director. The SDA has a relatively flat management structure. Each cell chief has responsibility for their specific cell. In addition, each person has direct access to the Director with the expectation that each cell chief makes decisions or strong recommendations when issues arise. "A PPBE process that can work with a spiral development approach requires a willingness to take on some risk in order to be more competitive." [159]

[157] Interviews with SDA.
[158] Interviews with SDA.
[159] Ibid.

### 3. Communication with Congress

The SDA has multiple engagements with the House and Senate professional staffs, to include quarterly briefings with up to date spend plans with "very transparent reporting to Congress."[160] Leadership makes these actions a priority and ensures to send both junior and senior leadership to these engagements.

**SSC (and more generally, Space Force) Research Findings:** The SSC, headquartered in California, is "responsible for developing, acquiring, equipping, fielding, and sustaining lethal and resilient space capabilities for war fighters.  As part of fielding, the command will be responsible for launch operations, on-orbit checkout, developmental testing, sustainment and maintenance of military satellite constellations and other Department of Defense space systems."[161]

The Next Generation Overhead Persistent Infrared (Next Gen OPIR) RDT&E program (see Figures 20, 21, and 22) used to be several smaller PEs that became one larger portfolio comprised of space, ground, and space modernization initiative programs.

Figure 20: Next Gen OPIR Budget Request by select Fiscal Year.

| Sum of Request | | Request FY | | | | |
|---|---|---|---|---|---|---|
| PE / BLI | Program Element / Budget Line Item (BLI) Title | 2019 | 2020 | 2021 | 2022 | 2023 |
| ⊟ 1206440SF | Next-Gen OPIR -- Ground | | | | | - |
| ⊟ 1206442F | Next Generation OPIR | | 1,395,278 | - | - | 148 |
| | Evolved SBIRS | 643,126 | | | | |
| ⊟ 1206442SF | Next Generation OPIR | | | 2,318,864 | 2,451,256 | 3,479,459 |
| ⊟ 1206443SF | Next-Gen OPIR -- GEO | | | | | - |
| ⊟ 1206444SF | Next-Gen OPIR -- Polar | | | | | - |
| ⊟ 0604441F | Space Based Infrared System (SBIRS) High EMD | - | | | | |
| ⊟ 1206441F | Space Based Infrared System (SBIRS) High EMD | 60,565 | | | | |
| **Grand Total** | | **703,691** | **1,395,278** | **2,318,864** | **2,451,256** | **3,479,607** |

Figure 21:  Next Gen OPIR Enactment by select Fiscal Year.

| Sum of Enacted** | | Enacted FY | | | | |
|---|---|---|---|---|---|---|
| PE / BLI | Program Element / Budget Line Item (BLI) Title | 2018 | 2019 | 2020 | 2021 | 2022 |
| ⊟ 1206440SF | Next-Gen OPIR -- Ground | | | | | 542,477 |
| ⊟ 1206442F | Next Generation OPIR | | 643,126 | 1,470,278 | - | - |
| | Evolved SBIRS | 71,018 | | | | |
| ⊟ 1206442SF | Next Generation OPIR | | | | - | 2,318,864 | 125,853 |
| ⊟ 1206443SF | Next-Gen OPIR -- GEO | | | | | 1,199,193 |
| ⊟ 1206444SF | Next-Gen OPIR -- Polar | | | | | 471,398 |
| ⊟ 0604441F | Space Based Infrared System (SBIRS) High EMD | - | | | | |
| ⊟ 1206441F | Space Based Infrared System (SBIRS) High EMD | 311,844 | | | | |
| **Grand Total** | | **382,862** | **643,126** | **1,470,278** | **2,318,864** | **2,338,921** |

[160] Ibid.
[161] "Space Systems Command (SSC) Mission Video," May 25, 2022, https://www.ssc.spaceforce.mil/About-Us/About-Space-Systems-Command

Figure 22:  Next Gen OPIR Budget Justification sample from February 2019.



For the National Security Space Launch Procurement) program (see Figure 23), there was a desire within the U.S. Air Force to consolidate the hardware and launch service together to gain flexibility.  For example, if hardware funds were leftover, they could be used to purchase fuel.  Congress requested that the line items be separated but the lines have recently been re-consolidated.  When looking into what changed, the main driver is an improved rapport with the staffers by the DoD providing greater transparency in the form of breaking out more details and including detailed contract information in staffer briefs.

Figure 23:  Next Gen OPIR Budget Justification sample from February 2019.



## Budget Example:  U.S. Special Operations Command (USSOCOM).
### RDT&E and Procurement

The USSOCOM and USD for Acquisition, Technology, and Logistics (AT&L) hosted a SOF Acquisition Summit in 2013 and again in October of 2014, with the intent of consolidating USSOCOM Procurement and RDT&E BLIs.  "The summit is a twice a year meeting between the USSOCOM and our partners in the OSD, Service acquisition offices, and other Defense Agencies so that we can synchronize acquisition, technology and logistics activities and resolve issues which are impacting USSOCOM's ability to accomplish the mission," said James Geurts, USSOCOM's former Acquisition Executive.[162]

[162] Tech. Sgt. Angelita M. Lawrence, "SOCOM hosts the SOF Acquisition Summit", November 13, 2014, https://www.socom.mil/Pages/SOCOMhoststheSOFAcquisitionSummit.aspx

The objective was to pursue consolidation to enhance funding flexibility without reducing budget information provided to OSD and Congress with the "same information-just fewer lines." A key to USSOCOM's effort was to maintain the same level of information in justification material and staffer briefs; however, to provide it in fewer BLIs. The USSOCOM began with consolidation of non-military intelligence program (MIP) BLIs with the understanding that they were interested in further consolidation opportunities for MIP lines pending successful implementation of their non-MIP restructure.

## Procurement (see Figure 24)

There were 36 BLIs that were consolidated into 26 BLIs. The USSOCOM suggested a "logical commodity grouping" of BLIs to consolidate low dollar value Procurement items into three categories:  five Warrior System BLIs; two Ordnance BLIs, and six Other BLIs less than $5 million. All intelligence lines remained unchanged and Special Access Programs (SAP) were appropriately separated from non-SAP efforts with a "minimal impact to stakeholders."

Figure 24:  USSOCOM Procurement Request by P-1 line item and relative size for select Fiscal Years.

| Organization - Normalized | Organization | Size (Based on Request) | 2010 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| Other/Defense-Wide | SOCOM | Less than $50M | 25 | 14 | 14 | 15 |
| | | Between $50M and $100M | 5 | 3 | 3 | 2 |
| | | Between $100M and $500M | 6 | 9 | 9 | 9 |
| Grand Total | | | 36 | 26 | 26 | 26 |

## RDT&E (see Figure 25)

Here, USSOCOM created "logical groupings" while keeping ties to Procurement BLIs and went from three PEs in BA-3 to one PE and from more than 20 PEs in BA-7 to 12 PEs.  All intelligence lines remained separate, and SAP is properly separated from non-SAP.  The same information was provided in justification books, just in fewer PEs.

Figure 25:  USSOCOM RDT&E Request by PE and Budget Activity for select Fiscal Years.

| Organization | BudgetActivity | Budget Activity Title | 2010 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| SOCOM | 02 | Applied Research | 1 | 1 | 1 | 1 |
| | 03 | Advanced Technology Development | | 1 | 1 | 1 |
| | | Advanced Technology Development (ATD) | 3 | | | |
| | 07 | Operational System Development | | 12 | | |
| | | Operational Systems Development | 23 | | 12 | 11 |
| Grand Total | | | 27 | 14 | 14 | 13 |

## O&M

Prior to FY 2015, the entire USSOCOM O&M budget used to be under one Budget Activity and one SAG.  Due to Congressional scrutiny on the growth of USSOCOM's budget, visibility of program funding, funding realignments in the year of execution, and being looked at more like a Service, USSOCOM was directed in the FY 2014 Appropriations Bill to create an O&M structure that contained three BAs and formally identify and justify the budget along 14 Budget Sub-Activities (BSA) beginning in the FY 2015 PB.

In accordance with Explanatory Statement accompanying the FY 2018 DoD Appropriations Act (Division C of Public Law 115-141), USSOCOM was directed to create formal O&M SAGs like the Services are structured. The end result was an O&M budget in two BAs consolidating the 14 BSAs into eight formal SAGs to better explain and defend O&M resources.

The USSOCOM did the analysis, developed the recommendations, proposed those to the OSD Comptroller, discussed the proposal and rationale, and with approval took that to the House and Senate Subcommittees on Defense and the House and Senate Armed Services Committees as a joint OSD Comptroller and USSOCOM proposal for consideration as required by law. There were conversations with each committee; discussing the rationale for this approach as well as a commitment to retaining details of the former informal BSAs. A crosswalk of the BSAs to SAGs was provided in budget justification materials so no information was lost. Discussions addressed that there might be some movements between SAGs to clean up anything that might not initially have been put in the right SAG. Based on approval from all four defense committees, the formal SAGs were implemented for the FY 2020 PB; those same SAGs are still in use today.

The USSOCOM also has separate notification reprogramming language in the Joint Explanatory Statement every year to allow for the movement of O&M funds between SAGs for more than $10 million.

**Pros and Cons of BLI Consolidation**

**Pros:**
1. Provides greater autonomy to reprioritize spending among projects as priorities adjust. Need to ensure transparency and regular updates with Congress at an agreed upon battle rhythm to provide details on these types of movements.
2. Allows empowered staff to move faster or continue current path with fewer delays. Provides greater decision-making authority to make trades within purview.
3. May result in more productive use of resources when not constrained by BLIs requiring higher-level approval to realign resources.
4. Increased internal realignments below BLI level. May increase flexibility of realigning funds, particularly if supporting the same mission- or portfolio-area. Furthermore, depending on structure, may reduce the need to submit formal reprogramming actions.

**Cons:**
1. Loss of historical trend analysis. Need to ensure that the crosswalk is clearly tracked and communicated within the DoD and Congress to ensure systems can appropriately reflect movement in budget structure.

2. "Lose" ability to manage program by BLI, and instead must rely on inter-organizational communication. This has the potential to cause internal disagreements on funding splits between programs, which may or may not lead to better mission outcomes. This relies on management structure and communication to enable success.

3. Perceived loss of higher headquarters or congressional visibility into lower-level details. Requires active communication and transparency to mitigate.

# Appendix D2 - Reprogrammings

Literature raises the issue of budget flexibility as a limitation on the DoD's ability to respond to emerging challenges or fact-of-life changes in the year of execution.[163] Reprogramming allows the DoD to transfer funds within and across appropriation accounts in the execution phase.

The DoD has a range of reprogramming actions available to transfer funds including internal, below threshold, and above threshold. Congress provides authorities and guidance related to reprogramming actions in appropriation and authorization legislation and explanatory language.[164] This includes general and special transfer authorities, reprogramming thresholds for appropriation accounts, and limitations or additional notification requirements on certain budget lines.

This appendix examines the following aspects of the reprogramming process – transfer authority, reprogramming thresholds, and reprogramming timelines. It draws primarily on publicly available data from the OUSD(C) website, information provided by the DoD to the Commission, congressional appropriation and report language, and government and academic reports.

### Definitions[165]
**Reprogramming:** "Realignment of budget authority from the purpose for which appropriated to finance another (usually emergent, unfunded) requirement. A necessary, desirable, and timely device during execution of Defense programs for achieving flexibility in the use of DoD funds provided in appropriation acts."

**Transfer:** "Movement or shifting of budgetary resources from one budget account to another. Agencies may transfer budget authority only as specifically authorized by law. For budgetary accounting purposes, the nature of the transfer determines whether the transaction is recorded as an expenditure transfer, which means a transfer that involves an outlay, or as a non-expenditure transfer, which means a transfer that does not involve an outlay."

### Background
Congress authorizes and appropriates money for the DoD to spend for specified purposes. It also provides the DoD with limited authority to change how money is spent through reprogramming (change within an appropriation account) or transfer (between accounts) processes.

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[163] Matt McGregor, Greg Grant, and Pete Modigliani, "Five First Steps to a Modern Defense Budgeting System," the MITRE Corporation, August 8, 2022, 17, https://www.mitre.org/news-insights/publication/five-first-steps-modern-defense-budgeting-system and Eric Lofgren, Jerry McGinn, and Lloyd Everhart, "Execution Flexibility and Bridging the Valley of Death," George Mason University School of Business Center for Government Contracting, October 21, 2022.

[164] Reports can include formal conference reports, joint explanatory statements, and language inserted into the Congressional Record. While report language is not officially binding as statutory language, DoD customarily follows requirements in report language. See Kevin P. McNellis, R44124 "Appropriations Report Language: Overview of components and Development," CRS, September 14, 2021, 4, https://crsreports.congress.gov/product/pdf/R/R44124/10.

[165] DoD, DoD 7000.14-R Financial Management Regulation, September 2021, G-31 and G-33, https://comptroller.defense.gov/Portals/45/documents/fmr/current/glossary.pdf.

The phrase "reprogramming" is used to describe both kinds of movements. Reprogramming authority is subject to limitations, notably annual limits on transfer authority and dollar or percentage limitations on how much money can be transferred or reprogrammed before requiring congressional prior notification. There are also limitations depending on the purpose and nature of the account, congressional interest, and if a program is a new start.

| Appropriation Account | Army | Navy | Marine Corps | Air Force | Space Force | DOD |
|---|---|---|---|---|---|---|
| RDT&E | 2040A | 1319N | | 3600F | 3620F | 0400D |
| Procurement | | | | | 3022F | |
| Aircraft | 2031A | 1506N | | 3010F | | 0300D |
| Missiles | 2032A | | | 3020F | | |
| Weapons | | 1507N | | | | |
| Wheeled & Tracked Combat Vehicles | 2033A | | | | | |
| SCN | | 1611N | | | | |
| Ammunition | 2034A | 1508N | | 3011F | | |
| USMC | | | 1109N | | | |
| Other | 2035A | 1810N | | 3080F | | |
| Space | | | | 3021F | | |
| MILPERS | 2010A, 2070A, 2060A | 1453N, 1405N | 1105N, 1108N | 3500F, 3700F, 3850F | | |
| O&M | 2020A, 2020AX, 2065A, 2080A | 1804N, 1806N | 1106N, 1107N | 3400F, 3740F, 3840F | 3410F | 0100D |

There are four main types of reprogramming actions: (1) prior approval (PA) also commonly referred to as above threshold reprogramming (ATR); (2) internal reprogramming (IR); (3) below threshold reprogramming (BTR); and (4) letter transfers (LTR). The PA reprogrammings and BTRs are discussed in detail in this paper. The IRs are actions to facilitate execution without changes in purpose or congressional intent and do not require congressional approval.[166] The LTR actions are congressionally authorized transfers between the DoD and other agencies.

Reprogramming is governed by a mix of statute, regulation, and custom. Key documents include the annual Appropriation and Authorization Acts and accompanying report language, the DoD Financial Management Regulation 7000.14-R (FMR), and Title 10, U.S.C. §2214.

**Transfer Authority**

Congress provides the DoD with annual transfer authorities (TA) to move money between different appropriations accounts. Two of these authorities are the general transfer authority (GTA) and special transfer authority (STA). The dollar amounts for GTA and STA are established in annual authorization and appropriation legislation, as are conditions, restrictions, and exceptions on the use of the authorities. STA had traditionally been established for use with

[166] Brendan W. McGarry, IF11243 Defense Primer: DOD Transfer and Reprogramming Authorities, CRS, December 21, 2022, https://crsreports.congress.gov/product/pdf/IF/IF11243/6.

former Global War on Terror/Overseas Contingency Operations funding, which was enacted under a separate Title within Defense Appropriations Acts. As a percentage of the DoD budget, TA has trended downward since FY 2014 (Figure 26). Figures 27 and 28 contain TA use from FY 2011 to FY 2021.[167] For FY 2022 and FY 2023, Congress provided the DoD with $6 billion in GTA and $0 in STA.[168]

Figure 26: Total TA as a Percentage of DoD Budget, Current ($B) [169]
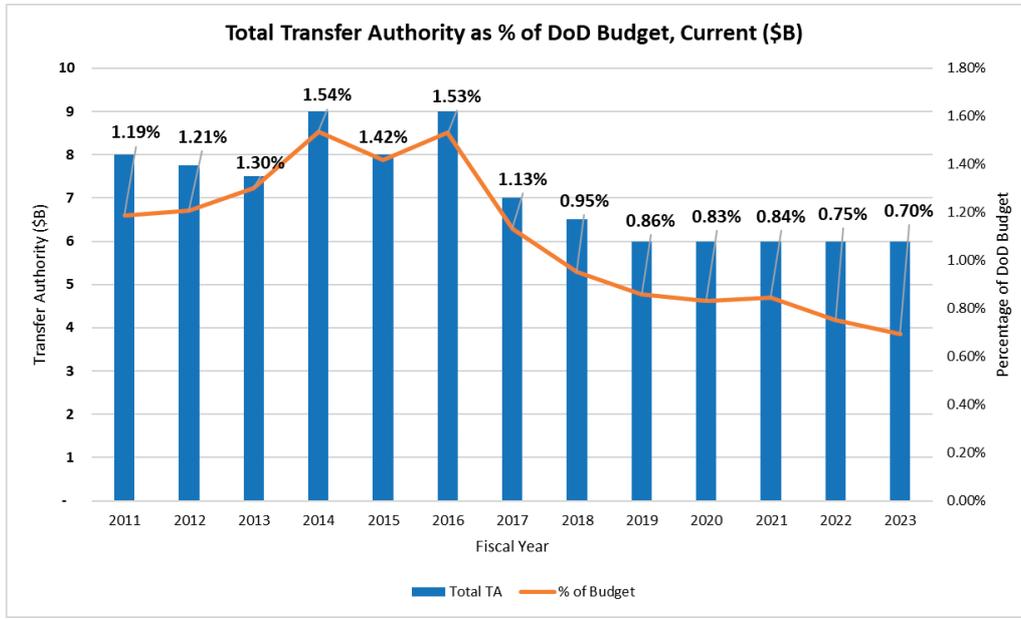


Figure 27: General Transfer Authority, $M, FY 2011 - FY 2021

| FY | GTA | GTA Used | Balance | % Used |
|---|---|---|---|---|
| 2011 | 4,000 | 3,777 | 223 | 94.4% |
| 2012 | 3,750 | 3,750 | - | 100.0% |
| 2013 | 4,000 | 3,589 | 411 | 89.7% |
| 2014 | 5,000 | 2,571 | 2,429 | 51.4% |
| 2015 | 4,500 | 1,599 | 2,901 | 35.5% |
| 2016 | 4,500 | 2,056 | 2,444 | 45.7% |
| 2017 | 4,500 | 1,924 | 2,576 | 42.8% |
| 2018 | 4,250 | 3,668 | 582 | 86.3% |
| 2019 | 4,000 | 3,494 | 506 | 87.4% |
| 2020 | 4,000 | 3,913 | 87 | 97.8% |
| 2021 | 4,000 | 3,497 | 503 | 87.4% |

[167] OUSD(C), General Transfer Authority and Special Transfer Authority Report to Congress required by the Consolidated Appropriations Act, 2021, Committee Print of the Committee on Appropriations U.S. House of Representatives on H.R. 133/Public Law 116-260, March 2021, 388-389, https://www.congress.gov/117/cprt/HPRT43749/CPRT-117HPRT43749.pdf.
[168] H.R. 2471 Consolidated Appropriations Act, 2022, March 15, 2022, 125, https://www.congress.gov/117/plaws/publ103/PLAW-117publ103.pdf; S. 1605 National Defense Authorization Act for Fiscal Year 2022, December 27, 2021, 1883, https://www.congress.gov/bill/117th-congress/senate-bill/1605/text; H.R. 7776 James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, December 23, 2022, https://www.congress.gov/bill/117th-congress/house-bill/7776/text; and H.R. 2617 Consolidated Appropriations Act, 2023, December 29, 2022, 139, https://www.congress.gov/117/bills/hr2617/BILLS-117hr2617enr.pdf.
[169] OUSD(C), National Defense Budget Estimates for FY 2024, May 2023, 143-145, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2024/FY24_Green_Book.pdf. DoD budget calculation excludes MILCON and family housing. MILCON and family housing have a separate TA in the Military Construction/Veterans Affairs Appropriations Act (see Budget Execution Flexibilities and the Reprogramming Process, OUSD (C), January 13, 2021, 13, https://comptroller.defense.gov/Portals/45/Documents/execution/Budget_Execution_Tutorial.docx).

Figure 28:  Special Transfer Authority, $M, FY 2011 - FY 2021

| FY | STA | STA Used | Balance | % Used |
|------|-------|----------|---------|--------|
| 2011 | 4,000 | 4,000 | - | 100.0% |
| 2012 | 4,000 | 1,864 | 2,136 | 46.6% |
| 2013 | 3,500 | 3,499 | 1 | 100.0% |
| 2014 | 4,000 | 2,120 | 1,880 | 53.0% |
| 2015 | 3,500 | 2,008 | 1,492 | 57.4% |
| 2016 | 4,500 | 782 | 3,718 | 17.4% |
| 2017 | 2,500 | 1,146 | 1,354 | 45.8% |
| 2018 | 2,250 | 295 | 1,955 | 13.1% |
| 2019 | 2,000 | 1,728 | 272 | 86.4% |
| 2020 | 2,000 | 2,000 | - | 100.0% |
| 2021 | 2,000 | 770 | 1,230 | 38.5% |

From FY 2011 to FY 2021, the Department fully used its GTA in FY 2012 and its STA in FY 2011, FY 2013, and FY 2020.  The DoD used less than 50 percent of its GTA in three fiscal years and less than 50 percent of its STA in five fiscal years.  From FY 2018 to FY 2021, the DoD used between 86.3 and 97.8 percent (average 89.7 percent) of its GTA.  Not all reprogramming actions are subject to the GTA and STA authority.  In FY 2022, the DoD received $6 billion in TA, without a distinction between GTA or STA limitations.

**Reprogramming Thresholds**

The BTR levels vary over time.  Congress has tended to tighten threshold limits. Current thresholds were established in FY 2020:  $10 million in increases or decreases for Military Personnel (MILPERS), Operation and Maintenance (O&M), Procurement, and Research, Development, Test, and Evaluation (RDT&E). Procurement and RDT&E are also subject to a 20 percent restriction, whichever is lesser.  While the DoD budget has grown since 1999, thresholds have remained relatively constant (Figure 29, decreases in red, increases in green).  From 2003 to 2017 and in 2019, the thresholds for MILPERS, O&M, RDT&E, and Procurement were $10, $15, $10, and $20 million, respectively.

Congress changed reprogramming thresholds during this period due to inflation, budget size and timing, and in response to executive action.  Most recently, the appropriations act for FY  2020 reduced thresholds to $10 million for all accounts in response to reprogramming actions to support border wall construction, with report language decrying the flouting of "a long-standing tradition of comity and cooperation between the executive and legislative branches that exists to meet unforeseen requirements and higher military priorities." [170]

[170] H. Rept. 116-84 Department of Defense Appropriations Bill, 2020, May 23, 2019, 4, https://www.congress.gov/116/crpt/hrpt84/CRPT-116hrpt84.pdf: "The Committee strongly opposes the Department's use of funds appropriated for military requirements to subsidize border wall construction.  This action flouts a long-standing tradition of comity and cooperation between the executive and legislative branches that exists to meet unforeseen requirements and higher military priorities that inevitably arise between the submission of the budget request and the execution of those funds pursuant to congressional appropriations legislation.  The Committee recommendation includes provisions to prevent and deter the further misuse of funds recommended by the Committee, and still allows for the meeting of urgent and emerging military requirements."

In 2000, Congress decreased the O&M threshold from $20 to $15 million, expressing concern over multiple aspects of O&M use by the Department.[171]

Figure 29: BTR Thresholds, FY 1999 - FY 2022 ($M, Current)[172]

| FY | MILPERS | O&M | RDT&E | PROC | | FY | MILPERS | O&M | RDT&E | PROC |
|------|---------|-----|-------|------|---|------|---------|-----|-------|------|
| 1999 | 10 | 20 | 4 | 10 | | 2011 | 10 | 15 | 10 | 20 |
| 2000 | 10 | 15 | 4 | 10 | | 2012 | 10 | 15 | 10 | 20 |
| 2001 | 10 | 15 | 4 | 10 | | 2013 | 10 | 15 | 10 | 20 |
| 2002 | 10 | 15 | 4 | 10 | | 2014 | 10 | 15 | 10 | 20 |
| 2003 | 10 | 15 | 10 | 20 | | 2015 | 10 | 15 | 10 | 20 |
| 2004 | 10 | 15 | 10 | 20 | | 2016 | 10 | 15 | 10 | 20 |

| FY | MILPERS | O&M | RDT&E | PROC | | FY | MILPERS | O&M | RDT&E | PROC |
|------|---------|-----|-------|------|---|------|---------|-----|-------|------|
| 2005 | 10 | 15 | 10 | 20 | | 2017 | 10 | 15 | 10 | 20 |
| 2006 | 10 | 15 | 10 | 20 | | 2018 | 10 | 20 | 10 | 20 |
| 2007 | 10 | 15 | 10 | 20 | | 2019 | 10 | 15 | 10 | 20 |
| 2008 | 10 | 15 | 10 | 20 | | 2020 | 10 | 10 | 10 | 10 |
| 2009 | 10 | 15 | 10 | 20 | | 2021 | 10 | 10 | 10 | 10 |
| 2010 | 10 | 15 | 10 | 20 | | 2022 | 10 | 10 | 10 | 10 |

However, Congress has also increased thresholds. In the 2003 supplemental, the RDT&E threshold was increased from $4 to $10 million and the Procurement threshold was increased from $10 to 20 million.[173] The following year, while noting that the increase was intended to be temporary, Congress maintained the higher threshold, acknowledging the effects of inflation on "numerical below threshold limits" and stressing the need for the Department "to provide more convincing arguments if it expects the Committees to approve this change permanently."[174] The increased thresholds remained in effect until FY 2020. Congress also temporarily increased the O&M threshold for FY 2018 due to the "delay of the final passage of this year's appropriation bill, combined with the large funding increase made possible by the Bipartisan Budget Act of 2018."[175] The House Appropriations Committee included increased reprogramming thresholds for MILPERS and O&M to $15 million for FY 2024.[176] The Senate Appropriations Committee included increased reprogramming thresholds for O&M, Procurement, and RDT&E to $15 million for FY 2024.[177]

[171] Department of Defense Appropriations Bill, 2000, Report of the Committee on Appropriations together with Additional Views to accompany H.R. 2561, July 20, 1999, 8-10, 22, 198-199.
[172] Commission staff analysis of annual appropriations and DoD guidance. Red indicates decrease in BTR authority over prior year; green indicates increase in BTR authority over prior year.
[73] H. Rept 108-10 Making Further Continuing Appropriations for the Fiscal Year 2003, and For Other Purposes, February 13, 2003, 1499, https://www.congress.gov/108/crpt/hrpt10/CRPT-108hrpt10.pdf.
[174] H. Rept 108-283 Making Appropriations for the Department of Defense for the Fiscal Year ending September 30, 2004, and For Other Purposes, September 24, 2003, 60, https://www.congress.gov/108/crpt/hrpt283/CRPT-108hrpt283.pdf.
[175] Consolidated Appropriations Act, 2018, Committee Print of the Committee on Appropriations U.S. House of Representatives on H.R. 1625/Public Law 115-141, 2018, 342, https://www.govinfo.gov/content/pkg/CPRT-115HPRT29456/pdf/CPRT-115HPRT29456.pdf. O&M received another flexibility for FY 2018 due to the lateness and size of the budget, with the 80/20 obligation restriction relaxed to 75/25.
[176] H. Rept. 118-121 Department of Defense Appropriations Bill, 2024 Report of the Committee on Appropriations together with Minority Views to accompany H.R 4365, June 27, 2023, 6, https://www.congress.gov/118/crpt/hrpt121/CRPT-118hrpt121.pdf
[177] H. Rept. 118-121 Department of Defense Appropriations Bill, 2024 Report of the Committee on Appropriations together with Minority Views to accompany H.R 4365, June 27, 2023, 6, https://www.congress.gov/118/crpt/hrpt121/CRPT-118hrpt121.pdf

## Reprogramming Thresholds and Inflation

Declining reprogramming thresholds relative to inflation and growing budgets have been identified as a source of reduced budget flexibility for the DoD.[178] Figure 30 illustrates the value of thresholds since FY 1999, adjusted to FY 2022 dollars. Inflation accounts for roughly a third of the decline in value, with O&M and Procurement losing 55 and 66 percent, respectively, with the FY 2020 threshold cuts.

Figure 30: BTR Thresholds in FY 2022 Constant Dollars ($M). Red callout boxes represent notable Congressional action on threshold levels. Source: Staff analysis of thresholds using Total DoD Deflator – Budget Authority deflators.[179]
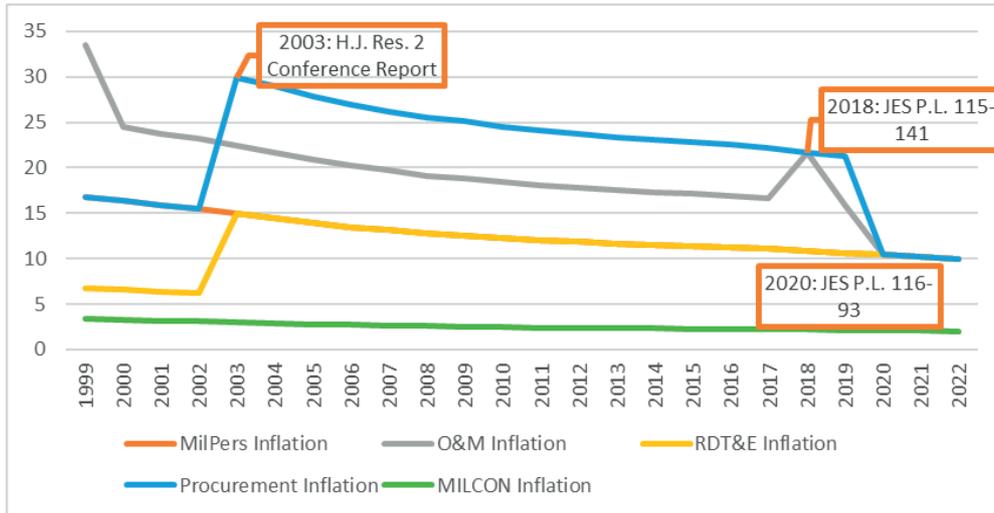


Figure 31 provides inflation-adjusted thresholds to FY 1999 dollars, holding congressional action constant. Over two decades, adjustments have produced modest increases in thresholds.

Figure 31: Reprogramming Dollar Thresholds, if inflation adjusted to FY 1999 $M.[180] O&M and Procurement include thresholds with and without FY 2020 related threshold cuts. Other thresholds reflect actual congressional thresholds, as provided in Figure 29, with inflation adjustment.

| FY | MILPERS | O&M | | RDT&E | Procurement | | MILCON |
|---|---|---|---|---|---|---|---|
| 1999 | 10.00 | 20.00 | | 4.00 | 10.00 | | 2.00 |
| 2000 | 10.15 | 15.23 | | 4.06 | 10.15 | | 2.03 |
| 2001 | 10.36 | 15.54 | | 4.14 | 10.36 | | 2.07 |
| 2002 | 10.51 | 15.77 | | 4.21 | 10.51 | | 2.10 |
| 2003 | 10.74 | 16.11 | | 10.74 | 21.48 | | 2.15 |
| 2004 | 10.95 | 16.42 | | 10.95 | 21.89 | | 2.19 |
| 2005 | 11.22 | 16.84 | | 11.22 | 22.45 | | 2.24 |
| 2006 | 11.47 | 17.20 | | 11.47 | 22.93 | | 2.29 |
| 2007 | 11.66 | 17.50 | | 11.66 | 23.33 | | 2.33 |
| 2008 | 11.89 | 17.83 | | 11.89 | 23.77 | | 2.38 |
| 2009 | 12.01 | 18.01 | | 12.01 | 24.02 | | 2.40 |
| 2010 | 12.19 | 18.28 | | 12.19 | 24.38 | | 2.44 |
| 2011 | 12.34 | 18.51 | | 12.34 | 24.68 | | 2.47 |
| 2012 | 12.48 | 18.71 | | 12.48 | 24.95 | | 2.50 |
| 2013 | 12.61 | 18.91 | | 12.61 | 25.21 | | 2.52 |
| 2014 | 12.71 | 19.07 | | 12.71 | 25.42 | | 2.54 |
| 2015 | 12.81 | 19.21 | | 12.81 | 25.62 | | 2.56 |
| 2016 | 12.90 | 19.35 | | 12.90 | 25.79 | | 2.58 |
| 2017 | 13.08 | 19.61 | | 13.08 | 26.15 | | 2.62 |
| 2018 | 13.28 | 26.55 | | 13.28 | 26.55 | | 2.66 |
| 2019 | 13.47 | 20.20 | | 13.47 | 26.93 | | 2.69 |
| 2020 | 13.65 | 13.65 | 20.52 | 13.65 | 13.65 | 27.36 | 2.73 |
| 2021 | 13.82 | 13.82 | 20.77 | 13.82 | 13.82 | 27.70 | 2.76 |
| 2022 | 14.04 | 14.04 | 21.11 | 14.04 | 14.04 | 28.14 | 2.81 |

[178] Section 809 Panel, Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations: Volume 3 of 3, January 2019, 186, https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume3/Sec809Panel_Vol3-Report_Jan2019_part-1_0509.pdf
[179] OUSD(C), National Defense Budget Estimates for FY 2022, August 2021, 68-69. https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY22_Green_Book.pdf.
[180] Ibid. Staff used FY 2022 deflator data to rebaseline deflator values to FY 1999.

**Example of Inflation Related Flexibility**

Title 10, U.S.C § 2805 provides inflation-related flexibility for unspecified minor construction projects and allows the Secretary to adjust the dollar limitation ($6 million) for unspecified minor military construction in the continental U.S. each fiscal year "to reflect the area construction cost index for military construction projects," not to exceed $10 million.[181]

**Findings**

Congress uses reprogramming thresholds to communicate concern about the DoD's financial behavior (i.e., after border wall funding reprogrammings). Congress has also been willing to increase thresholds in response to economic and budget conditions. While the current caps reflect a decrease in trust by Congress in the DoD, future thresholds could be negotiated with adequate justification and improved relationships with the congressional committees. Since FY 1999, inflation has reduced the purchasing power of the thresholds by about a third (excluding congressional changes to thresholds). Congressional action in the FY 2024 House and Senate Subcommittees on Defense bills could signal a recognition that the DoD requires additional flexibility.

**Reprogramming Actions**

Reprogramming is commonly used to refer to actions that transfer funds within or between any appropriation account. Reprogramming is governed by a mixture of statutory, regulatory, and customary provisions.[182]

Three common reprogramming actions are IR, LTR, and PA. The PA actions include new starts, which require notification to the congressional defense committees, changes to congressional special interest items, and reprogramming actions above thresholds established in explanatory language accompanying appropriations acts. The DoD FMR describes actions that require congressional approval for reprogramming.[183] An IR allows the DoD to move funds for execution without affecting the purpose of the funds, reprogram to or from transfer accounts, or make certain increases in procurement quantities.[184] A LTR is required for certain procurement, modification, research and development, and congressionally-established line item efforts and are subject to a 30-day notify and wait period prior to implementation.[185] From FY 2007 to FY 2018, there were 977 reprogramming requests for a total of around $289 billion with IRs accounting for 47 percent ($125 billion), PAs accounting for 33 percent ($134 billion), and LTRs accounting for 20 percent ($31 billion) of requests.[186]

[181] Title 10 U.S.C. §2805(f).
[182] For detailed background on relevant authorities see Brendan W. McGarry, R46421 DoD Transfer and Reprogramming Authorities: Background, Status, and Issues for Congress, CRS, June 17, 2022, https://crsreports.congress.gov/product/pdf/R/R46421/2.
[183] DoD, DoD 7000.14-R, 2015, 6-6 – 6-16, https://comptroller.defense.gov/Portals/45/documents/fmr/current/03/03_06.pdf.
[184] Ibid., 6-10-11.
[185] Ibid., 6-11.
[186] Robert A. Fritsch, Jacob J. Mcmurtrey, and Joseph F. Sullivan, "The Nature of DoD Reprogramming and Associated Trend Analysis." Naval Postgraduate School, June 2020, 22, https://apps.dtic.mil/sti/pdfs/AD1114534.pdf. Dollar values rounded to nearest whole number.

## Below-Threshold Reprogramming

Congress allows the Department to realign funding within most appropriations, if it meets certain conditions, through BTR authority.[187] The MILPERS and O&M accounts can transfer designated amounts within BAs and Sub-Activity Groups and the Procurement and RDT&E accounts can transfer designated amounts at the BLI level. The BTRs cannot change the purpose or intent, affect a congressional special interest item, initiate a new start, terminate a procurement or development effort,[188] or apply to certain restricted O&M accounts.

Congress directs the DoD to provide annual DD 1416 reports for the MILPERS and O&M accounts and quarterly DD 1416 reports for the Procurement and RDT&E accounts.[189] Based on the annual DD 1414 Base for Reprogramming Actions, these reports provide cumulative changes at the respective line item level of each account. These reports allow Congress to identify where reprogramming actions occur, including for all BTR and ATR actions.

Between FY 2011 and FY 2020, there was an absolute value of over $29 billion reprogrammed through BTR actions, with the majority occurring in Procurement and RDT&E accounts (accounting for different data availability) (Figure 32). This is consistent with the budget structure of those accounts, with BTRs allowable at the BLI level. The BTR increases and decreases balance since they occur within accounts.

Figure 32: Absolute Value of BTRs.[190] Data for all appropriations not available for all fiscal years. Table excludes data from active appropriations (i.e., FY 2021 and FY 2022 Procurement and FY 2022 RDT&E), which were active at the time of data compilation.

| FY Start | MILPERS | O&M | Procurement | RDT&E | Grand Total |
|---|---|---|---|---|---|
| 11 | | | $ 2,131,739,359 | | $ 2,131,739,359 |
| 12 | | | $ 2,381,058,833 | $ 1,247,191,840 | $ 3,628,250,673 |
| 13 | | | $ 2,032,500,536 | $ 1,039,038,890 | $ 3,071,539,426 |
| 14 | | | $ 1,441,839,482 | $ 987,010,430 | $ 2,428,849,912 |
| 15 | $ 54,807,894 | $ 300,951,016 | $ 1,451,367,784 | $ 1,113,630,250 | $ 2,920,756,944 |
| 16 | $ 94,845,996 | $ 347,141,674 | $ 1,598,018,003 | $ 1,188,909,576 | $ 3,228,915,249 |
| 17 | $ 73,668,696 | $ 260,345,003 | $ 1,596,523,456 | $ 945,488,746 | $ 2,876,025,901 |
| 18 | $ 99,433,028 | $ 412,657,050 | $ 1,203,089,621 | $ 1,016,478,429 | $ 2,731,658,128 |
| 19 | $ 59,265,058 | $ 326,249,712 | $ 1,460,634,247 | $ 1,060,771,750 | $ 2,906,920,767 |
| 20 | $ 109,289,998 | $ 260,023,800 | $ 892,980,411 | $ 913,090,976 | $ 2,175,385,185 |
| 21 | $ 79,998,000 | $ 227,675,826 | | $ 1,026,112,665 | $ 1,333,786,491 |
| 22 | $ 50,014,000 | $ 192,058,968 | | | $ 242,072,968 |
| Grand Total | $ 621,322,670 | $ 2,327,103,049 | $ 16,189,751,732 | $ 10,537,723,552 | $ 29,675,901,003 |

As noted above, BLIs can have additional restrictions based on congressional action. These actions can impose additional limits on the DoD's ability to use BTR authority.

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[187] OUSD(C), "Budget Execution Flexibilities and the Reprogramming Process," January 13, 2021. https://comptroller.defense.gov/Budget-Execution/.
[188] Ibid.
[189] For example in Division C - Department Of Defense Appropriation Act, 2022, 2, 76, 111, https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/BILLS-117RCP35-JES-DIVISION-C.pdf.
[190] DD 1416 data (available on OUSD(C) website) compiled by George Mason University and provided to the Commission.

As an example, of 962 RDT&E PEs identified on the DD 1414 for FY 2022, 264 (27 percent) included at least one congressional addition requiring a PA to decrease funds and 192 (20 percent) included at least one congressional reduction that could not be restored by BTR (Figure 33). Reprogramming funds for identified programs or in program elements would require the use of a PA reprogramming.

Figure 33: FY 2022 RDT&E Congressional Special Interest Item Restrictions[191]

| RDT&E Budget Activity | Count of BLI | PA for Decrease | No BTR Restoration |
|---|---|---|---|
| BA 01: BASIC RESEARCH | 17 | 15 | |
| BA 02: APPLIED RESEARCH | 62 | 33 | 7 |
| BA 03: ADVANCED TECHNOLOGY DEVELOPMENT | 85 | 45 | 18 |
| BA 04: ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES | 203 | 62 | 59 |
| BA 05: SYSTEM DEVELOPMENT & DEMONSTRATION | 184 | 26 | 65 |
| BA 06: MANAGEMENT SUPPORT | 134 | 30 | 6 |
| BA 07: OPERATIONAL SYSTEM DEVELOPMENT | 264 | 53 | 35 |
| BA 08: SOFTWARE & DIGITAL TECHNOLOGY PILOT PROGRAMS | 13 | | 2 |
| **Grand Total** | **962** | **264** | **192** |

## Above Threshold Reprogrammings

Transfers exceeding thresholds or otherwise not meeting BTR requirements are ATR actions that require the DoD to submit a PA reprogramming request, DD 1415-1, to the congressional defense committees.[192] Around 2006, the DoD transitioned from a topical to a monthly PA reprogramming request to Congress as well as an annual Omnibus, although there are still some issue-specific PA requests.[193] The DoD submits PA reprogramming requests throughout the year, with the majority in the June Omnibus request (Figure 34). The value of actions is more distributed but tends to increase beginning with the June Omnibus (Figure 35).

Figure 34: PA Reprogramming Actions by Month, Selected Fiscal Years
Source: PA Reprogramming DD 1415-1s available on OUSD(C) website.
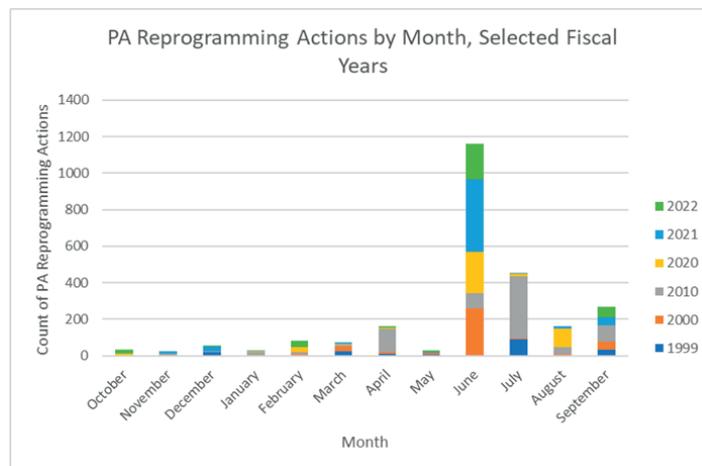


[191] Commission staff review of "Department of Defense DD1414 Base for Reprogramming Actions." 29 April 2022. https://comptroller.defense.gov/Portals/45/Documents/execution/FY_2022_DD_1414_Base_for_Reprogramming_Actions.pdf
[192] DoD provides DD 1416 reports that provide information on reprogramming actions by account and fiscal year. These reports track all ATR actions, including IRs, LTRs, and PA actions. Due to this aggregation, data on ATRs in this appendix concentrates on prior approval reprogramming data from DD 1415s posted on "Budget Execution: Implemented Reprogramming Actions," OUSD(C), https://comptroller.defense.gov/Budget-Execution/Reprogramming.
[193] Commission interview with subject matter expert.

Figure 35: PA Reprogramming Increase Request Value by Month, Selected Fiscal Years[194] Months are based on the date of signature on the PA reprogramming request available on the OUSD(C) website. The February 2020 value is driven by reprogramming actions in support of border construction. The April 2010 value includes three requests from January, March, and for Counter-Improvised Explosive Device Equipment. The July 2010 value is for the FY 2010 Omnibus. The August 2020 value includes two requests, including one addressing Working Capital Fund requirements due to COVID-19. Source: PA Reprogramming DD 1415-1s available on OUSD(C) website.
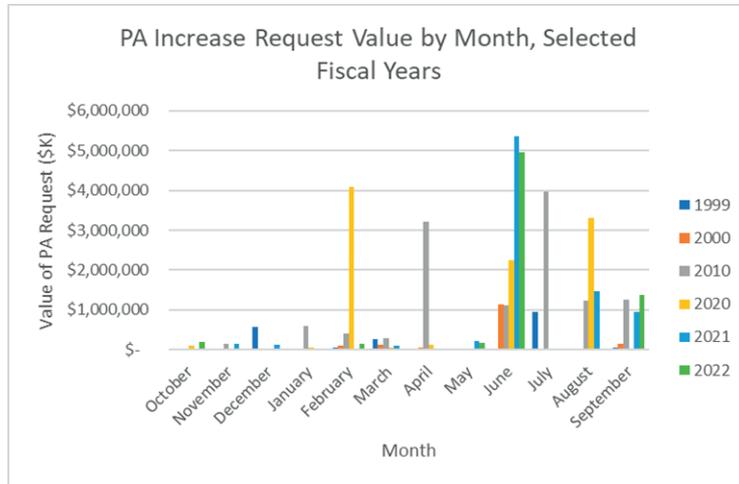


Around 40 percent of PA reprogramming increase requests are for less than $10 million across the selected fiscal years; around 60 percent of PA reprogramming decrease requests are for less than $10 million across the selected fiscal years (Tables 7 and 8). Since PA reprogramming requests must balance, this suggests that smaller decreases serve as sources for larger increases.

Figure 36:    Frequency Table of PA Reprogramming Increase Requests, Selected Fiscal Years[195]

| Prior Approval Reprogramming | Fiscal Year | | | | | | |
|---|---|---|---|---|---|---|---|
| Increase Request ($K) | 1999 | 2000 | 2010 | 2020 | 2021 | 2022 | Total |
| 0-9,999 | 31 | 43 | 147 | 75 | 65 | 37 | 398 |
| 10,000-19,999 | 21 | 9 | 62 | 27 | 34 | 29 | 182 |
| 20,000-29,999 | 6 | 9 | 30 | 17 | 16 | 12 | 90 |
| 30,000-39,999 | 5 | 6 | 29 | 11 | 8 | 6 | 65 |
| 40,000-49,999 | 5 | 2 | 12 | 3 | 8 | 4 | 34 |
| 50,000-59,999 | 2 | 4 | 12 | 3 | 5 | 2 | 28 |
| 60,000-69,999 | 2 | 1 | 4 | 3 | 9 | 3 | 22 |
| 70,000-79,999 | | 1 | 9 | 3 | 2 | 2 | 17 |
| 80,000-89,999 | 1 | 1 | 3 | 3 | 1 | 2 | 11 |
| 90,000-99,999 | 1 | | 4 | | 1 | | 6 |
| 100,000-199,999 | 4 | 2 | 21 | 8 | 8 | 8 | 51 |
| 200,000-299,999 | | | 6 | 3 | 3 | 2 | 14 |
| 300,000-399,999 | | | | 2 | 3 | 2 | 7 |
| 400,000-499,999 | | | 1 | | | | 1 |
| 500,000-599,999 | | | 2 | 1 | 1 | | 4 |
| 600,000-699,999 | | | 1 | | 1 | | 2 |
| 700,000-799,999 | | | | 1 | | 1 | 2 |
| 800,000-899,999 | | | | | 1 | | 1 |
| 900,000-999,999 | | | | | | 2 | 2 |
| 1,000,000-1,099,999 | | | | | 1 | | 1 |
| 1,600,000-1,699,999 | | | | 1 | | | 1 |
| 2,200,000-2,299,999 | | | | 1 | | | 1 |
| Grand Total | 78 | 78 | 343 | 162 | 167 | 112 | 940 |

[194] Data for selected fiscal years compiled from "Budget Execution: Implemented Reprogramming Actions," OUSD(C), https://comptroller.defense.gov/Budget-Execution/Reprogramming.
[195] Ibid.

Figure 37: Frequency Table of PA Reprogramming Decrease Requests, Selected Fiscal Years[196]

| Prior Approval Reprogramming Decrease Request ($K) | Fiscal Year | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2010 | 2020 | 2021 | 2022 | Total |
| 0-9,999 | 88 | 224 | 203 | 118 | 205 | 134 | 972 |
| 10,000-19,999 | 14 | 29 | 65 | 29 | 61 | 32 | 230 |
| 20,000-29,999 | 1 | 11 | 29 | 25 | 29 | 8 | 103 |
| 30,000-39,999 | 3 | 4 | 12 | 12 | 8 | 12 | 51 |
| 40,000-49,999 | 2 | 1 | 14 | 3 | 11 | 5 | 36 |
| 50,000-59,999 | 3 | 2 | 7 | 3 | 7 | 1 | 23 |
| 60,000-69,999 | 2 | | 11 | 7 | 9 | 3 | 32 |
| 70,000-79,999 | | | 10 | 6 | 4 | 5 | 25 |
| 80,000-89,999 | | 1 | 4 | 1 | 1 | 2 | 9 |
| 90,000-99,999 | | | 4 | 1 | 4 | | 9 |
| 100,000-199,999 | 3 | 1 | 21 | 17 | 12 | 4 | 58 |
| 200,000-299,999 | | | 6 | 7 | 3 | 1 | 17 |
| 300,000-399,999 | | | 1 | 2 | | 1 | 4 |
| 400,000-499,999 | | | 3 | 1 | | 1 | 5 |
| 500,000-599,999 | 1 | | 1 | | | | 2 |
| 600,000-699,999 | | | | 1 | 2 | | 3 |
| 700,000-799,999 | | | | | | 1 | 1 |
| 900,000-999,999 | | | | 1 | | 2 | 3 |
| Grand Total | 117 | 273 | 391 | 234 | 356 | 212 | 1583 |

Increasing BTR limits alone might not automatically reduce the number of PA actions if funds continue to be restricted at the appropriation structure level. For example, regardless of the BTR limit, if the use and source for a request require transferring between appropriations then a PA request will be required under current rules.

## Congressional Involvement

In 1999, Congress directed the DoD to update reprogramming policy to require written approval from all four congressional defense committees prior to implementing reprogramming actions.[197] Each committee responds to DoD approving, denying, or deferring a PA reprogramming request. Committees can deny requests in part or in full. The DoD applies each committee's response equally and applies the most restrictive (e.g., if the Senate Appropriations Committee (SAC) cuts a request by $1 million and the House Armed Services Committee (HASC) denies the request entirely, the DoD will zero out the PA action). Since FY 1999, PA notifications account for 26 percent of all DoD reprogramming requests.[198]

While PA reprograming requests are balanced between requested and sourced funds, Congress does not have to balance approvals (see Figure 38). Differences between the request and approved sources require the DoD to decide what to fund with available approved sources.

[196] Ibid.
[197] H. Rept. 106-244 Department of Defense Appropriations Bill, 2000, July 20, 1999, 120, https://www.congress.gov/congressional-report/106th-congress/house-report/244.pdf and H. Rept. 106-371 Making Appropriations for the Department of Defense for the Fiscal Year Ending September 30, 2000, and For Other Purposes, October 8, 1999, 162, https://www.congress.gov/106/crpt/hrpt371/CRPT-106hrpt371.pdf.
[198] McGarry, DOD Transfer and Reprogramming Authorities, 25. Reprogramming actions are defined as discrete notification letters posted on the OUSD(C) website.

Figure 38: Difference between Requested and Approved PA Reprogramming Amounts ($K), Selected Fiscal Years Source: DD 1415-1 data available on OUSD(C) website.

| Fiscal Year | Sum of PA Increase Request | Sum of PA Increase Approved | Sum of PA Decrease Request | Sum of PA Decrease Approved |
|---|---|---|---|---|
| 1999 | $1,919,729 | $1,752,643 | $1,919,729 | $1,752,643 |
| 2000 | $1,580,219 | $879,743 | $1,580,219 | $915,540 |
| 2010 | $12,194,701 | $8,707,635 | $12,194,701 | $8,702,096 |
| 2020 | $10,013,499 | $8,840,162 | $10,013,499 | $8,657,406 |
| 2021 | $8,387,212 | $6,753,677 | $8,360,299 | $6,704,198 |
| 2022 | $6,863,314 | $6,400,028 | $6,863,314 | $6,400,028 |
| Grand Total | $40,958,674 | $33,333,888 | $40,931,761 | $33,131,911 |

Figures 39 and 40 provide congressional outcomes on PA actions for selected fiscal years. The majority of requests are approved as requested by Congress.

Figure 39: Congressional Outcomes of PA Reprogramming Increase Requests, Selected Fiscal Years Source: DD 1415-1 data available on OUSD(C) website.

| Outcome of PA Reprogramming Request | Fiscal Year | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2010 | 2020 | 2021 | 2022 | Grand Total |
| Approved | 78 | 64 | 305 | 123 | 156 | 104 | 830 |
| Approved/Rescinded | | | | | | | |
| Approved/Supplemental | | 6 | | | | | 6 |
| Approved/Supplemental Rescission | | | | | | | |
| Deferred | | | 3 | 23 | | 1 | 27 |
| Denied | | 4 | 24 | 7 | 8 | 5 | 48 |
| Denied/Rescinded | | | | | | | |
| Denied/Supplemental Rescission | | | | | | | |
| Element deferred | | | | 2 | 1 | | 3 |
| Element denied | | 4 | 11 | 5 | 2 | 2 | 24 |
| N/A | | | | 2 | | | 2 |
| Rescission | | | | | | | |
| Grand Total | 78 | 78 | 343 | 162 | 167 | 112 | 940 |

Figure 40: Congressional Outcomes of PA Reprogramming Decrease Requests, Selected Fiscal Years. Source: DD 1415-1 available on OUSD(C) website.

| Outcome of PA Reprogramming Request | Fiscal Year | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2010 | 2020 | 2021 | 2022 | Grand Total |
| Approved | 104 | 185 | 335 | 169 | 293 | 186 | 1272 |
| Approved/Rescinded | | 9 | | | | | 9 |
| Approved/Supplemental | | | | | | | |
| Approved/Supplemental Rescission | | 4 | | | | | 4 |
| Deferred | | | 2 | 18 | 3 | 2 | 25 |
| Denied | 13 | 65 | 51 | 25 | 45 | 22 | 221 |
| Denied/Rescinded | | 1 | | | | | 1 |
| Denied/Supplemental Rescission | | 1 | | | | | 1 |
| Element deferred | | | | 1 | 3 | | 4 |
| Element denied | | 8 | 3 | 3 | 12 | 1 | 27 |
| N/A | | | | 18 | | | 18 |
| Rescission | | | | | | 1 | 1 |
| Grand Total | 117 | 273 | 391 | 234 | 356 | 212 | 1583 |

Congressional action on reprogramming requests is not legally binding on the DoD. However, DoD by regulation abides by congressional decisions.[199] Perceived misuse or abuse of reprogramming authority has led to congressional action on execution flexibility, most recently following 2020 reprogramming actions to support border wall construction, discussed above.

[199] Ibid., 34-35, for a discussion of constitutional and legal issues.

## Above Threshold Reprogramming Use

The data below draws on PA reprogramming requests (DD 1415-1s) to present use trends for PA reprogramming actions.[200] Between FY 2011 and FY 2018, O&M accounted for the highest value of PA increase requests approved, followed by Procurement.  In the same timeframe, Procurement narrowly accounted for the highest value of PA decrease requests approved, followed by O&M (Figures 41 and 42).

Figure 41: PA Increase Amount Approved, FY 2011 - FY 2018 [201]

| Account | Sum of Prior Approval Increase Amount Approved ($K) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Grand Total |
| O&M | $3,245,230 | $5,911,887 | $6,558,202 | $2,099,482 | $3,653,620 | $6,656,042 | $1,103,220 | $834,792 | $30,062,475 |
| Procurement | $5,142,277 | $1,743,178 | $619,717 | $2,001,405 | $2,450,365 | $1,299,734 | $1,677,170 | $1,964,123 | $16,897,969 |
| RDT&E | $1,524,142 | $1,193,092 | $395,228 | $908,684 | $399,181 | $490,121 | $1,169,901 | $2,323,307 | $8,403,661 |
| Military Personnel | $661,103 | $783,493 | $831,233 | $839,137 | $100,297 | $434,461 | $358,100 | $66,444 | $4,074,268 |
| WCF | | $1,000,000 | $1,565,005 | | | | $500,000 | $690,562 | $3,755,567 |
| Defense Health Program | $18,736 | $5,650 | | $429,800 | $1,018,978 | $179,740 | | $11,600 | $1,664,504 |
| Overseas Humanitarian, Disaster Assistance, and Civic Aid | | | | $1,000,000 | | | | $0 | $1,000,000 |
| Shipbuilding and Conversion | $176,787 | $254,700 | $239,850 | $0 | $46,100 | $24,000 | $0 | $62,700 | $804,137 |
| National Guard Personnel | $62,055 | | $0 | $247,829 | $92,100 | | $17,500 | $120,365 | $539,849 |
| Joint Improvised Explosive Device Defeat Fund | $363,659 | | $72,386 | | | $20,000 | $0 | | $456,045 |
| Afghanistan Security Forces Fund | | | | | | $230,000 | | | $230,000 |
| Reserve Personnel | $32,500 | $11,000 | $25,200 | $60,656 | $71,800 | $6,000 | | $4,858 | $212,014 |
| Global Security Contingency Fund | | $21,800 | $35,911 | $45,200 | $63,866 | $18,720 | | | $185,497 |
| Cooperative Threat Reduction Account | | | | $81,025 | | | | | $81,025 |
| National Guard and Reserve Equipment | | $7,550 | | | | $30,955 | | | $38,505 |
| Diplomatic and Consular Programs | | | | | | | | $20,000 | $20,000 |
| National Defense Sealift Fund | $0 | $4,617 | | | | | | | $4,617 |
| Grand Total | $11,226,489 | $10,936,967 | $10,342,732 | $7,713,223 | $7,896,307 | $9,389,773 | $4,825,891 | $6,098,751 | $68,430,133 |

Figure 42: PA Decrease Amount Approved, FY 2011 - FY 2018 [202]

| Account | Sum of Prior Approval Decrease Amount Approved ($K) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Grand Total |
| Procurement | $2,234,535 | $2,183,107 | $3,636,639 | $1,350,096 | $1,774,556 | $1,352,183 | $1,525,555 | $1,842,970 | $15,899,641 |
| O&M | $4,161,901 | $1,489,728 | $847,940 | $2,569,918 | $1,617,058 | $1,812,161 | $865,928 | $594,051 | $13,958,685 |
| Military Personnel | $1,492,574 | $1,149,579 | $3,698,649 | $1,237,244 | $883,845 | $877,047 | $756,106 | $2,179,539 | $12,274,583 |
| WCF | $1,983,000 | $1,510,194 | | $1,155,836 | $1,960,277 | $3,370,025 | $836,650 | $58,996 | $10,874,978 |
| RDT&E | $551,707 | $1,199,245 | $519,374 | $388,506 | $322,733 | $330,018 | $243,454 | $513,833 | $4,068,870 |
| Defense Health Program | $349,926 | $707,949 | | $742,991 | $521,478 | $179,740 | $98,792 | $668,700 | $3,269,576 |
| Counterterrorism Partnerships Fund | | | | | $523,810 | $1,374,997 | $479,157 | | $2,377,964 |
| Afghanistan Security Forces Fund | | $2,000,000 | $355,950 | | | | | | $2,355,950 |
| Foreign Currency Fluctuations, Defense | | | $969,000 | | | | | | $969,000 |
| National Guard Personnel | | | $494,460 | $146,729 | $28,100 | $19,300 | | $70,829 | $759,418 |
| Joint Improvised Explosive Device Defeat Fund | $363,659 | | $176,175 | | | | | | $539,834 |
| Iraq Security Forces Fund | | $344,540 | | | | | | | $344,540 |
| Chemical Agents and Munitions Destruction | | $100,851 | $120,900 | $89,947 | $15,000 | $6,347 | | $10,500 | $343,545 |
| Reserve Personnel | $82,400 | $56,440 | $49,000 | $28,956 | | | $15,249 | $65,477 | $297,522 |
| Drug Interdiction and Counter-Drug Activities | | | | | $189,000 | $37,000 | | $24,252 | $250,252 |
| Pakistan Counterinsurgency Fund | | $126,298 | | | | | | | $126,298 |
| Shipbuilding and Conversion | $5,489 | $52,856 | | $3,000 | | $0 | | $62,700 | $124,045 |
| Office of the Inspector General | | $19,500 | $29,000 | $0 | $5,500 | | $5,000 | | $59,000 |
| Overseas Humanitarian, Disaster Assistance, and Civic Aid | | | | | $49,950 | | | | $49,950 |
| National Guard and Reserve Equipment | | | | | | $30,955 | | | $30,955 |
| National Defense Sealift Fund | $1,298 | | | | $5,000 | | | | $6,298 |
| Space Program | | | | | | | | $4,907 | $4,907 |
| DoD Acquisition Workforce Development Fund | | | | | | | | $1,997 | $1,997 |
| Operational Test and Evaluation | | $125 | | | | | | | $125 |
| Grand Total | $11,226,489 | $10,940,412 | $10,897,087 | $7,713,223 | $7,896,307 | $9,389,773 | $4,825,891 | $6,098,751 | $68,987,933 |

[200] DD 1416s include a column titled "Above Threshold Reprogramming". The column includes amounts reprogrammed via IR, PA, and LTRs per a DoD official.  PA data is compiled from DD 1415-1s.
[201] Data set accompanying Fritsch, Mcmurtrey, and Sullivan, "Nature of DoD Reprogramming," 2020 provided to the Commission. Ibid. PA increases and decreases should balance.  Congress is not required to balance increases and decreases. There is a
[202] FY 2012 difference of $3,445,000 related to the Omnibus reprogramming request.  The FY 2013 difference reflects two requests for replacement sources for previously submitted PA requests.

Between FY 2020 and FY 2022, O&M accounted for the highest value of approved PA increase requests; Procurement accounted for the highest value of approved PA decrease requests (Figures 18 and 19). Increases associated with fuel costs drove working capital fund requests in FY 2022. Impacts from COVID-19, changes in operational activity, and pay raises also drove working capital fund requests, reflecting how PA requests can be required to respond to fact-of-life changes in the year of execution. Similarly, the foreign currency fluctuations account was a significant source for working capital fund increases during this timeframe.

Figure 43: PA Increase Amount Approved, FY 2020 - FY 2022 "Border Wall" reflects FY 2020 reprogrammings into the Drug Interdiction and Counter-Drug Activities, Defense account. [203]

| PAR Increase Approved ($K) | Fiscal Year | | | |
| Account | 2020 | 2021 | 2022 | Grand Total |
|---|---|---|---|---|
| O&M | $5,931,832 | $3,627,089 | $1,702,653 | $11,261,574 |
| Working Capital | $1,803,605 | $1,309,599 | $2,638,927 | $5,752,131 |
| Military Personnel | $379,785 | $774,674 | $833,667 | $1,988,126 |
| Procurement | $237,557 | $774,064 | $900,126 | $1,911,747 |
| RDT&E | $487,383 | $268,251 | $324,655 | $1,080,289 |
| Foreign Currency | | | | |
| Other | | | | |
| Grand Total | $8,840,162 | $6,753,677 | $6,400,028 | $21,993,867 |

Figure 44: PA Decrease Amount Approved, FY 2020 - FY 2022 [204]

| PAR Decrease Approved ($K) | Fiscal Year | | | |
| Account | 2020 | 2021 | 2022 | Grand Total |
|---|---|---|---|---|
| Procurement | $4,369,380 | $1,891,327 | $1,010,213 | $7,270,920 |
| Foreign Currency | $945,000 | $600,000 | $2,638,927 | $4,183,927 |
| O&M | $1,564,932 | $1,307,584 | $1,108,292 | $3,980,808 |
| Military Personnel | $915,523 | $648,015 | $980,923 | $2,544,461 |
| RDT&E | $408,549 | $739,568 | $661,673 | $1,809,790 |
| Other | $8,255 | $1,517,704 | | $1,525,959 |
| Working Capital | $445,767 | | | $445,767 |
| Grand Total | $8,657,406 | $6,704,198 | $6,400,028 | $21,761,632 |

## Above Threshold Reprogramming Timelines

### Background

The length of the reprogramming process is frequently raised as a challenge that limits flexibility in budget execution. A 2020 study of Navy PA requests found that the overall average for a request was 96 days, 41 days in various executive branch agencies and about 55 days with the congressional committees.[205] The Section 809 panel reported that a PA reprogramming request takes roughly 75 days to go from the OUSD(C), to the Office of Management and Budget, to congressional approval, with an additional month

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[203] Data for selected fiscal years compiled from "Budget Execution: Implemented Reprogramming Actions," OUSD(C), https://comptroller.defense.gov/Budget-Execution/Reprogramming.
[204] Ibid.
[205] Fritsch, Mcmurtrey, and Sullivan, "Nature of DoD Reprogramming," 51.

or more in a Service prior to Comptroller receipt.[206] Overall, the 809 Panel found "[f]rom a [program manager's] perspective, the total time required to compete an ATR reprogramming action 'ranges from 4 to 6 months." [207] The BTR actions can take between 60 to 90 days on average. [208] Figures 45, 46, and 47 illustrate current PA and BTR processes.

The OUSD(C) provided Department-wide data for PA reprogramming timelines. Factors that contribute to the timeline include adherence to OUSD(C)'s schedule for submissions, proximity to the Omnibus, and delays in identifying sources. The DD 1416 reports provide BTR information quarterly for Procurement and RDT&E accounts and annually for O&M and MILPERS accounts, by Service/Agency and for active fiscal years. Quarterly O&M execution reports also provide information about BTRs.[209]

**Statutory and Regulatory Guidance**

Congress does not prescribe DoD's internal process for vetting and approving BTR or PA reprogramming requests. Starting in FY 2000, Congress directed DoD to update reprogramming policy to require written approval from all of the congressional defense committees.[210] The annual Appropriation act directs the DoD to submit "a request for multiple reprogrammings of funds using [reprogramming] authority...prior to June 30." [211] The Appropriations Act also requires the submission of the DD 1414 ("the baseline for application of reprogramming and transfer authorities") not later than 60 days after enactment and prior to any reprogramming or transfer actions (with exceptions for emergencies and certain transfer accounts).[212] The FMR notes that PA reprogramming requests require "approval of the Department" and describes the requirements for Components to submit PA reprogramming requests.[213] It does not direct internal component processes for approving BTR or PA reprogramming requests.

After receiving congressional responses, the DoD abides by the most "severe" action (that is, if SAC defers a $0.5 million of a $1 million source and HASC denies the entire amount, DoD does not use the entire amount).[214] If Congress denies an increase, DoD cannot use BTR actions to fund the increase.[215] And BTRs cannot be used "to either restore or reduce funding from

[206] Section 809 Panel, Report of the Advisory Panel on Streamlining and Codifying Acquisition Regulations: Volume 3 of 3, January 2019, 181-2, https://discover.dtic.mil/wp-content/uploads/809-Panel-2019/Volume3/Sec809Panel_Vol3-Report_Jan2019_part-1_0509.pdf.
[207] Ibid., 182.
[208] Commission interview with subject matter experts.
[209] For example, see https://comptroller.defense.gov/Budget-Execution/1416QrtlyRptsfy2023/ and https://comptroller.defense.gov/Budget-Execution/OM_Reports/.
[210] H. Rept. 106-244 Department of Defense Appropriations Bill, 2000, July 20, 1999, 120, https://www.congress.gov/106/crpt/hrpt244/CRPT-106hrpt244.pdf.
[211] H.R. 2617 Consolidated Appropriations Act, 2023, December 29, 2022, 127, https://www.congress.gov/117/bills/hr2617/BILLS-117hr2617enr.pdf.
[212] Ibid., 128.
[213] DoD, DoD 7000.14-R, 6-5; 6-13-14.
[214] Ibid.
[215] Ibid., 6-15.

congressional special interest items" identified on the DD 1414.[216] Similarly, reprogramming cannot be used for items denied by Congress.[217]
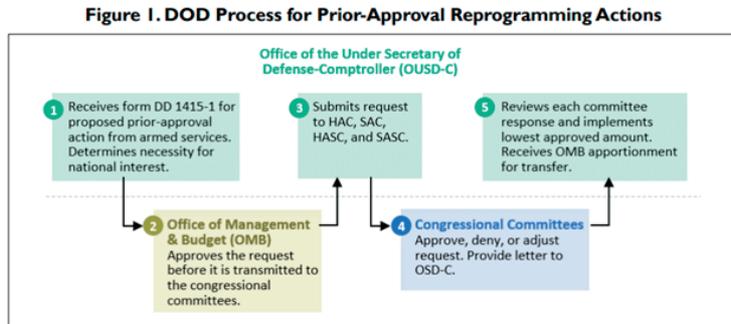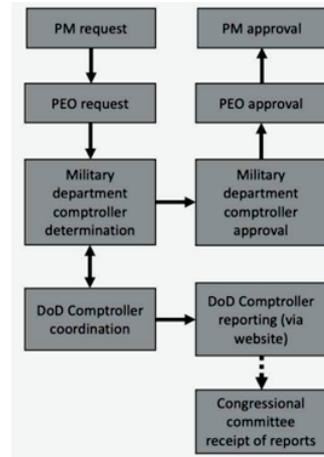


Figure 45: Current PA Reprogramming Process Source: McGarry, CRS 2020, 16.



Figure 46: Current Decision Authority Flowchart for BTR Source: Section 809 Panel Report, 185.
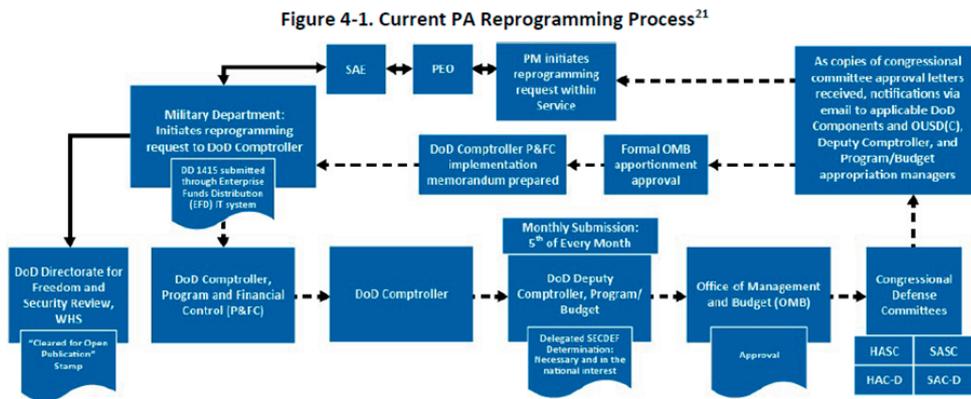


Figure 47: Current PA Reprogramming Process - DoD to Congress Source: Section 809 Panel

[216] Consolidated Appropriations Act, 2023, Committee Print of the Committee of Appropriations U.S. House of Representatives on H.R. 2617/Public Law 117-328, 2023, 532, https://www.congress.gov/117/cprt/HPRT50347/CPRT-117HPRT50347.pdf.
[217] H.R. 2617 Consolidated Appropriations Act, 2023, December 29, 2022, 127, https://www.congress.gov/117/bills/hr2617/BILLS-117hr2617enr.pdf.

## Prior Approval Timelines

Figure 48: PA Reprogramming Total Timelines Source:  Commission Analysis of data provided by OUSD(C).  Reflects the total number of days for reprogramming request, from earliest available DoD date at the OUSD(C) level.  Data does not include time within a component to identify and request reprogramming.

| FISCAL YEAR | TOTAL | | | OMNIBUS | | | Non-Omnibus | | |
|---|---|---|---|---|---|---|---|---|---|
| | AVERAGE | MAX | MIN | AVERAGE | MAX | MIN | AVERAGE | MAX | MIN |
| 2009 | 94 | 455 | 24 | 62 | 79 | 49 | 102 | 455 | 24 |
| 2010 | 53 | 144 | 3 | 60 | 60 | 60 | 52 | 144 | 3 |
| 2011 | 60 | 140 | 10 | 73 | 124 | 22 | 58 | 140 | 10 |
| 2012 | 91 | 347 | 1 | 141 | 142 | 140 | 87 | 347 | 1 |
| 2013 | 89 | 154 | 7 | | | | 89 | 154 | 7 |
| 2014 | 76 | 177 | 9 | 80 | 83 | 76 | 75 | 177 | 9 |
| 2015 | 97 | 329 | 18 | 137 | 138 | 136 | 94 | 329 | 18 |
| 2016 | 97 | 191 | 20 | 133 | 133 | 133 | 94 | 191 | 20 |
| 2017 | 78 | 224 | 7 | 168 | 224 | 111 | 72 | 190 | 7 |
| 2018 | 100 | 251 | 13 | 173 | 210 | 135 | 93 | 251 | 13 |
| 2019 | 114 | 257 | 33 | 161 | 161 | 161 | 105 | 257 | 33 |
| 2020 | 126 | 251 | 21 | 193 | 251 | 135 | 116 | 224 | 21 |
| 2021 | 70 | 181 | 1 | 140 | 153 | 126 | 62 | 181 | 1 |
| 2022 | 93 | 169 | 18 | | | | 93 | 169 | 18 |
| Grand Total | 87 | 455 | 1 | 113 | 251 | 22 | 84 | 455 | 1 |

Figure 49: PA Reprogramming Timelines, DoD and Congress Source:  Commission analysis of data provided by OUSD(C).  Reflects the longest available time for a reprogramming request (i.e., does not reflect multiple rounds of congressional approval).  The DoD time measures from date of component request receipt or identification by OUSD(C) and does not include time within a component to identify and request reprogramming.

| Fiscal Year | DOD Average | | Congress Average | | Total Average | |
|---|---|---|---|---|---|---|
| | Omnibus | Non-Omnibus | Omnibus | Non-Omnibus | Omnibus | Non-Omnibus |
| 2009 | 5 | 42 | 37 | 56 | 62 | 102 |
| 2010 | 6 | 22 | 42 | 27 | 60 | 53 |
| 2011 | 56 | 22 | 14 | 36 | 73 | 58 |
| 2012 | 53 | 26 | 85 | 49 | 141 | 87 |
| 2013 | | 39 | | 45 | | 89 |
| 2014 | 4 | 32 | 76 | 43 | 137 | 75 |
| 2015 | 48 | 26 | 89 | 65 | 133 | 94 |
| 2016 | 48 | 18 | 83 | 73 | 168 | 94 |
| 2017 | 34 | 19 | 134 | 51 | 173 | 72 |
| 2018 | 55 | 29 | 117 | 62 | 161 | 93 |
| 2019 | 66 | 20 | 92 | 81 | 193 | 105 |
| 2020 | 42 | 44 | 150 | 71 | 140 | 116 |
| 2021 | 61 | 24 | 74 | 42 | | 62 |
| 2022 | | 34 | | 52 | | 93 |
| Grand Total | 35 | 28 | 71 | 53 | 113 | 84 |

## Data Notes and Limitations
- There was no Omnibus reprogramming in 2013.  There was no official Omnibus submission in 2017, but there were larger June requests that were coded as Omnibus in the data set by Commission staff.
- Data set is current through February 2022.  Does not include reprogramming requests, including the FY 2022 Omnibus, after that date.
- DoD data begins from the date OUSD(C) received a PA request from a Component or from the date OUSD(C) signed out a PA request.  This does not include the total process time within the Component.

## Lesser of 20 Percent Rule

In addition to BTR dollar limits provided in annual appropriation explanatory statements, Procurement and RDT&E line items have an additional 20 percent restriction. Referred to as the "lesser of 20 percent rule," this rule limits BTRs to the lesser of the dollar BTR limit or 20 percent of the BLI. This rule further constrains execution flexibility available in smaller lines where the 20 percent rule creates a BTR threshold below $10 million.

This research presents data, available on the OUSD(C) website and provided to the Commission, regarding BLIs to examine the implications of the lesser of 20 percent rule on Procurement and RDT&E accounts.

## Background

In the FY 2004 Appropriation Supplemental Act, Congress clarified that Procurement and RDT&E lines were subject to the lesser of a dollar or a percentage threshold to protect funds from being excessively reallocated from smaller programs.[218] Current BTR thresholds for Procurement and RDT&E are $10 million. The BLIs below $50 million therefore have BTR limits below $10 million. The BLIs can also have additional restrictions, noted on the DD 1414 Base for Reprogramming Actions, based on congressional appropriation actions.

## Data

The majority of Procurement and RDT&E lines are below $50 million dollars. Between FY 2013 - 2021, the median value of BLIs in both accounts was around $25.6 million (Table 18). However, BLIs greater than $50 million generally contained significantly higher amounts than those under $50 million (Figures 50 and 51). Across the Department, RDT&E BLIs less than $50 million outnumbered those over $50 million for BA 03 (with one exception in FY 2020) through BA 08 (Figure 52). The RDT&E BLIs greater than $50 million were more common in BA 01 and BA 02. In terms of the lesser of 20 percent rule, this distribution indicates greater reprogramming constraints beginning with BA 03.

Figure 50: Median BLI, Fiscal Years 2013 – 2021 Source: DD 1416 data (available on OUSD(C) website) compiled by George Mason University and provided to the Commission.

| | Median BLI Value | |
|---|---|---|
| Fiscal Year | Procurement | RDT&E |
| 2011 | $25,474,000 | |
| 2012 | $25,522,000 | $22,990,000 |
| 2013 | $23,474,000 | $21,108,000 |
| 2014 | $18,755,000 | $20,902,000 |
| 2015 | $19,676,000 | $22,000,000 |
| 2016 | $21,974,500 | $24,887,000 |
| 2017 | $28,096,000 | $25,354,000 |
| 2018 | $31,404,000 | $29,383,500 |
| 2019 | $33,513,000 | $31,022,000 |
| 2020 | $32,004,000 | $30,179,000 |
| 2021 | | $30,110,000 |
| Grand Total | $25,566,000 | $25,743,911 |

[218] H. Rept 108-283 Making Appropriations for the Department of Defense for the Fiscal Year ending September 30, 2004, and For Other Purposes, September 24, 2003, https://www.congress.gov/108/crpt/hrpt283/CRPT-108hrpt283.pdf and Section 809 Panel, Report of the Advisory Panel, 2019, 194.

Figure 51: Count and Value of Procurement and RDT&E BLIs, FY 2011 - FY 2021 [219]

| Fiscal Year | Procurement BLI Count | Procurement Value | RDT&E BLI Count | RDT&E Value |
|---|---|---|---|---|
| **2011** | **921** | **$107,053,663,569** | | |
| Less than $50M | 575 | $7,845,733,569 | | |
| Greater than $50M | 346 | $99,207,930,000 | | |
| **2012** | **917** | **$114,352,934,613** | **827** | **$72,648,723,000** |
| Less than $50M | 591 | $8,927,172,613 | 565 | $8,489,956,000 |
| Greater than $50M | 326 | $105,425,762,000 | 262 | $64,158,767,000 |
| **2013** | **889** | **$101,695,748,452** | **809** | **$64,452,752,286** |
| Less than $50M | 601 | $9,312,201,247 | 565 | $8,294,189,674 |
| Greater than $50M | 288 | $92,383,547,205 | 244 | $56,158,562,612 |
| **2014** | **883** | **$97,068,665,000** | **793** | **$62,854,002,000** |
| Less than $50M | 616 | $8,256,646,000 | 562 | $8,537,565,000 |
| Greater than $50M | 267 | $88,812,019,000 | 231 | $54,316,437,000 |
| **2015** | **847** | **$99,300,192,000** | **819** | **$63,797,822,000** |
| Less than $50M | 578 | $7,762,703,000 | 581 | $9,163,230,000 |
| Greater than $50M | 269 | $91,537,489,000 | 238 | $54,634,592,000 |
| **2016** | **890** | **$117,146,301,000** | **825** | **$69,780,967,000** |
| Less than $50M | 589 | $8,031,768,000 | 564 | $9,141,073,000 |
| Greater than $50M | 301 | $109,114,533,000 | 261 | $60,639,894,000 |
| **2017** | **863** | **$123,031,139,000** | **861** | **$73,547,781,000** |
| Less than $50M | 540 | $8,093,092,956 | 575 | $9,135,014,487 |
| Greater than $50M | 323 | $114,938,046,044 | 286 | $64,412,766,513 |
| **2018** | **886** | **$145,233,482,000** | **924** | **$90,277,119,000** |
| Less than $50M | 530 | $8,045,522,000 | 599 | $10,193,399,151 |
| Greater than $50M | 356 | $137,187,960,000 | 325 | $80,083,719,849 |
| **2019** | **933** | **$150,749,919,000** | **941** | **$95,939,660,000** |
| Less than $50M | 548 | $8,632,454,079 | 597 | $10,140,819,951 |
| Greater than $50M | 385 | $142,117,464,921 | 344 | $85,798,840,049 |
| **2020** | **861** | **$120,764,445,000** | **929** | **$105,455,304,000** |
| Less than $50M | 521 | $8,435,329,000 | 565 | $8,912,465,000 |
| Greater than $50M | 340 | $112,329,116,000 | 364 | $96,542,839,000 |
| **2021** | | | **941** | **$107,197,647,000** |
| Less than $50M | | | 572 | $8,702,692,000 |
| Greater than $50M | | | 369 | $98,494,955,000 |

Figure 52: Count of RDT&E BLIs by Budget Activity, FY 2012 - FY 2021 [220]

| RDT&E Budget Activities | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **BA 01: BASIC RESEARCH** | 1 | 16 | 17 | 17 | 17 | 17 | 17 | 18 | 17 | 17 | 154 |
| Less than $50M | 1 | 7 | 7 | 7 | 6 | 6 | 8 | 7 | 5 | 4 | 58 |
| Greater than $50M | | 9 | 10 | 10 | 11 | 11 | 9 | 11 | 12 | 13 | 96 |
| **BA 02: APPLIED RESEARCH** | 59 | 62 | 61 | 59 | 60 | 62 | 63 | 64 | 53 | 57 | 600 |
| Less than $50M | 26 | 33 | 32 | 29 | 26 | 26 | 28 | 25 | 16 | 21 | 262 |
| Greater than $50M | 33 | 29 | 29 | 30 | 34 | 36 | 35 | 39 | 37 | 36 | 338 |
| **BA 03: ADVANCED TECHNOLOGY DEVELOPMENT** | 88 | 89 | 88 | 88 | 90 | 88 | 88 | 89 | 82 | 84 | 874 |
| Less than $50M | 51 | 57 | 56 | 55 | 55 | 46 | 48 | 47 | 40 | 42 | 497 |
| Greater than $50M | 37 | 32 | 32 | 33 | 35 | 42 | 40 | 42 | 42 | 42 | 377 |
| **BA 04: ADVANCED COMPONENT DEVELOPMENT & PROTOTYPES** | 139 | 138 | 136 | 134 | 137 | 148 | 170 | 180 | 193 | 196 | 1571 |
| Less than $50M | 90 | 90 | 91 | 86 | 86 | 87 | 103 | 104 | 99 | 103 | 939 |
| Greater than $50M | 49 | 48 | 45 | 48 | 51 | 61 | 67 | 76 | 94 | 93 | 632 |
| **BA 05: SYSTEM DEVELOPMENT & DEMONSTRATION** | 150 | 150 | 152 | 165 | 168 | 179 | 194 | 190 | 188 | 184 | 1720 |
| Less than $50M | 101 | 101 | 102 | 114 | 109 | 116 | 122 | 120 | 118 | 110 | 1113 |
| Greater than $50M | 49 | 49 | 50 | 51 | 59 | 63 | 72 | 70 | 70 | 74 | 607 |
| **BA 06: MANAGEMENT SUPPORT** | 106 | 104 | 103 | 103 | 106 | 110 | 120 | 127 | 129 | 128 | 1136 |
| Less than $50M | 74 | 82 | 82 | 84 | 84 | 89 | 84 | 92 | 91 | 91 | 853 |
| Greater than $50M | 32 | 22 | 21 | 19 | 22 | 21 | 36 | 35 | 38 | 37 | 283 |
| **BA 07: OPERATIONAL SYSTEM DEVELOPMENT** | 263 | 243 | 235 | 252 | 245 | 256 | 271 | 272 | 266 | 266 | 2569 |
| Less than $50M | 208 | 191 | 191 | 205 | 196 | 204 | 205 | 201 | 195 | 197 | 1993 |
| Greater than $50M | 55 | 52 | 44 | 47 | 49 | 52 | 66 | 71 | 71 | 69 | 576 |
| **BA 08: SOFTWARE & DIGITAL TECHNOLOGY PILOT PROGRAMS** | | | | | | | | | | 8 | 8 |
| Less than $50M | | | | | | | | | | 3 | 3 |
| Greater than $50M | | | | | | | | | | 5 | 5 |
| **BA 09: 09000000** | 8 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 18 |
| Less than $50M | 7 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 17 |
| Greater than $50M | 1 | | | | | | | | | | 1 |
| **BA 20: UNDISTRIBUTED** | | 1 | | | 1 | | | | | | 2 |
| Less than $50M | | 1 | | | 1 | | | | | | 2 |
| **BA 99: CLASSIFIED PROGRAMS** | 13 | 4 | | | | | | | | | 17 |
| Less than $50M | 7 | 1 | | | | | | | | | 8 |
| Greater than $50M | 6 | 3 | | | | | | | | | 9 |

[219] DD 1416 data from "Budget Execution: 1416 Quarterly Reports," OUSD(C) compiled by George Mason University and provided to the Commission. RDT&E data is available starting in FY 2012. FY 2021 final Procurement data not available because funds were still available at time of data compilation.
[220] Ibid.

**Findings**

The BLIs constrained by the lesser of 20 percent rule comprise the majority of lines in Procurement and RDT&E accounts.  However, they do not comprise the majority of dollar amounts in either account (i.e., the majority of budget dollars are in larger BLIs).  This means that larger dollar amounts are budgeted in BLIs that can make use of the full dollar BTR threshold.  However, the prevalence of BLIs under $50 million, particularly in RDT&E BAs 03-07, presents potential challenges for execution reprogramming flexibility.  As modern technology cycles become less distinct and serial from the current BA definitions, smaller PEs in these BAs could constrain the Department's ability to reprogram funds between programs as technology matures.[221]

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[221]  See definitions of RDT&E budget activities in John F. Sargent Jr., R44711 Department of Defense Research, Development, Test, and Evaluation (RDT&E): Appropriations Structure, CRS, September 7, 2022, 3-4, https://crsreports.congress.gov/product/pdf/R/R44711/12.

# Appendix D3: New Starts

This overview of new starts presents PA Reprogramming action new start data provided to the Commission by the OUSD(C) and publicly available on the USD(C) website. New starts requested in the PB are outside the scope of this section.

## Background

New starts allow the DoD to initiate efforts not previously justified and enacted in annual appropriations. A combination of statute, explanatory statements, and regulations, as provided in the DoD FMR, govern the new start process. The DoD must notify Congress of all new starts, but Congress allows new starts below certain dollar amounts to be initiated via letter notification. Requests above the dollar threshold or that trigger other reprogramming restrictions use the PA reprogramming request process.

## Definition

Program, project, and activity (PPA): "the most specific level of budget items identified in the Department of Defense Appropriations Act, 2021, the related classified annexes and Committee reports, and the P-1 and R-1 budget justification documents as subsequently modified by congressional action [for Military Personnel and [O&M] defined as the appropriations accounts contained in the Department of Defense Appropriations Act."[222]

## Statutory and Regulatory Guidance

In the DoD Appropriations Act for Fiscal Year 2005, Congress established a requirement for written notification to the congressional defense committees and the OSD at least 30 days prior to initiating a new start program.[223]

The annual appropriations act includes language restricting the use of funds "through a reprogramming of funds that creates or initiates a new program, project, or activity" except in the interest of national security and only after written prior notification.[224] The definition of PPA is also provided in Joint Explanatory Statement language accompanying annual appropriations (see definition above).

The DoD FMR expands on the new start authority, linking it to the relevant justification documents and also notes that ordinary new start requests without follow-on budgeted or programmed funding will not be considered.[225] The BTR authority cannot be used to initiate new starts.[226]

[222] H.Rept. 116-453 Department of Defense Appropriations Bill, 2021, July 16, 2020, 5, https://www.congress.gov/116/crpt/hrpt453/CRPT-116hrpt453.pdf. With updates to the years, this language is largely consistent across years. For older example: H. Rept. 108-622 Making Appropriations for the Department of Defense for the Fiscal Year Ending September 30, 2005, and for Other Purposes, July 20, 2004, 67, https://www.govinfo.gov/content/pkg/CRPT-108hrpt622/pdf/CRPT-108hrpt622.pdf.
[223] Prior notification was required in statute; the 30-day notification period was directed in explanatory language. H. Rept. 108-622, 47.
[224] H.R. 2617, 149.
[225] DoD, DoD 7000.14-R, 6-9.
[226] Ibid. 6-20.

The FMR allows for 30-day notify-and-wait letter notification of new starts under informally agreed upon thresholds that were established to align to the BTR thresholds at the time.[227] The OUSD(C) does not provide these notifications to Congress. A sample of Service letter notifications provided to the Commission included the dollar amount requested, the source of the funds, and a discussion of the new start requirement.[228]

**Data**

From FY 2015 to FY 2022:

- There were 218 new start requests with 159 approved by the congressional defense committees; approximately 73 percent of requested new starts were approved.
- The majority of requests are approved, and adequately resourced meaning enough sources are approved to fund the new starts; 9 percent of requested dollar amounts were OUSD(C)-adjusted due to mismatches between approved new starts and sources or other implementation issues.
- New starts were requested in 68 out of 166 PA requests (about 41 percent)

Figure 53: Prior Approval (PA) New Start Outcomes, FY 2015- FY 2022 Source: Commission staff analysis of OUSD(C) data and PA Requests on the OUSD(C) website[229]

| Fiscal Years | Requested NS # | Requested NS $M | Approved NS # | Approved NS $M | Approved % NS | Approved % $ NS | Denied/Deferred NS # | Denied/Deferred NS $M | Denied/Deferred % NS | Denied/Deferred % $ NS | Not Implemented/Partial NS # | Not Implemented/Partial NS $M | Not Implemented/Partial % NS | Not Implemented/Partial % $ NS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FY 2015 | 35 | $760.5 | 22 | $552.4 | 63% | 73% | 13 | $197.8 | 37% | 26% | 2 | $10.3 | 6% | 1% |
| FY 2016 | 37 | $475.5 | 22 | $372.8 | 59% | 78% | 15 | $59.2 | 41% | 12% | 5 | $43.5 | 14% | 9% |
| FY 2017 | 29 | $402.1 | 16 | $294.6 | 55% | 73% | 13 | $107.5 | 45% | 27% | | | 0% | 0% |
| FY 2018 | 50 | $924.7 | 47 | $777.8 | 94% | 84% | 3 | $51.3 | 6% | 6% | 6 | $95.6 | 12% | 10% |
| FY 2019 | 22 | $471.2 | 20 | $332.9 | 91% | 71% | 2 | $38.0 | 9% | 8% | 2 | $100.3 | 9% | 21% |
| FY 2020 | 19 | $281.2 | 9 | $135.4 | 47% | 48% | 9 | $125.8 | 47% | 45% | 1 | $20.0 | 5% | 7% |
| FY 2021 | 13 | $266.2 | 11 | $141.9 | 85% | 53% | 2 | $76.0 | 15% | 29% | 3 | $48.3 | 23% | 18% |
| FY 2022 | 13 | $179.6 | 12 | $171.6 | 92% | 96% | 1 | $4.9 | 8% | 3% | 1 | $3.1 | 8% | 2% |
| TOTALS | 218 | $3,760.8 | 159 | $2,779.3 | 73% | 74% | 58 | $660.4 | 27% | 18% | 20 | $321.1 | 9% | 9% |

New starts occur overwhelmingly in the Procurement and RDT&E appropriations (see Figure 54). From FY 2015 to FY 2022, there were two requested O&M new starts: to initiate initial Syria Train and Equip Fund efforts in 2015 and a non-executable classified collection request.

[227] Commission interview with subject matter experts.
[228] Commission interviews with subject matter experts. Service letter notifications, signed out by budget and legislative liaisons, provided to Commission.
[229] New start data provided by OUSD(C) and staff analysis of PA requests on the OUSD(C) website. Numbers in the not implemented/partial column are not included in the sum of requested, except for the FY 2020 new start request that was pulled and not implemented.

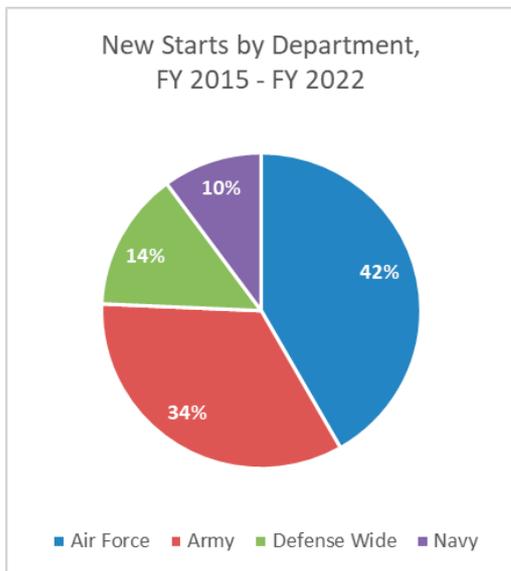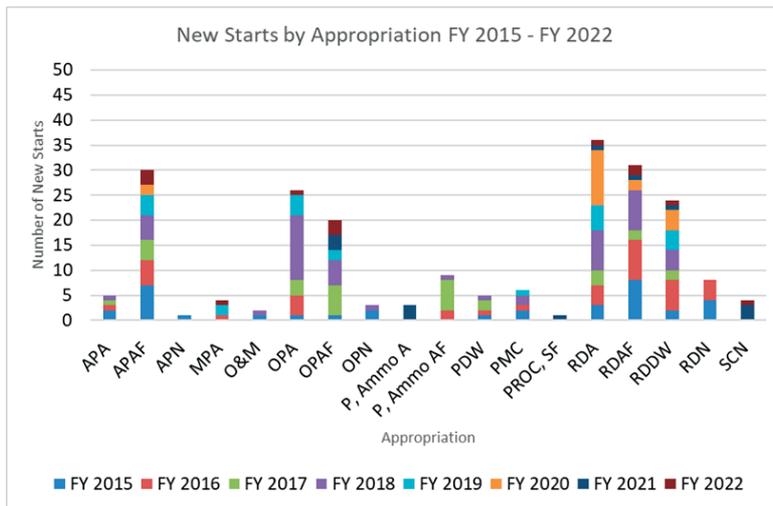Figure 54: New Starts by Appropriation Category, FY 2015 - FY 2022 [230]





Figure 55: New Starts by Department [231]
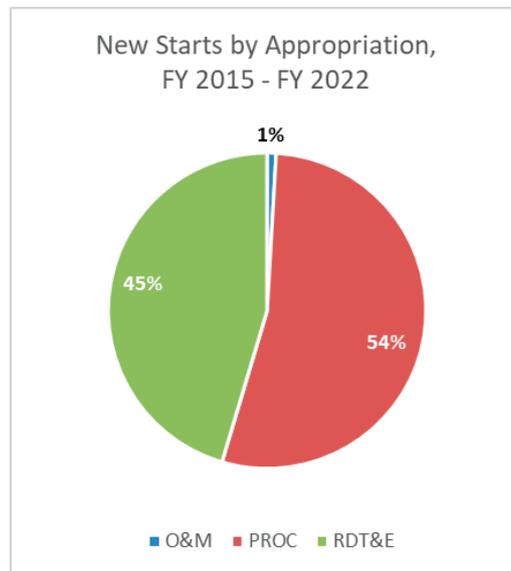
Figure 56: New Starts by Appropriation [232]

- Total requested amount of new start programs in the year of request was $3,760.8 million; total costs of the new start efforts (when provided) were $33,586.9 million
- Most new starts were in the Procurement appropriations accounts (54 percent)
  - Procurement: $2,329.6 million initial request/$21,525.6 million in total cost
  - RDT&E: $1,207.8 million initial request/$12,058.3 million in total cost
  - O&M: $223.5 million initial request/$3 million in total cost [233]
- The Department of the Air Force had the most new start requests (42 percent); the Department of the Navy had the fewest (10 percent)

[230] Ibid.
[231] Ibid.
[232] Ibid. Defense-wide includes an O&M new start that is counted as one Defense-wide action but includes an Air Force and Army element.
[233] Total cost of effort was not available for an O&M new start (initial request $220.5M for Syria Train & Equip Activities).

## Uses of New Starts

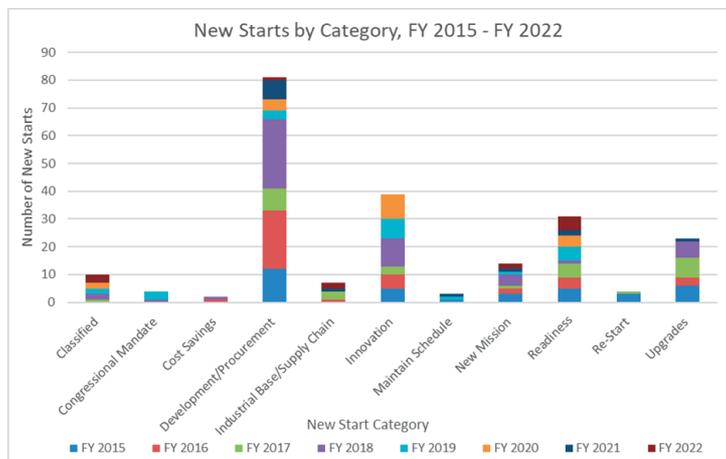One potential application of new starts is as a mechanism to insert new technologies or respond to events in the year of execution that could not be anticipated prior to locking a PB. To examine this question, the 218 new start requests were categorized based on a staff-developed subjective taxonomy based on the project descriptions provided in PA requests. The frequency of the development or procurement category aligns with the above finding that most new starts occur in procurement accounts.

**New Start Taxonomy**

1. **Re-Start:** Re-start of a program after more than one year.

2. **Maintain innovation Schedule:** Effort to meet schedule

3. **Industrial Base:** Challenge or opportunity related to the industrial base or supply chain (e.g., establishing a Manufacturing Innovation Institute, production line shutting down, labor shortages)

4. **Congressional Mandate:** Action required to implement legislative requirements (e.g., tools to support background check transfer, Iron Dome procurement)

5. **Innovation:** New start supporting development, testing/experimentation, procurement, insertion, or integration of new operational concepts or emerging technology (based on 14 R&E Critical Technology Areas: Biotechnology, Quantum Science, Future Generation Wireless Technology, Advanced Materials, Trusted AI/Autonomy, Integrated Network Systems-of-Systems, Microelectronics, Space Technology, Renewable Energy Generation and Storage, Advanced Computing and Software, Human-Machine Interfaces, Directed Energy, Hypersonics, Integrated Sensing and Cyber)

6. **Readiness:** Efforts that support readiness1 of people and systems (including training and safety) (e.g. readiness dashboard, hypoxia modification, simulators, cyber vulnerability analysis, survivability, structures)

7. **Development/Procurement:** Initiate or accelerate development, procurement, integration, and installation of capabilities/systems (e.g. software modifications from FMS to US version of F-16, additional missiles, advance procurements, long-lead item procurement, procurement of COTS solutions, etc.). Could include new technologies, but PA language not interpreted as covering the areas described in the "Innovation" category.

8. **New Mission:** New start supporting a non-congressionally directed new mission (e.g., JAIC, C-sUAS Office, SFAB, Syria Train & Equip)

9. **Upgrades:** Upgrades to existing systems and associated challenges (updating, modifying existing systems; hardware and/or software-based, ship conversion)

10. **Classified:** Details classified in description/inadequate detail to classify in another category

11. **Cost Savings:** New start that produces government cost savings (e.g., purchase of leased systems)

- 81 new start requests were to initiate or accelerate development or procurement.
- 38 requests supported innovation; 31 supported readiness.
- 10 classified requests could include technology insertions, but sufficient information was not available in the unclassified PA request language to make a determination.
- 35 requests (~16 percent) were identified as urgent operational needs (JUONS, ONS, UONS, etc.) in PA documentation.
- The remaining 23 requests fit into the categories identified below in Figure 57.

Figure 57: New Starts by Type, Fiscal Year 2015-2022 [234]



[234] New Start data provided by OUSD(C).

Figure 58: Average and Median Amount of Requested New Starts [235]

| | # of New Starts | Average Request ($M) | Median Request ($M) | Average Total Cost of Effort ($M) | Median Total ($M) |
|---|---|---|---|---|---|
| **O&M** | **2.0** | **111.8** | **111.8** | **1.5** | **1.5** |
| FY 2015 | 1.0 | 220.5 | 220.5 | 0.0 | 0.0 |
| FY 2018 | 1.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| **Procurement** | **118.0** | **19.7** | **10.8** | **205.0** | **12.3** |
| FY 2015 | 17.0 | 22.1 | 10.6 | 947.8 | 19.5 |
| FY 2016 | 15.0 | 23.2 | 11.9 | 64.6 | 18.0 |
| FY 2017 | 22.0 | 14.7 | 4.8 | 26.0 | 12.3 |
| FY 2018 | 29.0 | 17.4 | 9.8 | 27.2 | 9.8 |
| FY 2019 | 13.0 | 24.6 | 10.9 | 70.7 | 8.7 |
| FY 2020 | 2.0 | 50.0 | 50.0 | 413.5 | 413.5 |
| FY 2021 | 10.0 | 22.1 | 18.7 | 573.2 | 97.6 |
| FY 2022 | 10.0 | 13.7 | 11.4 | 14.6 | 14.1 |
| **RDT&E** | **98.0** | **12.3** | **6.1** | **138.6** | **25.1** |
| FY 2015 | 17.0 | 9.6 | 5.0 | 67.7 | 35.5 |
| FY 2016 | 22.0 | 5.8 | 4.5 | 101.3 | 19.3 |
| FY 2017 | 7.0 | 11.3 | 6.3 | 33.8 | 25.1 |
| FY 2018 | 20.0 | 20.9 | 5.6 | 247.0 | 28.8 |
| FY 2019 | 9.0 | 16.8 | 13.0 | 193.5 | 93.5 |
| FY 2020 | 17.0 | 10.7 | 5.5 | 28.4 | 4.6 |
| FY 2021 | 3.0 | 14.9 | 20.0 | 17.1 | 17.1 |
| FY 2022 | 3.0 | 14.2 | 15.9 | 1957.0 | 1957.0 |
| **Grand Total** | **218.0** | **17.3** | **7.8** | **173.1** | **19.0** |

Figure 59: Average and Median Amounts of New Start Requests, FY 2015-2022 ($M).  Notes:  The FY 2015 Procurement average is driven by total effort cost based on the KC-46 program.  The FY 2020 Procurement average is driven by double count of total cost for two requests for the same effort; they were the only Procurement new starts that year.  The FY 2021 Procurement average is driven by total effort cost based on the SSP-2 Life-of-Type Buy effort; not all requests included total cost in the PA request.  The FY 2018 RDT&E average is driven by manned ground vehicle, JAIC, and Midterm Polar MILSATCOM System.  The FY 2019 RDT&E average is driven by SDA establishment and 5G development.  The FY 2022 RDT&E average and median are driven by the total cost of the E-7 AWACS replacement.



Average and Median Amounts of New Start Requests, FY 2015 - FY 2022 ($M)
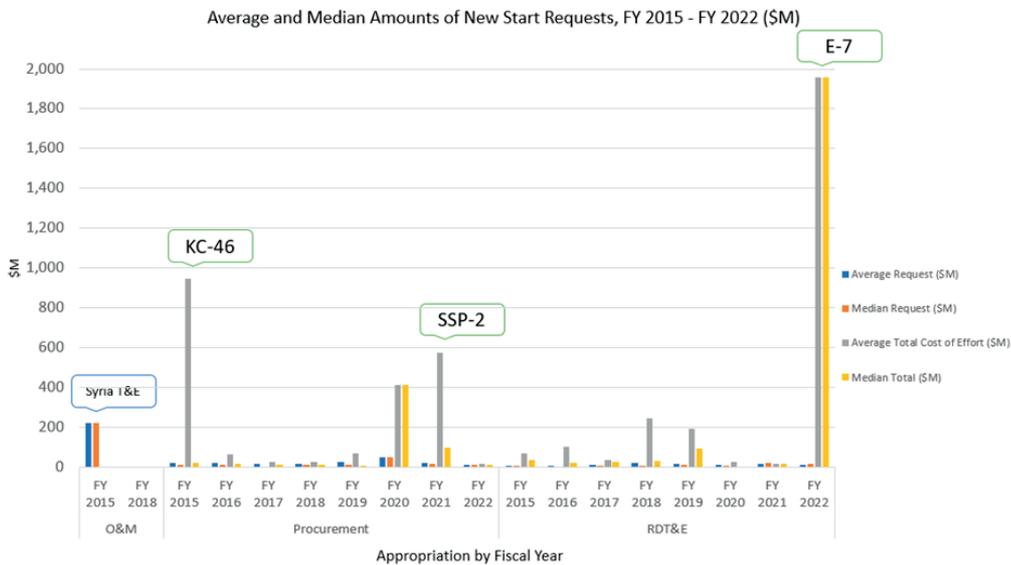
[235] Ibid.

## Discussion of Issues

### Re-starts

The FMR allows for programs to extend "into a subsequent fiscal year without constituting a new start...and could include a skip year for execution purposes."[236] A skip year allows the DoD to resume a program if there was a challenge in execution (such as a production backlog) without having to declare a new start.[237] The CR language prohibiting new starts supersedes the skip year guidance. Absent a CR, there is no legislative language regarding a skip year.[236]

There were three new start requests in 2015 for the procurement of systems that had not been requested in the prior three to four fiscal years. In January 2017, one new start request was to restart development and testing following a two-year funding gap. In March 2022, one new start request was to restart production activities last funded in FY 2018.

### New Starts and Justification Book Materials

Legislative restrictions on initiating new starts are based on the definition of "program, project, and activity" provided in the Joint Explanatory Statement accompanying appropriations: "...the terms "program, project, and activity" for appropriations contained in this Act shall be defined as the most specific level of budget items identified in the Department of Defense Appropriations Act, 2023, the related classified annexes and Committee reports, and the P-1 and R-1 budget justification documents as subsequently modified by congressional action. The following exception to the above definition shall apply: the Military Personnel and the operation and maintenance accounts, for which the term "program, project, and activity" is defined as the appropriations accounts contained in the Department of Defense Appropriations Act."[239] Based on this definition, the language used to describe a program, project, and activity matters for determining whether an effort should be considered a new start.

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[236] DoD, DoD 7000.14-R, 6-9: "A program effort in one year in the Procurement and RDT&E accounts may be extended into a subsequent fiscal year without constituting a new start. This is considered an extension of the effort initiated in the prior year program and could include a skip year for execution purposes."

[237] The origin of the "skip year" is unclear. The 1996 FMR allows the extension of Procurement and RDT&E into subsequent years without constituting a new start. The 2000 FMR explicitly notes the ability to "include a skip year for execution purposes." In May 2023 interview with subject matter experts, a possible origin of the skip year is shipbuilding schedules. Ships require significant time to build and for a variety of reasons, it might not be possible to build a ship each year. A skip year allows DoD to build ships within a class without having to declare a new start if there is a gap in production for each ship.

[238] Interview with subject matter experts. For example Public Law 117-43 Extending Government Funding and Delivering Emergency Assistance Act, September 30, 2021, 346, https://www.congress.gov/117/plaws/publ43/PLAW-117publ43.pdf: "(3) The initiation, resumption, or continuation of any project, activity, operation, or organization (defined as any project, subproject, activity, budget activity, program element, and subprogram within a program element, and for any investment items defined as a P–1 line item in a budget activity within an appropriation account and an R–1 line item that includes a program element and subprogram element within an appropriation account) for which appropriations, funds, or other authority were not available during fiscal year 2021."

[239] Consolidated Appropriations Act, 2023, 532.

**Purpose vs. Potential**

New starts in PA reprogramming requests experience similar challenges as other reprogramming requests with identifying sources, DoD and congressional review and approval processes, adequate source approval by Congress, and the timelines associated with the reprogramming process. There were 70 new starts (about 32 percent) in 12 Omnibus reprogramming requests between FY 2015 and FY 2022. The FMR currently allows a 30-day notify-and-wait period for certain new starts based on cost thresholds. Congressional approval of PA reprogrammings on average takes longer than 30 days (Figure 60).

Figure 60: Congressional PA Timelines Source: Commission analysis of data provided by OUSD(C). Averages reflect longest available time for a reprogramming request (i.e., does not reflect multiple rounds of congressional approval).

| | Congress | | | | | |
| | OMNIBUS | | | NON-ONMIBUS | | |
| Fiscal Year | Average | Max | Min | Average | Max | Min |
|---|---|---|---|---|---|---|
| 2009 | 37 | 38 | 29 | 56 | 354 | 12 |
| 2010 | 42 | 42 | 42 | 27 | 112 | 2 |
| 2011 | 14 | 20 | 10 | 36 | 118 | 1 |
| 2012 | 85 | 85 | 84 | 49 | 206 | 7 |
| 2013 | | | | 45 | 119 | 1 |
| 2014 | 76 | 81 | 70 | 43 | 120 | 6 |
| 2015 | 89 | 90 | 88 | 65 | 288 | 8 |
| 2016 | 83 | 83 | 82 | 73 | 182 | 17 |
| 2017 | 134 | 190 | 77 | 51 | 189 | 5 |
| 2018 | 117 | 155 | 79 | 62 | 221 | 10 |
| 2019 | 92 | 92 | 92 | 81 | 181 | 28 |
| 2020 | 150 | 209 | 91 | 71 | 134 | 13 |
| 2021 | 74 | 91 | 56 | 42 | 176 | 5 |
| 2022 | | | | 52 | 118 | 15 |
| Grand Total | 71 | 209 | 10 | 53 | 354 | 1 |

**Vignette 1: Interconnecting Color of Money and New Start Rules**

In FY 2016, the Defense POW/MIA Accounting Agency (DPAA) O&M J-book described ongoing efforts to "develop an information technology solution to establish accounting community accessible files for each missing person that contain all available information regarding the disappearance, whereabouts, and status of missing persons." In FY 2016, the DPAA had only requested O&M funding.

In April 2016, the DPAA requested $9.1 million in Procurement, Defense-Wide funding, as a new start to procure commercial-off-the-shelf (COTS) software for a Case Management System (CMS); the request was approved and later described in budget justification narratives. The PA request justified the request as required to purchase a COTS software solution to deploy a single database and CMS containing information on all missing persons for whom a file has been established…will enable quick, efficient compilation of relevant individual missing persons case data and tracking."

While the requirement was described in the FY 2016 O&M J-book, the FMR also includes a rule for determining whether something is an investment or expense, with a threshold at $250,000 in consideration of which type of funding should be used for the effort.  In 2016, Title 10, U.S.C §2245a limited the use of O&M to purchase items with a unit cost greater than $250,000. This limitation was repealed in the NDAA for FY 2017.   The FMR maintains a $250,000 expense/investment threshold; the FY 2023 DoD Appropriations Act increased the threshold to $350,000.

Since 2015, the DPAA has occasionally requested Procurement funding, primarily to purchase vehicles to support recovery efforts (see FY 2023 and  FY 2020).  These requests were a new start initiated in the FY 2020 PB.

This example provides insight into the complex ecosystem of rules and regulations governing DoD spending and points to potential benefits for adjusting color of money rules for software and IT procurement.  Changes to new start rules in isolation will not necessarily reduce new starts in PA reprogrammings if other rules and regulations are not clarified or amended.

**PPBE Timelines and the Requirement to Fund Outyear Efforts in Future Years**
The FMR states that, with extraordinary exceptions, "consideration will not be given to new start reprogramming requests for which follow-on funding is not budgeted or programmed." [240] In FY 2015 to FY 2022, 124 of the 218 new start requests (about 57 percent) required funds beyond the initial reprogramming request.  In requesting the new start, the requestor must also take into account the need to ensure that any required subsequent funds are programmed or budgeted for in the appropriate years.   Reprogramming requests with new starts tend to occur in the late spring/early summer (in proximity to the annual Omnibus request) (Figure 61).

Figure 61: Monthly Distribution of PA Requests with New Starts, FY 2015-2022 [241]
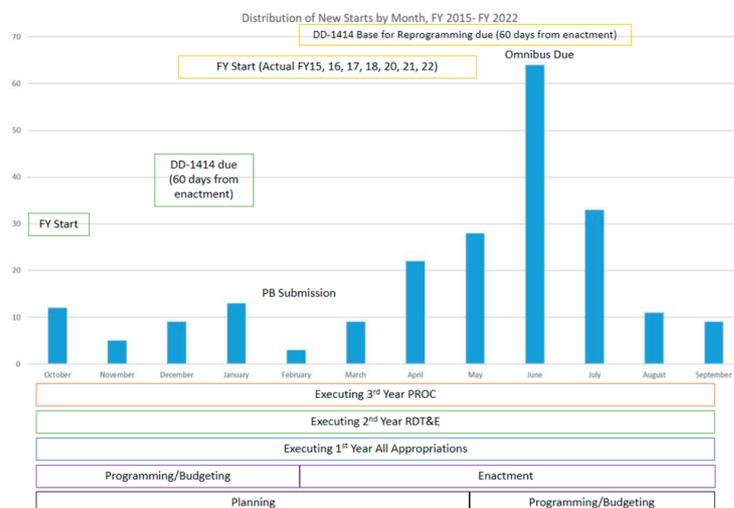


[240] DoD, DoD 7000.14-R, 6-9.
[241] New Start data provided by OUSD(C). PPBE process events adapted from Defense Acquisition University, Funds Management Platinum Card, February 2022, 2, https://www.dau.edu/tools/Lists/DAUTools/Attachments/156/Platinum%20Card%20Feb%202022.pdf.

Submission of new starts in the middle of the calendar year aligns with the programming and budgeting phase of the upcoming year and the planning phase of the following fiscal year, allowing the request to provide Congress with details about future funding. Requesting a new start later in the calendar year risks not being able to insert the effort in the program and President's Budget if it requires funding beyond the initial request.

## New Start Request Amounts

Most new start requests are below $10 million, with about 92 percent below $50 million (Figure 62); 89 out of 218 (about 41 percent) requested new starts were for dollar amounts below the letter notification limits provided in the FMR with no funds required beyond the PA request. [242]

Figure 62: New Start Request Amount ($M) Frequency Table, FY 2015- FY 2022

| FY Amount of Request ($M) | Count of FY Amount of Request ($M) | % of New Start Requests | % Cumulative of New Start Requests |
|---|---|---|---|
| 0.2-10.2 | 122 | 55.96% | 55.96% |
| 10.2-20.2 | 35 | 16.06% | 72.02% |
| 20.2-30.2 | 20 | 9.17% | 81.19% |
| 30.2-40.2 | 16 | 7.34% | 88.53% |
| 40.2-50.2 | 8 | 3.67% | 92.20% |
| 50.2-60.2 | 5 | 2.29% | 94.50% |
| 60.2-70.2 | 5 | 2.29% | 96.79% |
| 80.2-90.2 | 3 | 1.38% | 98.17% |
| 90.2-100.2 | 1 | 0.46% | 98.62% |
| 100.2-110.2 | 2 | 0.92% | 99.54% |
| 220.2-230.2 | 1 | 0.46% | 100.00% |

Using a notional $50 million threshold in the request year, 201 of requested new starts would fall below that threshold and 137 would fall below the threshold for the entire effort (Figure 63). For 25 of the requests there was no information on the total cost of the effort beyond the PA request.

Figure 63: Total Cost of New Start Efforts Frequency Table, FY 2015 – FY 2022

| Total Cost of Effort ($M) | Count of Total Cost of Effort ($M) | % of Total Cost Count | % Cumulative of Total Cost Count | Total Cost of Effort ($M) | Count of Total Cost of Effort ($M) | % of Total Cost Count | % Cumulative of Total Cost Count |
|---|---|---|---|---|---|---|---|
| <0.2 | 1 | 0.52% | 0.52% | 230.2-240.2 | 1 | 0.52% | 89.18% |
| 0.2-10.2 | 73 | 37.63% | 38.14% | 240.2-250.2 | 3 | 1.55% | 90.72% |
| 10.2-20.2 | 24 | 12.37% | 50.52% | 270.2-280.2 | 1 | 0.52% | 91.24% |
| 20.2-30.2 | 22 | 11.34% | 61.86% | 310.2-320.2 | 2 | 1.03% | 92.27% |
| 30.2-40.2 | 10 | 5.15% | 67.01% | 340.2-350.2 | 1 | 0.52% | 92.78% |
| 40.2-50.2 | 7 | 3.61% | 70.62% | 370.2-380.2 | 1 | 0.52% | 93.30% |
| 50.2-60.2 | 6 | 3.09% | 73.71% | 390.2-400.2 | 1 | 0.52% | 93.81% |
| 60.2-70.2 | 5 | 2.58% | 76.29% | 410.2-420.2 | 2 | 1.03% | 94.85% |
| 70.2-80.2 | 2 | 1.03% | 77.32% | 430.2-440.2 | 1 | 0.52% | 95.36% |
| 80.2-90.2 | 5 | 2.58% | 79.90% | 510.2-520.2 | 1 | 0.52% | 95.88% |
| 90.2-100.2 | 6 | 3.09% | 82.99% | 550.2-560.2 | 1 | 0.52% | 96.39% |
| 100.2-110.2 | 2 | 1.03% | 84.02% | 600.2-610.2 | 1 | 0.52% | 96.91% |
| 110.2-120.2 | 1 | 0.52% | 84.54% | 880.2-890.2 | 1 | 0.52% | 97.42% |
| 140.2-150.2 | 1 | 0.52% | 85.05% | 980.2-990.2 | 1 | 0.52% | 97.94% |
| 150.2-160.2 | 2 | 1.03% | 86.08% | 1740.2-1750.2 | 1 | 0.52% | 98.45% |
| 160.2-170.2 | 2 | 1.03% | 87.11% | 1950.2-1960.2 | 1 | 0.52% | 98.97% |
| 170.2-180.2 | 2 | 1.03% | 88.14% | 1990.2-2000.2 | 1 | 0.52% | 99.48% |
| 190.2-200.2 | 1 | 0.52% | 88.66% | 14790.2-14800.2 | 1 | 0.52% | 100.00% |

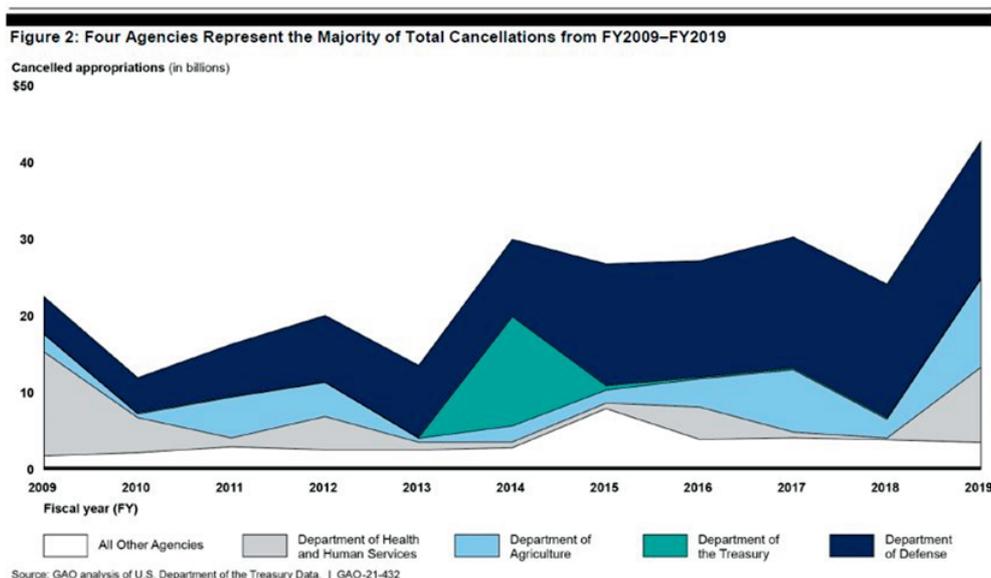[242] Excludes new starts without reported total cost of effort.

# Appendix D4: Expiring, Expired, or Cancelled Funds

Appropriations have different life cycles, consisting of a period of active availability, expiration, and cancellation. The O&M and MILPERS appropriations are available for one year, RDT&E is available for two years, and Procurement is available for three years, with the exception of Shipbuilding and Conversion, which is available for five (or in some limited circumstances six) years. The MILCON appropriation is available for five years. Some accounts can receive no-year appropriations, that is, the funds that do not expire.

Expiring funds are funds at the end of their period of active availability defined as "[b]udget authority that is no longer available to incur new obligations but is available for an additional five fiscal years for disbursement of obligations properly incurred during the budget authority's period of availability. Unobligated balances of expired budget authority remain available for five years to cover legitimate obligation adjustments or for obligations properly incurred during the budget authority's period of availability that the agency failed to record." [243]

Cancelled funds are all remaining unobligated and obligated balances in an account at the end of the account's expiration period. These funds return to the Treasury. [244] From FY 2009 to FY 2019, the federal government-wide cancellation rate was 1.6 percent. The DoD's cancellation rate during that time was 1.8 percent and represented 48.5 percent ($127.61 billion) of government cancellations in dollar terms from FY 2009 to FY 2019. [245]

Figure 64: Total Federal Cancellations FY 2009 - FY 2019 Source: GAO-21-432



Figure 2: Four Agencies Represent the Majority of Total Cancellations from FY2009–FY2019

Cancelled appropriations (in billions)

Source: GAO analysis of U.S. Department of the Treasury Data. | GAO-21-432

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[243] Government Accountability Office (GAO), A Glossary of Terms Used in the Federal Budget Process, September 2005, 23, https://www.gao.gov/assets/gao-05-734sp.pdf.
[244] Ibid.
[245] GAO, GAO-21-432 FEDERAL BUDGET: A Few Agencies and Program-Specific Factors Explain Most Unused Funds, May 2021, https://www.gao.gov/assets/gao-21-432.pdf.

The figures below present data on expiring, expired, and cancelled funds by Service and appropriation for the DoD. This data was provided to the Commission by OUSD(C) based on SF-133 data for FY 2018 to FY 2022.
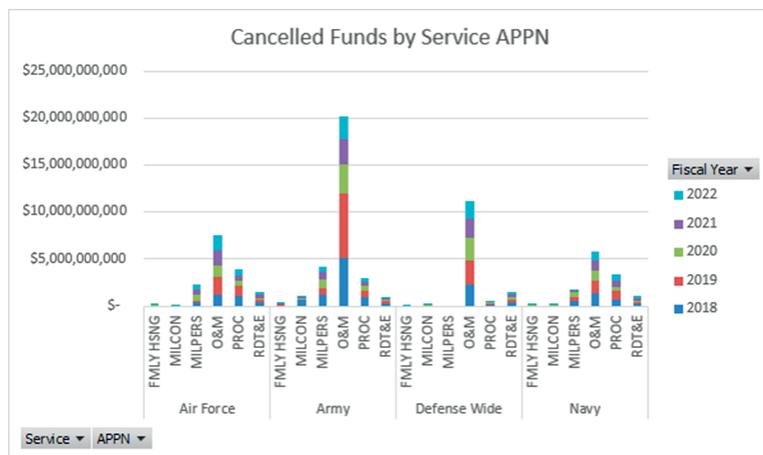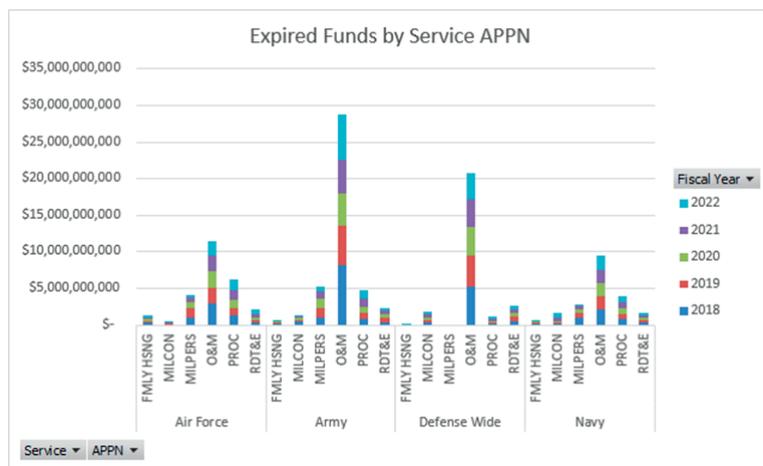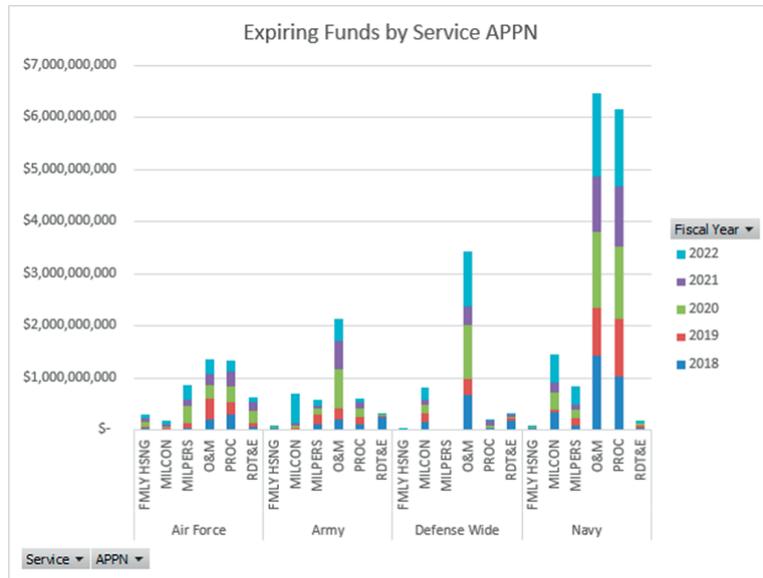
The figures below present data on expiring, expired, and cancelled funds by appropriation for the DoD. Data was provided to the Commission by OUSD(C) based on SF-133 data for FY 2018 to FY 2022.
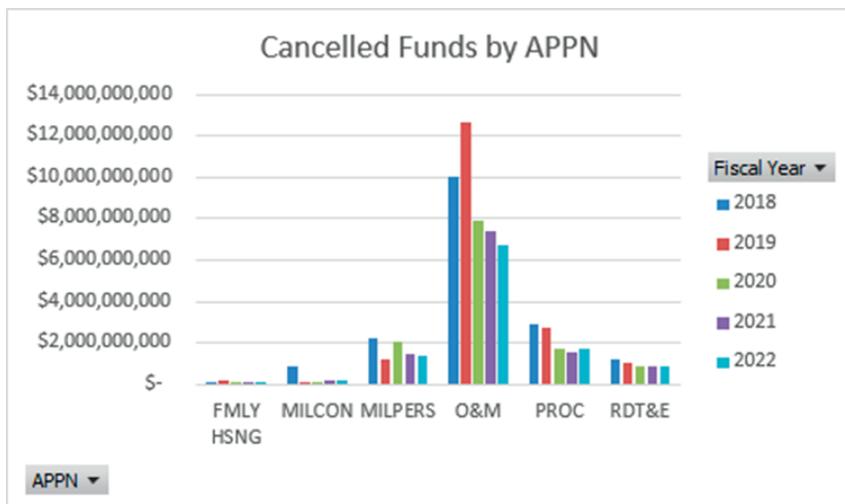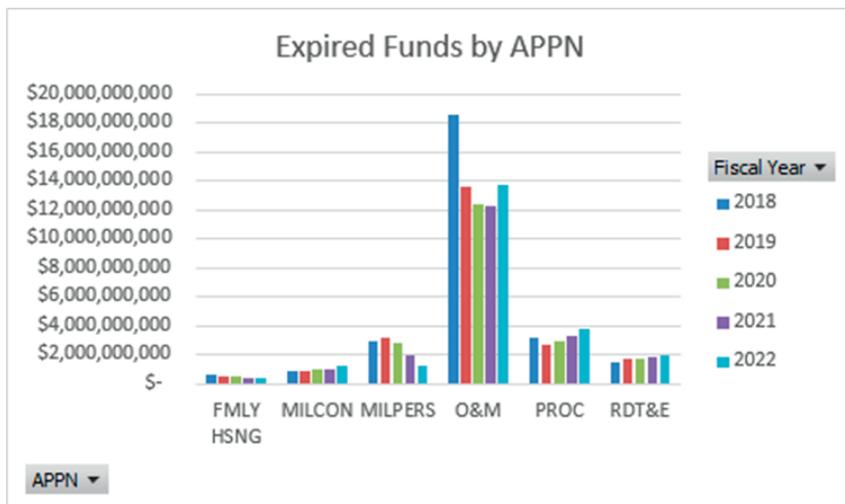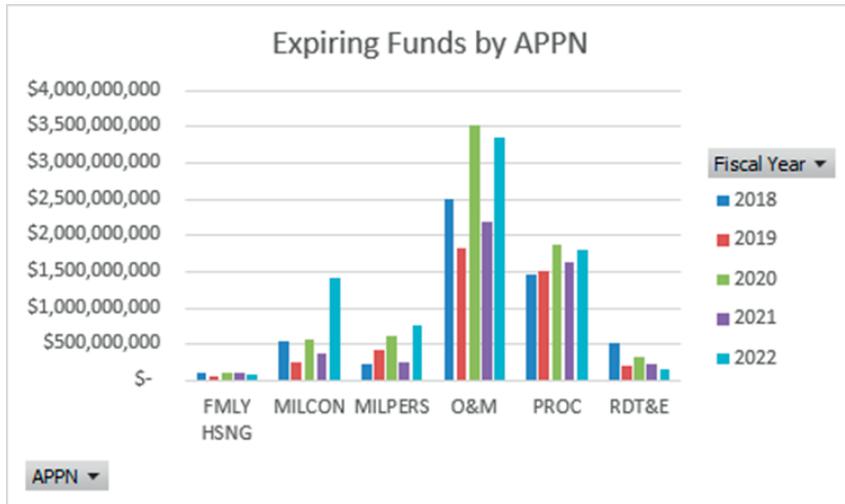
# Appendix D5:  President's Budget, Appropriation Acts, and NDAA Release Dates

The last three years, from FY 2022 - FY 2024, the PB has been submitted an average of 63 days late based on "Budget of the United States Government" data from the Government Publishing Office.[246]

Other data notes:
- Appendix Date:  date that detailed appendix is released; "primarily for the use of the Appropriations Committees"
- Appropriation:  based on Presidential approval[247]
- NDAA:  based on dates from Pentagon Library linked NDAAs[248]

| President's Budget Delivery | | | | | |
|---|---|---|---|---|---|
| Fiscal Year | PB released | PB Due | Appendix Date | PB Days Late | Appendix Days Late |
| 2024 | 9-Mar-23 | 6-Feb-23 | 13-Mar-23 | 31 | 35 |
| 2023 | 28-Mar-22 | 7-Feb-22 | 28-Mar-22 | 49 | 49 |
| 2022 | 28-May-21 | 8-Feb-21 | 28-May-21 | 109 | 109 |
| 2021 | 10-Feb-20 | 3-Feb-20 | 10-Feb-20 | 7 | 7 |
| 2020 | 11-Mar-19 | 4-Feb-19 | 18-Mar-19 | 35 | 42 |
| 2019 | 12-Feb-18 | 5-Feb-18 | 12-Feb-18 | 7 | 7 |
| 2018 | 23-May-17 | 6-Feb-17 | 23-May-17 | 106 | 106 |
| 2017 | 9-Feb-16 | 8-Feb-16 | 9-Feb-16 | 1 | 1 |
| 2016 | 2-Feb-15 | 2-Feb-15 | 2-Feb-15 | 0 | 0 |
| 2015 | 4-Mar-14 | 3-Feb-14 | 4-Mar-14 | 29 | 29 |
| 2014 | 10-Apr-13 | 4-Feb-13 | 10-Apr-13 | 65 | 65 |
| 2013 | 13-Feb-12 | 6-Feb-12 | 13-Feb-12 | 7 | 7 |
| 2012 | 14-Feb-11 | 7-Feb-11 | 14-Feb-11 | 7 | 7 |
| 2011 | 1-Feb-10 | 1-Feb-10 | 1-Feb-10 | 0 | 0 |
| 2010 | 26-Feb-09 | 2-Feb-09 | 7-May-09 | 24 | 94 |
| 2009 | 4-Feb-08 | 4-Feb-08 | 4-Feb-08 | 0 | 0 |
| 2008 | 5-Feb-07 | 5-Feb-07 | 5-Feb-07 | 0 | 0 |
| 2007 | 6-Feb-06 | 6-Feb-06 | 6-Feb-06 | 0 | 0 |
| 2006 | 7-Feb-05 | 7-Feb-05 | 7-Feb-05 | 0 | 0 |
| 2005 | 2-Feb-04 | 2-Feb-04 | 2-Feb-04 | 0 | 0 |
| 2004 | 3-Feb-03 | 3-Feb-03 | 3-Feb-03 | 0 | 0 |
| 2003 | 4-Feb-02 | 4-Feb-02 | 4-Feb-02 | 0 | 0 |
| 2002 | 9-Apr-01 | 5-Feb-01 | 9-Apr-01 | 63 | 63 |
| 2001 | 7-Feb-00 | 7-Feb-00 | 7-Feb-00 | 0 | 0 |
| 2000 | 1-Feb-99 | 1-Feb-99 | 1-Feb-99 | 0 | 0 |
| 1999 | 2-Feb-98 | 2-Feb-98 | 2-Feb-98 | 0 | 0 |
| 1998 | 1-Feb-97 | 3-Feb-97 | 6-Feb-97 | -2 | 3 |
| 1997 | 5-Feb-96 | 5-Feb-96 | 5-Feb-96 | 0 | 0 |
| 1996 | 1-Feb-95 | 6-Feb-95 | 1-Feb-95 | -5 | -5 |

[246] Budget of the United States Government, https://www.govinfo.gov/app/collection/budget.
[247] Appropriations Status Table, Congressional Research Service, https://crsreports.congress.gov/AppropriationsStatusTable.
[248] DoD Authorization and Appropriation Laws: NDAA, https://whs-mil.libguides.com/dodappropriationslaws/NDAA.

| Fiscal Year | Appropriations | | | | | | Authorization | | | | Appropriation (Pres Approval) | Approps Late by | NDAA | NDAA Late by | FY Start |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HAC-D | SAC-D | HAC | SAC | House | Senate | HASC | SASC | House Passed | Senate NDAA | | | | | |
| 2024 | 6/15/2023 | | | | | | | | | | | | | | 1-Oct-23 |
| 2023 | 6/15/2022 | | 6/22/2022 | | | | 7/1/2022 | 7/18/2022 | 7/14/2022 | | 29-Dec-22 | 89 | 23-Dec-22 | 83 | 1-Oct-22 |
| 2022 | 6/30/2021 | | 7/13/2021 | | | | 7/2/2021 | 9/22/2021 | 9/23/2021 | | 15-Mar-22 | 165 | 15-Mar-22 | 165 | 1-Oct-21 |
| 2021 | 7/8/2020 | | 7/14/2020 | 11/10/2020 | 7/31/2020 | | 7/9/2020 | 6/23/2020 | 7/21/2020 | 7/23/2020 | 27-Dec-20 | 87 | 1-Jan-21 | 92 | 1-Oct-20 |
| 2020 | 5/15/2019 | 9/10/2019 | 5/21/2019 | 9/12/2019 | 6/19/2019 | | 6/19/2019 | 6/11/2019 | 7/12/2019 | 6/27/2019 | 20-Dec-19 | 80 | 20-Dec-19 | 80 | 1-Oct-19 |
| 2019 | 6/7/2018 | 6/26/2018 | 6/13/2018 | 6/28/2018 | 6/28/2018 | 8/23/2018 | 5/15/2018 | 6/5/2018 | 5/24/2018 | | 28-Sep-18 | -3 | 13-Aug-18 | -49 | 1-Oct-18 |
| 2018 | 6/26/2017 | | 6/29/2017 | | 1/30/2018 | | 7/6/2017 | 7/10/2017 | 7/14/2017 | | 3-Mar-18 | 153 | 12-Dec-17 | 72 | 1-Oct-17 |
| 2017 | 5/11/2016 | 5/24/2016 | 5/17/2016 | 5/26/2016 | 6/16/2016 | | 5/4/2016 | 5/18/2016 | 5/18/2016 | 6/14/2016 | 5-May-17 | 216 | 23-Dec-16 | 83 | 1-Oct-16 |
| 2016 | 5/20/2015 | 6/9/2015 | 6/2/2015 | 6/11/2015 | 6/11/2015 | | 5/5/2015 | 5/14/2015 | 5/15/2015 | 5/14/2015 | 18-Dec-15 | 78 | 25-Nov-15 | 55 | 1-Oct-15 |
| 2015 | 5/30/2014 | 7/15/2014 | 6/10/2014 | 7/17/2014 | 6/20/2014 | | 5/13/2014 | 6/2/2014 | 5/22/2014 | | 16-Dec-14 | 76 | 19-Dec-14 | 79 | 1-Oct-14 |
| 2014 | 6/5/2013 | 7/30/2013 | 6/12/2013 | 8/1/2013 | 7/24/2013 | | 6/7/2013 | 6/20/2013 | 6/14/2013 | | 17-Jan-14 | 108 | 26-Dec-13 | 86 | 1-Oct-13 |
| 2013 | 5/8/2012 | 7/31/2012 | 5/17/2012 | 8/2/2012 | 7/19/2012 | | 5/11/2012 | 6/4/2012 | 5/18/2012 | 12/4/2012 | 26-Mar-13 | 176 | 2-Jan-13 | 93 | 1-Oct-12 |
| 2012 | 6/1/2011 | 9/13/2011 | 6/14/2011 | 9/15/2011 | 7/8/2011 | | 5/17/2011 | 6/22/2011 | 5/26/2011 | | 23-Dec-11 | 83 | 31-Dec-11 | 91 | 1-Oct-11 |
| 2011 | 7/27/2010 | 9/14/2010 | | 9/16/2010 | | | 5/21/2010 | 6/4/2010 | 12/17/2010 | | 15-Apr-11 | 196 | 7-Jan-11 | 98 | 1-Oct-10 |
| 2010 | 7/16/2009 | 9/9/2009 | 7/22/2009 | 9/10/2009 | 7/30/2009 | 10/6/2009 | 6/18/2009 | 7/2/2009 | 6/25/2009 | 7/23/2009 | 19-Dec-09 | 79 | 28-Oct-09 | 27 | 1-Oct-09 |
| 2009 | 7/30/2008 | 9/10/2008 | | | | | 5/16/2008 | 5/12/2008 | 5/22/2008 | 9/17/2008 | 30-Sep-08 | -1 | 14-Oct-08 | 13 | 1-Oct-08 |
| 2008 | 7/12/2007 | 9/11/2007 | 7/25/2007 | 9/12/2007 | 8/5/2007 | 10/3/2007 | 5/11/2007 | 6/5/2007 | 5/17/2007 | | 13-Nov-07 | 43 | 28-Jan-08 | 119 | 1-Oct-07 |
| 2007 | 6/7/2006 | 7/18/2006 | 6/13/2006 | 7/20/2006 | 6/20/2006 | 9/7/2006 | 5/5/2006 | 5/9/2006 | 5/11/2006 | 6/22/2006 | 29-Sep-06 | -2 | 17-Oct-06 | 16 | 1-Oct-06 |
| 2006 | 5/24/2005 | 9/26/2005 | 6/7/2005 | 9/28/2005 | 6/20/2005 | 10/7/2005 | 5/20/2005 | 5/17/2005 | 5/25/2005 | 11/15/2005 | 30-Dec-05 | 90 | 6-Jan-06 | 97 | 1-Oct-05 |
| 2005 | 6/2/2004 | 6/22/2004 | 6/16/2004 | 6/22/2004 | 6/22/2004 | 6/24/2004 | 5/14/2004 | 5/11/2004 | 5/20/2004 | 6/23/2004 | 5-Aug-04 | -57 | 28-Oct-04 | 27 | 1-Oct-04 |
| 2004 | 6/18/2003 | 7/8/2003 | 6/26/2003 | 7/9/2003 | 7/8/2003 | 7/17/2003 | 5/16/2003 | 5/13/2003 | 5/22/2003 | 5/22/2003 | 30-Sep-03 | -1 | 24-Nov-03 | 54 | 1-Oct-03 |
| 2003 | 6/19/2002 | 7/16/2002 | 6/24/2002 | 7/18/2002 | 6/27/2002 | 8/1/2002 | 5/3/2002 | 5/15/2002 | 5/10/2002 | 6/27/2002 | 23-Oct-02 | 22 | 2-Dec-02 | 62 | 1-Oct-02 |
| 2002 | 10/10/2001 | | 10/24/2001 | 12/4/2001 | 11/28/2001 | 12/7/2001 | 9/4/2001 | 9/12/2001 | 9/25/2001 | | 10-Jan-02 | 101 | 28-Dec-01 | 88 | 1-Oct-01 |
| 2001 | 5/11/2000 | 5/17/2000 | 5/25/2000 | 5/18/2000 | 6/7/2000 | 6/13/2000 | 5/12/2000 | 5/12/2000 | 5/18/2000 | 7/13/2000 | 9-Aug-00 | -53 | 30-Oct-00 | 29 | 1-Oct-00 |
| 2000 | 7/12/1999 | 5/24/1999 | 7/16/1999 | 5/25/1999 | 7/22/1999 | 7/28/1999 | 5/24/1999 | 5/17/1999 | 6/10/1999 | 5/27/1999 | 25-Oct-99 | 24 | 5-Oct-99 | 4 | 1-Oct-99 |
| 1999 | 6/4/1998 | 6/2/1998 | 6/17/1998 | 6/4/1998 | 6/24/1998 | 7/30/1998 | 5/12/1998 | 5/11/1998 | 5/21/1998 | 6/25/1998 | 17-Oct-98 | 16 | 17-Oct-98 | 16 | 1-Oct-98 |
| 1998 | | | 7/25/1997 | 7/10/1997 | 7/29/1997 | 7/15/1997 | 6/16/1997 | 6/17/1997 | 6/25/1997 | | 8-Oct-97 | 7 | 18-Nov-97 | 48 | 1-Oct-97 |
| 1997 | | | 6/11/1996 | 6/20/1996 | 6/13/1996 | 7/18/1996 | 5/7/1996 | 5/13/1996 | 5/15/1996 | 7/10/1996 | 30-Sep-96 | -1 | 23-Sep-96 | -8 | 1-Oct-96 |
| 1996 | | | 7/27/1995 | 7/28/1995 | 9/7/1995 | 9/5/1995 | 6/1/1995 | 7/12/1995 | 6/15/1995 | 9/6/1995 | 1-Dec-95 | 61 | 10-Feb-96 | 132 | 1-Oct-95 |