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FIVE FIRST STEPS TO A MODERN DEFENSE BUDGETING SYSTEM

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Executive Summary

Developing and executing an annual defense budget approaching $800 billion is an extremely complex process involving thousands of stakeholders from across the Department of Defense (DoD), Congress, and industry. It involves making numerous tradeoffs in an increasingly resource-constrained environment. However, as revealed in recent years, past investments have failed to produce a joint military force that can meet current operational demands.

The current defense budgeting system requires bold reforms to strengthen U.S. national security going forward. The Planning, Programming, Budgeting, and Execution (PPBE) Commission should engage key stakeholders, conduct thorough analyses, encourage rigorous debate, and offer bold recommendations for action by DoD and Congress.

Effectively reforming a 60-year-old process with many competing interests and priorities will take time, but the U.S. national security environment has demonstrated that the nation does not have the luxury of time. The following five steps are provided for DoD and Congress to consider implementing immediately.

These actions will enable DoD to focus more of its collective investments on increasing mission impact and meeting high-priority objectives of the national defense strategy. The outcomes of these reforms will be a more responsive and adaptive resource allocation system that promotes better alignment to national goals, faster adoption of innovation, improved optionality for end users, and a more prepared military.

1. STRENGTHEN DEFENSE PLANNING GUIDANCE AND ASSERT SECDEF AUTHORITY.

Reinforce the Secretary of Defense's (SECDEF's) ability to provide clear direction and prioritization to the Services as they shape their budget decisions. Reinstate comprehensive strategic analysis and guide the difficult decisions to ensure future budgets deliver the capabilities that will successfully deter and, if necessary, defeat an adversary.

2. INSTITUTIONALIZE BUDGET PLANNING COLLABORATION.

Promote greater alignment among the Services, the Office of the Secretary of Defense (OSD), and Congress at the strategic and tactical levels. Require collaborative development of a joint vision and the conduct of regular reviews with key stakeholders.

3. CHARACTERIZE AND MONITOR SPECIAL FUNDS.

Clarify the purpose and continuation criteria for each special fund. For example, articulate what outcomes must be demonstrated for the European and Pacific Defense Initiative accounts to no longer be required to meet near-term Combatant Command (CCMD) priorities.

4. ENABLE EXECUTION YEAR FLEXIBILITIES.

Consolidate smaller accounts, raise reprogramming thresholds, and address new start constraints. DoD and Congress can undertake a series of efforts to balance speed with rigor, thereby offering greater flexibility with proper oversight.

5. MODIFY OVERSIGHT MECHANISMS.

Current oversight reports, reviews, and engagements do not provide sufficient insight, measures, or accountability to achieve desired results. Revising reporting structures, aligning incentives, and promoting greater transparency would enable a common focus on desired outcomes.

FIVE FIRST STEPS WITH DETAILED RECOMMENDATIONS

1. STRENGTHEN DEFENSE PLANNING GUIDANCE AND ASSERT SECDEF AUTHORITY

1. SECDEF Issue Challenge-Driven Defense Planning Guidance to Support the FY25 POM
2. DSD and VJCS Reestablish the ACDP as a DMAG Guiding Organization Immediately
3. Congress Reaffirm SECDEF's Role in Aligning the DoD Budget with National Strategies
4. DoD Proactively Withhold Service Topline for Joint Needs

2. INSTITUTIONALIZE BUDGET PLANNING COLLABORATION

5. SECDEF Require the Components to Develop a Joint Vision for the FY25 POM
6. OSD and Congress Establish a Collaborative Budget Review at the End of Each Fiscal Year
7. SECDEF Institute Joint Budget Reviews Between Service Programmers and OSD Prior to Formal POM Submission

3. CHARACTERIZE AND MONITOR SPECIAL FUNDS

8. DoD and the Components Publish a Special Funds Primer with Key Details
9. DoD and Congress Establish Criteria for Creating and Continuing Special Fund Accounts
10. Congress Make the Longevity of the EDI and PDI Accounts Dependent on DoD's Collective Ability to Satisfactorily Meet CCMD IPL Inputs as Determined by the SECDEF

4. ENABLE EXECUTION YEAR FLEXIBILITIES

11. DoD and Congress Allow Consolidation of BLIs Using a Phased Approach
12. Congress Increase BTR threshold percentage from 20% to 50%
13. Congress Update New Start Cost Constraints to Promote Innovation
14. Congress Allow DoD to Submit Overbalanced ATR Packages
15. DoD and Congress Establish Congressional Mark Adjudication Process
16. DoD Establish FMR Streamlining Committee with Congressional Support
17. Congress Allow Expansion of BA-8 Software Appropriation Pilots
18. Congress Initiate Portfolio Management Budget Pilot

5. MODIFY OVERSIGHT MECHANISMS

19. Joint Staff Provide Congress an Operational Effectiveness Assessment with the Budget Submittal
20. DoD Initiate Development of Portfolio Management Measures
21. DoD Assess Use of Venture Capital Approaches for Managing Advanced Technology Efforts
22. DoD Propose a New Investment Category Structure That Better Aligns to the Reality of Current Military Investments
23. DoD Continue to Mature ADVANA and Incorporate Congressional Feedback
24. DoD and Components Enable Key Personnel Participation in Oversight Forums

Introduction

This paper represents the second of a three-part series on creating a Modern Defense Budgeting System. The first paper outlined four key challenges (Figure 1) confronting the current system and proposed six pillars of a modern system (Figure 2). This paper examines the perspectives of major stakeholder groups, outlines key areas that merit greater attention, and provides near-term Planning, Programming, Budgeting, and Execution (PPBE) modernization recommendations that Congress and the Department of Defense (DoD) can implement. The third paper will present a vision for a newly reimagined modern budgeting system.

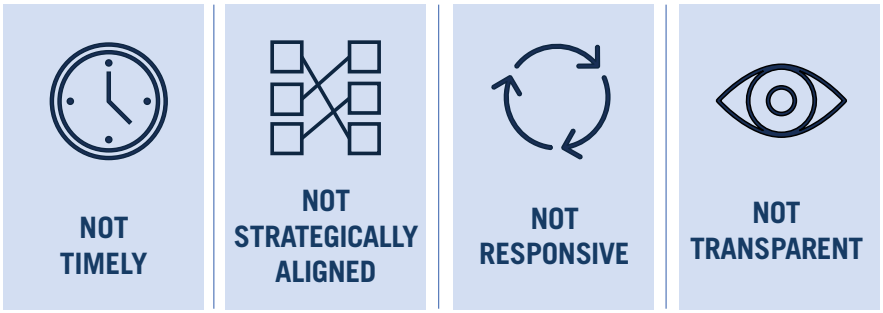

Figure 1: Four Key Challenges with the PPBE

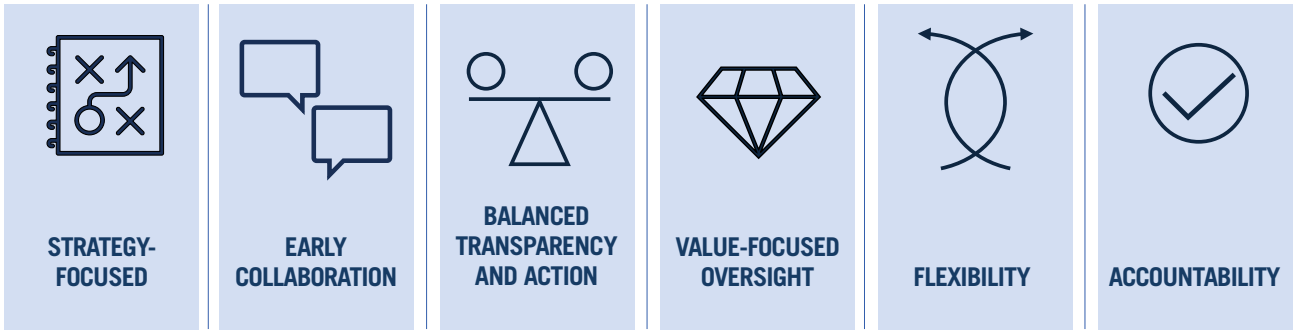

Figure 2: Six Pillars for the Modern Defense

Congress established the PPBE Commission to:

1. **Examine the effectiveness** of the PPBE process and adjacent practices of the Department of Defense, particularly with respect to facilitating defense modernization.
2. **Consider potential alternatives** to such process and practices to maximize the ability of the Department of Defense to respond in a timely manner to current and future threats.
3. **Make legislative and policy recommendations** to improve such process and practices to field the operational capabilities necessary to outpace near-peer competitors, provide data and analytical insight, and support an integrated budget that is aligned with strategic defense objectives.

Perspectives of Major Stakeholder Groups

The PPBE Commission faces a significant challenge in analyzing this complex process with such broad stakeholder equities. DoD is the largest U.S. government agency, with more than 1.3 million active-duty military personnel, nearly 700,000 civilian personnel, and 1.1 million citizens who serve in the National Guard and Reserve forces. Through its extensive supply chains, it processes roughly 64 million contract actions annually and engages with approximately 300,000 contractors across many different product lines.

As highlighted in the first paper, the PPBE process involves many stakeholder groups across DoD, Congress, and industry that have competing priorities and incentives. The Commission must understand the perspectives of all these groups, including their perceptions of the current environment, their priorities and incentives, what they view as the key shortcomings of the budget processes, and their receptivity to strategic reforms. While the Commission is likely to find an array of views within each stakeholder group, the characterizations in the subsections below attempt to summarize the core themes for each group. The PPBE Commission should expand on these stakeholder perspectives to ensure it understands the broad equities.

THROUGH ITS EXTENSIVE SUPPLY CHAINS, DOD PROCESSES ROUGHLY 64 MILLION CONTRACT ACTIONS ANNUALLY AND ENGAGES WITH APPROXIMATELY 300,000 CONTRACTORS ACROSS MANY DIFFERENT PRODUCT LINES

Congress

Congress is a core stakeholder in the defense budgeting process. Within the Congress, there are four congressional defense committees that adjudicate defense investment decisions. These include the Senate and House Armed Services Committees and the Senate and House Defense Appropriations Subcommittees. They are more colloquially known as the authorizing and appropriation committees and have different but complementary roles. Authorizers generally establish programs and provide funding guidance while the appropriators allocate specific funding to the authorized programs. The House and Senate Select Committees on Intelligence also have an impact on the defense budget for the DoD intelligence agencies using Military Intelligence Program funding.

Congressional Authorizers	Focused on ensuring DoD has the appropriate level of resources, in terms of both personnel and material, to execute the national security mission. Committee members are deeply familiar with the details of DoD policy, military strategy, and specific programs, and are generally skeptical about trading modernization for capacity and readiness.
Congressional Appropriators	Focused on maintaining stable and predictable budgets. Familiar with defense programs and plans but have significantly smaller staffs than their authorizer counterparts. Committee members express greatest concern when execution deviates from stated plans and they have resisted embracing alternative acquisition structures that promote incremental delivery over fully articulated lifecycle plans.

Office of the Secretary of Defense (OSD)

OSD includes numerous offices, agencies, and field activities, but a core group of staff has responsibility for setting direction and making decisions that address the tensions between investing in personnel, bases, readiness of existing systems, and modernization. Within the PPBE process, the Secretary of Defense (SECDEF) "provides policy guidance to the Heads of DoD and OSD Components for the preparation and review of the program recommendations and budget proposals of their respective components." The table to the right summarizes the perceptions of certain OSD organizations regarding the current PPBE process.

OSD Policy	Focused on ensuring that DoD policy and capabilities are aligned to meet national strategies. This office may not have insight into lower-level processes that hinder the pursuit of innovation so is less likely to have strong opinions on the PPBE process.
OSD Comptroller	Focused on ensuring that the defense budget complies with fiscal law and that budget requests are executable. Recognizes that the PPBE process generally provides the needed flexibility but acknowledges some problems relating to technology transition.
OSD CAPE	Focused on ensuring that the defense budget meets the Secretary's guidance but has lacked the resources to conduct full analysis across the entire budget in recent years. Challenged to support the manpower-intensive issue teams regularly used to resolve major disconnects between OSD and Service budget priorities late in each budget cycle.
OSD A&S	Focused on ensuring that acquisition efforts are executable and informing DoD leadership on the status of various capability portfolios and other related issues. Has generally played a limited role in the PPBE process despite having collective responsibility for DoD acquisition.
OSD R&E	Focused on ensuring that acquisition efforts are executable and informing DoD leadership on the status of various capability portfolios and other related issues. Has generally played a limited role in the PPBE process despite having collective responsibility for DoD acquisition.
OSD Joint Staff	Focused on ensuring that DoD investments are adequate to execuFe the operational concepts and plans for the Joint force. Regularly challenged by having an investment process that limits the timely satisfaction of Combatant Command (CCMD) needs.

DoD Components

The Military Services provide forces to support the CCMDs, which then control those forces in executing specific operational missions. Balancing current and future needs presents a challenge for DoD. The table to the right summarizes the perceptions of military organizations regarding the current PPBE process.

Military Services	Focused on ensuring that the respective Services have the necessary capabilities, capacity, and readiness to support the future fight. Due to constrained budgets, often find it difficult to adequately address and balance readiness and modernization priorities. Challenged by OSD's frequent objections to their plans and by unbounded CCMD requests. Desire more flexibility in execution year to adapt to real-world challenges and initiate new efforts.
Combatant Commands	Focused on ensuring that the Services are providing the necessary capabilities, capacity, and readiness for the fight tonight in their respective theaters and functional areas. Challenged that their requests are not prioritized higher by the Services and that future force design decisions take precedence over current theater demands.

Industry

Commercial organizations that support DoD fall into three categories. DoD's traditional industry partners are established prime contractors that receive the largest defense contracts and orient their companies around the defense enterprise. Small businesses are those entities that regularly deal with DoD but receive more moderate awards and may specialize in one or few sectors. Non-traditional contractors are start-up companies that engage with DoD but usually aspire to become commercially viable entities. Commercial sector participants are companies such as Google and Microsoft, which concentrate on the civilian sector but provide support services to DoD. This table summarizes the perceptions of different types of industry organizations regarding the current PPBE process.

Traditional Defense Industry	Publicly traded companies focused on achieving growth in the defense sector. Generally involved in multiple capability areas but possess significant strengths in certain technology domains (such as fighter or bomber aircraft). Value stability in DoD needs and react negatively to shift in DoD investment priorities, particularly after production is underway. Invest heavily in lobbying activities to preserve current contracts.
Small Business	Focused on winning increasingly larger contracts with DoD and improving their competitiveness as they expand in their targeted business areas. Frustrated by the lack of opportunities, which often results from poorly constructed business strategies.
Non-Traditional Entrants	Focused on winning initial contracts with DoD that will provide much-needed cash flow and enable product improvements that will open commercial or expanded defense opportunities. Untimely PPBE processes prevent rapid scaling of ready solutions, which can dramatically impact their business solvency.
Commercial Sector	Focused on winning large contracts with DoD that provide an alternative business line and enable new applications for their commercial products. Various restrictive budget rules can present challenges when procuring commercial services.

Budget Areas

The PPBE Commission is likely to have the purview to investigate all DoD accounts (Figure 3). However, the congressional language establishing the Commission shows a clear bias toward improving the process that supports military modernization and more timely fielding of capabilities. Therefore, while areas such as force structure, training, recruitment, flying hours, and readiness are all critical to maintaining a fully functioning military, the Commission should focus its attention on the Research, Development, Test, and Evaluation (RDT&E) and Procurement accounts while also assessing modernization that occurs under the larger Operations and Maintenance (O&M) umbrella.

O&M is a broad account covering multiple budget activities: Operating Forces, Mobilization, Training and Recruiting, and Administration and Service-wide Activities. Roughly a third of the total O&M budget comprises modernization-type activities, usually managed as part of a working capital fund structure.

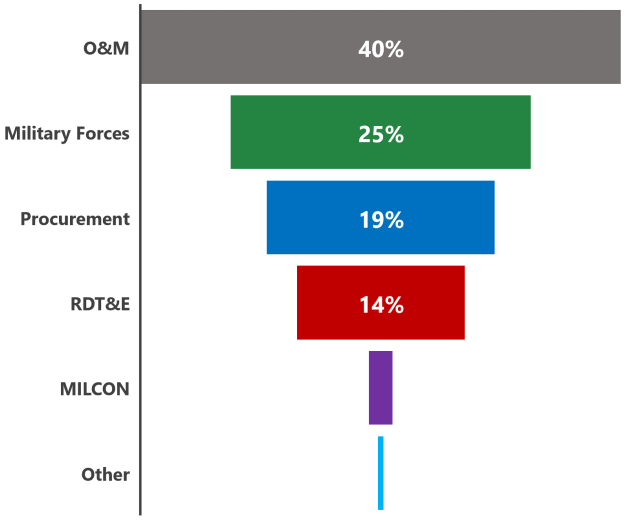

Figure 3: General Budget Allocation (for years 2020 to 2022)

While the Commission cannot ignore the O&M contribution to modernization, most resources for fielding new capabilities and improving current assets fall within the "investment accounts," which include the RDT&E and Procurement appropriations. The Fiscal Year (FY) 22 President's Budget requested $246 billion for the investment account, spread across multiple systems and activities (Figure 4).

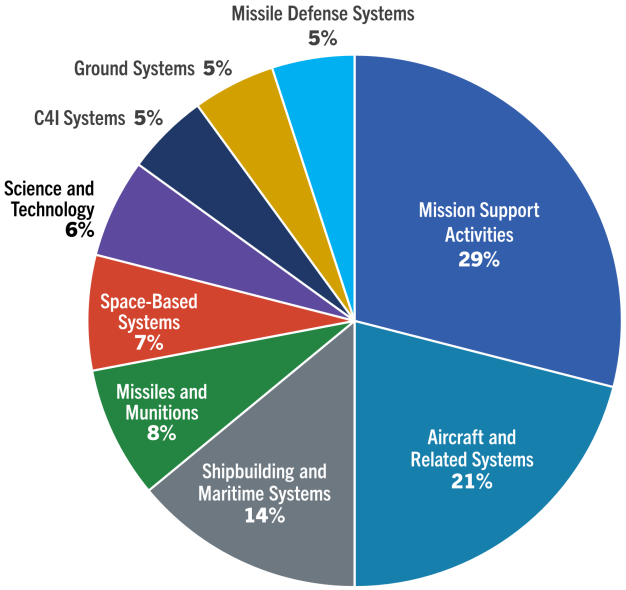

Figure 4: Total FY22 Investment Request (OSD Comptroller Weapons)

The RDT&E account includes various budget activities (BAs) that relate to the lifecycle stages of the effort. They fall into three categories: Science and Technology (S&T), Prototyping, and Development. The S&T line accounts for BAs 6.1 to 6.3, which span early-stage exploration and discovery, usually in civilian universities or military laboratories. The prototyping line accounts for activities within BA 6.4 that "evaluate integrated technologies, representative modes, or prototype systems in a high fidelity and realistic operating environment." The development line accounts for BAs 6.5–6.8, which encapsulate the activities required to complete development, integration, and testing. Figure 5 breaks down the $111.97B FY22 RDT&E budget into these categories.

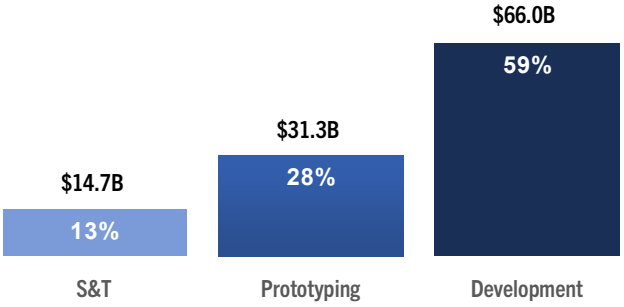

Figure 5: FY22 RDT&E Funding Breakout (OSD Comptroller Budget)

The Procurement account encompasses multiple appropriations and budget activities that vary depending on the item being purchased. The Other Procurement appropriation serves as an essential catch-all budget line that includes classified accounts, tactical and support vehicles, communication equipment, support equipment, and spares.

Figure 6 shows the collective investment accounts considered throughout the current PPBE process. The Commission must understand them to fully grasp some of the challenges that should drive some of the changes in the new envisioned system.

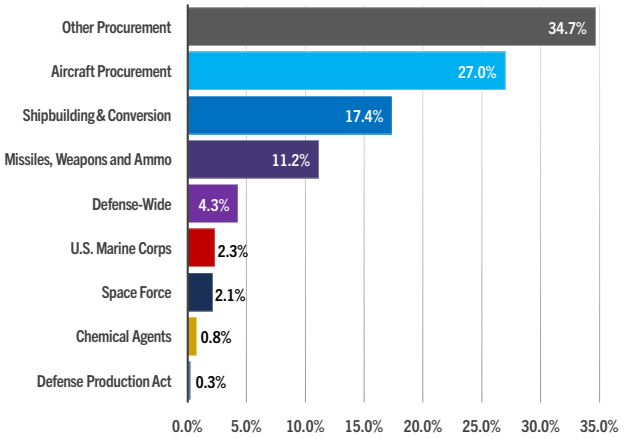

Figure 6: FY22 Procurement Funding Breakout (OSD Comptroller Budget)

Five Steps to Immediately Modernize the Defense Budgeting System

Given the accelerated modernization of advanced peer rival militaries, rapid technology refresh, and other critical factors, DoD cannot afford to continue the current budgeting processes. The PPBE Commission should explore the following focus areas as part of its efforts and work with Congress and DoD to implement key near-term reforms.

1. STRENGTHEN DPG GUIDANCE AND ASSERT SECDEF AUTHORITY

Ideally, the PPBE process would align DoD programs with the Department's overall strategic objectives. The SECDEF provides strategic guidance to DoD Components in the form of the National Defense Strategy (NDS), which replaced the Quadrennial Defense Review in 2010 and reflects the President's National Security Strategy. The NDS is the Secretary's primary guidance to the Department and sits atop all other guidance, including that from the uniformed Services. Immediately below the NDS is the Secretary's annual Defense Planning Guidance (DPG), which provides guidance to DoD Components on the preparation of programs and budgets. The Secretary's strategic guidance should prioritize objectives, then focus programmatic decisions on the forces and capabilities needed to meet them.

Yet, at least since the end of the Cold War, DoD has not implemented strategy in that manner. Instead, it has suffered from a lack of focus and a lack of prioritization. DoD has repeatedly proved incapable of setting force development priorities and ensuring that its Components deliver forces and capabilities that support the strategy. Importantly, the Department has also failed to communicate those areas of lesser significance to ensure that the highest-priority areas receive appropriate investment, even. Instead, the Department's various guidance documents continue "a proud strategic tradition of being all things to all people," as one assessment put it, typically containing sweeping statements spanning the strategic environment and detailing lengthy laundry lists of military missions and the capabilities necessary to enable those missions. As the saying goes, when everything is a priority, nothing is a priority.

The Department's repeated designation of the Indo-Pacific theater as its key focus area demonstrates this most starkly. At least since 2012, DoD has repeatedly announced that it will pivot to Asia-Pacific with a commensurate buildup in forces, basing, and advanced capabilities. Following the release of the 2018 NDS, the Department's senior leaders declared, on numerous occasions, that China represented the pacing threat, and that the Indo-Pacific was the priority theater. DoD's own internal wargames have shown that the Joint Force loses, and badly, in a war against China. Yet the Department continues to invest in capabilities that are either highly vulnerable in a Western Pacific fight or ill-suited for the theater given the geographic realities, specifically, the vast distances involved in the Pacific theater. Only the United States Marine Corps has begun to make serious shifts in force posture and investments that reflect those realities. Apart from investments in long-range hypersonic capabilities, most Components appear to be pursuing the same capabilities they did 20 years earlier. While the Air Force announced the Agile Concept Employment late last year, it seems not to recognize that its current platforms, existing basing limitations, and the logistics and personnel required make it unlikely that it will be able to effectively execute that concept.

The Navy continues to invest in high-end ships that are vulnerable to a range of Chinese anti-ship weapons and have lengthy production timelines despite the growing importance of capacity in the U.S. Indo-Pacific Command (USINDOPACOM) theater as China continues to ramp up ship production.

A single cause for this lack of alignment is hard to determine. It is likely a combination of entrenched interests, capture by the major primes, and lack of imagination in the face of growing threats. DoD's inability to prioritize its planned response and to clearly articulate specific operational problems certainly contributes to the challenge. This failure hinders DoD's ability to assess Component efforts to provide the Joint Force with the capabilities it needs for success. The incoherence in matching strategic objectives with the Department's resources contrasts with DoD practices during the Cold War period, when the imperative to maintain a lead in the dynamic military-technical competition with the Soviet Union drove the Department's processes, organization, and resource allocations. As former DoD official David Ochmanek noted, in the Cold War era DoD "focused on trying to solve discrete, enduring, operational problems such as how to disrupt Soviet second echelon forces in the presence of dense, mobile and lethal air defenses."

Because the strategic guidance does not contain specific force development and design directives that enable the overarching strategy, the Services have broad latitude to provide their own interpretation of what to include in their annual spending plan, the Program Objective Memorandum (POM). Absent strong direction from the senior leadership, DoD Components will allocate resources to their own priorities first, which may not align with the defense strategy. As one study put it, "the bottom-up nature of the process drives results that are heavily biased toward the status quo." Service POMs typically favor already programmed platforms and systems over the pursuit of alternative capabilities and concepts. For

DOD HAS REPEATEDLY PROVED INCAPABLE OF SETTING FORCE DEVELOPMENT PRIORITIES AND ENSURING THAT ITS COMPONENTS DELIVER FORCES AND CAPABILITIES THAT SUPPORT THE STRATEGY

their part, the Services need not adhere to guidance from the SECDEF, as the program review process does not rigorously hold the Services accountable for meeting specific capability goals or operational challenges. As the Defense Science Board notes, "the review process is just that—a review process that occurs after the force providers have produced complex, hard-to-change program plans." This results in the inevitable "December train wreck" in which unresolved budget decisions pile up and there is inadequate time for DoD to adjudicate them with senior leadership. Entrenched interests use the time constraints to their favor to defend their funding, which in turn hinders the pursuit of alternative capabilities and concepts.

Former DoD official Peter Levine recognized the process had gone too far in empowering the Services over OSD when he noted that, "The idea of the PPBS [Planning, Programming and Budgeting System] is that you start with the objectives and you prioritize and you figure out what you most need to meet those priorities so you have to be going down rather than going up." That requires a mechanism to enforce tradeoffs among the Services and ensure that DoD develops "joint" solutions to meet those larger operational challenges.

Driving meaningful change in the Joint Force invariably requires favoring some Components over others and directing resources to higher-priority areas. Yet, OSD's decision space is limited to a small percentage of the budget. Efforts to shift spending to higher-priority areas often require offsetting cuts in other areas, leading to inevitable infighting as the Services enlist sympathetic members of Congress to protect cherished programs.

Time is another variable that must be factored into the tradeoff discussion. While the DoD envisions achieving the needed capabilities over multiple 5-year cycles, there needs to be a greater focus on generating new capability and capacity at scale in the short term. This is particularly true of preferred munitions for a high-end conflict and should be a key criterion in deciding where limited investment resources are directed. There will be some advanced capabilities that will take time to develop, but the tendency to rely on future outcomes is impacting the ability to address key operational challenges today. As one analyst put it, DoD has adopted a "tomorrow, and tomorrow, and tomorrow" approach when deciding on future technology and concepts. The focus should be biased toward addressing near-term deterrence credibility challenges with China.

There are also challenges in the current process of understanding the value of differing investments. In a recent analysis of Component and CCMD unfunded priority lists, there were four key categories:

THE SECDEF MUST MAKE IT CLEAR TO THE SERVICES THAT ONLY THOSE CAPABILITIES THAT PROVE THEIR VALUE IN ADDRESSING THE MOST PRESSING OPERATIONAL CHALLENGES IDENTIFIED IN THE STRATEGIC GUIDANCE WILL BE FUNDED

(1) procurement of current weapons and platforms, (2) research and development of future warfighting systems, (3) facility and infrastructure sustainment and construction, and (4) operating readiness of the current force. While some of these categories are well understood, there may be an underappreciation of infrastructure investment as a capability force multiplier for the future fight. This can be seen in the Department's reactionary response to invest in hypersonic facilities after observing competitor advancements. The Navy's Shipyard Infrastructure Optimization Program is another prime example of a delayed investment to "modernize dry docks, optimize industrial processes and modernize standard equipment to bring these critical industrial sites to modern standards" that started in 2018 but was needed many years prior. A similar situation is underway at air combat ranges where major investments have been deferred for years.

Recommendation:
SECDEF Issue Challenge-Driven Defense Planning Guidance to Support the FY25 POM

To inject rigor into the planning and programming process, the SECDEF's strategic guidance to the Components must be more directive and specific and include a capability prioritization that will enable DoD to achieve its objectives. This means more than merely identifying China as the pacing threat. It means describing and prioritizing those near- and long-term capabilities and the desired operational characteristics of the Joint Force required to meet strategic objectives. The Secretary must drive the Components to consider alternative concepts and changes in their capabilities that could yield potential solutions to the most strategically important operational challenges.

The Secretary should issue a list of the highest-priority operational challenges, underpinned by

relevant operational concepts, to the Department and direct the Services to prioritize resources needed to develop response options that address those challenges. The 2018 NDS contained a list of key operational challenges but was too vague to guide force development. Given the list of challenges was also classified, public awareness and the ability of Congress to gauge progress in developing response options were limited and ultimately the Services had little accountability. The National Defense Strategy Commission recommended declassifying the challenges "so that they can be used as a benchmark for measuring implementation of the strategy." It remains unclear if the authors of the 2022 NDS will be able to articulate clear, specific, and prioritized operational challenges that will sufficiently energize the defense community. To hold the Components accountable, the highest-priority operational challenges must be specific, measurable, and unclassified to provide a metric against which to assess defense investments. RAND's David Ochmanek has proposed a set of priority operational challenges that would provide a good starting point for focusing Component efforts. A central challenge envisions a Chinese invasion of Taiwan that requires the Joint Force to "locate, identify, and damage or destroy surface naval vessels in contested environments." Another, highly prescient, scenario involves Russia launching a short-notice invasion of the Baltics that requires the U.S. military to "delay, damage, and destroy mechanized forces in a contested environment." These examples capture the challenges that should connect real-world scenarios to strategy and the resulting investment priorities that are required to support them. DoD should review these challenges on a regular basis to ensure continued relevance to evolving operational concepts and adversary threats.

The SECDEF must make it clear to the Services that only those capabilities that prove their value in addressing the most pressing operational challenges identified in the strategic guidance will be funded. The Secretary should adopt the proposal previously put forward by former Deputy Secretary of Defense Bob Work, to withhold 10% of R&D and procurement funds from Component toplines and distribute them during Program and Budget Review (PBR) to the most innovative concepts for addressing the priority challenges. "Give goals to the joint force that they have to solve" he said, "and I guarantee you that will generate operational concepts."

Recommendation:
DSD and VCJCS Reestablish the ACDP as a DMAG Guiding Organization Immediately

Focused senior leader engagement at the highest levels is needed for DoD to prioritize the most operationally impactful force and capability development decisions along with making the hard choices in the face of competing interests. Deputy Secretary of Defense Dr. Kathleen Hicks has initiated the Innovation Steering Group, which operates under her purview, to guide capability development decisions. However, reinvigorating the Advanced Capability and Deterrence Panel (ACDP), originally established by former Deputy Secretary of Defense Work in 2014, would provide a stronger organizational mechanism to champion strategy implementation, hold the Services accountable for developing response options to meet the highest-priority challenges, and make the invariable major capability tradeoffs.

In its original mandate, ACDP evaluated options to deter aggression at range and with speed in theaters where the United States lacks large numbers of forward-stationed combat forces and advanced adversaries have emplaced strong anti-access defenses. A past strength of the ACDP was its ability to conduct meaningful analysis and independent assessments on whether current and programmed systems would adequately address emerging threat systems, particularly those resulting from

China's blistering pace of military modernization. This recurring activity, facilitated in part by close collaboration with the intelligence community and its insights into Chinese military capabilities, provided much-needed mission area analysis and enabled senior leaders to discuss tradeoffs in priority capability areas. A forward-looking body, ACDP identified the most demanding operational challenges facing the Joint Force and focused the Department's senior leadership on developing solutions. It had the appropriate access to the Department's senior leadership who could direct funding to solve the most taxing operational challenges facing the Joint Force. DoD's sprawling, hierarchical, and entrenched bureaucracy demands such an approach and requires senior champions who can understand, support, and resource novel solutions to address DoD's highest operational challenges. The ACDP can also take a more holistic look at the infrastructure investments that might be needed to support future capabilities or scale and work to ensure resources are directed to key areas.

Therefore, the ACDP should be reestablished to provide the senior-level oversight, direction, and management necessary to improve the Department's response to emerging and long-term strategic and operational challenges. It should serve as the CCMD advocate working collaboratively to develop mission-focused Integrated Priority Lists (IPLs) with a clear prioritization. ADCP can provide an IPL integration function, working with Joint Staff and others, to make recommendations across multiple CCMDs, to the Defense Management Action Group (DMAG) on what collective capabilities need to be accelerated into theater. In conjunction with the acquisition community, the ADCP can help adjudicate specific platform requests with a focus on what available capabilities can be mobilized for the "fight tonight."

As in the past, it should be chaired by the Deputy Secretary and the Vice Chairman (VCJCS) of the Joint Chiefs—the two individuals responsible for building the annual defense program and who chair the executive-level DMAG. The ACDP should aim to integrate and focus efforts by senior leadership; intelligence analysts; the Services; the Combatant Commands; the research, development, and acquisition communities; and the various Department laboratories. Importantly, the ACDP served as the advocate for a properly shaped and equipped future Joint Force—a yawning gap in the Department's current force development process. It did so without adding additional bureaucratic layers or onerous checks to DoD's already burdensome processes.

Recommendation:
Congress Reaffirm SECDEF's Role in Aligning the DoD Budget with National Strategies

The PPBE Commission should urge Congress to issue a Sense of Congress regarding the SECDEF's ability to direct changes to Service budgets when elements are misaligned with national priorities or when the Services fail to pursue opportunities for joint efforts (such as the Next-Generation Jammer). While DoD has a process in place for this to occur now, it has proven ineffective given resistance from the Services. Congressional reinforcement will renew emphasis in this area given its criticality for national security.

Recommendation:
DoD Proactively Withhold Service Topline for Joint Needs

While it is a common practice during PBR to identify under-execution opportunities and other lower priorities that can support a "war chest" to fund discrete DoD priorities that are important for the Joint Force, DoD should take a more proactive stance and withhold a portion of the DoD topline to address joint operational seams that the Components are reluctant to fund within their allocation. DoD should

set clear expectations for how it will be used to minimize budget gamesmanship by the Components. This would provide opportunities for OSD to take responsibility for funding certain inherently joint efforts such as JADC2.

2. INSTITUTIONALIZE BUDGET PLANNING COLLABORATION

After the attacks of 9/11, Congress formed a Commission to investigate how the U.S. government missed the signs of such a serious and potentially predictable attack on the homeland. In the outbrief, the Commission chairs made the point that "We need to ensure that our government maximizes their efforts through information sharing; coordinated effort; and clear authority." This led to various government changes, many of which were based on the perceived successes of the Goldwater-Nichols reform of the military that mandated improved coordination and jointness among the Services.

Today, signs indicate that DoD may be moving away from jointness in a period where the ability to conduct joint operations will be more critical to battlefield success than ever before. The clearest sign of this is the uncoordinated way in which the Services carry out the Joint All Domain Command and Control initiative. Despite the establishment of joint working groups, each Service appears to be pursuing its own solutions that may not connect to or interoperate with each other. The Air Force and Army have very different visions of which Service will employ long-range fires in the Pacific theater. Even within the Navy and Marine Corps, it is unclear that building the island-hopping capabilities essential to Marine operations will be prioritized, which jeopardizes joint operations within the maritime domain. Some blame the problem on changes to joint education, joint duty, and organizations. However, the most likely culprit is the fixation on Service-unique solutions and the perception that the budget is a zero-sum game.

The PPBE process in its current configuration reinforces this mindset, as the Services develop their budgets in relative isolation before submitting them to OSD. The Services view collaboration with another Service or early revelation of budget positions as risky since it may enable another Service or OSD to develop an early counter position or issue an objection. The Services must abandon this approach and adopt a "competitive collaboration" mindset that encourages early sharing of key budget positions. The commercial sector has realized that developing a new product or penetrating a new market imposes real costs and that cooperation can lower the amount of individual investment while also leading to very profitable outcomes.

A positive example of this in DoD, that must be emulated more, is the Army's and Navy's development of the hypersonic Common Glide Body. While each Service will package the missile in unique ways for different applications, they are sharing the costs of development and will likely decrease the production cost through increased quantity buys. This collaboration also must extend to the Combatant Commanders, who should not have to rely on Integrated Priority Lists to convey their needs, but instead should have their near-term requirements

TODAY, SIGNS INDICATE THAT DOD MAY BE MOVING AWAY FROM JOINTNESS IN A PERIOD WHERE THE ABILITY TO CONDUCT JOINT OPERATIONS WILL BE MORE CRITICAL TO BATTLEFIELD SUCCESS THAN EVER BEFORE

incorporated in a collaborative investment planning process that occurs throughout the programming timeline. Achieving this will not be easy, and the goal should not be to eliminate all redundancies that would damage the industrial base. However, this approach has significant potential for leveraging research and development progress across common areas of interest (electronic warfare, networking, artificial intelligence, radios, autonomy, etc.) and improving affordability of fielded solutions. It may also have incalculable benefits in building a more joint and interoperable force.

Greater collaboration between Congress and DoD is also desperately needed. The assumption that less collaboration between DoD and Congress improves budget outcomes has been disproven many times in the recent past. However, the executive branch continues to pursue this approach. In reality, the more controversial a decision and the less supporting information DoD provides, the more likely it becomes that Congress will take retroactive action. DoD cannot expect Congress to appreciate the nuances of investment decisions without OSD and the military services providing supporting context. That context should include an assessment of how the change supports a specific CCMD need or provides a key element in a larger strategy. If DoD plans to divest a capability, end a production line, or make major personnel cuts, it should provide details to address predictable congressional concerns. These details should include how DoD plans to manage force structure changes, how it will minimize specific impact to congressional districts, how it will allocate freed resources to different important missions, and how it will utilize the military forces affected in new ways to support an improved Joint Force.

In some cases, congressional concerns may result from misinterpretation due to reliance on legacy artifacts such as unwieldy budget documents; constrained DoD responses to congressional requests for information; and perfunctory congressional posture hearings where discussion is often limited to talking points. An example of this is the Navy's recent performance in its plan for retiring amphibious warships with extensive service life remaining. This resulted in the ranking member of a key defense committee calling the plan "grossly irresponsible," which represents a poor start to the congressional budget review process. The Navy could probably have reduced many of the Congressman's objections by presenting additional context that addressed predictable concerns and by employing earlier face-to-face collaboration.

Improved collaboration would also limit the employment of budget tactics that exclude congressionally preferred capabilities under the premise that Congress will restore them without affecting Component-specific priorities. One former OSD Comptroller, Dov Zakheim, has termed this method "gold-watching" and noted that it "is ridiculous because you're relying on the Congress to do your job. Congress is supposed to respond to budgets, not create them." This practice has now prompted Senate appropriators to call for a Government Accountability Office (GAO) probe into this budgeting tactic, which, if GAO confirms the Senate's conclusions, will erode the trust between DoD and its congressional overseers. Therefore, DoD must institutionalize collaboration when the key parties involved cannot be relied upon to be transparent, collaborate effectively, or embrace coopetition.

Recommendation:
SECDEF Require the Components to Develop a Joint Vision for the FY25 POM

The Goldwater Nichols Department of Defense Reorganization Act of 1986 aimed to address excessive Service parochialism that historically hindered operational unity of effort. It assigned the Chairman of the Joint Chiefs of Staff responsibility

OSD, THE COMPONENTS, AND CONGRESS MUST HAVE A CLEAR AND SHARED VISION OF FUTURE WARFARE

for developing concepts and doctrine, in the hope that a vision would emerge to guide future force and capability development. That hoped-for result has never materialized. Over the decades, DoD has made little progress in generating a unifying vision of future war or a joint concept around which to orient a theater-level campaign plan.

The potential strength of the U.S. military comes from its ability to fight in a "joint" fashion that forces an adversary to plan how to counter attacks from multiple domains and along multiple vectors. In practice, the American military owes its demonstrated joint warfighting ability more to the creativity and adaptability of Combatant Command battle staffs, who can cobble together the forces provided by the Services into an effective fighting "whole" that is stronger than the sum of its parts. Despite frequent paeans to "jointness," absent a top-down forcing function that compels the Services to build the capabilities of their forces together, each Service will continue to design its force structure to address a different high-end problem set unique to its individual domain.

OSD, the Components, and Congress must have a clear and shared vision of future warfare. The recent issuance of the Joint Warfighting Concept and NDS presents an opportunity for DoD and the Components to coalesce around a new approach that promotes alignment of investment decisions in providing the needed Joint Force capabilities. A good start would be for the Components to collaboratively produce a vision document that conveys their collective understanding of the future fight and describes how they will work together to maximize resources and incorporate CCMD needs into the FY25 POM. They will demonstrate how the latest SECDEF guidance underpins their collective vision and also acknowledge potential barriers to seamless joint operations.

Recommendation: OSD and Congress Establish a Collaborative Budget Review at the End of Each Fiscal Year

Congress should issue an National Defense Authorization Act (NDAA) provision that institutes an end-of-fiscal-year budget review among OSD, Service leaders, and the members or staff of the congressional defense committees. This group would review the draft budget before final adjudication by OSD and Office of Management and Budget (OMB) to inform congressional stakeholders of the key decisions being considered. The group would identify themes for discussion based on potentially controversial decisions. This review should be structured as an informal event with the potential for different breakout sessions based on specific capability areas and specific areas of interest. It could also provide a venue for providing detailed threat briefings, briefings on classified programs, and other contextual information to inform pending decisions.

The review will also provide an opportunity for the Services to present their approaches for delivering the needed capabilities, for OSD to provide an assessment of how the collective investments conform to national strategy, for CCMDs to identify remaining challenges, and for congressional staffers to ask probing questions and provide early feedback on areas of concern or clear objections. It could help to clarify how DoD plans to balance force structure, modernization, and readiness and articulate the tradeoffs that were made. If earlier messaging and budget outcomes were inconsistent, this would serve as the forum to clarify points of confusion or to reexamine internal DoD assumptions.

The review will also give OSD officials an opportunity to explain new operational concepts and joint capabilities that DoD is exploring to respond to or circumvent an adversary's capabilities. As threats become more dynamic, all budget stakeholders must have a common and current understanding of the operational environment and the myriad ways DoD attempts to address current shortfalls and adapt to future challenges. This level of early and involved collaboration should minimize some of the common issues that arise when the President's Budget is submitted to the Hill.

Recommendation:
SECDEF Institute Joint Budget Reviews Between Service Programmers and OSD Prior to Formal POM Submission

While early engagement and collaboration between Congress and DoD is critical, it is equally important that the Components and OSD engage in the same deliberations to understand the collective investments undertaken in DoD at a point in the process where adjustments can still be made with minimal disruption. The SECDEF should institute a new joint budget review process that occurs in the May timeframe to allow OSD staff and the respective Service programmers to collectively discuss key budget positions being finalized for submission to OSD. This forum should include an action-officer-level review and a senior-leader outbrief on potential areas of collaboration. DoD will likely lack the time or capacity to adjudicate all budget decisions, so discussions should focus on key capability or technology development areas. While this budget review will not be a panacea for the natural collaboration that should occur, it will potentially help initiate further discussions and create more open channels of communication with senior leaders and key action officers across the Components and OSD. The idea will encounter resistance at first due to strong parochial tendencies, but, as the past Chief Architect of the Air Force and Space Force recently noted, we need to not "compete with each other, when we should be competing with China…[or] defend[ing] our turf, when we should be defending our country." DoD must heed these strong words as collaboration increasingly becomes the norm rather than the exception in investment decision-making.

3. CHARACTERIZE AND MONITOR SPECIAL FUNDS

Over the past few decades, DoD has dedicated many different special funds to specific purposes, usually to supplement combat activities, address near-term operational challenges, or promote innovation. The Global War on Terrorism and Overseas Contingency Operations funds were examples of major accounts in recent years dedicated to specific operations. The European Deterrence Initiative (EDI) came into being to promote deterrence in tandem with the NATO alliance. Most recently, Congress initiated the Pacific Deterrence Initiative (PDI) to address the growing challenges presented by China.

To promote innovation and technology transition, DoD has established numerous funds over the years. An early example goes back to the 1950s, when an "emergency" research and development fund allocated billions of dollars to support technology transition. During the Iraq and Afghanistan wars, when improvised explosive devices (IEDs) became a major challenge, DoD established the Joint IED Defeat Fund (JIEDDF) to provide flexibility and responsiveness in quickly fielding counter-IED solutions. The JIEDDF received an appropriation that allowed it to expend the funding over a 3-year period and was colorless, which meant it could be used for any application.

During the past decade, DoD has used the Rapid Innovation Fund (RIF) as its primary source of bridge funding to support transition of technology

OVER THE PAST FEW DECADES, DOD HAS DEDICATED MANY DIFFERENT SPECIAL FUNDS TO SPECIFIC PURPOSES, USUALLY TO SUPPLEMENT COMBAT ACTIVITIES, ADDRESS NEAR-TERM OPERATIONAL CHALLENGES, OR PROMOTE INNOVATION

development to an established program. Initiated in 2011, the RIF received $250M annually to support roughly 100 projects and drew on efforts from small business innovation programs, defense laboratories, and academia. With meaningful transition rates, noted improvements in affordability, and reduced technical risk of technology projects, the RIF was by most accounts a success, but in the FY20 budget, DoD discontinued funding it. The Rapid Prototyping Fund, established in the FY16 NDAA and included as an element of new acquisition authorities, was also intended to fund key prototyping efforts. Its resources came from penalties imposed for overruns on the Services' Major Defense Acquisition Programs (MDAPs). It was only funded in FY19 before DoD discontinued it as well.

The Undersecretary for Defense in Research and Engineering (R&E) office continues to manage many similar, albeit smaller funds. The Warfighting Lab Incentive Fund supports field experiments and demonstrations that take concepts from paper to real-world execution. It utilizes the O&M appropriation to fund these efforts and requires a warfighting sponsor. The Coalition Warfare Program funds projects that conduct cooperative research, development, test, and evaluation (RDT&E) with foreign partners. It has a limit of $2M over 3 years. The Quick Reaction Special Project funds projects that bring emerging technologies to maturity so they can address immediate conventional and irregular warfare needs of the joint warfighter. The projects must cost less than $2 million and be completed within 18 months. The Emerging Capabilities Technology Development fund accelerates the development of overmatch capabilities and rapid fielding to the warfighter. Projects involve prototyping and experimentation that showcase capabilities in realistic environments and against realistic threats with operational user involvement. The Joint Capability Technology Demonstration fund focuses on utilizing existing mature technologies to provide experimental and early prototypes of new capabilities to the joint warfighter in critical areas. A single Program Element houses many of these funds, which appear to have significant similarities in intent. However, warfighters and program offices may lack broad awareness that these funds are available given the relative dearth of available information.

The Rapid Defense Experimentation Reserve (RDER) represents the most recent instantiation of an innovation or "bridge" fund. RDER focuses on addressing the gaps between existing Service programs and ensuring that critical joint efforts that the individual Services may neglect have proper resourcing. Congress appears very supportive of RDER, which will probably receive a significant increase in future years. It seems likely that RDER will help address some operational seams or provide funding to continue promising efforts that the Components may not have resourced. It remains less clear how effectively it will achieve its larger goals of spanning the "Valley of Death" and scaling promising commercial technologies.

In the FY22 NDAA, Congress approved a 5-year mission budget pilot program that would fund the Strategic Capability Office to prototype new technology in support of USINDOPACOM. Congress also directed that the pilot identifies where "reforms to the traditional planning, programming,

budgeting and execution process are needed if the Department of Defense is to adopt the best practices of agile, innovative organizations." In the FY22 Defense Appropriations Act, Congress also established a new $100M Agile Procurement Transition Pilot to scale emerging technologies. It allows DoD to award $10–50M to companies with <$500M cumulative revenue from DoD. The pilot focuses on transitioning technologies from other pilots, prototypes, and research to scale capability, software, or service acquisitions.

Troubled by repeated warnings from USINDOPACOM of an eroding military balance between the U.S. and China and the failure of the Components to meet the need, Congress also felt compelled to create the Pacific Deterrence Initiative (PDI) in the 2020 NDAA to direct DoD to fund critical posture and capability improvements in the region. This was in addition to the European Deterrence Initiative that was created a few years earlier to bolster support to NATO allies.

What has been missing among the numerous funding pilots and bridge funds is clear rationale for how programs will be selected, what measures will be used to declare success, and what criteria will determine when a fund or initiative should be ended. Given the significant amount of funds being collectively allocated, this deserves greater focus from DoD and congressional leadership.

Recommendation:
DoD and the Components Publish a Special Funds Primer with Key Details

To ensure broader awareness of these funds by the acquisition community, DoD and the Components should publish a primer that describes the purpose, submission process, rules, and selection criteria for all special funds and make it easily accessible to the acquisition community. DoD should strive to maintain consistent review cycles to aid in program office planning, since selection and a clear understanding of the rules can determine whether an acquisition effort is initiated and continued.

Recommendation:
DoD and Congress Establish Criteria for Creating and Continuing Special Fund Accounts

DoD and Congress should examine several key issues when establishing these special accounts outside the normal budgeting process. These include: (1) Do these funds address the right problem? (2) Do they motivate the right behaviors in the larger defense acquisition system? (3) Should they be instituted temporarily or on a permanent basis? And (4) What criteria determine when they have outlived their usefulness? DoD and Congress should establish and regularly use these criteria to evaluate whether to continue these separate funding lines. Since the Components are most often the execution agents for these funds, ideally the separate funds should not be necessary, and the intent for creating them should be built into Service planning using collaborative processes.

Recommendation:
Congress Make the Longevity of the EDI and PDI Accounts Dependent on DoD's Collective Ability to Satisfactorily Meet CCMD IPL Inputs as Determined by the SECDEF

While the PBR process can resolve some conflicts between long-term Service priorities and near-term CCMD needs, if major capability gaps or infrastructure needs continue to be left unmet then DoD should allocate a percentage of each Component's Total Obligation Authority (TOA) toward the EDI/PDI funds. Congress should state clearly that the ACDP, in collaboration with CCMD commanders, will determine the content of these funds, given it appears they are

being repurposed for other Component needs. This approach will incentivize the Services to consider CCMD needs more seriously and, over time, eliminate the need for these types of funds. CCMDs will conversely have to ensure that their IPL requests are mission-focused and prioritized to enable the Components to balance their competing demands.

4. ENABLE EXECUTION YEAR FLEXIBILITIES

The failure of the current PPBE process to adapt to real-world circumstances represents a major shortcoming. Even with a faster approval timeline, acquisition efforts would still need to adjust given the limitations of planning. However, the current extended timelines for developing a defense budget, gaining internal DoD/OMB approval, and passing legislation through both chambers of Congress further exacerbate the challenges. Today DoD encounters several common scenarios related to budget flexibility.

Scenario #1:
An acquisition program has difficulty awarding a contract due to a source selection timeline, a contract protest, or is operating under a continuing resolution (CR). The program now has excess funds and cannot expend them in the anticipated or required timeframe. In the CR scenario, the program may also not have new start authority since approval was expected in the current budget cycle. Any commercial enterprise would move those funds to another project or use them for a new project to maximize their value.

Scenario #2:
An acquisition program planned to enter the Engineering and Manufacturing Development (EMD) phase after successfully completing technical maturation activities. However, prototyping activities encountered some obstacles and the technology required additional maturation before the program received approval to enter the EMD phase. However, the program had budgeted for RDT&E Budget Activities (BA) 5 funds, which are designated for "mature system development, integration, demonstration…" tasks and are not approved for continued prototyping. The financial manager can reprogram some funding with the correct budget authority, but not enough to cover all additional activities. The program must process an Above Threshold Reprogramming (ATR) package to convert BA-5 funds to BA-4 funds and enable continued execution of planned activities.

Scenario #3:
An acquisition program in the development phase executes per approved requirements and its acquisition program baseline. A successful S&T project is discovered that offers a significantly improved capability over the current program design. The program manager seeks to replan the program yet encounters many challenges to bridge the new technology across the Valley of Death. Financial managers conclude that the scope of the S&T project does not fall within the current baseline and is also not covered in the budget documents approved by Congress. This requires the program to be rebaselined, potentially triggering a baseline breach, and drives the need to submit an ATR package to Congress requesting approval to use the current program funds for this new activity (S&T transition).

Scenario #4:
The operational community approves an urgent operational need and submits it to the defense acquisition community for immediate action. The assigned program manager (PM) conducts the

appropriate market research and identifies a commercial capability that could be fielded to meet the urgent need. Given the urgency, the PM identifies funds that could be applied to the program. However, the PM does not have new start approval, because Congress has not approved any similar efforts. The PM must submit an ATR package to Congress for new start approval so that the program can commit funds for the urgent need. This will take 4–6 months and delay the ability to conclude planning, award a contract, and accelerate fielding of the critical capability.

Scenario #5:
DoD has launched a software program to rapidly deliver new capabilities. It follows commercially proven Agile and DevSecOps practices, which focus less on defining all the requirements up front and more on rapidly delivering capabilities and iterating based on active user engagement. The program maintains a backlog of potential capabilities to be developed and the user community prioritizes them at regular intervals to determine the content and timing of new releases. When the program collected budget inputs, it expected to pursue several smaller software upgrades that could be funded with O&M funding. It made this determination by reviewing the planned content against the DoD Financial Management Regulation (FMR) that allowed use of O&M funds, namely that the capabilities would be "iterations on the basic release and not involving significant performance improvements or extensive testing." However, after budget submittal and passage of an appropriations bill, the users updated their operational priorities, which included some features that the program interpreted as being more than iterations and instead fell into the major upgrade category, given they would increase the "performance envelope" and involve activities designed to bring it to its "objective system." The program had not requested any RDT&E funding and therefore had to defer the high-priority features until a future budget year or submit an ATR for new start and funding approval.

Scenario #6:
DoD identifies a commercial tool that seems to provide an improvement over any government-unique capabilities currently fielded. The government can procure the tool only by buying an annual license. The office responsible for buying the license requests Procurement funding since the initial license purchase is viewed as a fielding event. Given that Procurement is a 3-year appropriation, the initial license term is for 3 years, with O&M funding any annual license renewals. However, after a year of using the new tool, the users identify gaps in the tool's capabilities. The PM conducts market research to assess other options and identifies a more promising product that would better meet the user's needs. However, appropriation rules forced the program to procure a 3-year license for the existing product, and the program cannot obtain funds for the second product offering better performance.

Across these scenarios, **multiple appropriations and budget activities, limited reprogramming options, granularly approved activities, new start restrictions, congressional mark impacts**, and **constraining fiscal** law represent major impediments to adapting to change.

THE FAILURE OF THE CURRENT PPBE PROCESS TO ADAPT TO REAL-WORLD CIRCUMSTANCES REPRESENTS A MAJOR SHORTCOMING

Multiple Appropriations and Budget Activities

Currently, DoD investment accounts are subject to 23 different appropriations, excluding chemical agent destruction and Defense Production Act (Table 1). Additionally, ~48 unique budget activities apply to the 23 different appropriations (Table 2). These accounting-level breakdowns provide insight to auditors and control to overseers but also severely complicate DoD's ability to move funds to the programs that may need them most or those where they could achieve the most impact in the year of execution.

RDT&E					
Army	Navy	Air Force	Space Force	Defense-Wide	OT&E
Aircraft Procurement					
Air Force		Army		Navy	
Missile Procurement					
Air Force			Army		
Weapons Procurement			**Shipbuilding & Conversion**		
Navy			Navy		
Procurement of Ammunition					
Navy & Marine Corps		Air Force		Army	
Procurement of Weapons and Other Combat Vehicles					
Army					
Other Procurement					
Air Force		Army		Navy	
Procurement					
Defense-Wide		Space Force		Marine Corps	

Table 1: Modernization-Focused Appropriations

RDT&E	**Procurement**				
Basic Research	Aircraft	Ballistic Missiles	Ammunition	Support Equipment and Facilities	Other Support
Applied Research	Combat Aircraft	Guided Missiles and Equipment	Ammunition Production Base Support	Spares and Repair Parts	Major Equipment
Advanced Technology Development	Airlift Aircraft	Other Missiles	Procurement of Ammo, Navy	Tracked Combat Vehicles	Communica-tions and Electronics Equipment
Advanced Component Development and Prototypes	Trainer Aircraft	Modification of Missiles	Procurement of Ammo, Navy	Tactical and Support Vehicles	Fleet Ballistic Missile Ships
System Development and Demonstration	Other Aircraft	Modification of Inservice Missiles	Ordnance Support Equipment	Supply Support Equipment	Other Warships
RDT&E Management Support	Modification of Aircraft	Weapons	Other Support Equipment	Personnel & Command Support Equipment	Amphibious Ships
Operational Systems Development	Modification of Inservice Aircraft	Weapons and Other Combat Vehicles	Torpedoes and Related Equipment	Civil Engineering Support Equipment	Auxiliaries, Craft, and Prior-Year Program Costs
Software and Digital Technology Pilot Programs	Aviation Support Equipment	Other Weapons	Ships Support Equipment	Engineer and Other Equipment	Special Operations Command

Table 2: Modernization-Focused Unique Budget Activities

Limited Reprogramming Options

The PPBE Execution phase follows the completion of the Planning, Programming, and Budgeting processes and the passage of an Appropriations Bill. This can be considered the most important phase because it is when DoD awards contracts, initiates engineering activities, starts testing, and delivers capabilities. It is in the Execution phase that real-world challenges come into play. Changing conditions may disrupt the plans created during the planning or programming phase (as indicated in the above scenarios) and programs must adjust course. The adjustment can range from a minor modification to a major shift that requires substantial replanning. In almost all cases, an adjustment or replanning will affect funding, yet funding constraints may leave the program with only a limited ability to respond.

A program that experiences a disruption can address it in three primary ways: **execute a Below Threshold Reprogramming (BTR), request an ATR, or request an adjustment in the outyears.**

In general, executing a BTR is the easiest and most expedient means of either transferring funds to another account to reduce excess or obtaining a small increase in funds to address a shortfall. It allows a program to transfer "$10 million or 20 percent of the appropriated amount" of the Budget Line Item (BLI). However, the BTR process can be challenging. In a shortfall situation, a program must find another program with the right type of funding that is willing to serve as a source. That program must have remaining threshold to flow funds out (called flex-out) and the program needing the funds must have remaining threshold to flow funds in (called flex-in). Some organizations may also require multiple levels of approval to execute a BTR.

Compounding the challenge of identifying a program with the right funds is that DoD uses only a fraction of its current BTR authority due to the small size of its BLIs. To maximize the full $10M reprogramming potential that applies to receiving and allocating funding, a BLI must have at least $50M. However, in the FY23 RDT&E budget only **~41% of BLIs** met that criterion, with the remaining 59% having less than $10M in flexible transfer. The maximum amount DoD could reprogram in FY23 RDT&E funds, using the BTR process, was **$5.67B or 4.4%** compared to the full potential of **$9.41B or 7.2%** (Table 3).

Budget Line Items	Reprogramming Potential	% RDT&E Budget
All $50M or Greater	$9.41B	7.2%
FY23 RDT&E Position	**$5.67B**	**4.4%**

Table 3: RDT&E Reprogramming Potential (FY23 Budget)

THIS IS AN INEFFICIENT WAY TO MANAGE A PROGRAM AND DOES NOT HELP DOD TO MAXIMIZE ITS INVESTMENT FUNDING

If a BTR cannot meet a shortfall, a program may attempt to request an ATR. However, this process is very difficult, since it requires approval from all four congressional defense committees. First, the internal wickets that programs must navigate are extremely rigorous, with only the most compelling and urgent requests receiving DoD approval. Programs fortunate enough to be submitted have a high likelihood of receiving approval from congressional defense committees. However, processing the ATR request will likely take 3–6 months, which leaves a program without resources for potentially half of the fiscal year. Additionally, approval of the entire ATR package does not mean that Congress will approve enough sources of funding, since a program offering funds must demonstrate, in a very short narrative, that shifting the funds will have no impact on its mission. Congressional defense committees are often skeptical of this assertion and out of caution deny many proposed sources. This requires DoD and the Components to prioritize which requirements receive the limited funding, which can leave a program in the same situation it was in prior to ATR submittal. Therefore, an ATR is in essence a nuclear option for a program.

The third option is to adjust the funding in the next budget request by either decrementing the allocation for the outyears if a program has excess or increasing the allocation for outyears if the program expects it will need additional funds. While this seems relatively straightforward, it has several undesirable attributes. It does not achieve timely results since it requires going through the lengthy PPBE process and it often has an undesirable ripple effect of requiring

additional replanning and increasing the potential for future disruption because programs usually need to rebalance funds immediately or in the near term. Addressing a funding issue in this manner means artificially restructuring the program to either carry forward excess funds or forward delay activities that it must initiate. This is an inefficient way to manage a program and does not help DoD to maximize its investment funding.

An earlier GAO study demonstrated why programs benefit from greater flexibility. It found DoD was withholding $2.8 billion funds (i.e., not fully allocating them to programs) at the start of each fiscal year. GAO determined that this occurred because DoD officials anticipated immediate BTR requests, as well as the need to implement unfunded congressional mandates, accommodate unanticipated changes or events, and control the execution of individual programs. Commercial firms in this situation would use their management reserve (MR) to address these concerns. While MR can range from 5% to 15% depending on the level of risk, 10% is an accepted figure in the project management community to provide coverage for unanticipated problems. However, most DoD programs use estimates with only a 55% to 65% confidence level, which assumes little to no risk will be realized and provides managers with no buffer. Given that military development generally pursues cutting-edge technology in response to national security threats (versus taking a product to market), DoD should have a higher level of MR to adapt to changing events.

The only viable internal DoD mechanism for reallocating funds is a Below Threshold Reprogramming.

The BTR process is DoD's equivalent to the MR process. However, as discussed earlier, DoD cannot take full advantage of the authorities it already has. Furthermore, BTR authority, as it relates to total budget outlays, has decreased over time such that a program manager in the 1960s had double the reprogramming flexibility that they do today. If DoD doubled BTR thresholds and consolidated BLIs, it would gain flexibility equating to ~14% of a BLI, which falls within commercial norms.

Granularly Approved Activities

Apart from having many appropriations and budget activities along with limited discretion on transferring funds, DoD must also gain approval for highly discrete individual activities. DoD divided the $246B FY23 investment budget into 1,710 BLIs, with a median size of $38M (Table 4). This means the median investment budget line represents only 0.015% of the total investment budget.

Appropriation	FY23 Budget Request	# Sub Appropriations	# Budget Activities	# Budget Line Items (BLIs)	BLI Median Size (FY22)
RDT&E	$130B	9	8	941	$35M
Procurement*	$116B	19	8	769	$40M
Total	**$246B**	**28**	**16**	**1710**	**$38M**

Table 4: Defense Investment Budget Discreteness
*Weapon Systems Cost Only

Within these relatively small BLIs, Congress approves various activities or specific quantities. In an RDT&E budget line, programs must detail specific activities in what is termed a "Major Thrust" (Figure 7). This constrains a program to only activities that fit that description. The DoD financial management commonly interprets this to mean that even if an activity fits within the larger mission description narrative but is not in the Major Thrust narrative, then the activity is not authorized by Congress.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force | **Date:** May 2021

Appropriation/Budget Activity	**R-1 Program Element (Number/Name)**	**Project (Number/Name)**
3600 / 7	PE 0101113F / *B-52 Squadrons*	671803 / *B-52 AFMC Test Assets*

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
671803: *B-52 AFMC Test Assets*	-	4.069	15.654	1.447	0.000	1.447	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The B-52 AFMC Test Assets project will provide funding for the test aircraft, manpower, and facilities at the Air Force Test Center located at Edwards AFB, California. This project will support the developmental testing and sustainment needs of the B-52 weapon system as well as the procurement and install of the Bomber Modular Data Acquisition System (BMDAS) of identified B-52 Test Aircraft. Funds include cost of one Test Aircraft #60-036 Programmed Depot Maintenance (PDM) performed at Tinker AFB OK.

Costs include any analysis, documentation, and related expenses necessary to establish a program of record and support the B-52 weapon system. Additionally, other costs include PMA and centralized support and initiatives for anticipated weapon system enhancements (to include efforts to improve weapon system operational capabilities, safety, supportability, maintainability, reliability, and total cost of ownership).

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill Federal Aviation Agency (FAA) or other mandates necessary to ensure continue aircrew safety and mission effectiveness.

Funds may be used to address emerging and short-notice Diminishing manufacturing and material shortage (DMSMS) issues

B. Accomplishments/Planned Programs ($ in Millions) Major Thrust	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: B-52 AFMC Test Aircraft Asset Support	4.069	15.654	1.447	0.000	1.447
Description: B-52 Test Support provides funding for the test aircraft, manpower, BMDAS and facilities at the Air Force Test Center, Edwards AFB and Programmed Depot Maintenance (PDM). This will support the developmental testing and sustainment needs of the B-52.					
FY 2021 Plans: FY21 funding reallocated within B-52 to higher Air Force priorities. No induction in FY21 and next induction planned for 2QFY24.					
FY 2022 Base Plans: Provide funding for the test aircraft, manpower and facilities at the Air Force Test Center, Edwards AFB. This will support the developmental testing, facility, BMDAS and sustainment needs of the B-52.					
FY 2022 OCO Plans:					

Figure 7: FY22 Air Force RDT&E Budget Document (AF Justification Book)

The Procurement accounts focus more on quantities of specific end items; here, again, restrictions can become pronounced. If the BLI includes long-lead items, programs must often request separate "Advance Procurement" funding to ensure that they can procure an end item on schedule. If contract negotiations identify cost savings that would allow for increased procurement of an item, the program cannot take immediate advantage of that opportunity without processing an ATR or waiting until the next budget cycle. This constraint collectively limits DoD's ability to respond to unfolding program events or take advantage of opportunities that would benefit military modernization or readiness.

As illustrated in a recent research paper, it wasn't until 1972 that the budget request displayed discrete program elements and projects. Attempts to consolidate budget line items and gain additional flexibility have been rebuffed by Congress and the system remains largely unchanged since that time.

New Start Restrictions

During each budget cycle, as part of continuing an effort or initiating a new project, a program must determine the correct amount from each appropriation and budget activity that correlates with its plans. It must then articulate, in considerable detail, the specific effort that it will pursue or end item that it will procure. Deviation from the stated description or proposed quantities requires new start approval, since the general interpretation is that Congress did not approve the activity. This rule pertains regardless of the size of the account.

The only option to gain new start approval, apart from using an ATR, consists of using a new start letter notification to Congress. This process is limited to development programs costing less than $10 million, procurement items costing less than $20 million, or safety efforts costing less than $20 million. These $10 to $20 million thresholds must represent the cost of the **entire effort.**

Letter notification to the congressional committees is required in advance of initiating requirements for

- A new procurement line item not otherwise requiring prior approval action.
- A new procurement line item or major component thereof costing less than $20 million for the entire effort.
- Establishment of new development programs costing less than $10 million for the entire effort.
- Initiation of safety programs or safety modifications costing less than $20 million for the entire effort; can be initiated immediately following congressional notification.

Figure 8: Letter Notification to Congress Direction in the DoD FMR

Therefore, if DoD had an opportunity to field a commercial item to meet an important capability gap, but the per-unit cost and/or desired quantity exceeded the $20 million threshold, it could not begin fielding any units until Congress approved an ATR or until the next budget cycle, when the requirement could be included. This same scenario would apply to developing a prototype to experiment with a promising new technology if the cost of the entire effort exceeded $10 million. Given the selectiveness and timing of most ATRs, programs have no responsive and effective means to exploit new acquisition opportunities.

The inability to initiate a new development or procurement effort in the year of execution represents a major barrier to scaling commercial solutions. As Mike Brown, Director of the Defense Innovation Unit, noted, the commercial sector dominates in 8 of DoD's 10 top modernization areas (a recent update established 14 new critical technology areas). Commercial innovation time cycles show that it is possible to deliver new operationalized technology across multiple technology areas in under 4 years (Figure 7). DoD cannot match this fielding timeframe given current PPBE processes, which delay the incorporation and scaling of available technology for warfighter solutions. The process also continues to discourage venture capital investors and Silicon Valley entrepreneurs from pursuing business opportunities with the military.

In FY20, DoD submitted 17 new start requests as part of five separate ATR packages. These included deployment of special forces capabilities, hardware for in-theater troop tasking, software to aid in planning cyber operations, counter unmanned aircraft systems, critical electronic warfare aircraft, 5G prototyping, and Army readiness software. Among these new start requests, **11 of the 17** required funding within current BTR thresholds, which implies that most of these projects could have proceeded with available funding in the absence of the new start restriction. The request for the Army's Standoff Volcano Obstacle mine-dispersing system, which required new start authority only because of a gap in funding, represents one notable example. This occurred even though Congress had approved the program's FY20 funding request and the program had already begun executing the effort. This example represents the overall inflexibilities in this area, which preclude the acquisition community from delivering needed capabilities or fully exploiting available innovations in a timely manner.

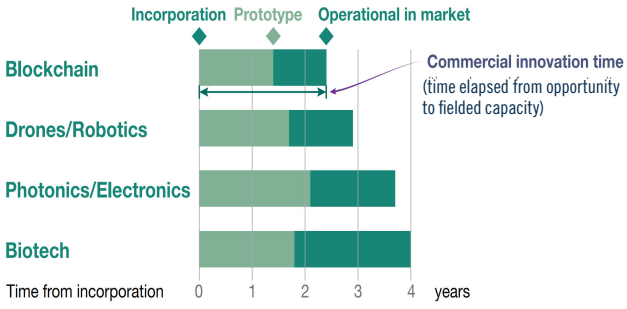

Figure 9: Commercial Innovation Timelines (from Competing in Time paper)

Congressional marks (a term used to denote a change from the original DoD request) also reduce the Department's ability to adapt to change. While congressional defense committees have the authority to adjust budget lines, these congressional marks often have unintended side effects. This occurs primarily because of the language used to justify a mark, OSD interpretation of that language, and the lack of an established process for adjudicating marks through execution. While some marks use unique terminology, most conform to a common lexicon that experienced defense budgeteers can recognize. For instance, an "early to need" mark conveys that the congressional defense committee considers the schedule misaligned with the budget request. Marks such as "contract savings" or "excess material" indicate the committees do not expect programs to need the funds. Sometimes a mark is more prejudicial when terms such as "unjustified" or "cost growth" are used. This indicates the committee staffers likely have larger issues with the budget request. Table 5 identifies commonly used marks.

Schedule Delay	Excess Funds	Unit Cost Adjustment	Excess Material	Insufficient Justification
Ahead of Need	Unjustified	Reduce Carryover	Cost Growth	Previously Funded
Early to Need	Program Delay	Contract Savings	Contract Delay	Scope Expansion

Table 5: Common Congressional Mark Language

While DoD generally understands the rationale for the marks, the specific intent of those marks as it relates to reprogramming later in execution is often less clear. For instance, to avoid DoD overruling a congressional adjustment, DoD financial managers will not process a BTR if a BLI has a congressional mark. This restriction may apply to the entire BLI if the mark was not specific to an activity, or it can be more precisely targeted. In either case, the mark further reduces the Department's already limited level of funding flexibility from 3% to an even lower number. In FY22, at least 30% of the RDT&E BLIs had a congressional mark, either as plus-ups or reductions (Table 6).

Component	Total BLIs	Marked BLIs	% Marked
Army	238	94	39.50%
Navy	254	113	44.49%
Air Force	306	95	31.05%
DW	250	88	35.20%

Table 6: FY22 RDT&E Congressional Marks

A mark also imposes a significant time lag compared to when the funds are executed. A congressional defense committee may mark a BLI a full year or two in advance of fund execution depending on the appropriation. With a 3-year appropriation such as Procurement, the time lag can be extensive. During this time, the program situation that drove the mark may have changed. However, DoD has no established process for adjudicating a mark with the congressional defense committees apart from requesting an ATR, which leaves most programs with excess funds or a shortfall and little recourse to mitigate the situation.

Constraining Fiscal Law

Finally, the accumulation of detailed and nuanced fiscal law over time in the DoD Financial Management Regulation from multiple Appropriation Acts and congressional conference reports prevents DoD from effectively pursuing much-needed innovation and disrupts programs. At over 7,400 pages, the FMR includes numerous areas where different offices can draw unique interpretations with varying levels of restrictiveness. The Defense Innovation Board's recent Software Acquisition and Practices study focused on the FMR's impact on software development—an increasingly important means of providing rapid upgrades to military users.

The FMR, specifically Volume 2A Chapter 1, forces program managers and financial managers of software-centric acquisition efforts to navigate a complex and often uncertain route that requires use of multiple appropriations to develop software capability. This portion of the FMR uses the accounting terms "expense" and "investment" to categorize whether a software effort falls under RDT&E, Procurement, or O&M (Table 7). The primary distinction between using RDT&E and O&M for software development is whether the effort is intended to achieve "objective system performance" or whether it is merely "iterations on the basic release and not involving significant performance improvements or extensive testing." A software upgrade to an existing system whose cost exceeds the expense threshold requires Procurement funding.

FMR Term	FMR Definition
Expense	Costs incurred to operate and maintain the organization, such as personal services, supplies, and utilities.
Investment	Investments are the costs that result in the acquisition of, or an addition to, end items. These costs benefit future periods and generally are of a long-term character such as real property and personal property.

Table 7: FMR Expense and Investment Definitions

However, as noted by the National Research Council in its publication Critical Code: Software Producibility for Defense, "Software is uniquely unbounded and flexible, having relatively few intrinsic limits on the degree to which it can be scaled in complexity and capability." Applying these accounting categories to software, particularly to programs using modern Agile approaches, is antiquated and restrictive. Fortunately, in FY20, Congress authorized the use of a new budget authority (BA-8) for a few acquisition programs. BA-8 allows programs to cover all expected software costs, including Procurement and O&M, from the RDT&E BA-8 account. However, this pilot applies to only eight programs, and congressional disapproval of the proposed FY21 pilots leaves its future unknown. With limited pilots, years may elapse before there is enough data to inform a final DoD recommendation. Congress, in coordination with the OSD Comptroller, can ease software development activities in the near term and can begin exploring ways to simplify other areas of the FMR.

Recommendation:
DoD and Congress Allow Consolidation of BLIs Using a Phased Approach

DoD and Congress should take a phased approach over the next three budget cycles to consolidate budget line items to a more manageable number that have adequate scope (at least $50M) to allow full utilization of DoD's reprogramming flexibility. These new BLIs should merge similar activities among which there would be potential synergies due to emerging technology and acquisition opportunities.

Recommendation:
Congress Increase BTR Threshold Percentage from 20% to 50%

As an interim step until more PEs can be consolidated, Congress should increase the BTR reprogramming threshold to 50% of RDT&E and Procurement BLIs to maximize the funding flexibility of smaller accounts. As noted, DoD generally only has ~4% flexibility across its investment accounts. This action would enable a slight improvement by reducing the constraints on ~59% of the BLIs that cannot currently maximize their flex-in and flex-out authority.

Recommendation:
Congress Update New Start Cost Constraints to Promote Innovation

To improve DoD's ability to exploit new technology opportunities, especially from the burgeoning commercial sector, Congress should update the new start rules in the next Appropriations Act. Specifically, it should change the letter notification requirement that the costs be "for the entire effort" to "for the fiscal year." This small change would give programs more flexibility for expenditure of funds while retaining the authority of Congress to approve long-term funding and veto any proposed efforts within the 30-day congressional notification period. Additional elements could be added to the new start notification letter such as expected future funding profile, procurement quantities, or major activities.

Recommendation:
Congress Allow DoD to Submit Overbalanced ATR Packages

Because Congress often disapproves ATR sources, which in turn leads to insufficient funding of approved requirements, the congressional defense committees should allow DoD to submit more sources than requirements on any given ATR package. This would improve the odds that approved requirements receive the necessary resources. It would also reduce the burden on the congressional committees by eliminating the need to review alternate sources that DoD sometimes submits later in the process.

Recommendation:
DoD and Congress Establish Congressional Mark Adjudication Process

The OSD Comptroller, Component Comptrollers, and the congressional defense committees should collaborate on developing a mark adjudication system that would provide an avenue for programs to gain relief from prejudicial marks when the programs have remedied the problems that caused concerns. While this would not restore funding that a congressional mark removed, it would allow the affected BLI to fully use its reprogramming authority.

Recommendation:
DoD Establish FMR Streamlining Committee with Congressional Support

In the FY21 and FY22 Appropriation Act Joint Explanatory Statement, the defense appropriation committees noted that DoD should "perform a detailed analysis of the Department's accounting and financial management process" to identify where internal guidance hinders program flexibility.

However, given that most OSD legal experts interpret the FMR to mean that content added to the FMR from past Appropriation Acts still retains the force of law, only direct congressional involvement can produce major reform. Congress should direct the establishment of an FMR Streamlining Board, to be executed by the PPBE Commission, to simplify major sections of the FMR and reduce the bureaucratic burden required to make the needed military investments. The committee should make investigating ways to improve funding software and IT investments a top priority.

Recommendation:
Congress Allow Expansion of BA-8 Software Appropriation Pilots

As DoD seeks to more fully understand the benefits and potential drawbacks of using an RDT&E budget activity to fund all software development activities, Congress should approve additional pilots in the FY23 budget. Software development is a highly nuanced activity and DoD develops many different types of systems and employs many different processes. A larger pool of pilots that can directly experiment with this flexible funding account will provide improved insight to inform final DoD recommendations and congressional action.

Recommendation:
Congress Initiate Portfolio Management Budget Pilot

Congress should formally establish a portfolio management budget pilot that provides a pool of funding for multiple related acquisition programs and research projects to deliver an integrated suite of capabilities. The pilot should have flexibility to take a distributed management approach that experiments with different technologies and scale them based on their success in providing a battlefield capability. This would enable examination of the effectiveness of having officials closer to program execution shift funding as program priorities, schedules, performance, risks, threats, costs, and other factors change to optimize the portfolio return on investment and improve mission impact. It would provide real-world examples of the impact of portfolio budgets on improving DoD's ability to make strategic investments in common platforms, infrastructure, and services.

One example mentioned previously was the joint Hypersonic Glide Body development and production. While that is a good example of collaboration that may result in efficiencies, a better portfolio approach would be to establish multiple efforts that would promote evolution of the technology, help scale the industrial base, strengthen the supply chains, and rebuild the skilled workforce in this technology domain. A portfolio approach would enable use of agile development and manufacturing approaches to rapidly advance in smaller production runs, and focus commonality at the subcomponent level, e.g., avionics, actuators, subsystems, and interfaces.

5. MODIFY OVERSIGHT MECHANISMS

The current approach for conducting congressional oversight of DoD investments bears little relation to strategic intent, does not use the right measures, lacks contextual information, and fails to reinforce accountability. Most recently, a member of the House Armed Services Committee noted, "the current system doesn't really give us the oversight that we need…We're sort of circling the drain with this system where DoD describes in intricate detail the ways that it isn't buying effectively, congress sort of signs off on that oversight, and we just keep going in circles."

Congressional oversight today primarily consists of reporting, in the form of Selected Acquisition Reports (SARs), Director of Operational Test and Evaluation (DOT&E) reports, and formal briefings (often called Staffer Day briefings). These reports and briefings generally only address DoD's 85 Major Defense Acquisition Program efforts, which represent the Department's largest investments. The Navy accounts for the bulk of the MDAP programs (39) and the Army for the fewest (15). DoD submits SAR reports annually with the President's Budget (PB) unless it has experienced a significant cost or schedule breach, as determined by the acquisition baseline

established at the start of development. If a breach occurs, a program submits an out-of-cycle report to describe the program's corrective action. DOT&E also issues its report annually; the report can include non-MDAP programs depending on the congressional demand. Staffer Day briefings occur after submission of the PB and generally focus on conveying details for how programs plan to execute the funds in the requested year. Depending on the staffers' interest, the briefings may generate expanded discussions, but more commonly they follow an established format and convey standardized information.

Using these reports and briefings as an oversight tool has six main problems.

First, they fail to correlate the Department's collective ability to meet the demands of the NDS and current joint operational needs. They would not help a member of Congress to understand whether the Department invests in the right areas or if the various program requirements remain relevant in the shifting threat landscape. While DOT&E reports do summarize operational effectiveness, suitability, and survivability, these test events occur at the conclusion of a program's development, just prior to entering the production phase. Identifying problems at this point requires either expensive remediation or program cancellation, thus wasting resources. Despite indications that Joint Staff has an incomplete understanding of the validated requirements in its systems, these reports reflect the assumption that the stated requirements, often validated many years earlier, remain relevant and address the necessary operational gaps.

Second, these reports and briefings ignore over 60% of the smaller acquisition programs that GAO found can range from a "multibillion dollar aircraft radar modernization program to soldier clothing and protective equipment." As with MDAP efforts, insight into these smaller programs also reflects only a single program and baseline, with no mechanism to provide a roll-up of collective capabilities that satisfies a range of mission needs. With roughly 64% of the DoD investment budget allocated to lower-cost programs, significant activities occurring at this level can have a large impact on achieving desired military outcomes. However, these efforts often receive cursory inspection during congressional review. Without better insight into these efforts, DoD has great difficulty in demonstrating alignment between its collective investments and national strategy objectives.

Third, the current process fails to reflect the complexity and dynamism inherent in any technology development project. The U.S. economic model places great emphasis on entrepreneurship and DoD has attempted to adopt key practices from the commercial sector, particularly as they relate to software development and prototyping. Unfortunately, this seems to overlook that entrepreneurship in the technology sector is risky. The National Venture Capital Association estimates that roughly 30% of venture capital-backed businesses fail. When failure is more precisely defined as not meeting projections, that number reaches 95%. Many ambitious DoD projects resemble cutting-edge technology projects in the commercial sector, yet very different expectations apply to DoD. While venture capital firms and large commercial companies are willing to invest in multiple product lines, with the expectation that some will fail and some will succeed, Congress (and many in DoD) expects that every project must be completely derisked and executed flawlessly. This viewpoint drives a reliance on measuring variance

THE CURRENT PROCESS FAILS TO REFLECT THE COMPLEXITY AND DYNAMISM INHERENT IN ANY TECHNOLOGY DEVELOPMENT PROJECT

against a cost, schedule, and technical baseline often established years before program execution rather than an appreciation of the learning, discrete technical progress, and regular user feedback that enables successful fielding of a new capability. As one analyst noted, this program-centric approach "does not capture the value generated by creative, adaptive, and innovative behavior associated with modern technology development" but instead relies on outdated industrial-era management practices. This excessive focus on capturing every capability within a "program of record" increases the difficulty of conveying more relevant information.

Fourth, oversight treats military investments in roughly the same manner. While DoD established multiple acquisition pathways to support different investment categories, the collective acquisition system has strong tendencies to revert to the mean (i.e., program-centric with strict baselines). This can result in the development of an AI algorithm, infrastructure investment, or integration of open-source software being monitored in the same way as the production of an aircraft carrier. The establishment of the Middle Tier of Acquisition (MTA) pathway represents one example. The 2016 NDAA established the MTA pathway of allowing more rapid development and fielding of prototypes to military users. While the statute provided relief from standard acquisition requirements, the appropriations committee inserted a joint explanatory statement requiring the reinstitution of certain onerous requirements. Internal to DoD, various Service-level acquisition policies also restrict flexibility beyond what the statute or higher-level policies require. This does not reflect the realities of how DoD develops military capabilities today, and the disparity will increase in the future. As a report on modernizing the Pentagon noted, "In the coming years, emerging technologies will redefine and expand modern warfare, and the pace of change is likely to be significantly faster than in the past… new technologies will span commercial, economic, and military domains, creating new threats and new opportunities." This recognition drove the creation of the DoD Digital Modernization Strategy, which provides a roadmap to "support implementation of the National Defense Strategy lines of effort through the lens of cloud, artificial intelligence, command, control and communications and cybersecurity."

THE CURRENT REPORT GENERATION AND BRIEFING PROCESS IS OUTDATED

Fifth, the current report generation and briefing process is outdated. Most information that DoD provides to Congress is months old, given the time needed to coordinate and gain approvals for releasing the information. This applies especially to SARs and DOT&E reports, which have especially lengthy compilation and review cycles. Staffer Day briefings generally represent the exception here, although these briefings are usually geared toward informing congressional mark-up. With a continuing resolution, this can occur a year before Congress appropriates full funding. As mentioned earlier, a mark incurred based on information presented in April of one year may not remain relevant in October of that same year. DoD must make progress toward enabling more timely reporting of latest status to the congressional defense committees. Fortunately, DoD has some efforts underway to improve reporting using more real-time IT systems, which will mitigate a portion of the challenge. However, the fundamental problem remains that the data reported by acquisition programs today does not provide the insight that congressional overseers need to gain confidence that investments will achieve desired outcomes.

Finally, today's oversight mechanisms neglect the importance of teams to achieving project success. The venture capital world recognizes

that entrepreneurial success is driven by the competence and cohesiveness of its founding team but acquisition reporting has no metrics or details on the government or contractor execution teams that would provide insight into whether or not the program staff has the right skill sets. Major technology companies are demonstrating the value they place in their teams by doubling company salary caps and offering unprecedented bonuses to retain top talent. Meanwhile the government has become an increasingly unpopular employer that has very limited ability to match commercial salaries for personnel with the skills DoD needs most. This makes it very difficult for DoD to attract and retain top technical talent. A recent study also found that contracting rules cap salaries, which means that defense contractors face the same challenge resulting in a situation where "innovation suffers, continuity of service is disrupted, timelines for delivering solutions can be delayed, and costs associated with replacing the departing workers are accrued." Those conducting oversight should devote more attention to the composition of the team and its collective skill sets. Overseers should also pay particular attention to the continuity of program and technical leadership. Congress has recognized the importance of this in past legislation, requiring large programs to retain PMs for the "program definition period" and designating Key Leadership Positions (KLPs). Yet, DoD does not commonly report staff retention nor does Congress truly view it as an indicator of likely program success. While detailing specific personnel skill sets to Congress would likely result in information overload and not be a value-added reporting measure, there should be greater recognition that this is important particularly as DoD moves into new advanced technology areas.

As part of promoting continuity in PMs, Congress also intended to reinforce accountability. However, accountability is so diffused in the current oversight structure that senior officials or Congress almost never call on PMs or other Key Personnel to explain the current challenges and mitigation actions projects take to ensure success. This sends the message that success or failure will be celebrated or borne by those in higher levels of leadership.

Recommendation:
Joint Staff Provide Congress an Operational Effectiveness Assessment with the Budget Submittal

To provide more clarity to Congress on the connections between disparate investments (and force structure proposals) and defense strategies, DoD should require the Joint Staff to provide an independent assessment of the proposed budget in meeting joint operational needs. The J-7 organization should lead this exercise in cooperation with the J-8 Functional Capability Boards and CCMDs. This would help integrate Joint Staff more into the communication channel with Congress on how well defense investments meet "fight tonight" needs while also balancing the requirements against new or emerging joint operational concepts necessary to meet the "fight tomorrow" challenges. The Joint Staff should directly engage with congressional defense authorization and appropriation committee members and staffers at the appropriate clearance levels to explain operational challenges and apprise them of the current and expected threats U.S. forces will face in various scenarios. As Mission Engineering practices expand and mature, illumination of key kill chains and how the investments enable them will become a more precise and illustrative means of conveying this information. However, DoD can make immediate improvements to make this picture clearer for those in oversight roles.

Recommendation:
DoD Initiate Development of Portfolio Management Measures

DoD cannot effectively integrate smaller acquisition programs into the current oversight and reporting structure because it would be overwhelming to overseers, would impose a burden on small HQ staffs, and, most importantly, current measures would not help illuminate the contribution of smaller efforts in meeting larger strategies. The only truly effective way to capture the value of small, disparate efforts is by establishing a capability portfolio that collectively can demonstrate how the portfolio provides a suite of capabilities or by upgrading fielded capabilities. One approach proposed would call on DoD to designate portfolio managers and hold them accountable to a small Board of Directors, similar to a publicly traded company or the Service Rapid Capability Offices. The board could work collaboratively with the portfolio manager to develop relevant metrics or measures specific to the disparate efforts. Another approach would rely on user-generated value assessments when projects provide capabilities in an iterative fashion. An operationally focused portfolio approach could measure mission outcomes such as Secretary Frank Kendall noted during the FY23 Senate posture hearings when he called out the need for the air domain to hold larger numbers of targets at risk. DoD could develop and communicate these measures to better inform Congress about progress across various efforts.

Recommendation:
DoD Assess Use of Venture Capital Approaches for Managing Advanced Technology Efforts

Dr. Bill LaPlante, the Undersecretary for Acquisition and Sustainment, stated during his confirmation hearing that "DoD should build and deliver capabilities in iterations similar to industry to reduce cycle times and be more responsive to changing technologies, operations, and threats." To fully embrace this paradigm, Congress should direct DoD to explore alternative approaches for resourcing and managing technology development efforts. The venture capital world makes effective use of sequential series of funding, which can range from Series A to K, which represent discrete and progressive phases as a means of oversight. Given that DoD will probably rely increasingly on commercial technology, Congress should encourage the exploration and adoption of similar models and abandon the linear, industrial-based approach. While not a silver bullet, this approach would push DoD to abandon its failure-averse structure and emphasize innovation by design.

Capital	Developing and procuring systems such as submarines, carriers, refueling and transport aircraft, exotic satellite systems, advanced fighter aircraft, bombers, tanks, combat vehicles, and high-end radars. These investments will be inherently more predictable in their execution and have greater longevity.
Expendable	Developing and procuring non-capital systems that are designed to be expendable, attritable, or disposable. This includes lower-cost unmanned systems, proliferated satellite systems, munitions, missiles, and bombs.
Evolving	Developing and procuring subsystem or modernization upgrades for an existing system. This includes sensor updates, offensive capability improvements, survivability enhancements, or procurement of commercial services.
Digital	Developing and procuring digital capabilities that are inherently software-enabled such as IT systems, command and control capabilities, AI improvements, or embedded software upgrades.
Enabling	Providing key infrastructure and support systems that enable combat capability. This includes networks, test and training systems, simulation environments, radios, medical, personnel support, and logistics capabilities.

Table 8: Notional Investment Characterization

Recommendation:
DoD Propose a New Investment Category Structure That Better Aligns to the Reality of Current Military Investments

DoD already provides some breakdowns of the types of systems it procures in each budget cycle. However, these broad groupings fail to capture the range of nuanced investments. DoD can make further distinctions among the types of capabilities it develops and procures. Some have proposed a categorization based on consumable, evolving, and enduring capabilities. Building on that concept, a more discrete investment breakout might include the notional categories in Table 8. This would provide more meaningful characterization; enable new thinking on how best to plan, budget, and execute programs; and improve the means of conducting oversight.

Recommendation:
DoD Continue to Mature ADVANA and Incorporate Congressional Feedback

Developing a reporting system that has the features and accessibility desired by all DoD and congressional users will take time. DoD is currently updating its Advanced Analytics (ADVANA) platform with one stated intention of using it to better inform the legislative branch. While incorporating some of the recommendations in this paper will drive significant changes to the planned structure and data elements, DoD should continue to mature the current approach and place significant emphasis on responding to congressional feedback about the system to improve usability and gain a deeper understanding of specific congressional needs. This feedback and learning can play a critical role in future updates that incorporate more tailored and value-focused means of reporting.

Recommendation:
DoD and Components Enable Key Personnel Participation in Oversight Forums

While acquisition Decision Authorities bear the ultimate responsibility in the current governance system, DoD should include PMs and other key functional leaders in discussions with congressional leaders and senior DoD executives to promote team accountability and shared outcomes. Given the independence of some acquisition functionals, a culture of compliance vs. performance can develop. DoD should clearly communicate across the Department that the designated individuals bear responsibility for delivering a stated capability. This should include all those in Key Leadership Positions, including contracting, engineering, and logistics functional areas. This has the significant side benefit of providing leaders with the most complete information possible. To achieve this requires streamlining or eliminating the excessive reporting and message relays with middle management to get insights directly from those managing program execution.

PMs and other KLPs will have competing demands on their time, so this is not to suggest they need to be in every discussion. However, they should be included in key meetings where value-added engagement from those closest to execution can help articulate finer details that can influence resourcing decisions. The advancement of portfolio management should make this a less program-centric function and focus it on a broader suite of capabilities. Program Executive Officers can convey the broader portfolio strategies, status, and funding needs

Summary

The current PPBE system has many shortcomings that do not all relate strictly to budgeting issues, but collectively contribute to an acquisition system that fails to deliver capabilities commensurate with the level of funding received. It does not reflect the needs of the modern age. To achieve the needed levels of disruptive innovation in the Department, DoD must issue and implement clearer strategic guidance. The Services, OSD, Joint Staff, and Congress must increase collaboration to drive a more common understanding of the environment, priorities, and strategic investments. DoD must focus special funds on targeted purposes and provide greater flexibility so that the Department can dynamically respond to rapidly changing threats, operations, and technologies.

In the year of execution, DoD must have greater flexibility to use funds to pursue new technological opportunities, whether they stem from DoD-sponsored research projects, internal research and development conducted by defense primes, or the commercial sector. As the Army Assistant Secretary for Acquisition recently stated, "ultimately, they (Congress) have to give us flexibility in research and development accounts, for example, to do things during the year, so to speak, that weren't planned in advance." DoD and Congress must also work together to modernize oversight mechanisms to ensure that these mechanisms can help to provide the keen insights both DoD and Congress need, but have lacked for years, in a timely and current manner.

The war in Ukraine has demonstrated that the United States does not have years to plan and program funds and marshal resources for the next conflict. Furthermore, while China has represented the priority threat for years in defense strategies, USINDOPACOM still lacks the critical capabilities it requires to deter or defeat this adversary. While some in DoD and Congress have sought acquisition reform for decades, the time has come to finally modernize our defense budgeting system for the 21st century. The recommendations outlined in this paper represent near-term steps that DoD and Congress can take to improve DoD's ability to deliver maximum value to the warfighters.

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DoD and Congress Must Take Five First Steps to Establish a Modern Defense Budgeting System.

1. STRENGTHEN DEFENSE PLANNING GUIDANCE AND ASSERT SECDEF AUTHORITY

1. SECDEF Issue Challenge-Driven Defense Planning Guidance to Support the FY25 POM
2. DSD and VJCS Reestablish the ACDP as a DMAG Guiding Organization Immediately
3. Congress Reaffirm SECDEF's Role in Aligning the DoD Budget with National Strategies
4. DoD Proactively Withhold Service Topline for Joint Needs

2. INSTITUTIONALIZE BUDGET PLANNING COLLABORATION

5. SECDEF Require the Components to Develop a Joint Vision for the FY25 POM
6. OSD and Congress Establish a Collaborative Budget Review at the End of Each Fiscal Year
7. SECDEF Institute Joint Budget Reviews Between Service Programmers and OSD Prior to Formal POM Submission

3. CHARACTERIZE AND MONITOR SPECIAL FUNDS

8. DoD and the Components Publish a Special Funds Primer with Key Details
9. DoD and Congress Establish Criteria for Creating and Continuing Special Fund Accounts
10. Congress Make the Longevity of the EDI and PDI Accounts Dependent on DoD's Collective Ability to Satisfactorily Meet CCMD IPL Inputs as Determined by the SECDEF

4. ENABLE EXECUTION YEAR FLEXIBILITIES

11. DoD and Congress Allow Consolidation of BLIs Using a Phased Approach
12. Congress Increase BTR threshold percentage from 20% to 50%
13. Congress Update New Start Cost Constraints to Promote Innovation
14. Congress Allow DoD to Submit Overbalanced ATR Packages
15. DoD and Congress Establish Congressional Mark Adjudication Process
16. DoD Establish FMR Streamlining Committee with Congressional Support
17. Congress Allow Expansion of BA-8 Software Appropriation Pilots
18. Congress Initiate Portfolio Management Budget Pilot

5. MODIFY OVERSIGHT MECHANISMS

19. Joint Staff Provide Congress an Operational Effectiveness Assessment with the Budget Submittal
20. DoD Initiate Development of Portfolio Management Measures
21. DoD Assess Use of Venture Capital Approaches for Managing Advanced Technology Efforts
22. DoD Propose a New Investment Category Structure That Better Aligns to the Reality of Current Military Investments
23. DoD Continue to Mature ADVANA and Incorporate Congressional Feedback
24. DoD and Components Enable Key Personnel Participation in Oversight Forums