Recommendation 18: Fund DBSs in a way that allows for commonly accepted software development approaches.

Problem

The current statutory and policy regime does not enable the speed DoD needs to effectively acquire DBSs. Funding constraints, in various forms, are key contributors to this problem. One constraint applies to the appropriations account and/or program element/budget line item (PE/BLI) from which money is spent. Another constraint applies to the point in time at which money is spent.

Because DBS acquisition follows a model similar to that of major weapon systems acquisition, program managers (PMs) are required to spend money from different appropriation accounts and PEs/BLIs based on the acquisition stage. Depending on financial management regulations (FMR) and Military Department regulations, DoD may need to fund a specific DBS requirement via Research, Development, Test, and Evaluation (RDT&E), Procurement, and/or Operation and Maintenance (O&M). These accounts categorize phases of weapon system engineering. When applied to business software IT, which by its nature does not have such clear phases, the account categories introduce inefficiencies.

PMs must also use different types of funding at different points in time, depending on the years in which Congress appropriated those funds and appropriation availability. This requirement prevents DoD from modifying DBS funding timetables on a monthly or even weekly basis. To accommodate continuous user feedback and changing technical requirements of DBSs, DoD needs the ability to make funding modifications with such frequency.

Appropriation system timing and account constraints are commonly known as *colors of money* in defense acquisition circles. DBS experts cite color of money as a major problem.¹

Background

In the regular federal budgeting system, Congress appropriates money each year for agency use. This money must be obligated within a date range specified by the appropriation in question and may not, generally, be obligated beyond that range (see Table 3-3 below).² The obligation of these funds is also limited to the specific purpose identified in the appropriation.³

Appropriation account	Period of availability	
Research, Development, Test, and Evaluation (RDT&E)	2 years	
Other Procurement	3 years	
Operation and Maintenance (O&M)	1 year (some exceptions) ⁴	

Table 3-3. Appropriation Accounts Used by DoD to Acquire Business Software Solutions

¹ Approximately 30 DBS experts, interviews with the Section 809 Panel staff, mid-2017.

² Balances Available, 31 U.S.C. § 1502.

³ Application, 31 U.S.C. § 1301(a).

⁴ For example, 1 percent of the Defense Health Agency appropriation is given 2-year availability (*de facto* carryover authority).

Fundamentals of the modern appropriation system are outlined in sections of law originally enacted in 1809.⁵ Current law states that regular appropriations "may be construed to be permanent or available continuously only if the appropriation... expressly provides that it is available after the fiscal year covered by the law in which it appears."⁶

DBSs receive funding primarily from three appropriation accounts—RDT&E, Procurement, and O&M—all of which have different periods of availability and restrictions on use. PMs cannot use these funds interchangeably. For RDT&E and Procurement, program-specific funding is approved by the House and Senate appropriations committees after moving through a lengthy POM process within DoD.

Unlike RDT&E and Procurement funds, for which control resides at the program element level, O&M funding control takes place at a higher level and is not tied to specific programs. Additional constraints apply to O&M funding. In practice, a DBS PM's ability to plan and execute use of funds is restricted based on factors such as type of activity on which money is spent, production document scope, dollar-cost of purchase, and technical details of system modification.⁷

For example, DoD financial regulations distinguish between *investments* and *expenses* based not simply on the qualitative aspects of what is being purchased, but on whether the purchase falls within a dollar threshold of \$250,000. Investments, greater than \$250,000, must be funded via (specifically appropriated) Procurement dollars; whereas, expenses, less than \$250,000, may be funded via O&M dollars.⁸

⁸ FMR, Volume 2A, Chapter 1, Section 010212(B)(4). This section of the FMR was codified in Use of Operations and Maintenance Funds for Purchase of Investment Items: Limitation, 10 U.S.C. § 2245a, but repealed in the FY 2017 NDAA (Pub. L. No. 114–328).

⁵ GAO, *Principles of Federal Appropriations Law, Third Edition, Volume I*, Chapter 4, 4–6, accessed August 10, 2017, <u>http://www.gao.gov/special.pubs/3rdeditionvol1.pdf</u>.

⁶ Application, 31 U.S.C. § 1301(c).

⁷ For differentiation based on type of activity, see FMR Volume 2A, Chapter 1, Section 010212(B)(1): "The underlying purpose for each discrete task within an IT effort determines the correct appropriation for budgeting of that task. An effort that is so broadly defined that it contains separate tasks appropriate to budgeting in different appropriations should be separated into discrete tasks, each of which is budgeted in the correct appropriation." For differentiation based on dollar threshold, see FMR Volume 2A, Chapter 1, Section 010212(B)(4): For DBS *modification efforts* of less than \$250,000, Operation and Maintenance funding may be used. For DBS modifications involving "a complete system with a cost of \$250,000 or more," however, PMs must use Procurement funds. These funds must be either explicitly appropriated by Congress and programmed by DoD at the PE/BLI level, or reprogrammed from another account (which often requires Congressional approval). Differentiation based on production document scope and technical thresholds may indicate Service-level decision-making problems in addition to regulatory problems. According to Service-level DBS acquisition officials in contact with Section 809 Panel staff in August 2017, if modification requirements are not explicitly listed in a DBS's current requirements document, RDT&E funding must be used for that requirement. Even if the DBS's requirements document explicitly lists the modification requirements in question, if a preponderance of development objects being modified are new, RDT&E funding must be used. Only if a majority of development objects being modified are not written from scratch may O&M funding be used. This requirement is important because unlike RDT&E and Procurement, O&M spending does not require the initiation of DBS-specific approval years in advance via the PPBE and appropriation processes.

Case Study: Dollar Thresholds Impeding Financial Auditability

In 2016, the Army's General Fund Enterprise Business System (GFEBS) required new computer code to enhance property management auditability reporting. The program contractor estimated that writing this code would cost approximately \$600,000.⁹

The program office determined that the work primarily would take the form of newly written code, not modifications to existing code. This determination, combined with the fact that the feature's cost rose beyond the FMR's \$250,000 *investment* threshold, necessitated funding the feature's development with RDT&E appropriations.¹⁰

At the time, the program was already in sustainment and had no RDT&E funding. As a result, the program had to postpone the addition of this financial auditability feature. As of late 2017, the Army requested \$1.7 million in FY 2019 and \$6.7 million in FY 2020 for GFEBS Increment II RDT&E funding.¹¹ Some of this funding, if approved by Congress, presumably will be allocated to the development of the GFEBS auditability feature in question.

In addition to constraints created by applying normal appropriations accounts to DBSs, other laws, policies, and decision-making bodies may affect DBS spending patterns. These items include the statutory 80/20 rule, OMB quarterly apportionment practices, DoD comptroller *rephasing* practices, and Service-level comptroller policies.

As an illustration of these phenomena, Figure 3-7 below shows DoD's weekly IT contract obligations. In addition to the large peak in IT obligations in the final weeks of September (see rightmost bars of chart), there are smaller peaks visible throughout the fiscal year.

⁹ Army DBS program office staff, emails to Section 809 Panel staff, August 2017.

¹⁰ To some degree, this impediment may have been produced by the Army's interpretation of FMR language. According to one DCMO official, "some Services are known to be more conservative in the way they interpret" the distinction between expenses and investments. This situation suggests that part of the problem may be the FMR's excess complexity—as of August 2017, the document was more than 7,000 pages long.

¹¹ Assistant Secretary of the Army for Financial Management and Comptroller, "Department of Defense Fiscal Year (FY) 2018 Budget Estimates: Army Justification Book of Research, Development, Test & Evaluation, Army" (see page 225 of Volume II, Budget Activity 5B, under Project EV4, General Fund Enterprise Business System Inc. 2), accessed August 14, 2017, https://www.asafm.army.mil/documents/BudgetMaterial/fy2018/vol5b.pdf.



Figure 3-7. Weekly DoD Information Technology Contract Obligations During FY 2017¹²

A small peak in obligations is visible in the 43rd week of the fiscal year (at the end of July). This observation overlaps with the 80/20 rule, under which Congress requires at least 80 percent of single-year obligations to occur between the months of October and July. Small peaks also occur at midyear, the end of each quarter, and the end of most months. These peaks may overlap with temporal constraints applied by OMB, DoD, Military Departments, and lower-level organizations.

There are several important and legitimate reasons for imposing time- and account-based constraints on normal DoD program budgets. One reason may be that the annual appropriation process allows for a regular, standardized oversight process to occur by default. Another issue may be the concern that if funding never expires, it may result in large unobligated balances that could be used for inappropriate purposes. This second justification was alluded to in the 1980s and 1990s, during which some observers viewed certain forms of DoD budget flexibility as "slush funds."¹³

Program officials, however, describe the current appropriation system as a major impediment to the success of DBS programs. One former DBS PM noted commercial companies do not develop market-competitive software IT using the type of siloed-funding model that results from appropriation timing

¹² Dataset includes all DoD contract actions coded with Product and Service Codes *D3* or *70* from the Federal Procurement Data System, <u>https://www.fpds.gov</u>, accessed January 2, 2018. To ensure comparability of data across years, each weekly period contains the same days of the week. The first day of the fiscal year (or first 2 days for leap years) are omitted.

¹³ See, for example, Senator Alfonse D'Amato's 1985 letter to the U.S. Comptroller General on this issue and the accompanying report: GAO, Comptroller General of the United States, Potential for Excess Funds in DOD, GAO/NSIAD-85-145, accessed June 27, 2017, <u>http://www.gao.gov/assets/150/143300.pdf</u>. In the past, funding flexibilities (such as the *M* accounts) have been permitted to exist for long periods of time but eventually were shut down after accumulating large unobligated balances. The flexibility accounts in question were eliminated by the FY 1991 NDAA (Pub. L. No. 101–510).

and account constraints. The PM suggested that the main problem was a failure to recognize that as users' needs become clearer, DBS technical specifications change. This fact, however, is not reflected in a requirement and PPBE process that attempts to lay out every technical detail of DBSs in advance. One DBS PM explained, "If you try to build the fifth floor of your house before the first floor, it isn't going to work."¹⁴

Findings

Time- and account-based funding constraints may address some of the accountability concerns raised by oversight officials. These constraints, however, are counter to two key characteristics of software: It changes rapidly and constantly.¹⁵ For some DBS programs, these constraints can create serious inefficiencies. If a PM wishes to provide new capabilities to end-users based on their feedback from previous software releases, the PM must have the ability to modify requirements on relatively short notice. To modify requirements on short notice, the PM must be able to access congressionally appropriated funding with flexibility regarding time and account. The current DBS funding system lacks such flexibility and serves as a major constraint.

Case Study:

Embrace Funding Models That Can Accommodate Older IT Systems

The Air Force's Aviation Resource Management System (ARMS) is a 30-year-old ACAT III aviation information reporting system, historically funded with O&M appropriations.¹⁶ Due to its age, it did not have any of the documentation associated with the DoDI 5000.02 major program acquisition process.

The Air Force determined that required upgrades to the system would have to be carried out using RDT&E appropriations, for which DoDI 5000.02 process documentation would be required, *causing a 2-year delay*.¹⁷ By loosening the distinctions between O&M and RDT&E, Congress would allow for necessary upgrades to older software systems.

Statistical evidence lends some support to the hypothesis that the time periods of appropriation accounts are connected to the quality of DBS procurements. A 2013 study focused on U.S. federal government IT acquisition projects showed a correlation between funding obligated at the very end of the fiscal year and comparatively low quality of project outcomes.¹⁸ A 2016 paper reiterated many of these points, concluding that although existing data "do not prove that wasteful year-end spending exists," current constraints "may encourage wasteful spending of taxpayer dollars."¹⁹ Senior defense officials such as former DoD Comptroller Robert Hale, former Acting Army Secretary Patrick Murphy,

¹⁴ Former Army DBS PM, conversations with Section 809 Panel staff, May 2017.

¹⁵ Jacques S. Gansler, Commercial Off The Shelf (COTS): Doing It Right, presentation for Acquisition Research Symposium, May 14-15, 2008.

¹⁶ Defense Information Technology Portfolio Repository (DITPR), accessed August 15, 2017.

¹⁷ Air Force CIO staff, emails with Section 809 Panel staff, August 15, 2017.

¹⁸ Jeffrey B. Liebman and Neale Mahoney, "Do Expiring Budgets Lead to Wasteful Spending? Evidence from Federal Procurement," *National Bureau of Economic Research*, September 2013, accessed April 26, 2017, <u>http://www.nber.org/papers/w19481.pdf</u>.

¹⁹ Jason J. Fichtner and Adam N. Michel, *Curbing the Surge in Year-End Federal Government Spending: Reforming 'Use It or Lose It' Rules,* accessed August 7, 2017, <u>https://www.mercatus.org/system/files/mercatus-fichtner-year-end-spending-v1.pdf</u>.

and former Army Business Transformation Office Director LTG Tom Spoehr have all suggested that timing constraints lead to suboptimal spending outcomes.²⁰

Acquisition officials also described funding flexibility as necessary to build effective cybersecurity measures into DBSs. In their assessment, when critical needs arise due to unforeseen vulnerabilities, flexible funding must be available for the immediate development of new capabilities, as going through a formal POM process can take as long as 2 years.²¹

Case Study: Using Appropriation Account and PE/BLI Flexibility to Promote Business Process Reengineering

The Air Force Way system (AFWay) is an electronic portal that enables users to securely order IT hardware, software, and services online. During development of the system's Version 4.0 technical refresh, acquisition personnel leading the effort believed many of the business processes involved in ordering IT hardware and services could be made more efficient. Compliance with then-current DoD security requirements necessitated a complete rewrite of the application code, which provided an opportunity to introduce concurrently the desired business process efficiencies.

The proposed improvements were considered new capabilities that required RDT&E funding. AFWay was an aging system with a 20-year-old set of requirements, being funded solely by O&M. As such, it not only lacked RDT&E funds, but also lacked a PE/BLI at which to assign such funds.

Because of the inability to use O&M dollars for application enhancements in this case, the proposed business process improvements could not be included in the rollout of AFWay's Version 4.0 in 2015.²² Congress could mitigate this impediment to improving business processes by allowing for more malleable distinctions between DBS appropriation accounts.

²¹ Air Force IT acquisition officials, conversations with Section 809 Panel staff, June 2017.

²⁰ Robert Hale, "Why DoD's Year-End Spending Needs to Change," *Breaking Defense*, September 23, 2016, accessed December 28, 2017, <u>http://breakingdefense.com/2016/09/why-dods-year-end-spending-needs-to-change</u>. Changing Management Behavior: Every Dollar Counts, U.S. Army Directive 2016-16 (2016). David Vergun, "End-of-year 'use it or lose it' budget mindset to get tossed," *Army News Service*, April 18, 2016, accessed December 28, 2017, <u>https://www.army.mil/article/166098</u>.

²² Air Force CIO staff, emails with Section 809 Panel staff, August 15, 2017.

Case Study: Tailoring Funding Timetables to Acknowledge Special Characteristics of DBSs

The Air Force's Contracting-Information Technology (CON-IT) program is intended to replace the outdated Standard Procurement System (SPS) as the departmentwide contract writing system. The Air Force used an integrated team of acquisition and contracting personnel to develop an innovative acquisition strategy for CON-IT.

By using an existing software solution owned by Defense Information Systems Agency (DISA) and outsourcing much of the development and training to USDA, the Air Force anticipated avoiding \$83 million in costs and shortening the program schedule by 23 months.²³ The integrated team adopted an Agile software development methodology and provided a working prototype in 6 weeks, which shortened the program schedule by an additional 3 months.

Because the program succeeded in shortening its timeline by about 2 years, however, the Air Force required end-user software licenses much earlier than originally anticipated or budgeted. End-user license purchases constitute a system deployment, so they must be purchased using Procurement appropriations.

The FY 2018 POM request had already been delivered prior to successful delivery of the prototype system. Acquisition officials were able to locate sources of funding in other programs, but none of this funding was in the Procurement account, so they could not use it for purchasing end-user licenses.

Air Force acquisition personnel anticipated that an initial operational deployment would occur at the end of 2017 and broader fielding of CON-IT would occur in late 2018. This timetable was jeopardized by different appropriation accounts and the complex rules surrounding them.

The Air Force was stymied in deployment because it completed a prototype 23 months ahead of time and \$83 million under budget. Due to substantial time savings, it lacked Procurement appropriations specific to the time period in which the budget originally called for them. Officials estimated that if money were not obtained for purchase of end-user licenses in FY 2017, it would cause deployment delays and approximately \$7 million in added program costs due to simply "waiting for the right color of money."²⁴

By modifying the rules on appropriations timetables and accounts for DBSs, Congress can mitigate the unnecessary program delays that exist due to the inherently unpredictable process of Agile DBS development.

One senior industry representative advised Congress to "kill the color of money immediately" with respect to DBSs.²⁵ He stated that although problems had arisen in implementation, "the concepts are sound" behind flexibility mechanisms such as the working capital fund used by DISA.²⁶

Other government representatives outside DoD were less vocal in their condemnation of time- and account-based funding constraints. Software developers from the General Services Administration said

²³ Ibid.

²⁴ Ibid.

²⁵ Industry organization managing director, conversation with Section 809 Panel staff, June 2017.

²⁶ Ibid.

that because they focused on delivering capabilities within very short timeframes, color of money was rarely a major problem. The software developers did suggest, however, these funding constraints might have greater effect on other agencies that run larger-scale development projects. They described themselves as favoring working capital fund models for software IT acquisition.²⁷

The effect of color of money on DBS programs can be quantifiably estimated using publicly available federal procurement data. If there were a perfectly even distribution of DBS spending within fiscal years, about 2 percent of such spending would occur each week. In fact, recent observations show approximately 10 percent of IT spending concentrated in the final week of the fiscal year.²⁸





Much of the data in the chart are likely not DBS-related, but simply represent the purchase of computers and other equipment for day-to-day office use. This analysis, however, quantifies one of the most clearly visible ways in which the appropriation system produces skewed incentives for IT acquisition.

²⁷ GSA employees, conversation with Section 809 Panel staff, June 2017.

²⁸ Section 809 Panel analysis of FY 2017 Federal Procurement Data System data, January 2, 2018.

²⁹ Data from Federal Procurement Data System, extracted via Adhoc Report on January 2, 2018. Dataset includes all DoD contract actions coded with Product and Service Codes *D3* or *70* from the Federal Procurement Data System, https://www.fpds.gov, accessed January 2, 2018. To ensure comparability of data across years, each weekly period contains the same days of the week. The first day of the fiscal year (or first 2 days for leap years) are omitted.

This end-year skewing effect is higher for IT and IT-related products than for any other aggregate category of products purchased in substantial quantities by DoD in FY 2017.

PSC	PSC description	FY 2017 obligation	Obligation in final week of FY 2017	Final week as percent of FY 2017 total
69	Training Aids and Devices ³¹	\$1.5 billion	\$384 million	22.9%
70	Information Technology Equipment, Including Firmware and Software	\$7.0 billion	\$945.6 million	13.6%
19	Ships, Small Craft, Pontoons, and Floating Docks	\$15.1 billion	\$1.8 million	11.8%
58	Communication, Detection, and Coherent Radiation Equipment	\$12.3 billion	\$1.4 billion	11.2%
13	Ammunition and Explosives	\$5.5 billion	\$581.5 million	10.6%

Conclusions

No meaningful distinction exists among RDT&E, Procurement, or O&M for software systems developed according to modular, Agile principles. According to senior DoD IT officials, "Current appropriations laws and authorities are not aligned with the way technology is acquired for business operations."³² The officials elaborate on the changes that would need to occur to achieve such alignment:

To acquire a technology solution that takes advantage of the latest available alternatives Congress would provide flexibility to current appropriations for business system capability needs. To avoid technical debt, resources would be available in the appropriation needed immediately for technology capabilities current in the marketplace.³³

The traditional appropriations model provides a helpful framework when developing complex weapon systems over the course of many years. This traditional model, however, is fundamentally incompatible with open-architecture business software programs intended to deliver new capabilities multiple times per year.

The defense acquisition funding system faces constraints associated with timing, appropriation account, and PEs/BLIs. These funding constraints lock DBS development into rigid, predetermined pathways fundamentally at odds with widely accepted best practices for commercial software development and the continuous engineering nature of software. These best practices include core principles of Agile development:

³⁰ Data from Federal Procurement Data System, extracted via Adhoc Report on January 2, 2018. Only includes 2-digit product codes with FY 2017 DoD obligations greater than \$1 billion.

³¹ PSC 69, Training Aids and Devices, includes some computers and electronic communications equipment.

³² Deputy Assistant Secretary of Defense for Communications, Command and Control, Cyber and Business Systems (DASD C3CB), *Study of Commercial Practices: Resourcing Alternatives Deep Dive*, July 10, 2017.

³³ Ibid.

- Delivering software on a regular basis, with continuous end-user feedback involves simultaneous research, development, acquisition, and sustainment.³⁴ The current system of defense appropriation accounts and PEs/BLIs does not acknowledge the fusion of these processes in software development.
- Delivering working software in a span of weeks or months requires a funding system that can change the allocation of program resources in such a timeframe.³⁵ The current appropriation system does not allow for the allocation or reallocation of resources on these timeframes.

Analysis: Appropriation Labeling and Decision-Point Blockages

Service acquisition professionals state that the requirement to fund much of IT software development via RDT&E imposes a burden "simply because of the word Development within RDT&E."³⁶

This statement suggests that DoD leadership psychology may be one of the problems associated with DBS funding. A given piece of software may never be done developing. As connected systems are modified, it may require the continual addition of new RICEFW objects. Consequently, program staff could potentially justify the funding of many endeavors under RDT&E, Procurement, or O&M. Those concerned primarily with legal compliance, however, may tend to default to the most liberal possible interpretation of the term *development* to ensure they avoid violating the law.

By allowing the type of funding flexibilities outlined below, Congress can mitigate the degree to which nonprogram officials impede DBS development due to DoD's overabundance of caution regarding fiscal law and regulation.

Ultimately, the more work DBS PMs devote to obligating funds within specific time periods or accounts, the less work they devote to ensuring positive outcomes for end-users. For this reason, greater funding flexibility is required if DBSs are to deliver value to warfighters at substantially lower cost to taxpayers.

Implementation

Legislative Branch

Fund DBSs in a way that allows for commonly accepted software development approaches. To
do so requires flexibility in both time period limits and appropriation account limits. DoD
cannot effectively manage large IT projects in accordance with best practices without this
flexibility. Account flexibility recommendations (internal reprogramming) and time period
flexibility recommendations (carryover authority) are described below.

³⁴ See first principle of Agile Manifesto, "Principles behind the Agile Manifesto," AgileManifesto.org, accessed November 9, 2017, <u>http://agilemanifesto.org/principles.html</u>.

³⁵ Ibid, third principle.

³⁶ Air Force CIO staff, conversation with Section 809 Panel staff, August 15, 2017.

- To address appropriation account constraints and allow Agile, sprint-based software development decisions to be made in real time, congressional defense committees should allow internal reprogramming for DBSs, provided that each internal reprogramming is within an individual DBS portfolio. Congress should allow DoD to manage DBS funding through internal reprogramming guidelines for reclassifying funds (including maximum thresholds). Further, movement of DBS funding across O&M accounts, RDT&E accounts, and Procurement accounts of a DBS portfolio should not count against general transfer authority and should not require prior approval from congressional committees.
- To address time period constraints, add a section to the annual defense appropriation act permitting DBS carryover authority of 10 percent up to 6 months. In other words, DoD would be empowered to delay the obligation of funds for up to 6 months beyond the end of the fiscal year.
- Repeal the regular appropriations bill section on investment item unit costs to acknowledge that, for the purpose of modifying or enhancing DBSs, there is no technically meaningful distinction between RDT&E, Procurement, and O&M.³⁷
 - In future appropriations acts, omit the section reading, "appropriations which are available to the Department of Defense for operation and maintenance may be used to purchase items having an investment item unit cost of not more than \$250,000."³⁸

Executive Branch

- Allow for flexibility across appropriation accounts at the DBS portfolio level, by delegating internal reprogramming authority to portfolio leads.
 - To address appropriation account constraints, OSD should issue policy or guidance to the Comptroller, CMO, and DBS managers. The policy or guidance should specify that DBS internal reprogramming should be maintained under the decision-making authority of DBS portfolio leads. DBS portfolio leads should be permitted to redistribute available funding among their own subordinate DBS program accounts. The CMO would send regular reports to the DoD Comptroller detailing all such transfers after the fact, to be incorporated into the Comptroller's internal reprogramming notifications to the congressional defense committees.
- The DoD comptroller and the CMO should issue policy or guidance stating their intent not to decrement funding due to DBS portfolios retaining unobligated money within targeted phases of the fiscal year. Without this policy or guidance, carryover provisions would be unlikely to produce benefits.

³⁷ This recommendation would be in keeping with changes under the FY 2017 NDAA. The law repealed Use of Operation and Maintenance Funds for Purchase of Investment Items: Limitation, 10 U.S.C. §2245a, which mandated that "funds appropriated to the Department of Defense for operation and maintenance may not be used to purchase any item (including any item to be acquired as a replacement for an item) that has an investment item unit cost that is greater than \$250,000."

³⁸ Section 8032 of the Consolidated Appropriations Act for FY 2017, Pub .L. No. 115–31 (2016).

- Rewrite FMR Volume 2A, Chapter 1, Section 010212(B) to acknowledge that, for the purpose of modifying or enhancing DBSs, there is no technically meaningful distinction between RDT&E, Procurement, and O&M.
 - Eliminate the \$250,000 barrier between expenses and investments in FMR Volume 2A, Chapter 1, Section 010212(B)(4).

Implications for Other Agencies

 DoD (or parts of DoD) could serve as a pilot program for changing the U.S. government's approach to funding the acquisition of business software IT. Depending on problems encountered and lessons learned, similar approaches could be adopted by other agencies.