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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Department of Defense Information Technology and Cyberspace Activities Budget Overview

Fiscal Year 2020
President's Budget Request

March 2019

Preparation of this study/report* cost the Department of Defense a total of approximately \$5,382,400 for the 2020 Fiscal Year

*Includes unclassified report and its classified annex

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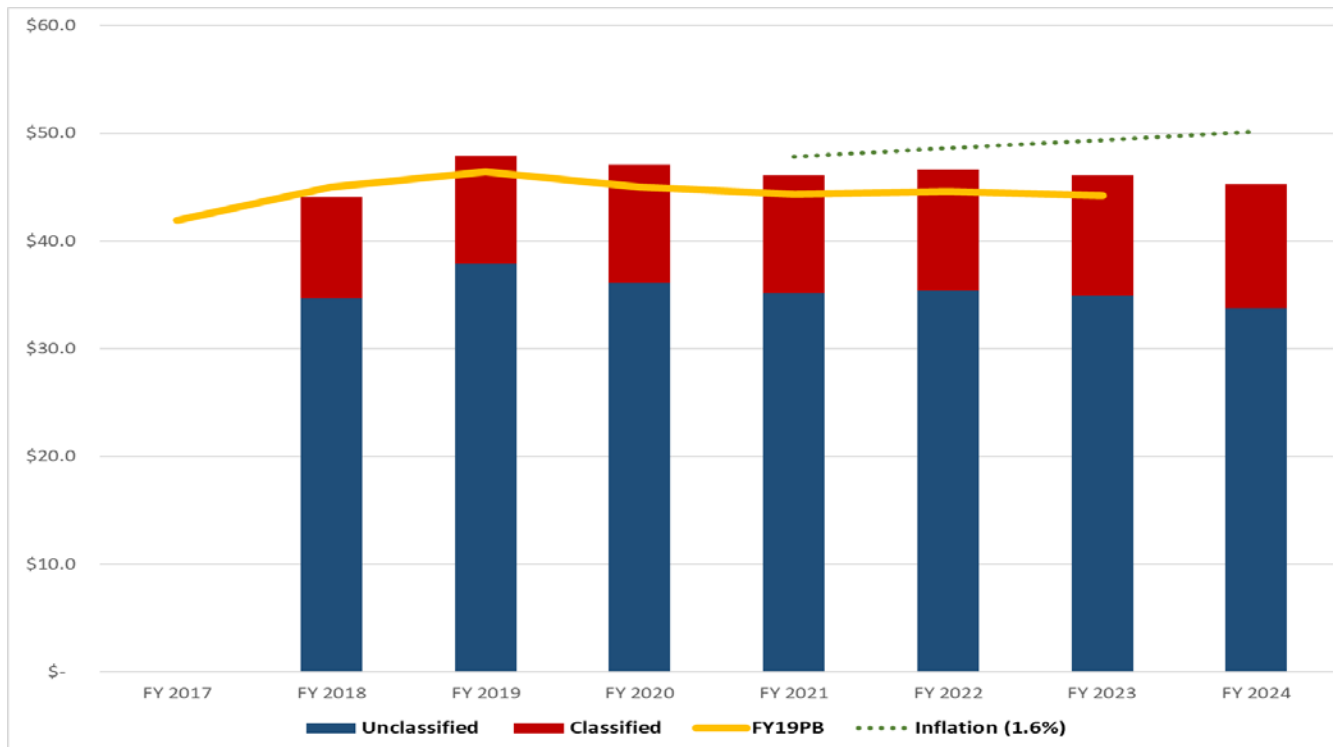
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1. DoD FY 2020 Information Technology and Cyberspace Activities Budget Request Overview

The Department of Defense (DoD) Fiscal Year (FY) 2020 total Information Technology/Cyberspace Activities (IT/CA) Budget Request is \$47.0B, including \$11.0 B in classified IT/CA investments and expenses and \$36.0B in unclassified IT/CA investments and expenses. The FY 2020 request reflects an overall 1.7% decrease from the DoD FY 2019 available IT/CA Budget. The DoD IT/CA Budget funding levels in the FY 2020 – FY 2024 Future Year Defense Plan (FYDP) remain relatively consistent, with a projected decrease of approximately \$11.7B or 24.8% in IT/CA spending when factoring in the future value of money (FY20 through FY24). Figure 1 below includes DoD IT/CA Portfolio Resources for FY 2017 to FY 2024.

Figure 1: DoD IT Portfolio Resources for FYs 2017 to FY 2024
(dollars in billions)



Numbers may not add due to rounding

Technology capabilities underpin nearly every aspect of modern defense and warfighting strategies and objectives, from the Pentagon to the tactical edge, space and now cyberspace. Successful mission execution is contingent on a seamless, secure infrastructure that transforms data into actionable information and ensures dependable mission execution in the face of the persistent cyber threat. To do this, DoD's IT/CA assets and initiatives deliver essential infrastructure, systems, communications and capabilities from the smallest units to the largest components of the vast global DoD enterprise. This creates a strategic landscape for DoD IT/CA to deliver unified capabilities across DoD and maintain connectivity with our mission partners.

The FY 2020 Cyberspace Activities request of \$9.6B, a \$0.9B (10.4%) increase from the 2019 available, provides the resources, infrastructure and tools for our cyber warriors to operate, defend, and secure information networks and systems and the ability to conduct offensive operations. The classified portion of the FY 2020 IT/CA Budget (PB) Request addresses Cyberspace Activities and other classified IT initiatives and resources. The classified portion of the FY 2020 President's Budget Request is available electronically on compact disk and can be found on the Secret Internet Protocol Router Network (SIPRNet) at the following location: <https://snap.cape.osd.smil.mil/snapit/Home.aspx>.

The public Office of Management and Budget (OMB) IT Dashboard (ITDB)¹ reflects the DoD unclassified IT budget submission and protects classified IT/CA information and information associated with National Security Systems (NSS) from public distribution. As reflected above, the total DoD IT/CA budget for FY 2020 is \$47.0B. Table 1 provides a breakout of the DoD unclassified IT budget, National Security System (NSS) budget, and classified IT/CA budget.

Table 1: DoD Unclassified IT/NSS and Classified IT/CA Breakout
(dollars in billions)

	FY 2018*	FY 2019*	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
IT Budget**	\$ 16.665	\$ 18.505	\$ 19.068	\$ 18.499	\$ 18.529	\$ 18.498	\$ 17.941
NSS Budget***	\$ 18.053	\$ 19.356	\$ 17.003	\$ 16.704	\$ 16.867	\$ 16.439	\$ 15.835
Classified IT/CA Budget***	\$ 9.353	\$ 9.977	\$ 10.967	\$ 10.917	\$ 11.175	\$ 11.205	\$ 11.466
Total FY 2020 PB	\$ 44.071	\$ 47.838	\$ 47.038	\$ 46.119	\$ 46.571	\$ 46.142	\$ 45.241
<i>* Reflects Total Obligation Authority (TOA) as of February 18, 2019</i>				<i>Numbers may not add due to rounding</i>			
<i>** Publically available on the OMB IT Dashboard</i>							
<i>*** Not publically available on the OMB IT Dashboard</i>							

¹ OMB IT Dashboard, <https://www.itdashboard.gov/>

2. Cross-Cutting DoD IT Strategies and Goals

The DoD National Defense Strategy (NDS) focuses on expanding the competitive space while pursuing three distinct lines of effort (LOE) that the DoD Chief Information Officer actively supports:

- LOE 1: Rebuilding military readiness as we build a more lethal force;
- LOE 2: Strengthening alliances as we attract new partners; and
- LOE 3: Reforming the Department's business practices for greater performance and affordability.

The 2018 NDS clearly articulates the DoD's mission to compete, deter, and win in an increasingly complex security environment while executing objectives in the most efficient and effective manner throughout the enterprise. The Table 2 below depicts the resources allocated for each LOE in the IT budget.

Table 2: IT Budget allocation across Lines of Effort
(dollars in thousands)

STRATEGIC GOAL	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
LOE 1	\$ 29,941,972.00	\$ 32,423,127.00	\$ 30,478,510.00	\$ 29,480,209.00	\$ 29,603,850.00	\$29,078,545.00	\$ 28,115,242.00
LOE 2	\$ 4,706,173.00	\$ 5,270,960.00	\$ 5,437,492.00	\$ 5,556,804.00	\$ 5,617,962.00	\$ 5,673,776.00	\$ 5,586,070.00
LOE 3	\$ 70,037.00	\$ 166,856.00	\$ 155,409.00	\$ 165,500.00	\$ 173,924.00	\$ 184,311.00	\$ 74,276.00
Total	\$ 34,718,182.00	\$ 37,860,943.00	\$ 36,071,411.00	\$ 35,202,513.00	\$ 35,395,736.00	\$34,936,632.00	\$ 33,775,588.00
Note: Unclassified Submission Only							

In support of these LOEs, the DoD CIO's developed a vision for the Department's IT of tomorrow that is integrated, resilient, dynamic, secure and responsive. This vision is being implemented through an aggressive cyber Modernization campaign built on four key pillars: Artificial Intelligence (AI), Cloud, Cyber, and Command, Control & Communications (C3). Efforts from each of the pillars are designed to support achievable and impactful goals as laid out in the NDS, DoD Cyber Strategy (CDS), the 2018 DoD Cloud Strategy and the draft DoD Artificial Intelligence Strategy. Initial successes within the campaign included standup of the Joint Artificial Intelligence Center (JAIC) and Joint Enterprise Defense Infrastructure (JEDI) and successful obtainment of additional funding through the department's FY20 Program and Budget Review (PBR). Integrated outcomes from this campaign will be the foundation upon which the department further builds and scales more effective cybersecurity, advanced analytical capabilities, better command and control, and future enabling technologies. Figure 2 depicts the CIO Focus Area Alignment.

DoD CIO Priorities:

- **Cloud** is the foundation for all Key Focus Areas to unlock the full potential of technology advances for the Department and Warfighter;

- **Artificial Intelligence (AI)** is a force multiplier and agent of transformation across all DoD functions – we will harness it smartly and at pace;
- **Cyber** dominance and wartime mindset will drive everything we design, build, and operate; and
- **Command, Control and Communications (C3)** modernization is critical to Department and Warfighter mission assurance.

Figure 2: CIO Focus Area Alignment



The table below provides a summary view of the DoD CIO goals and objectives that support each DoD Strategic Goal and Strategic Objective:

Table 3: Summary View of the DoD CIO Goals and Objectives

DoD Strategic Goal	DoD Strategic Objective	DoD CIO Goal	DoD CIO Objectives
#1: Rebuilding Military Readiness as We Build a More Lethal Joint Force	1.2: Lay the foundation for future readiness through recapitalization, innovation, and modernization	Innovate for Competitive Advantage	<ul style="list-style-type: none"> • Establish the Joint Artificial Intelligence Center (JAIC) to Accelerate Adoption and Integration Delivery of AI-Enabled Capabilities to Achieve Mission Impact at Scale • Deliver a DoD Enterprise Cloud Environment to Leverage Commercial Innovation

DoD Strategic Goal	DoD Strategic Objective	DoD CIO Goal	DoD CIO Objectives
			<ul style="list-style-type: none"> • Modernize Warfighter Command, Control, Communications, and Computer (C4) Infrastructure and Systems • Treat Data as a Strategic Asset • Strengthen Collaboration, International Partnerships & Allied Interoperability • Ensure National Leadership Command Capabilities (NLCC) Assured Connectivity • Enhance the Delivery and Protection of PNT • Modernize Defense Information Systems Network (DISN) Transport Infrastructure • Modernize and Optimize DoD Component Networks and Services • Provide End-to-End Airborne Intelligence, Surveillance, and Reconnaissance (AISR) Data Transport • Improve Information Sharing to Mobile Users • Evolve the DoD to Agile Electromagnetic Spectrum Operations (EMSO) • Drive Standards into DoD IT Systems
		Optimize for Efficiencies and Improved Capability	<ul style="list-style-type: none"> • Shift from Component-Centric to Enterprise-Wide Network Operations and Defense Model • Optimize DoD Data Centers • Optimize DoD Office Productivity and Collaboration Capabilities (ECAPS Capability Set 1) • Optimize DoD Voice & Video Capabilities (ECAPS Capability Sets 2 & 3) • Improve Rapid Technology Deployment Processes
		Evolve Cybersecurity for an Agile and Resilient Defense Posture	<ul style="list-style-type: none"> • Transform the DoD Cybersecurity Architecture to Increase Agility and Strengthen Resilience • Deploy an End-to-End Identity, Credential, & Access Management (ICAM) Infrastructure

DoD Strategic Goal	DoD Strategic Objective	DoD CIO Goal	DoD CIO Objectives
<p>#1: Rebuilding Military Readiness as We Build a More Lethal Joint Force</p>	<p>1.3: Enhance information technology and cybersecurity capabilities</p>	<p>Innovate for Competitive Advantage</p>	<ul style="list-style-type: none"> • Establish the Joint Artificial Intelligence Center (JAIC) to Accelerate Adoption and Integration Delivery of AI-Enabled Capabilities to Achieve Mission Impact at Scale • Deliver a DoD Enterprise Cloud Environment to Leverage Commercial Innovation • Treat Data as a Strategic Asset • Strengthen Collaboration, International Partnerships & Allied Interoperability • Ensure National Leadership Command Capabilities (NLCC) Assured Connectivity • Enhance the Delivery and Protection of PNT • Modernize Defense Information Systems Network (DISN) Transport Infrastructure • Modernize and Optimize DoD Component Networks and Services • Provide End-to-End Airborne Intelligence, Surveillance, and Reconnaissance (AISR) Data Transport • Improve Information Sharing to Mobile Users
		<p>Optimize for Efficiencies and Improved Capability</p>	<ul style="list-style-type: none"> • Shift from Component-Centric to Enterprise-Wide Network Operations and Defense Model • Optimize DoD Data Centers • Optimize DoD Office Productivity and Collaboration Capabilities (ECAPS Capability Set 1) • Optimize DoD Voice & Video Capabilities (ECAPS Capability Sets 2 & 3) • Improve Rapid Technology Deployment Processes
		<p>Evolve Cybersecurity for an Agile and Resilient Defense Posture</p>	<ul style="list-style-type: none"> • Transform the DoD Cybersecurity Architecture to Increase Agility and Strengthen Resilience • Deploy an End-to-End Identity, Credential, & Access Management (ICAM) Infrastructure • Protect Sensitive DoD Information and Critical Programs and Technologies on Defense Industrial Base (DIB) Unclassified Networks and Information Systems • Reform DoD Cybersecurity Risk Management Policies and Practices

DoD Strategic Goal	DoD Strategic Objective	DoD CIO Goal	DoD CIO Objectives
<p>#1: Rebuilding Military Readiness as We Build a More Lethal Joint Force</p>	<p>1.4 Ensure the best intelligence, counterintelligence, and security support to DoD operations</p>	<p>Innovate for Competitive Advantage</p>	<ul style="list-style-type: none"> • Establish the Joint Artificial Intelligence Center (JAIC) to Accelerate Adoption and Integration Delivery of AI-Enabled Capabilities to Achieve Mission Impact at Scale • Modernize Warfighter Command, Control, Communications, and Computer (C4) Infrastructure and Systems • Treat Data as a Strategic Asset • Modernize DISN Transport Infrastructure • Modernize and Optimize DoD Component Networks and Services • Provide End-to-End Airborne Intelligence, Surveillance, and Reconnaissance (AISR) Data Transport • Improve Information Sharing to Mobile Users • Evolve the DoD to Agile Electromagnetic Spectrum Operations (EMSO) • Drive Standards into DoD IT Systems
		<p>Optimize for Efficiencies and Improved Capability</p>	<ul style="list-style-type: none"> • Shift from Component-Centric to Enterprise-Wide Network Operations and Defense Model • Improve Rapid Technology Deployment Processes
		<p>Evolve Cybersecurity for an Agile and Resilient Defense Posture</p>	<ul style="list-style-type: none"> • Transform the DoD Cybersecurity Architecture to Increase Agility and Strengthen Resilience • Deploy an End-to-End Identity, Credential, & Access Management (ICAM) Infrastructure • Protect Sensitive DoD Information and Critical Programs and Technologies on DIB Unclassified Networks and Information Systems • Reform DoD Cybersecurity Risk Management Policies and Practices
<p>#1: Rebuilding Military Readiness as We Build a More Lethal Joint Force</p>	<p>1.5 Implement initiatives to recruit and retain the best total force to bolster capabilities and readiness</p>	<p>Cultivate Talent for a Ready Digital Workforce</p>	<ul style="list-style-type: none"> • Strengthen the Cyber Functional Community Workforce • Strengthen the IT Acquisition Workforce • Enhance Cyber Workforce Recruiting, Retention, Education, Training, and Professional Development
<p>#2: Strengthen Our Alliances & Attract New Partners</p>		<p>Innovate for Competitive Advantage</p>	<ul style="list-style-type: none"> • Strengthen Collaboration, International Partnerships & Allied Interoperability

DoD Strategic Goal	DoD Strategic Objective	DoD CIO Goal	DoD CIO Objectives
		Optimize for Efficiencies and Improved Capability	<ul style="list-style-type: none"> • Improve Rapid Technology Deployment Processes
		Evolve Cybersecurity for an Agile and Resilient Defense Posture	<ul style="list-style-type: none"> • Protect Sensitive DoD Information and Critical Programs and Technologies on DIB Unclassified Networks and Information Systems
<p>#3: Reform the Department's Business Practices for Greater Performance and Affordability</p>	<p>3.1: Improve and strengthen business operations through a move to DoD-enterprise or shared services; reduce administrative and regulatory burden</p>	Innovate for Competitive Advantage	<ul style="list-style-type: none"> • Deliver a DoD Enterprise Cloud Environment to Leverage Commercial Innovation
		Optimize for Efficiencies and Improved Capability	<ul style="list-style-type: none"> • Shift from Component-Centric to Enterprise-Wide Network Operations and Defense Model • Optimize DoD Data Centers • Optimize DoD Office Productivity and Collaboration Capabilities (ECAPS Capability Set 1) • Optimize DoD Voice & Video Capabilities (ECAPS Capability Sets 2 & 3) • Improve IT Category Management • Improve Rapid Technology Deployment Processes • Strengthen IT Financial Management Decision Making and Accountability
		Evolve Cybersecurity for an Agile and Resilient Defense Posture	<ul style="list-style-type: none"> • Protect Sensitive DoD Information and Critical Programs and Technologies on DIB Unclassified Networks and Information Systems • Reform DoD Cybersecurity Risk Management Policies and Practices

DoD Strategic Goal	DoD Strategic Objective	DoD CIO Goal	DoD CIO Objectives
#3: Reform the Department's Business Practices for Greater Performance and Affordability	3.3 Undergo an audit, and improve the quality of budgetary and financial information that is most valuable in managing the DoD	Optimize for Efficiencies and Improved Capability	<ul style="list-style-type: none"> • Strengthen IT Financial Management Decision Making and Accountability

3. DoD IT Budget by Component for FYs 2018-2024

Table 4 below summarizes the total DoD IT Budget (both classified and unclassified) for each of the Military Departments and DoD Components over the FYDP. This level of resources sustains IT/CA operations, meets current IT/CA modernization needs, maintains or improves our cyber posture, and continues to fund Nuclear Command, Control, and Communications (NC3) programs and activities at the appropriate level.

Table 4: DoD IT Budget by Component for FYs 2018-2024
(dollars in thousands)

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
ARMY							
Unclass	\$ 10,341,639	\$ 11,562,086	\$ 9,815,491	\$ 9,406,876	\$ 9,319,240	\$ 9,013,806	\$ 8,066,475
Class	\$ 2,255,118	\$ 2,323,771	\$ 2,410,691	\$ 2,226,140	\$ 2,380,885	\$ 2,390,495	\$ 2,438,573
Sub-total	\$ 12,596,757	\$ 13,885,857	\$ 12,226,182	\$ 11,633,016	\$ 11,700,125	\$ 11,404,301	\$ 10,505,048
NAVY							
Unclass	\$ 7,770,098	\$ 8,270,444	\$ 8,627,273	\$ 8,144,538	\$ 8,276,037	\$ 8,292,331	\$ 8,489,228
Class	\$ 1,415,072	\$ 1,564,300	\$ 1,768,708	\$ 1,914,661	\$ 1,913,388	\$ 1,941,919	\$ 2,002,335
Sub-total	\$ 9,185,170	\$ 9,834,744	\$ 10,395,981	\$ 10,059,199	\$ 10,189,425	\$ 10,234,250	\$ 10,491,563
AIR FORCE							
Unclass	\$ 5,491,231	\$ 6,075,502	\$ 5,456,622	\$ 5,619,230	\$ 5,446,213	\$ 5,155,233	\$ 4,743,533
Class	\$ 2,345,365	\$ 2,460,754	\$ 2,488,960	\$ 2,599,949	\$ 2,717,372	\$ 2,732,896	\$ 2,815,569
Sub-total	\$ 7,836,596	\$ 8,536,256	\$ 7,945,582	\$ 8,219,179	\$ 8,163,585	\$ 7,888,129	\$ 7,559,102
DEF-WIDE							
Unclass	\$ 11,115,214	\$ 11,952,911	\$ 12,172,025	\$ 12,031,869	\$ 12,354,246	\$ 12,475,262	\$ 12,476,352
Class	\$ 3,337,355	\$ 3,628,393	\$ 4,298,529	\$ 4,176,148	\$ 4,163,611	\$ 4,139,560	\$ 4,209,074
Sub-total	\$ 14,452,569	\$ 15,581,304	\$ 16,470,554	\$ 16,208,017	\$ 16,517,857	\$ 16,614,822	\$ 16,685,426
DOD TOTAL							
Unclass	\$ 34,718,182	\$ 37,860,943	\$ 36,071,411	\$ 35,202,513	\$ 35,395,736	\$ 34,936,632	\$ 33,775,588
Class	\$ 9,352,910	\$ 9,977,218	\$ 10,966,888	\$ 10,916,898	\$ 11,175,256	\$ 11,204,870	\$ 11,465,551
TOTAL	\$ 44,071,092	\$ 47,838,161	\$ 47,038,299	\$ 46,119,411	\$ 46,570,992	\$ 46,141,502	\$ 45,241,139

4. FY 2020 Key Drivers for Increases and Decreases

Table 5 below summarizes changes between the FY 2019 President's Budget portfolio and the FY 2020 PB Request in the total number of investments, total unclassified resources, and the percentage change in resources from PB 2019 to PB 2020 by Component.

Table 5: FY 2019 to 2020 Portfolio Comparison
(dollars in millions)

DoD Components	FY 2019 President's Budget		FY 2020 President's Budget		% Change in Resources from 2019 PB to 2020 PB
	FY 2019 President's Budget	FY 2019 Portfolio Resources	Number of Investments	FY 2020 Portfolio Resources	
Army	976	\$ 10,703	1,069	\$ 9,815	-8%
Navy	754	\$ 8,250	786	\$ 8,627	5%
Air Force	621	\$ 5,827	768	\$ 5,456	-6%
Defense-Wide	800	\$ 11,631	816	\$ 12,172	5%
DoD Total	3,151	\$ 36,411	3,439	\$ 36,070	-1%
<i>Note: Unclassified Submission Only</i>				<i>Numbers may not add due to rounding</i>	

Increases or decreases from one FY to the next can be indicative of changes in investment acquisition stages or activities and other lifecycle-sensitive resource changes such as technology refresh cycles. Other common drivers of resources increases include changes in labor or full-time equivalent (FTE) costs, commodity price fluctuations, and general inflation. Overall portfolio increases reflect the net effect of investment increases and decreases, including the addition of new investments, retirement or consolidation of existing investments, systems, or services. Table 6 below includes PB 2020 changes in resources from PB 2019 by Components and Appropriations Type:

Table 6: FY 2019 to 2020 Portfolio Comparison by Appropriation Type

DoD Components	Change from FY 2019 President's Budget			
	Operations	Procurement	RDT&E	Other
Army	1%	-6%	-22%	-30%
Navy	11%	1%	-4%	2%
Air Force	5%	17%	-6%	6%
Defense-Wide	10%	-59%	52%	18%
DoD Total	7%	-13%	1%	9%
<i>Note: Unclassified Submission Only</i>				

5. DoD IT Cost Savings Initiatives

Investment and management strategies for modernizing or consolidating information systems, acquiring newer technologies, and applying innovative uses of technologies offer opportunities for efficiencies and cost savings both within the IT resource pool and outside of IT in a variety of mission, administrative, and other functional areas. The Table 7 (IT Efficiencies and Cost Savings Summary) summarizes the composite realized or expected savings and IT efficiencies within the following areas as of March 2019:

- Data Center Consolidation
- Enterprise licensing
- Circuit optimization
- Medical devices
- Application rationalization
- Military Health System IT Reform
- The National Capital Region (NCR) IT Consolidation
- The Defense Media Activity (DMA)
- IT Commodity Management Reform
- Wireless Device Management Reform
- Task Management System Rationalization
- Streamline Risk Management Framework Process
- Realignment of the Defense Technical Information Center (DTIC)
- Fourth Estate¹ Optimization
- Fourth Estate Cloud Migration Reform
- Assisted Acquisition through USA Learning

Table 7: IT Efficiencies and Cost Savings Summary
(dollars in millions)

IT Savings	FY 2017 and Prior	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative
Data Center Savings	\$ 331.90	\$ 64.10	\$ 102.30	\$ 109.50	\$ 143.20	\$ -	\$ -		\$ 751.00
Other IT Savings	\$ 23.80	\$ 144.20	\$ 239.60	\$ 522.70	\$ 796.70	\$ 600.30	\$ 604.20	\$ 70.00	\$ 3,001.50
Total Savings	\$ 355.70	\$ 208.30	\$ 341.90	\$ 632.20	\$ 939.90	\$ 600.30	\$ 604.20	\$ 70.00	\$ 3,752.50

6. FY 2018, 2019, and 2020 IT Budget by Capital versus Operating Expenses

The OMB defines categorizations of funds according to the system lifecycle constructs of Development/Modernization/Enhancement (DME) and Operations and Maintenance (O&M). Within DoD, the DME categorization indicates acquisition or development efforts for specific IT capital assets. Despite persistent characterizations of all O&M activities as funding “legacy” (antiquated) system spending, this category of expenses within DoD actually includes all non-capital and modernization expenses for all activities, purchased services, staffing, and systems

¹ Fourth Estate represents Defense-Wide Agencies and Activities. Does not include the Military Departments and Combatant Commands.

costs for all ongoing IT functions (such as help desk services or communications) and operational costs for in-service systems, regardless of when such assets were developed or deployed, or the relative currency of technology employed. Resources assigned to the O&M category are used to operate and maintain specific systems and technologies with discernable lifecycles, including Technical Refresh of equipment and software versions/releases, as well as resources for ongoing functions, services and expenses not specific to a particular system or the acquisition of a particular capital asset.

Table 8 below compares the portion of the DoD IT Portfolio resources aligned to the Capital (DME)) and Expenses (O&M) categories defined by the OMB Circular A-11 (<https://www.whitehouse.gov/wp-content/uploads/2018/06/a11.pdf>).

Table 8: DoD IT Portfolio Resource Distribution by Capital (DME) and Operating Expenses (Operations and Maintenance)
(dollars in millions)

Fiscal Year	Dev/Mod/Enhance		Expenses (O&S)	
	Resources	Portfolio %	Resources	Portfolio %
FY 2018 PB	\$ 7,600	23%	\$ 25,578	77%
FY 2019 PB	\$ 9,779	27%	\$ 26,631	73%
FY 2020 PB	\$ 7,633	21%	\$ 28,428	79%
<i>Note: Unclassified Submission Only</i>				

Within the DoD IT portfolio, O&M resources are used for the following expenses:

- IT Staffing/FTE;
- IT Systems operation and sustainment;
- Legacy IT systems and assets operation and sustainment;
- Technology refresh, upgrades and updates;
- Software licensing, maintenance updates and releases;
- Purchase of commodity and commercial services not deemed provisioned;
- IT Management and CIO staff functions; and
- IT Technical support functions.

7. DoD Data Center Consolidation/Optimization Savings Summary

In accordance with DoD Data Center consolidation objectives, DoD closed 1138 data centers between FY 2010 and FY 2018, with an estimated cumulative cost savings of \$396.03 million¹. See Table 9 below for FY savings through FY 2020 based on DoD Total Cost of Ownership Model and FY15 (FY17) DoD resource management decisions.

Table 9: DoD Data Center Optimization Savings from FYs 2011-2020
(dollars in millions)

Data Center Optimization	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019*	FY 2020*
Annual Savings	\$ 0.50	\$ 17.00	\$ 5.90	\$ 117.80	\$ 49.40	\$ 80.40	\$ 60.90	\$ 64.10	\$ 102.30	\$ 109.50
Cumulative Savings	\$ 0.50	\$ 17.50	\$ 23.40	\$ 141.20	\$ 190.50	\$ 271.00	\$ 331.90	\$ 396.00	\$ 498.30	\$ 607.80

* Projected

8. DoD Investment in Cloud Technologies

The advent of commercial cloud capabilities is changing the way DoD develops, delivers, deploys, and ultimately, buys applications and systems. Cloud is the foundation upon which DoD will build and scale more effective cyber security, advanced analytical capabilities, better command and control, and future enabling technologies. This foundation will give the Department the ability to organize massive amounts of data to give the warfighter the advantage they need to achieve their mission.

To better take advantage of this information, the optimized enterprise cloud environment also provides a platform for advanced capabilities such as AI and machine learning (ML) that are necessary to increase decision-making speed and lethality. DoD will partner with industry to securely deliver commercial cloud capabilities and will manage these capabilities across the enterprise to deliver improved effectiveness and efficiency.

This budget establishes a DoD enterprise cloud computing environment, composed of a multi-cloud, multi-vendor strategy incorporating a General Purpose cloud and Fit-For-Purpose clouds, which enables a more lethal force and supports reforms for greater affordability and improved performance. The plans for FY 2020 and FY 2021 budget cycles have been funded sufficiently to include resourcing the JEDI program office. Table 10 below is the DoD FY 2020 PB Request Cloud Profile.

¹ Q4FY18 data center inventory submission to OMB used to calculate data center closure value

Table 10: DoD FY 2020 President's Budget Request (PB) Cloud Profile

Organization	Appropriation Type	FY 2018 TOA			FY 2019 Request			FY 2020 Budget		
		Commercial	In-House	Total	Commercial	In-House	Total	Commercial	In-House	Total
ARMY	MILPERS	\$ -	\$ 162	\$ 162	\$ -	\$ 167	\$ 167	\$ -	\$ 172	\$ 172
	Operations (O&M)	\$ 23,254	\$ 97,727	\$ 120,981	\$ 23,962	\$ 87,441	\$ 111,403	\$ 27,339	\$ 88,649	\$ 115,988
	Procurement	\$ 200	\$ 8,127	\$ 8,327	\$ 210	\$ 14,858	\$ 15,068	\$ 480	\$ 19,498	\$ 19,978
	RDT&E	\$ 1	\$ 8,652	\$ 8,653	\$ 1	\$ 18,005	\$ 18,006	\$ 1	\$ 17,356	\$ 17,357
ARMY Subtotal		\$ 23,455	\$ 114,668	\$ 138,123	\$ 24,173	\$ 120,471	\$ 144,644	\$ 27,820	\$ 125,675	\$ 153,495
NAVY	DWCF	\$ 371	\$ -	\$ 371	\$ 2,459	\$ -	\$ 2,459	\$ 3,299	\$ -	\$ 3,299
	Operations (O&M)	\$ 77,367	\$ 21	\$ 77,388	\$ 105,952	\$ 14	\$ 105,966	\$ 103,970	\$ 15	\$ 103,985
	Procurement	\$ 1,159	\$ -	\$ 1,159	\$ 761	\$ -	\$ 761	\$ -	\$ -	\$ -
	RDT&E	\$ 653	\$ -	\$ 653	\$ 4,047	\$ -	\$ 4,047	\$ 8,187	\$ -	\$ 8,187
NAVY Subtotal		\$ 79,550	\$ 21	\$ 79,571	\$ 113,219	\$ 14	\$ 113,233	\$ 115,456	\$ 15	\$ 115,471
AIR FORCE	DWCF	\$ -	\$ 5	\$ 5	\$ -	\$ 2	\$ 2	\$ -	\$ 2	\$ 2
	MILPERS	\$ -	\$ 119	\$ 119	\$ -	\$ -	\$ -	\$ -	\$ 1,825	\$ 1,825
	Operations (O&M)	\$ 34,984	\$ 33,343	\$ 68,327	\$ 65,586	\$ 48,428	\$ 114,014	\$ 59,419	\$ 44,816	\$ 104,235
	Procurement	\$ 195	\$ 1,106	\$ 1,301	\$ 167	\$ 1,136	\$ 1,303	\$ 2,511	\$ 12,379	\$ 14,890
RDT&E	\$ 1,822	\$ 22,636	\$ 24,458	\$ 1,580	\$ 28,177	\$ 29,757	\$ 1,655	\$ 29,833	\$ 31,488	
AIR FORCE Subtotal		\$ 37,001	\$ 57,209	\$ 94,210	\$ 67,333	\$ 77,743	\$ 145,076	\$ 63,585	\$ 88,855	\$ 152,440
DEFENSE WIDE	DWCF	\$ 15,488	\$ 40,005	\$ 55,493	\$ 34,854	\$ 42,629	\$ 77,483	\$ 125,960	\$ 34,294	\$ 160,254
	Operations (O&M)	\$ 8,166	\$ 39,528	\$ 47,694	\$ 28,138	\$ 48,564	\$ 76,702	\$ 29,707	\$ 37,753	\$ 67,460
	Procurement	\$ -	\$ 1	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ 2,432	\$ 2,432
	RDT&E	\$ 4	\$ 5,668	\$ 5,672	\$ 26	\$ 4,543	\$ 4,569	\$ 26	\$ 4,804	\$ 4,830
DEFENSE WIDE Subtotal		\$ 23,658	\$ 85,202	\$ 108,860	\$ 63,018	\$ 95,736	\$ 158,754	\$ 155,693	\$ 79,283	\$ 234,976
DoD Total		\$ 163,664	\$ 257,100	\$ 420,764	\$ 267,743	\$ 293,964	\$ 561,707	\$ 362,554	\$ 293,828	\$ 656,382

9. DoD IT Budget Request by Mission Area

The DoD IT Budget organizes investments by Mission Areas, and Segments within those Mission Areas, to provide visibility into how much we are investing in various capabilities across the portfolio. Mission Areas and Segments are shown in Figure 2 below:

Figure 2: DoD FY 2020 Mission Areas and Segments

BUSINESS MISSION AREA (BMA)										WARFIGHTING MISSION AREA (WMA)						Intel Mission Area				
Financial Management (500)	Acquisition (510)	Human Resource Management (520)	Logistics/Supply Chain Management (530)	Real Property Management (540)	Planning and Budget (550)	Training and Readiness (560)	Security Cooperation (570)	Defense Security Enterprise (580)	Other Business Services (599)	Defense Health (760)	Battlespace Awareness Environment (710)	Battlespace Networks (720)	Command and Control (730)	Force Application (740)	Protection (750)	Force Management (770)	Force Training (780)	Building Partnerships (790)	Core Mission Services (799)	Battlespace Awareness – ISR (700)
Enterprise Information Environment Mission Area (EIEMA)																				
Cyberspace Activities (610)																				
DoD IT Infrastructure (600)																				
Centrally Managed Enterprise Software Licenses (620)																				
Artificial Intelligence (400)																				
IT Management (800)																				
Cloud (General Purpose/Fit-for-Purpose)																				

Table 11 below shows the distribution of unclassified IT investments and resources among the DoD Mission Areas and Segments for the FY 2020 IT PB Request.

Table 11: DoD FY 2020 IT Budget Resources by Mission Area and Segment
(dollars in millions)

Mission Area	Segment	FY 2020 PB		
		Resources	% of Total IT Portfolio Resources	% of Total IT Portfolio Resources
Business	Acquisition	\$ 716.1	2.0%	24.7%
	Other Business Services	\$ 197.1	0.5%	
	Financial Management	\$ 1,046.6	2.9%	
	Health	\$ 1,417.9	3.9%	
	Human Resource Management	\$ 2,317.1	6.4%	
	Defense Security Enterprise	\$ 26.5	0.1%	
	Real Property Management (E!&E)	\$ 349.2	1.0%	
	Training and Readiness	\$ 229.4	0.6%	
	Logistics/Supply Chain Management	\$ 2,613.7	7.2%	
Enterprise Information Environment	DoD IT Infrastructure	\$ 17,655.0	48.9%	55.1%
	Artificial Intelligence (AI)	\$ 266.7	0.7%	
	Centrally Managed Enterprise Software Licenses	\$ 552.7	1.5%	
	IT Management	\$ 1,400.3	3.9%	
Warfighting	Battlespace Awareness-Environment	\$ 285.2	0.8%	19.9%
	Battlespace Networks	\$ 2,111.9	5.9%	
	Building Partnerships	\$ 156.3	0.4%	
	Command & Control	\$ 3,403.1	9.4%	
	Core Mission	\$ 332.7	0.9%	
	Force Application	\$ 181.2	0.5%	
	Force Management	\$ 111.6	0.3%	
	Force Training	\$ 368.4	1.0%	
	Protection	\$ 220.6	0.6%	
Intelligence	Battlespace Awareness-ISR	\$ 112.1	0.3%	0.3%
Total Portfolio		\$ 36,071.4	100.0%	100.0%

Note: Unclassified Submission Only

Numbers may not add due to rounding

10. Cyberspace Activities

The scope, pace, and sophistication of malicious cyber activity continues to rise globally. Growing dependence on the cyberspace domain for nearly every essential civilian and military function makes this an urgent issue that must be addressed. DoD overmatch in conventional and strategic weaponry is threatened by sophisticated attacks within cyberspace, supply chain exploitation across the acquisition and sustainment lifecycle, and intelligence operations targeting insiders with access. The Department must adopt a “Cybersecurity First, Cybersecurity Always” mindset and be prepared to defend DoD systems in a cyber-contested environment. Cybersecurity must be included in every network and system, and managed throughout the acquisition lifecycle. The Department will maintain system confidentiality, integrity, and availability by prioritizing defense of avenues of attack used by sophisticated adversaries.

In preparation for the FY20 DoD Cyber Budget, DoD CIO in consultation with DSD, and in coordination with DoD PCA, NSA, DISA, the Military Services, USD(I), USD(A&S), USD(R&E) and USCYBERCOM, conducted an analysis of risk across the entire DoD cyber landscape. As part of this effort, DoD CIO in coordination with the above organizations assembled a package of funding requests as part of the annual DoD Program and Budget Review (PBR) to target key cyber deficiencies (cybersecurity and others) within DoD. Increases in funding received as a result of the PBR and the regular budget process significantly improve cyber’s ability to support the NDS and bolster successful DoD mission execution even in the face of sophisticated cyber adversaries. It will specifically strengthen our defensive cybersecurity capabilities within the below listed, and other, focus areas:

- Network and Information Sharing such as end point management, identity, credential and access management, and DoD Enterprise Development Security Operations
- Cyber Workforce
- Human Factors including insider threat security
- Cross-Domain security
- Information Technology Products/Supply Chain Risk Management
- Encryption
- Critical Infrastructure

The Fiscal Year (FY) 2020 President’s Budget request for Cyberspace Activities of \$9.6 billion (FYDP, \$49.1 billion) represents an increase in cyberspace funding of \$0.9 billion compared to the FY 2019 budget request, and supports the Department’s defensive and offensive cyberspace operations capabilities and cyber strategy. Table 12 displays the distribution of the Cyberspace Activities request by portfolio; Cyberspace Activities, Cybersecurity, Cyber Mission Forces, HQ US CYBERCOM, and Cyber Science & Technology.

Table 12: DoD Cyberspace Activities Budget Request
(dollars in millions)

Program	FY 2018*	FY 2019**	FY 2020***	Δ FY19-20	FY 2021	FY 2022	FY 2023	FY 2024	Total FY20-24
Cybersecurity	4,467	4,691	5,413	+722	5,312	5,323	5,308	5,421	26,776
Cyberspace Operations	2,939	3,366	3,697	+331	3,734	4,030	4,077	4,199	19,736
CYBER Mission Force (CMF)	1,478	1,640	2,032	+393	2,156	2,214	2,322	2,376	11,100
USCYBERCOM (Headquarters only)	272	250	253	+4	267	272	279	288	1,359
All Other Cyberspace Operations	1,189	1,476	1,411	-65	1,311	1,544	1,476	1,535	7,277
Research and Development	642	677	533	-143	516	517	491	500	2,557
TOTAL Cyber	8,048	8,734	9,643	+910	9,562	9,870	9,875	10,120	49,070
Army	1,717	1,855	2,040	+184	1,853	2,060	2,068	2,105	10,126
Navy	1,287	1,429	1,567	+137	1,706	1,711	1,733	1,788	8,505
Air Force	2,345	2,461	2,489	+28	2,600	2,717	2,733	2,816	13,355
Defense-Wide	2,699	2,988	3,548	+560	3,403	3,382	3,341	3,410	17,084
TOTAL Cyber	8,048	8,734	9,643	+910	9,562	9,870	9,875	10,120	49,070

Numbers may not add due to rounding

Source: Select & Native Programming Data Input System - Information Technology (FEB 2019)

Includes operations, investment, military personnel, and military construction appropriations

* FY 2018 actuals includes \$222 million Overseas Contingency Operations (OCO) funds

** FY 2019 reflects enacted, includes \$192 million OCO funds

*** FY 2020 reflects the President's Budget request, includes \$573 million OCO funds

11. Electronic-Government (E-Government)

DoD continues to support and benefit from Federal E-Government (E-Gov) Initiatives, including Lines of Business (LoB) and shared services. Table 13 below includes DoD agency contributions towards E-Gov initiatives in FYs 2018 through 2020. The National Freedom of Information Act (FOIA) Portal is a requirement under the FOIA Improvement Act and not reflected within the DoD E-Gov Initiatives.

Agency contributions reflect commitments of funding and/or in-kind services provided by partner agencies to initiative managing partner agencies in support of developing, implementing, and/or migrating to E-Gov common solutions. Contribution amounts are determined annually through collaborative, interagency E-Gov initiative governance structures subject to approval by OMB.

Table 13: DoD E-Government Contributions for FY 2018, FY 2019, and FY 2020
(dollars in thousands)

Line of Business (LoB) Title	Investment Unique ID	Brief Description	FY 2018	FY 2019	FY 2020
Budget Formulation and Execution LoB	007-000100911	Provides agencies with technological solutions, tools, and services for enhancing budgeting, analysis, document production, and data collection.	\$ 110.00	\$ 110.00	\$ 110.00
E-Rulemaking	007-000100920	DoD's as a Partner Agency with the Environmental Protection Agency (EPA), provides funding for the fee for service to supporting maintenance and operation of the government-wide electronic docket management system known as the Federal Docket Management System (FDMS), a publicly accessible system. The eRulemaking Program is a collaborative, inter-agency effort, whose purpose is to establish a common, automated and integrated repository for managing Federal rulemakings and non-rulemaking action that follow a structured notice and common process.	\$ 94.00	\$ 95.00	\$ 86.00
Federal Health Architecture LoB	007-000100912	Coordinates government-wide solutions for interoperable and secure health information exchange and address agency business priorities, while protecting citizen privacy.	\$ 1,618.00	\$ -	\$ -
Federal PKI	007-000101044	The federal Public Key Infrastructure (PKI) efforts/federal PKI bridge is designed to allow agencies to operate their own public key infrastructures and interoperate with the public key infrastructures of other agencies.	\$ 645.00	\$ 645.00	\$ 645.00
Financial Management LoB	007-000100913	Creates government-wide financial management solutions that are efficient and improve business performance while ensuring integrity in accountability, financial controls, and mission effectiveness.	\$ 187.00	\$ 187.00	\$ 187.00
Grants.Gov	007-000100914	The Grants.gov Storefront provides electronic functionality for applicants and grantees, and reduces the paper-based processes that currently challenge the Federal grants environment. The initiative is designed to reduce existing inefficiencies, meet E-Gov goals, and provide benefits to both citizens and the government. Funds are provided for the DoD use of Grants.gov's Find and Apply functionality.	\$ 737.00	\$ 755.00	\$ 621.00

Line of Business (LoB) Title	Investment Unique ID	Brief Description	FY 2018	FY 2019	FY 2020
Human Resources LoB	007-000100915	Allows the DoD to optimize the cost of managing HR systems and processes across a worldwide customer base and to reduce costs of performing these functions individually.	\$ 274.00	\$ 274.00	\$ 274.00
Integrated Award Environment	007-000100916	Uses innovative processes and technologies to improve systems and operations for those who award, administer, or receive federal financial assistance (i.e. grants, loans), contracts, and intergovernmental transactions.	\$ -	\$ 29,028.00	\$ 42,133.00
Performance Management LoB	007-000100917	Develops government-wide performance management capabilities to help meet the transparency requirements of the Government Performance and Results Modernization Act of 2010 (GPRAMA), and support government-wide performance management efforts.	\$ 80.00	\$ 80.00	\$ 80.00
Security, Suitability, and Credentialing LoB	007-000100918	Executive branch-wide, modern, cost-effective, standardized, and interoperable personnel security, suitability, and credentialing solutions providing common, core functionality to support the strategic management of the LoB.	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
USAJOBS	007-000100919	USAJOBS.gov website provides a place while citizens can easily search for employment opportunities throughout the Federal Government.	\$ 775.00	\$ 792.00	\$ 875.00
Total			\$ 6,520.00	\$ 33,966.00	\$ 47,011.00

Numbers may not add due to rounding

Notes:

1. The Geospatial LoB is not represented in the Department of Defense budget, it is funded with National Intelligence Program (NIP) resources.
2. USAJOBS funding in FY 2017 is located in multiple investments throughout the IT Budget but was centralized into a single investment (007-000100919) beginning in PB 2018.

13. FITARA Statements

The DoD CIO (a) reviewed and provided recommendations to the Secretary of Defense on the information technology budget request of the Department, and (b) certifies that information technology investments are adequately implementing incremental development, as defined in capital planning guidance issued by the OMB.

The Chief Financial Officer (CFO) and CIO jointly affirm that the CIO had a significant role in reviewing planned IT support for major programs and significant increases and decreases in IT resources.