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THE BOTTOM LINE

Analysis of the 2019 Defense Budget Request

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Center for a
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Security

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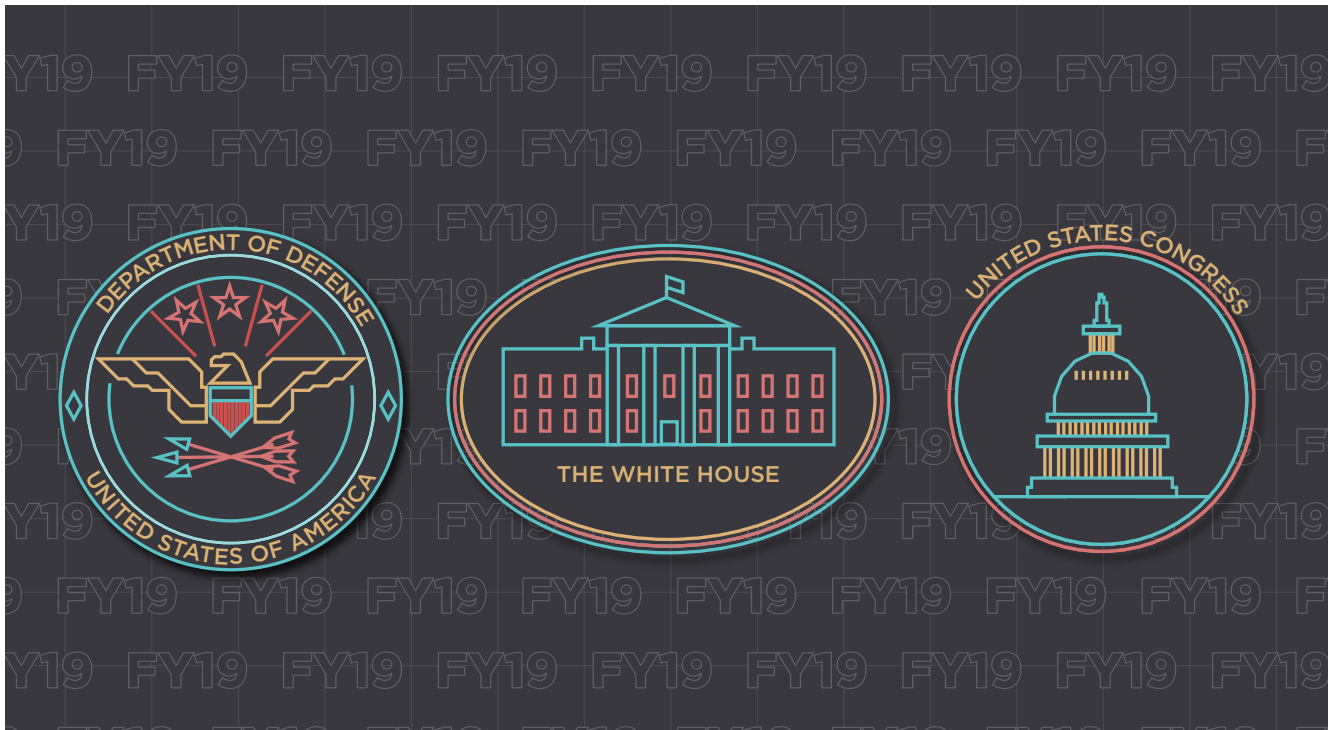
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The statements made and views expressed are solely those of the authors. Any errors of fact, omission, or interpretation are the authors' alone. CNAS does not take institutional positions.

About the Defense Program

The CNAS Defense program focuses on the strategic choices and opportunities available to preserve and extend U.S. military advantage in the face of evolving security challenges. From assessing the past, present, and future security environments to exploring alternative operating concepts, force structures, and basing options to testing alternatives through innovative scenarios and war games, the program aims to be a hub of innovation and action.



Executive Summary

2019 presented a very rare opportunity for the Department of Defense to change the shape of the future joint force: the Trump administration has set a new strategic direction in its National Security Strategy and National Defense Strategy and received a significant influx of cash from Congress with which to implement these strategies. However, the 2019 DoD budget request does not take full advantage of this opportunity. Increases in procurement spending largely go to buying or upgrading legacy systems like the Abrams tank, Bradley Fighting Vehicle, and F/A-18E/F Super Hornets. There are some notable exceptions, including increased investment in the Air Force's Next Generation Air Dominance program and growth in science and technology investment. However, for the most part, the request focuses on legacy systems.

This approach is not unreasonable. The budget future remains uncertain; Budget Control Act (BCA) caps return in 2020 absent another deal. The DoD has cash in hand today, but doesn't know if it will tomorrow, and so it is wise to spend that money on things that can deliver today. Money invested in developing new systems is wasted unless there is funding available in the future to bring those systems into production. Nonetheless, the 2019 budget request supports a force that is less advanced than what one would expect, given the strategy's emphasis on strategic competition with China and Russia. The Trump administration will not get another opportunity like the 2019 planning cycle, now that the administration's strategic direction is set and the best-case budget scenario is a flat topline through 2023.

Introduction

The Office of Management and Budget (OMB) released President Trump's fiscal year 2019 budget request on February 12, 2018. This budget request is the first that will have been prepared entirely during the current administration, so it should accurately reflect this administration's world view and priorities.

The administration requested \$716 billion for national defense, or about 7 percent more than it requested for fiscal year 2018. Of this total, \$686 billion will go to the Department of Defense, while the remainder will fund non-DoD national defense requirements (e.g., nuclear weapons programs at the Department of Energy).¹ Two percent of that increase covers only inflation, and another two percent covers the expected cost growth exceeding inflation in maintenance and personnel accounts. Taking these considerations into account, DoD is left with about \$20 billion in new money to apply to its chosen priorities.

The new Bipartisan Budget Act, which sets spending levels for fiscal years 2018 and 2019, significantly increased the defense budget – the most significant increase we've seen since the early days of the wars in Iraq and Afghanistan.² But the real question is, how will the department spend it? The new National Defense Strategy gives us some clues.³ The strategy's prioritization of strategic competition with China and Russia means that the budget should reflect an emphasis on investing in advanced capabilities, rather than solely increasing the size of the force. Similarly, the strategy's language on force employment suggests a recalibration in favor of preserving readiness at the expense of some presence activities that are not focused on improving the military's ability to deter or respond to conflict.⁴ The 2019 defense budget request does include these investments, to an extent. However, the bulk of the request's increase for 2019 went toward marginal improvements to legacy systems. Without doubt, this budget request repairs damage done by the deep and indiscriminate cuts imposed over the past several years by the Budget Control Act of 2011, improving readiness balance in the defense investment program. But given the strategy's bold prioritization of strategic competition with China and Russia, the relative size of investment in advanced capabilities remains somewhat unsatisfying. This report will explore these issues and more, providing in-depth analysis of each military department's request and the request for the defense-wide accounts. But first ...

A Brief History of Defense Budget Instability

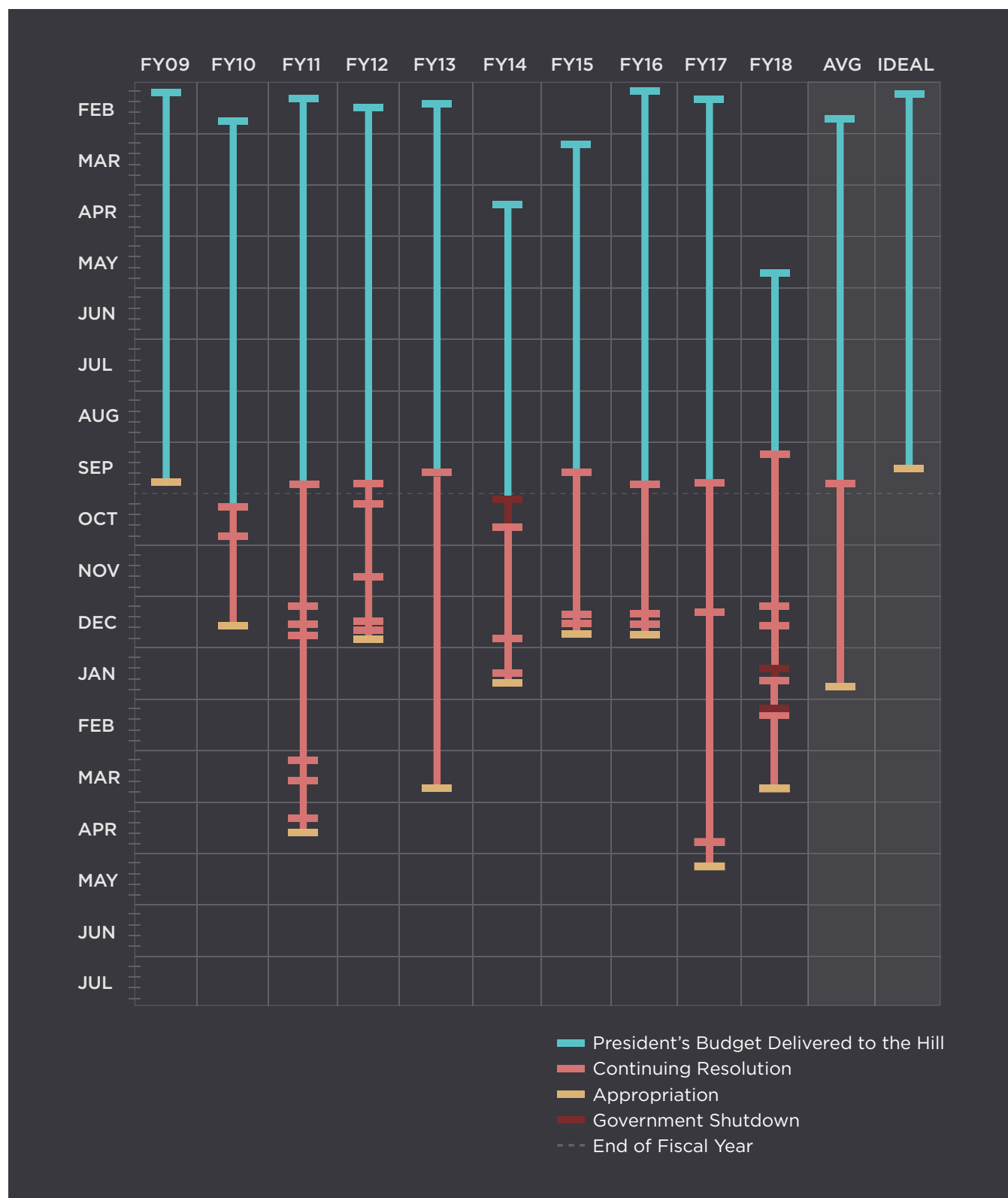
The Department of Defense (DoD) has lurched from one budgetary crisis to another for nearly a decade, through a series of continuing resolutions, short-term budget deals, and the twin specters of sequestration and shutdown. This defense budgetary instability is national self-harm on an epic scale. Congress's inability to pass budgets, let alone pass them on time, has severely handicapped the department in fulfilling its mission – to ensure the safety of the nation and protect U.S. citizens and interests at home and abroad.

Despite the highly predictable end of the fiscal year annually on September 30, Congress has not passed a final defense appropriations bill on time since 2009; the Department of Defense has begun each fiscal year since then without knowing how much money it could spend that year. In the past decade, Congress has come close to shutting down the government seven times, and has actually shut down the government three times. The duration and number of continuing resolutions varies by year, creating additional uncertainty for the department. Congress has enacted over

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30 continuing resolutions since 2009, and the department has operated under a continuing resolution for approximately a third of that time, the longest lasting for over seven months. Continuing resolutions harm the department by freezing the budget at the previous year's level and distribution. During a continuing resolution, DoD cannot move money from one account to another through reprogramming, nor can it start new programs not authorized and appropriated the previous fiscal year. Any increase in budget authority planned for the new fiscal year is deferred until Congress ends the continuing resolution and appropriates funds for the new fiscal year. This lack of flexibility is debilitating over time.

A DECADE OF BUDGET INSTABILITY⁵



This graphic provides a pictorial history of the past decade of budget instability. Visit CNAS.org/DoDBudgetInstability for the full interactive version.

Compounding the harm done by these continuing resolutions and late appropriations is the 2011 Budget Control Act's (BCA) legacy of dysfunction. The BCA was an ill-fated bipartisan attempt to reduce the deficit in exchange for an increase in the debt limit. To this end, the act established caps on defense and non-defense discretionary spending. To ensure that Congress would not be tempted to exceed these caps, it established a mechanism called sequester, which, if triggered, would result in an automatic, across-the-board cancellation of approximately 9 percent of the discretionary budget. The mechanism was designed to be so dreadful as to force Congress to come to a long-term budget agreement through the "supercommittee" led by Representatives Paul Ryan and Patty Murray. However, the worst came to pass in 2013 when the "supercommittee" failed, resulting in a \$30 billion cut to DoD in the middle of the year. This mid-year cut forced DoD to cancel training activities, defer maintenance, and furlough most of its civilian workforce, harming military readiness for years to come.

The 2013 sequester was followed by the government shutdown that kicked off fiscal year 2014. A shutdown, or even the threat of a shutdown, which occurs every time Congress lets the clock run down on the end of the fiscal year or a continuing resolution, is enormously disruptive and wasteful. The department must plan for a shutdown, even if Congress passes a last-minute budget resolution, drawing senior leaders' time and attention away from more pressing matters and harming the morale of the military and civilian work forces. If a shutdown does occur, service members wonder whether they will be paid on time; furloughed civilians wonder whether they will be compensated at all. Costs accrue for overhead to administer the shutdown. A shutdown completely disrupts the department's work: it defers maintenance and procurements, delays critical decisions, and cancels or postpones engagements. Perhaps most damaging is the reputational harm the United States incurs in the eyes of other nations when the government cannot perform its most basic functions.

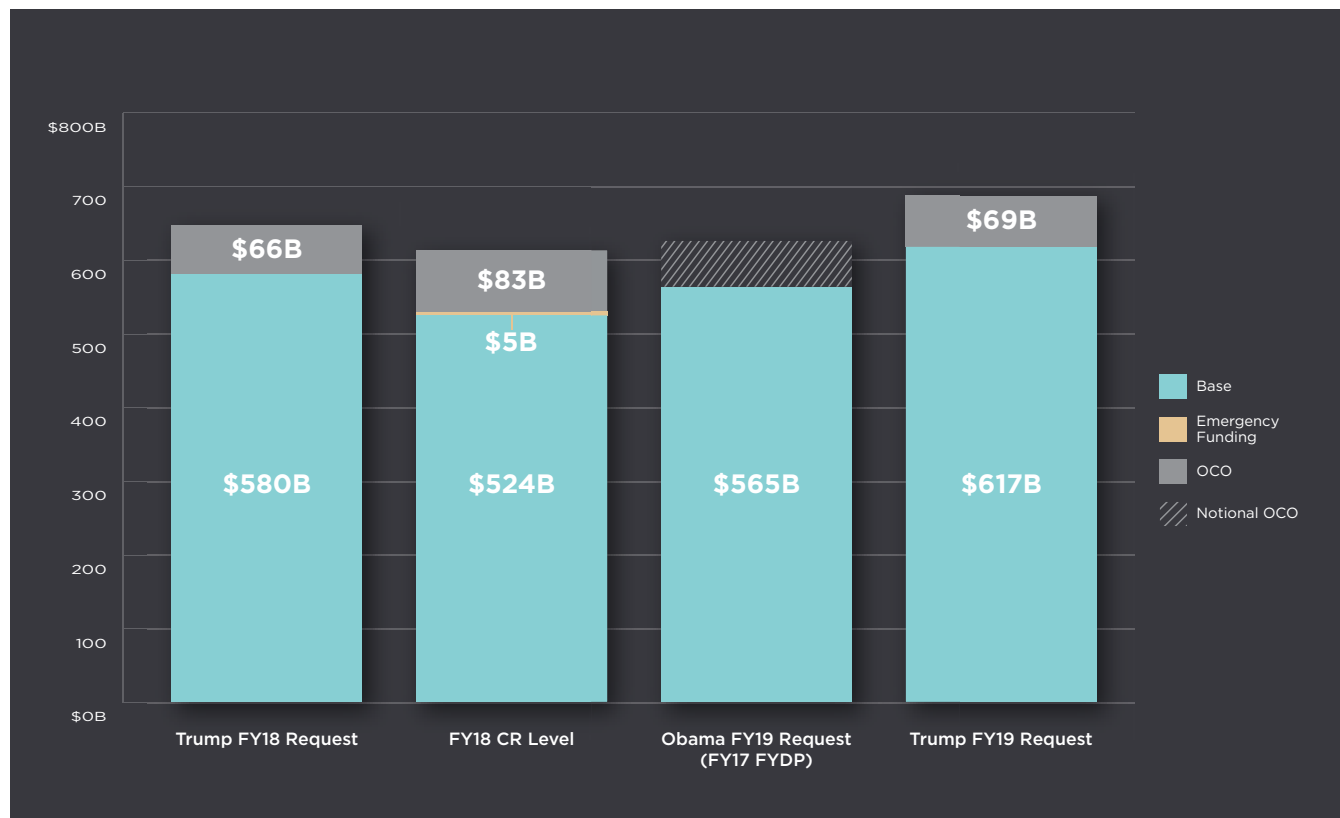
Overview of the 2019 Defense Budget Request

The Trump administration's fiscal year 2019 budget request for the Department of Defense is \$686 billion, an increase of \$40 billion over the fiscal year 2018 President's Budget request.⁶ About half of this increase is consumed by inflation and cost growth above inflation in some accounts.⁷ Even so, the 2019 request provides substantial real growth for the Department of Defense, although it can be surprising how little even these staggering sums can buy, in terms of equipment like military aircraft, ships, and satellites. Even in these times of increasing budgets, DoD must still make tough decisions about what to prioritize and where to accept risk.

Readiness

The budget request grows the size of the force, but does so at relatively modest levels, adding an additional 51,500 active duty service members by 2023 and 5,100 service members to the reserve components over the same period, an increase of 3 percent total. The services intend most of this end-strength growth to improve readiness; much of it will go to filling gaps and improving manning levels in existing units, some of which have been understaffed due to previous end-strength cuts. Where force structure does grow, as is the case with the new Security Force Assistance Brigades the Army is creating, there is also a readiness justification, in that these new units will allow the Army to keep its Brigade Combat Teams whole while still meeting train, advise, and assist requirements. Also in the cause of improving readiness, the services are continuing to increase munitions buys, particularly for guided munitions like the Navy and Air Force's Joint Direct Attack Munition (JDAM) and the Army and Marine Corps' Guided Multiple Launch Rocket System (GMLRS). The services are also investing more in sustaining their physical infrastructure, especially training, operational, and maintenance facilities, reversing cuts to facilities sustainment accounts made during the preceding era of declining budgets.

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TOPLINES - FY18 & FY19⁸

This chart shows the Trump administration's 2019 topline request for defense in the context of previous year's requests and the Obama administration's planned request for 2019.

Procurement

Procurement grew more than any other title in the defense budget – up 15 percent relative to the Trump administration's fiscal year 2018 request – an increase of approximately \$20 billion. Most of this increase goes toward upgrading or buying new legacy systems, many of which have already been in service for decades. In addition to the increased munitions procurement mentioned above, this budget invests in additional aircraft (F-35 and P-8A), ships (DDG-51 and T-AO), space systems (Evolved Expendable Launch Vehicles and Space Based Infrared System), and ground vehicles (Joint Light Tactical Vehicles), above what the department requested last year.

Research, Development, Test, and Evaluation

Research, development, test, and evaluation (RDT&E) received the second largest percentage increase, at 11 percent over the Trump administration's fiscal year 2018 request. This increase makes sense given the National Defense Strategy's focus on strategic competition with China and Russia.⁹ DoD needs to invest more in these

accounts to fund the advanced capability development the United States needs to retain its technological edge against these adversaries, who are also investing heavily in high-end weapons systems. Priority investment areas in this category include hypersonic weapons, autonomous systems, artificial intelligence, directed energy (i.e., lasers), and electronic warfare (i.e., offensive or defensive action in the electromagnetic spectrum). These investments play the long game; the department needs to do the research and development work now that will make it possible to field these capabilities in the future.

Missile Defense Agency

Some of this growth in both procurement and RDT&E went to the Missile Defense Agency (MDA), whose budget increased by 26 percent, from \$7.9 billion in the original fiscal year 2018 request to \$9.9 billion in the fiscal year 2019 request. MDA has requested funds to improve strategic missile defenses, primarily the Ground-based Midcourse Defense (GMD) system, which protects the homeland.¹⁰ It also has plans to invest more in regional missile defenses, which protect allies

and partners as well as U.S. facilities overseas, and to include the Aegis and Terminal High Altitude Area Defense (THAAD) systems.¹¹ This substantial increase in funding provides a good indication of where the forthcoming DoD Missile Defense Review is headed.

Army

The Army grew the most of the three military departments – 10 percent over the fiscal year 2018 request. The 2019 request increases Army end strength by 11,500 soldiers in the active component and 1,000 soldiers in the Guard and Reserve, with additional growth planned through 2023. The Army's focus on modernization and acquisition reform is reflected by RDT&E and procurement growth totaling \$4.2 billion above the fiscal year 2018 request. However, most of this increase goes towards purchasing additional legacy systems or marginal upgrades to legacy systems that have already been in service for decades. These investments include new UH-60 Blackhawk helicopters, new Joint Light Tactical Vehicles, modifications and upgrades to M-1 Abrams tanks and Bradley fighting vehicles, and increased munitions procurement.

Navy and Marine Corps

The Navy and Marine Corps budget grew by 8 percent relative to the fiscal year 2018 request. In fiscal year 2019, the Navy will add 7,500 active duty sailors and an additional 100 in the Reserve, while the Marine Corps will grow by 1,100 active Marines. The Navy plans to grow from 289 battle force ships in fiscal year 2018 to 299 in the fiscal year 2019 request. It will do so by procuring an additional DDG-51 *Arleigh Burke*-class destroyer and an additional fleet oiler over last year's plan. At the same time, the 2019 plan reduces the Littoral Combat Ship buy from two in fiscal year 2018 to one, in preparation for the selection of a new frigate. The 2019 request increases aircraft procurement relative to 2018, adding five F-35Cs, 10 F/A-18E/Fs, and three P-8As. The 2019 request sustains investments in sub-surface capabilities and nuclear modernization.

Air Force

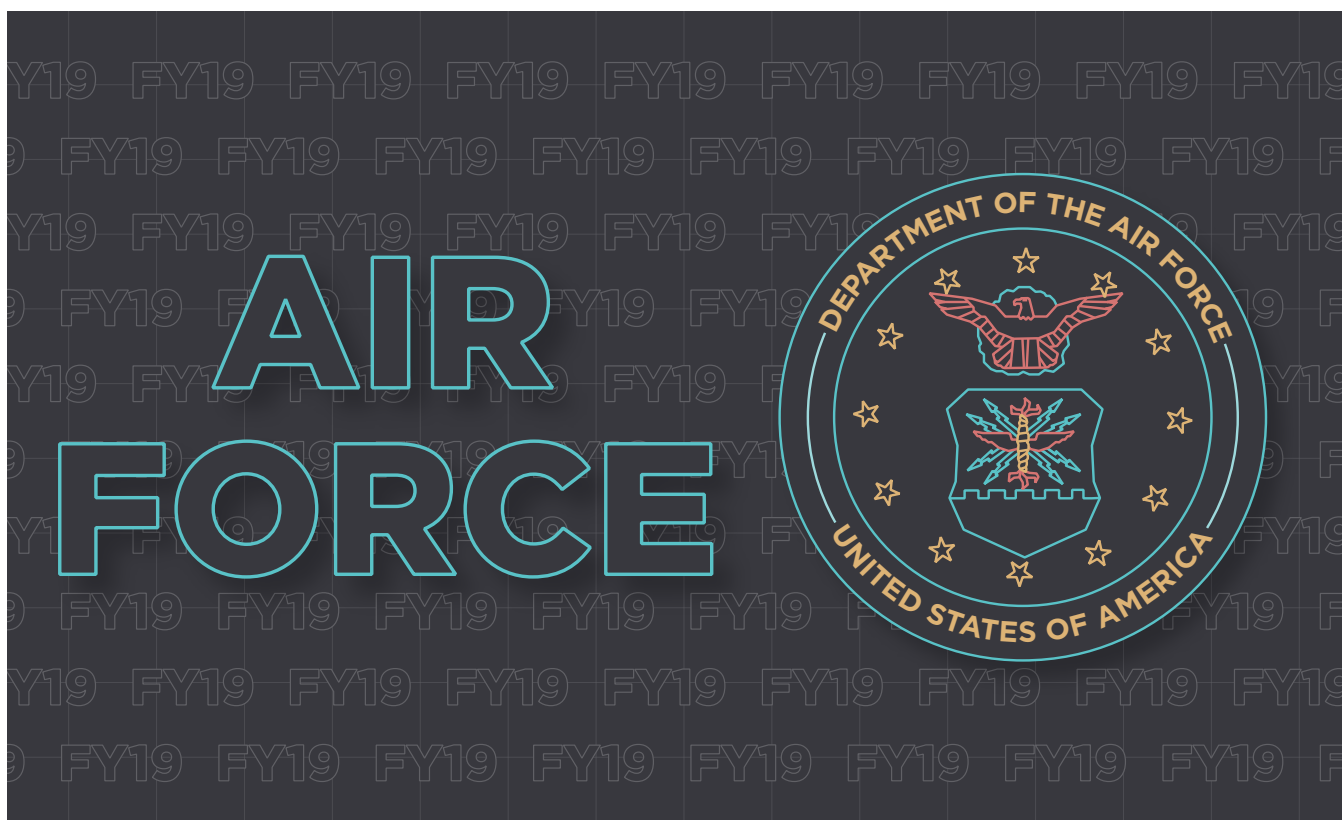
The Air Force budget grew by about 6 percent over the fiscal year 2018 request. To improve readiness, the 2019 plan adds 4,700 airmen, invests in training and maintenance, and invests in munitions procurement. The request continues to modernize through F-35A and KC-46A tanker procurement and development of the B-21 bomber and T-X advanced trainer. It sustains investments in modernizing nuclear and space systems. Notably, the budget request indicates that the Air Force is reexamining their plan to recapitalize the Joint Surveillance Target Attack Radar System (JSTARS), instead developing an alternative way to fulfill the battle management command and control mission.

Defense-wide

The Defense-wide accounts, also sometimes called the Fourth Estate, fund the Office of the Secretary of Defense, the Joint Staff, Special Operations Command, and the defense agencies and field activities, such as the Missile Defense Agency and the Defense Logistics Agency. The Defense-wide accounts grew the least of all the DoD components, by about 5 percent overall relative to the fiscal year 2018 request, despite the Missile Defense Agency's 26 percent budget increase. Limited growth in this area bodes well for the department's efforts to meet Congress's mandate to reduce all major headquarters activities by 25 percent from fiscal years 2016 to 2020.

Conclusion

While the budget increase is both sizable and meaningful, it is not enough to deliver the kind of build-up then-candidate Trump promised on the campaign trail. This is not necessarily a bad thing, as those campaign promises were unmoored from any kind of strategy.¹² But it is remarkable how little an additional \$40 billion dollars will buy in terms of military capability and capacity. Furthermore, additional growth is not in the offing, as indicated by the Future Years Defense Program (FYDP) profile, which limits further DoD budget growth over the next five years to inflation only and uses a pretty optimistic assumption about what inflation will be over that period (2 percent per year). Even this substantial increase in the defense budget is not enough for DoD to do it all.



The Air Force

The Air Force 2019 budget requests \$194 billion in budget authority, an increase of \$10 billion, or about 6 percent, over the fiscal year 2018 request.¹³ But the challenges the Air Force is facing are also growing. Chinese and Russian advanced capabilities in both the air and space domains are challenging the Air Force, requiring continued and new investments in things like penetrating strike options (both platforms and munitions) and survivable space capabilities. At the same time, the Air Force is responsible for two of the three legs of the nuclear triad, all of which urgently need to be recapitalized. Finally, ongoing operations in Iraq, Syria, and Afghanistan have stretched the Air Force thin, necessitating the restocking of precision guided munitions and the restoration of readiness in the tactical air fleet. Fulfilling these requirements is a tall order, even with a \$10 billion budget increase.

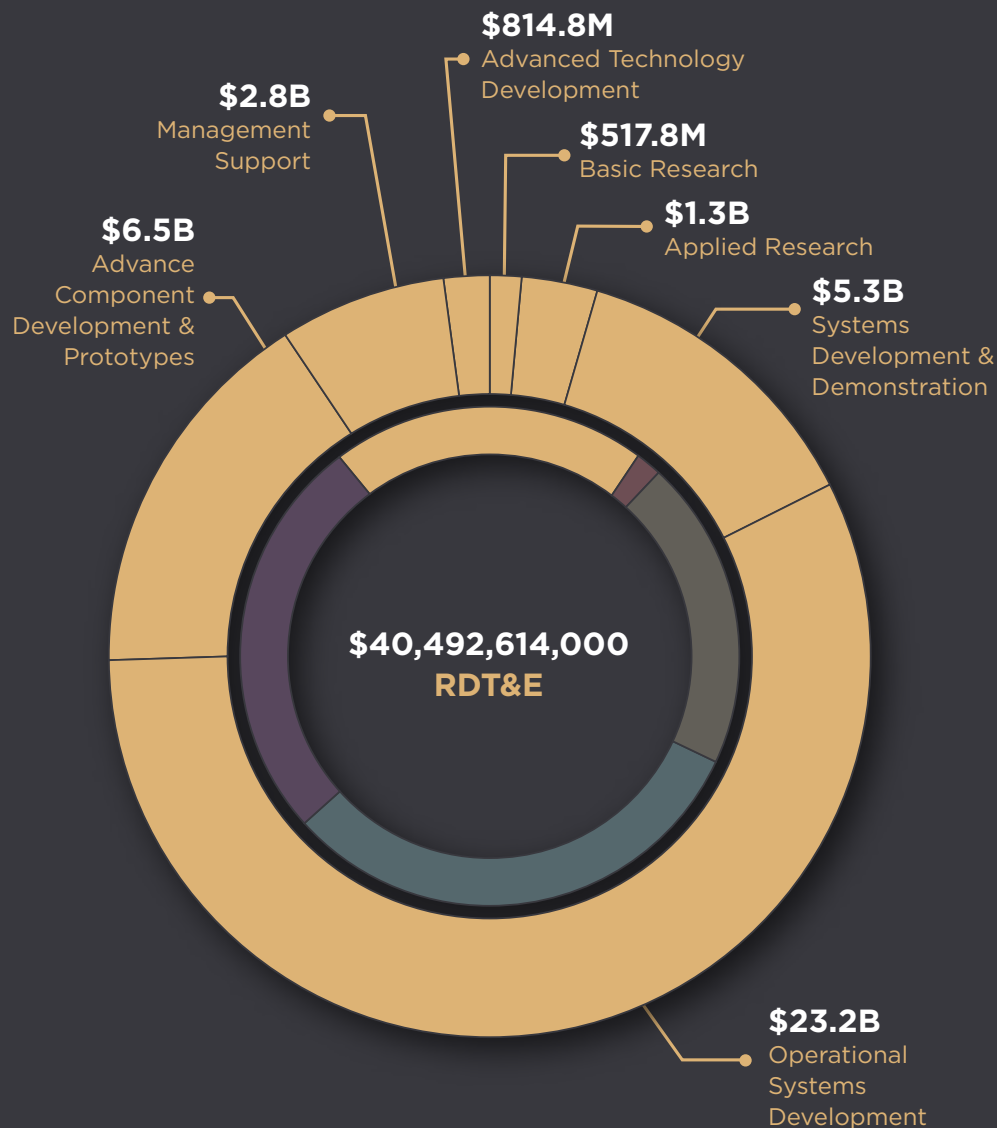
Research, Development, Test, and Engineering

Research, development, test, and engineering (RDT&E) saw the largest growth over 2018 at almost 19 percent, or nearly \$5 billion.¹⁵ Most of this growth in RDT&E is in the later stages in the process of developing and fielding

new systems, including the B-21 bomber, the Presidential Aircraft Replacement, and the new combat rescue helicopter. Spending on basic research, applied research, and advanced technology development remained relatively flat compared to the 2018 request. These trends indicate prioritization of bringing already developed systems over the final technological hurdles and into production, rather than breaking new ground. A notable exception here is the Next Generation Air Dominance Program, investment in which nearly doubled from the 2018 request to the 2019 request, now totaling over \$500 million.

Bombers

Concurrent with this budget request, the Air Force announced plans for the future of the bomber fleet.¹⁶ First, the budget request funds new engines for the aging B-52 fleet. These new engines are necessary to keep these aircraft, which have been in service since 1954, operational through 2050. The Air Force also announced intent to incrementally retire the B-1s and B-2s as B-21s become operational, beginning in the mid-2020s. Retiring these two aircraft fleets could significantly reduce the operating and maintenance costs of the bomber fleet as a whole. Maintaining two types of aircraft

AIR FORCE FY19¹⁴

RDT&E – Research, Development, Test, and Evaluation. This title includes funding for basic and applied scientific research and capability development. It also funds test and evaluation, activities including construction, operation, and maintenance of test facilities.

This graphic is a sample display of the interactive charts prepared for each of the services and the Defense-wide account. They show each budget by title, by category within each title, and down to the line item level of detail. To see the full versions, please visit [CNAS.org/PB19](https://cnas.org/PB19).

instead of four is less complicated for operators and maintainers and requires fewer different types of spare parts. According to Secretary of the Air Force Heather Wilson, the fleet will maintain no less than 175 bombers; ultimately no less than 100 of those bombers will be B-21s, and the remainder will be B-52s.¹⁷ Despite the opportunity for cost savings, some argue that a bomber fleet of this size will be too small to meet operational requirements and that the stealth B-2s in particular should be kept in service, given the need the future force will have for long-range penetrating strike options.¹⁸

Joint Surveillance Target Attack Radar System

Concurrent with this budget request, the Air Force announced intent to reconsider its plan to recapitalize the Joint Surveillance Target Attack Radar System (JSTARS), which provides the capability to find and track targets on the ground in real time and direct fire toward them.¹⁹ Rather than replace this specific platform as it had planned, the Air Force intends to rethink the way it provides this capability. JSTARS combines sensors, analysts, and controllers on a single aircraft, and the Air Force has concluded that this platform is not survivable in a contested environment. It is also unclear whether recapitalizing JSTARS is the right approach in permissive environments, as the same capability could potentially be achieved at lower cost by linking sensors aboard any one of a number of platforms with analysts and controllers who are on the ground. Advanced sensors have proliferated across many more U.S. platforms since the first JSTARS aircraft were fielded during the first Gulf War, and ways to link sensors to analysts and controllers have also improved. Consequently, there may be a new way to effectively meet this requirement more completely, in a more survivable package, and potentially at a lower cost. The Air Force intends to find out by conducting an analysis of alternatives.

Light Attack Aircraft

At the other end of the conflict spectrum is continued investment in the light attack aircraft program, which intends to develop and field an aircraft that can provide close air support in permissive environments at a much lower cost to procure, operate, and maintain than the aircraft currently fulfilling this mission (A-10s, F-15s, and F-16s). Doing so could reduce the cost of this mission, while preserving readiness in the fourth- and eventually fifth-generation tactical air fleet. Success hinges on realization of the low-cost vision and on commanders' finding the Light Attack Aircraft an acceptable substitute for fourth-generation fighters, despite the aircrafts'

reduced capability. If the program does reach maturity, there are likely some good foreign military sales opportunities here.

Space

The Air Force continues to invest in space capabilities designed to cope with a war that extends into space. While once an uncontested environment for the United States, space is now crowded, and some actors are now able to do considerable damage to U.S. military space assets. Space procurement decreased by about 25 percent from the 2018 request, but those dollars (and more) are invested in developing new space systems in the 2019 request. For example, the Air Force is changing its approach to the satellites that provide missile early warning (among other capabilities). It is discontinuing

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its planned buy of Space-Based Infrared System (SBIRS) satellites seven and eight and investing those funds in manufacturing and engineering support for the Evolved Space-Based Infrared System (E-SBIRS) instead.²⁰ Investment in these next-generation capabilities increased from \$71 million in the 2018 request to \$643 million in the 2019 request, while the SBIRS satellite cuts saved \$975 million. The Global Positioning System (GPS) III follow-on is a new start, with \$452 million behind it, intended to provide secure position, navigation, and timing that cannot be tampered with, spoofed, or jammed.

Nuclear Forces

Consistent with the results of the new *Nuclear Posture Review*, the 2019 request also continues existing plans to modernize the nuclear triad.²¹ In addition to the bomber investments described above, the Air Force will continue to develop the Long-Range Stand-off Missile (LRSO), a replacement for the current nuclear-tipped air-launched cruise missile, as well as the Ground Based Strategic Deterrent (GBSD), a new nuclear intercontinental ballistic missile replacing the current Minuteman III. Investments in these two legs of the nuclear triad increase by 44 percent over the fiscal

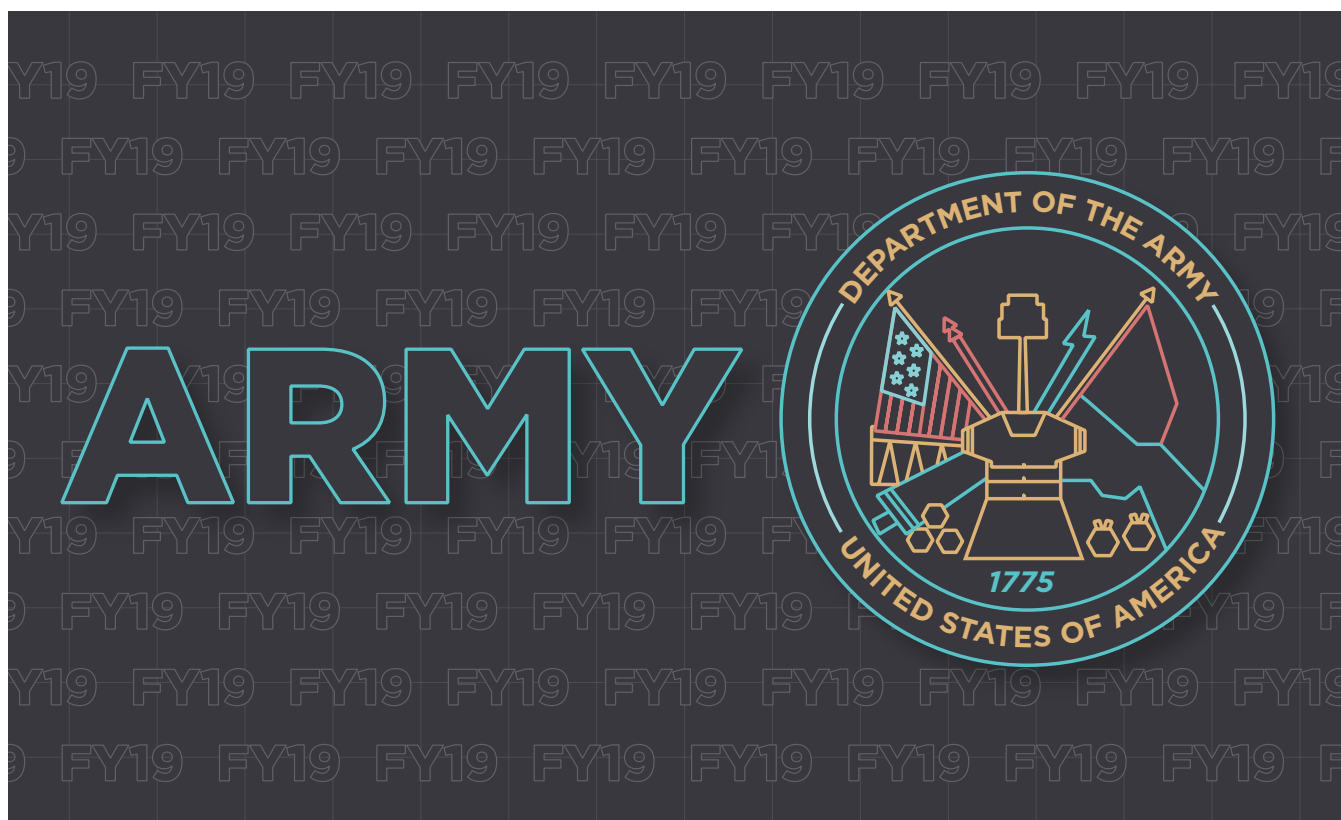
year 2018 request. Significant cost increases are still to come for these systems in the 2020s, as they move further along in their development and fielding. The budget request also continues to modernize the country's nuclear command, control, and communications architecture, to ensure that the president and other civilian and military leadership can communicate with each other and maintain control over these weapons and their employment in times of crisis. This budget does not yet begin to execute the *Nuclear Posture Review's* intent to increase non-strategic nuclear capabilities, with the exception of increased procurement of B61 nuclear gravity bombs, from 30 in the 2018 request to 250 in the 2019 request.

Readiness

The Air Force request makes several investments intended to improve readiness. It plans to improve manning levels in existing units by adding an additional 4,000 active-duty airmen in fiscal year 2019, increasing by a total of 13,700 airmen by 2023.²² The request also continues to replenish depleted stocks of precision guided munitions, increasing procurement of the Joint Direct Attack Munition (JDAM) and Hellfire missiles. The request continues to fund training and weapons systems maintenance accounts to executable levels.

Conclusion

We have reached the end of our assessment of the Air Force budget request but have yet to mention the F-35. The request includes two more F-35s than last year's request, but the same number as were purchased in 2017 – 48. At the same time, the Air Force is requesting \$1 billion to modify its fourth-generation fighter fleet, a 64 percent increase over what it requested for this purpose in 2018. It is interesting to see this buy rate hold steady even with a substantial injection of new funds. The trend indicates either that the Air Force was happy with this buy rate, that the Air Force is waiting on the next increment of the F-35 to increase its buy, or that other priorities are crowding out further growth in the tactical air portfolio. The F-35 buy is indicative of the major theme running through the Air Force request. With such substantial financial responsibilities for advanced capabilities in space, the nuclear forces, aircraft, and munitions, an increase of over \$10 billion relative to the 2018 request doesn't go as far as one might think.



The Army

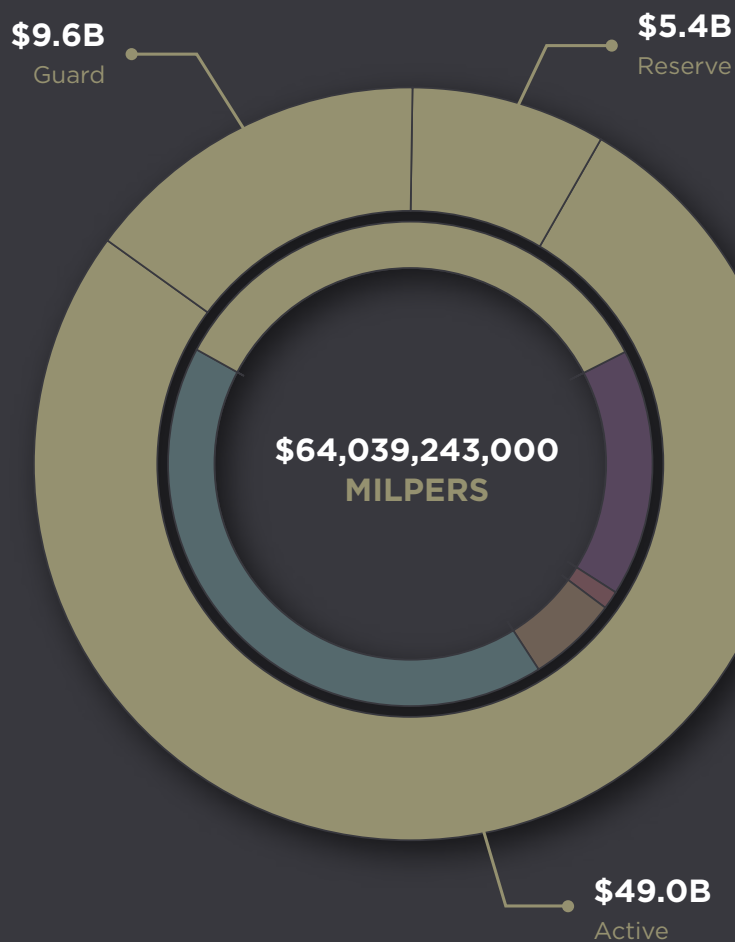
The Army's budget request saw more growth than any other service relative to the 2018 President's Budget request, gaining \$16 billion, or about 10 percent.²³ With these additional funds, the Army is investing in end strength to improve readiness and modernize aging equipment. In the modernization portfolio, there is a tension between making marginal improvements to existing systems like the M-1 Abrams tank (which has been in service since 1980) and developing the next generation of systems. Doing both simultaneously is extremely resource-intensive. The failure of the Future Combat System program combined with over a decade of counterinsurgency commitments have prevented the Army from modernizing, a fact that the Army has recognized and is working to rectify. Consequently, the Army must choose where to accept risk; either it must accept a longer wait for next generation systems or accept less modern equipment in the interim.

Readiness and End Strength

To address readiness concerns, the Army intends to use some of its budget increase to grow the size of the force. In fiscal year 2019, the Army intends to grow by 11,500

soldiers in the active component and an additional 1,000 in the Guard and Reserve. By 2023, the Army will have grown by a total of 19,500 soldiers in the active component and 2,500 in the Guard and Reserve, leaving it with a total force end strength of 1,040,000 soldiers.²⁵ Some of this end strength will go toward creating three new Security Force Assistance Brigades (SFABs) by the end of fiscal 2019, adding to the two already in the force.²⁶ As their name implies, these SFABs are designed to support train, advise, and assist missions, like those ongoing in Afghanistan and Iraq. Creating new force structure dedicated to these missions may seem inconsistent with the *National Defense Strategy*, which prioritizes strategic competition with China and Russia. However, a driving force behind creation of the SFABs is the need to preserve readiness in the Army's regular Brigade Combat Teams (BCTs). Prior to instantiation of the SFABs, the Army routinely stripped senior non-commissioned officers (NCOs) and junior officers out of their units to support train, advise, and assist missions, in the process seriously damaging the readiness of those soldiers' home units. The SFABs should allow the Army to meet train, advise, and assist requirements while ensuring that BCT readiness, a critical aspect of the force's ability to deter, does not suffer from partially deployed formations.

ARMY FY19²⁴



MILPERS - Military Personnel. This title includes funding for basic pay, housing, subsistence, and other allowances, relocation costs, retirement, and some benefits paid by the Department of Defense as part of compensation for service members.

This graphic is a sample display of the interactive charts prepared for each of the services and the Defense-wide account. They show each budget by title, by category within each title, and down to the line item level of detail. To see the full versions, please visit CNAS.org/PB19.

However, it remains to be seen whether the Army can actually grow by 11,500 active component soldiers in one year, particularly in light of DoD's new deployability policy, where a soldier who is not deployable for a year or more due to reasons like illness, injury, or incarceration, will have to leave the service.²⁷ (Injuries sustained in combat and pregnancy are exceptions to this new policy.)²⁸ Meeting this target will be a challenge both in terms of recruitment and retention if the Army is to avoid lowering accession standards on physical and mental health, education, and criminal history; lowering these standards could damage the health of the force.²⁹ The challenge will be that much more difficult given continued low unemployment; the young men and women that the Army would like recruit have many options from which to choose.³⁰

The Army's budget request saw more growth than any other service relative to the 2018 President's Budget request. The Army is investing in end strength to improve readiness and modernize aging equipment.

Continued Army investment in critical munitions will also improve readiness. Maintaining adequate numbers of these munitions on hand is essential to ensuring that the Army is able to respond in a timely manner and sustain operations in the event of a conflict. The Army continues to invest in increased capacity at the industrial facilities that produce propellants used by all the services in different munitions, requesting \$394 million in 2019 for this purpose. The Army is also increasing its procurement of several guided munitions, including Javelin missiles, TOW-2 missiles, Joint Air-to-Ground Missiles (JAGM), High Mobility Artillery Rocket System (HIMARS) rockets, and Guided Multiple Launch Rocket System (GMLRS) rockets, as well as investing in modifications to the Patriot missile defense system.

Modernization

In October, then-Acting Secretary of the Army Ryan McCarthy and Chief of Staff of the Army General Mark Milley announced new modernization priorities that would focus the Army on regaining "overmatch and competitive advantage against emerging threats,

competitors, and adversaries."³¹ However, the constant challenge for Army modernization is striking a balance between incrementally improving current systems and developing the next generation of systems. For example:

- The Army's top modernization priority is a "long-range precision fires (LRPF) capability that restores U.S. Army dominance in range, munitions, and target acquisition." The 2019 budget requests \$186 million to pursue this capability. However, to fill the gap before LRFP becomes a fielded capability, the Army is also extending the life of the current Army Tactical Missile System (ATACMS), at a cost of \$447 million.
- The Army's second modernization priority is "a next-generation combat vehicle ... with the most modern firepower, protection, mobility, and power generation capabilities." The Army requests \$120 million in 2019 RDT&E funding for combat vehicle and automotive advanced technology development. At the same time, the Army requests \$3.4 billion to upgrade its current M-1 Abrams tanks and Bradley Fighting Vehicles.
- The third Army modernization priority is "future of vertical lift platforms ... that are survivable on the modern and future battlefield." To this end, the Army has requested \$125 million in RDT&E funding for aviation advanced technology in 2019. At the same time, the Army plans to continue procuring and remanufacturing UH-60 Blackhawk and AH-64 Apache helicopters, to the tune of \$2.9 billion in the same year.

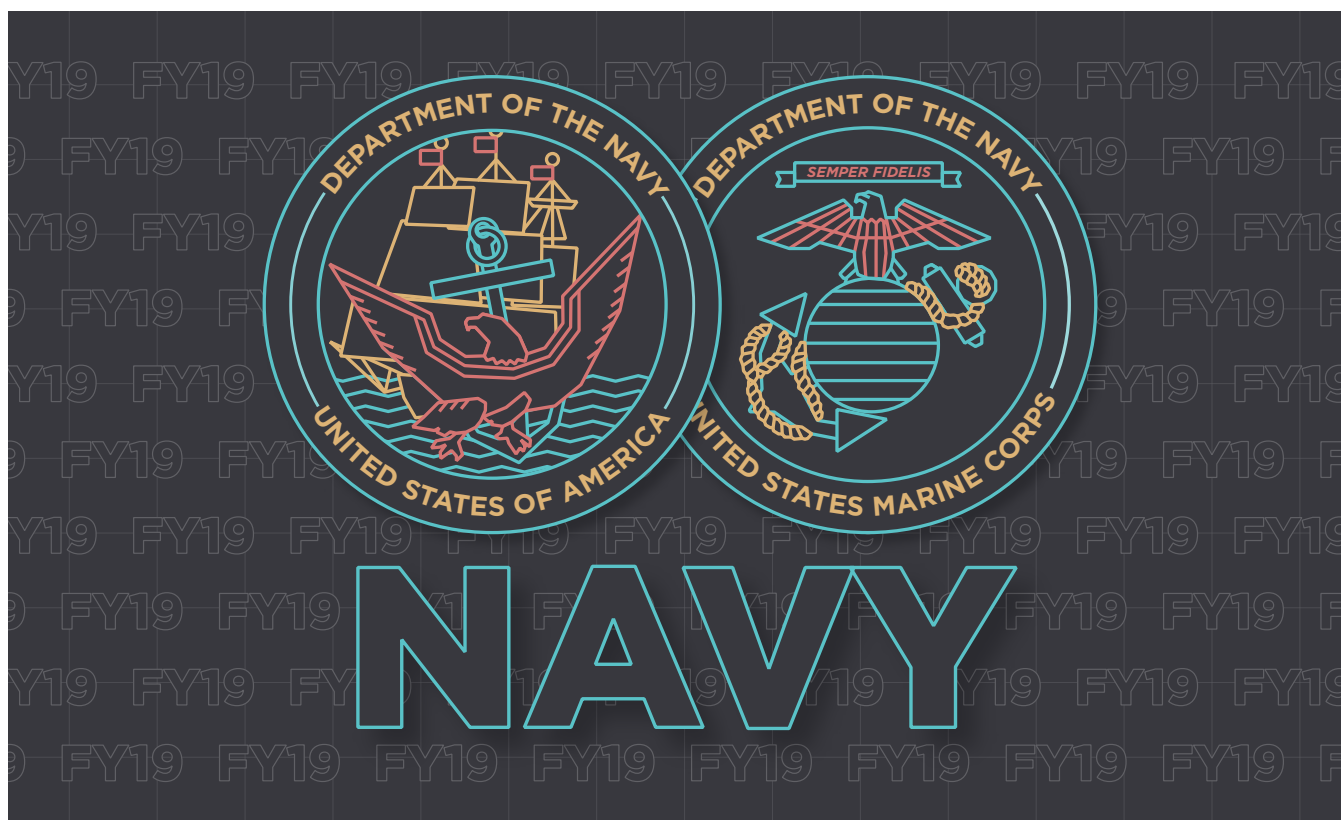
Given the Army's recent history of failed modernization programs, it makes sense that currently fielded systems need to be kept running and improved to bridge the gap until the next generation of systems are developed and delivered to soldiers.³² But given how much larger the investments in legacy systems are relative to investments in next-generation systems, one has to wonder if the Army hasn't overinvested in improving current systems at the expense of fielding the next-generation systems more quickly. Over the past several months, the Army has introduced several reforms to improve its requirements and acquisition processes, including creation of a Futures Command and establishment of cross-functional teams to pursue the Army's modernization priorities.³³ These reforms are designed to accelerate development of next-generation combat systems; hopefully we will see their success reflected in the 2020 budget request.

European Deterrence Initiative

Consistent with the National Security Strategy and National Defense Strategy's emphasis on strategic competition with Russia, the Department again increased funding for the European Deterrence Initiative (EDI) in the 2019 budget request.³⁴ The Army receives the largest share of EDI funding, \$4.6 billion of \$6.5 billion. Formerly known as the European Reassurance Initiative, these funds enable the department to "respond to an evolving European security environment."³⁵ In other words, EDI funding increases U.S. military presence and infrastructure in Europe to counter increased Russian aggression. The shift in nomenclature from reassurance to deterrence is borne out by increased focus on prepositioned equipment and on reception, staging, onward movement, and integration (RSOI) infrastructure, both of which would improve U.S. response time in a potential conflict with Russia. The request provides \$2.5 billion to continue to build a division-sized set of prepositioned Army equipment that U.S. soldiers deploying from the United States fall in on, avoiding the delay that would be incurred if they had to transport this heavy equipment across the Atlantic. The request also provides \$193 million for RSOI construction in Romania, Bulgaria, and Poland, which will improve U.S. forces' ability to move quickly to the front.

Conclusion

As discussed above, the Army's investments in marginally improving legacy systems often far exceed investments in developing the successors to those systems. If the Army does not yet know what it wants these next-generation capabilities to look like, investing resources to keep those legacy systems going may be prudent. One hopes that the changes the Army is making to its requirements and acquisition processes will bear fruit quickly, providing clarity on next-generation requirements ahead of the fiscal year 2020 budget request. At the same time, while the cost to increase end strength is relatively modest in fiscal year 2019 (the Army military personnel account increases by only 4.6 percent relative to the 2018 request), it compounds over time. Increasing the size of the force may improve readiness in the near term, but it also has the potential to crowd out investment in next-generation combat systems well into the future.



The Navy and Marine Corps

The Department of the Navy's budget request for 2019, which includes both the Navy and the Marine Corps, increased by just under 8 percent over the 2018 President's Budget request, for a total of \$194.1 billion.³⁶ The Navy and Marine Corps will spend much of this increase on additional ships, aircraft, and personnel. The Navy argues that these increases would improve readiness, the lack of which has been cited as one of the factors in 2017's fatal ship collisions and aviation mishaps.³⁷ Newer equipment could reduce maintenance requirements; more ships across the same missions could lessen stress on the fleet; and more sailors and Marines could allow more time for training. However, it may not be possible for the Navy to buy its way out of all its readiness problems in this way, even with a budget increase of \$14 billion above last year's original request.

Ships

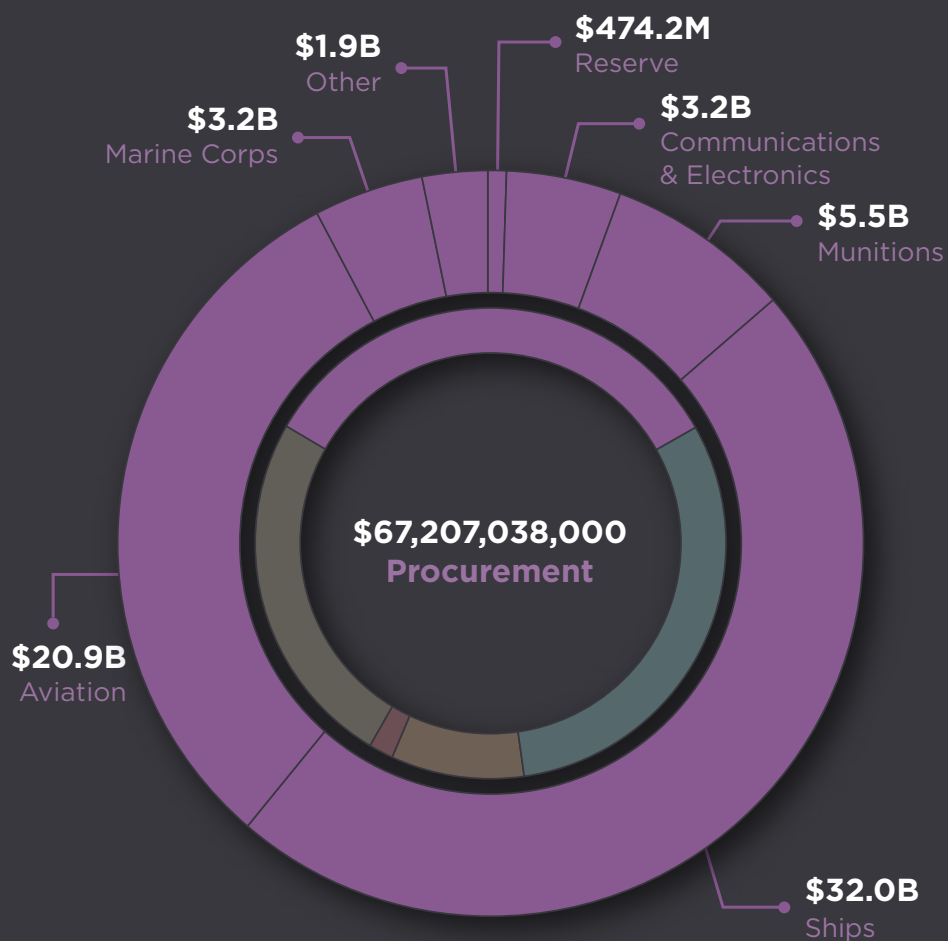
As it does every year concurrently with the President's Budget request, the Navy released its "Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019," also known as the 30-year shipbuilding plan.³⁹ Both the budget request

and the shipbuilding plan show an increase in the size of the fleet, although the Navy's stated goal of achieving 355 battle force ships, first announced in December 2016, remains distant – somewhere in the 2050 timeframe with options for accelerating growth to get to 355 ships in the 2030s.⁴⁰ The shipbuilding plan is the first of a few areas in the Navy's budget request where the tension between increasing the capacity of the fleet and the capability of the fleet becomes apparent. Buying less expensive and less capable ships would grow the fleet more quickly, an argument made since the beginning of the Littoral Combat Ship (LCS) program.

It may not be possible for the Navy to buy its way out of all its readiness problems in this way, even with a budget increase of \$14 billion above last year's original request.

Instead, the Navy has chosen to invest in more capable ships, accepting a slower rate of growth. The 2019 30-year shipbuilding plan grows the projected size of

NAVY FY19³⁸



Procurement – This title funds production, purchase, modification, installation, and modernization of equipment, as well as government investment in production facilities.

This graphic is a sample display of the interactive charts prepared for each of the services and the Defense-wide account. They show each budget by title, by category within each title, and down to the line item level of detail. To see the full versions, please visit CNAS.org/PB19.

the fleet by 11 ships over the 2018 plan, projecting a total of 326 ships in the fleet by 2023.⁴¹ The budget requests one additional DDG-51 *Arleigh Burke*-class destroyer (for a total of three) and one additional T-AO fleet oiler (for a total of two) over the 2018 request. The request reduces the LCS buy from two to one in preparation for transition to the Navy's next-generation frigate program. These *Arleigh Burkes* offer far more capability than the smaller LCSs, particularly missile defense capability, but they come at about three times the cost per ship.

Furthermore, in light of the evolving threat environment and the strategy's prioritization of strategic competition with China and Russia, one might have expected to see increased investment in submarines, either along with or instead of some of the growth in the surface fleet. It is no secret that the United States faces increased threats to the surface fleet.⁴² At the same time, the U.S. Navy enjoys an advantage in the subsurface domain.⁴³ But instead of growing the subsurface fleet, the Navy has chosen to sustain the investments made in previous years rather than using some of their additional topline to grow this part of the fleet. The budget request holds the SSN Virginia-class fast attack submarine buy rate steady at two per year. The budget continues plans to replace the current SSBN ballistic missile submarines with new Columbia-class boats, requesting \$6 billion in procurement and another \$514.8 million in research, development, testing, and evaluation (RDT&E) for this purpose in 2019. In addition, the Navy's RDT&E budget sustains investment in unmanned undersea vehicles, totaling \$227.2 million for 2019.

Aviation

Carrier aviation is another area where the Navy's desire to increase both capacity and capability compete for available resources. Currently the vast majority of Navy strike fighters are fourth-generation F/A-18 variants, while the Navy will not deploy its first operational fifth-generation F-35C squadron until 2021.⁴⁴ The budget request buys more of both aircraft, but favors fourth-generation capacity over the additional capabilities of the fourth-generation F-35C. The budget requests five more F-35Cs than the Navy asked for in 2018, for a total buy of nine. At the same time, the budget request increases the F/A-18E/F Super Hornet buy from 14 aircraft in 2018 to 24 in 2019. In addition, the Navy is investing in service life extension for many existing Hornets and Super Hornets, running them for 8,000 to 10,000 hours, as opposed to the original design life of 6,000 hours. End of service life for F/A-18A-D aircraft is challenging carrier aviation capacity; without increased investment, there

may not be enough available aircraft to fill out the current carrier air wings. Super Hornets can be had at lower cost than F-35Cs, which we can assume is a key consideration in the Navy's decision to procure nearly three times as many F/A-18E/Fs as F-35Cs. But the delay in getting fifth-generation stealth aircraft onto carrier decks, a critical capability in any conflict with an adversary possessing advanced air defenses, seems inconsistent with a strategy that prioritizes strategic competition with China and Russia. On the other hand, the Navy's budget request also increases the planned P-8A buy by three over the 2018 request, for a total of ten. These aircraft provide anti-submarine warfare capabilities critical to counter both Chinese and Russian undersea operations and replace P-3s that are nearing end of service life.

The Marine Corps continues to buy the short take-off/vertical landing (STOVL) variant of the F-35 at a steady rate of 20 per year. These new F-35Bs are required to replace the Marine Corps' AV-8B Harriers and F/A-18A-D Hornets, which are at end of their extended service life.

The Navy's RDT&E request does not contain much that is new in terms of aviation, but it does continue to invest in several significant programs already in development. The request provides \$718.9 million for unmanned carrier aviation, including the MQ-25, which will extend the range of carrier-launched aircraft by providing badly needed tanking capacity.⁴⁵ Formerly the Unmanned Carrier Launched Airborne Surveillance and Strike (UCLASS), the MQ-25 concept's focus on refueling is a departure from the Navy's original plan to develop an unmanned surveillance and strike platform. The Navy also requests \$574.8 million to continue development of the next generation jammer, required to keep up with the evolution of electronic warfare – defending U.S. military use of and attacking adversary use of the electromagnetic spectrum. Last but not least, the RDT&E request provides an additional \$511.5 million for F-35 continuous capability development and delivery.

Readiness

The aforementioned increase in the number of ships and aircraft in the Navy could improve readiness by reducing stress on these fleets. In theory, more platforms across the same number of missions should mean increased time for training and maintenance, while newer platforms should reduce maintenance requirements. But it could also exacerbate readiness challenges into the future, as a bigger Navy and Marine Corps means more ships and aircraft to maintain. The budget does not increase the capacity of maintenance depots, nor

does it significantly grow maintenance funding. The Navy asserts that maintenance accounts are funded to maximum executable levels, meaning that they provide funding to put as many ships and aircraft through the depots as those depots can handle in a single year. But whether or not the Navy has enough depot capacity in the first place is another question entirely. Current Navy plans, such as service life extension for F/A-18s and modernization of the cruiser fleet, will stress depots further. It is not at all clear that the Navy's budget request funds the maintenance capacity required to keep its growing fleet in fighting shape.

Both the Navy's and the Marine Corps' end strengths grow in the 2019 budget request in service of improving readiness. The 2019 request grows the Navy by 7,500 sailors, for a total of 335,400 in the active component, and increase by a further 9,400, for a total of 344,800 sailors by 2023.⁴⁶ Much of this growth is required to man the new ships the Navy is bringing into the fleet. The remainder fills gaps in existing force structure, adding additional manning to support things like the plan to have two crews per LCS, known as blue and gold. The Marine Corps grows by 1,100 Marines in the 2019 request, for a total of 186,100. The Corps will grow by an additional 300 Marines, for a total of 186,400 by 2023.⁴⁷

Like the other services, the Navy uses its 2019 budget request to build munitions stocks. For the second year, the Navy requests funds to procure the Air Force's Small Diameter Bomb II (SDB II), effective against mobile targets in all weather from stand-off range. It appears the Navy is pleased with SDB II, as it plans to increase its

buy from 90 in 2018 to 750 in 2019. The Navy will also increase procurement of another joint munition, the AIM-9X Sidewinder, from 185 missiles in 2018 to 192 in 2019. Additionally, the Navy is increasing procurement of ship self-defense missiles, growing its Rolling Airframe Missile buy from 60 in 2018 to 120 in 2019.

Conclusion

The Navy and Marine Corps' planned investments in more ships, newer aircraft, and additional personnel may alleviate some of their readiness concerns by increasing the size of the fleet available to meet operational requirements and by lowering maintenance requirements. The Navy and Marine Corps make a readiness-based case for these increases in ships, aircraft, and personnel, arguing that more platforms and people dedicated to the same number of missions will allow more time for training. However, the budget does not include significant increases in maintenance capacity or training funding, nor does it indicate a planned reduction in operations. Buying more ships and aircraft alone will not fix all the underlying issues that resulted in fatal ship collisions and aviation mishaps in 2017, which include inadequate training and crew fatigue.⁴⁸ It is not entirely clear that the Department of the Navy's 2019 budget request has adequately prioritized solutions to these deficiencies. Even with \$14 billion in topline growth over its original 2018 budget request, the Navy may still have to explore other ways of reducing stress on the fleet in order to restore readiness, including reducing operations.



The Defense-wide Account

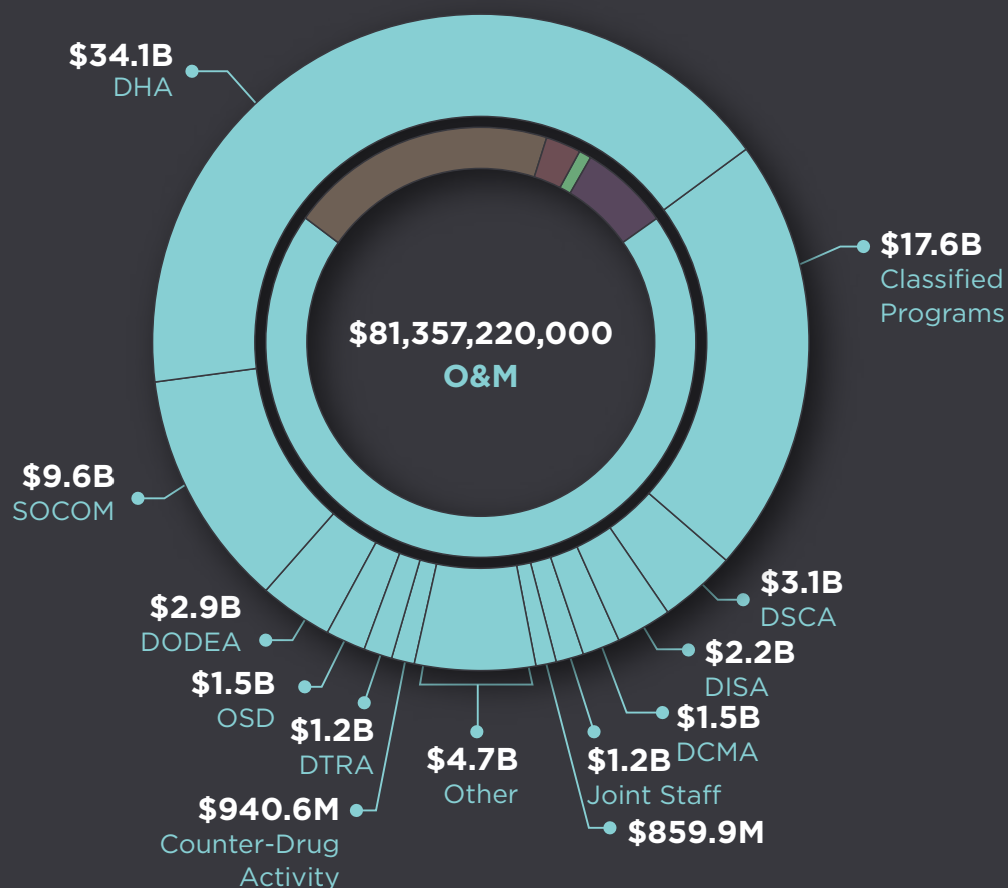
The Defense-wide account, colloquially known as the Fourth Estate, provides funds for all DoD activities that do not fall under one of the military services, including the Office of the Secretary of Defense, the Joint Staff, Special Operations Command (SOCOM), and defense agencies and field activities like the Missile Defense Agency (MDA), the Defense Health Agency (DHA), and the Defense Logistics Agency (DLA). The Defense-wide account is smaller than any of the services and grew less than each of the services, about 5 percent over the fiscal year 2018 request.⁴⁹ This comparatively low growth is consistent with direction from Congress to cut funding for DoD major headquarters by 25 percent by 2020 and with general concern, in and out of Congress, about the size and hierarchical nature the Fourth Estate.⁵⁰ However, Defense-wide funding remains essential to several critical DoD missions: defending the United States against missile threats; supporting special operations forces; and developing groundbreaking technologies, to name three. Moreover, in any organization, but particularly in one the size of DoD, headquarters and back-office functions like human resources and accounting are essential to a well-functioning enterprise.

Further indiscriminate cuts to the Defense-wide accounts would be damaging to the department's warfighting efficacy.

DoD has committed to improving the efficiency and effectiveness of the Fourth Estate.⁵¹ However, further indiscriminate cuts to the Defense-wide accounts would be damaging to the department's warfighting efficacy, as the following examples will show.

Missile Defense Agency

The Missile Defense Agency (MDA) is a research, development, and acquisition organization focused on protecting the homeland from ballistic missile threats (known as national missile defense) and on protecting U.S. military installations and allies overseas from ballistic missile threats (known as regional or theater missile defense). Both the Trump administration and Congress have prioritized missile defense in recent years, increasing funding for MDA in the 2017 appropriation and through amendments to the President's 2018 Budget

DEFENSE-WIDE FY19⁵²

Operations and Maintenance. This title is broad; by statute it includes “expenses, not otherwise provided for, necessary for the operation and maintenance” of the Department. Funding for training, exercises, maintenance, operations, and movement of forces all fall into this category.

This graphic is a sample display of the interactive charts prepared for each of the services and the Defense-wide account. They show each budget by title, by category within each title, and down-to-the-line-item level of detail. To see the full versions, please visit [CNAS.org/PB19](https://cnas.org/PB19).

request. The requested 2018 and 2019 funding increases are driven in part by the growing ballistic missile threat from North Korea. The administration requests \$9.9 billion for the agency in 2019, a very substantial increase of 26 percent over the original 2018 President's Budget request.⁵³ MDA plans to spend the bulk of this funding on research, development, test, and evaluation (RDT&E). It will also spend about a quarter of its 2019 funding request on procurement of national missile defense systems, like Ground-based Midcourse Defense (GMD), and theater missile defense systems, like Terminal High Altitude Area Defense (THAAD).⁵⁵ The forthcoming DoD Missile Defense Review should shed additional light on the department's priorities in this space, but this budget request makes clear that missile defense is a high priority for the Trump administration.

Special Operations Command

Special Operations Command (SOCOM) is a functional combatant command charged with supporting, directing, and overseeing U.S. special operations forces globally. The services provide personnel, platforms, and operational support to SOCOM, but many platforms, munitions, and research and development projects unique to special operations are funded under SOCOM in the Defense-wide account. The Department requests over \$13 billion for this purpose in 2019. This request is about \$1 billion more than the 2018 request, continuing a trend of growth in SOCOM funding. The majority of these funds, over \$9 billion, directly support special operations forces' operations and training.⁵⁶ Most of the remainder goes toward procurement of special operations-specific weapons systems and modifying general purpose platforms for use by special operations forces, both of which are enabled by SOCOM's dedicated procurement authority.⁵⁷

Defense Advanced Research Projects Agency

The Defense Advanced Research Projects Agency's (DARPA) mission is to identify and develop breakthrough national security technologies. DoD established DARPA following the 1957 Soviet launch of the Sputnik satellite to ensure that in the future, the United States "would be the initiator and not the victim of strategic technological surprise."⁵⁸ DoD requests over \$3 billion in RDT&E funding for DARPA in 2019, about the same as the 2018 request.⁵⁹ While the details of DARPA's projects are largely classified, research areas include biomedical technology, advanced aerospace systems, network-centric warfare technology, advanced electronics, and sensor technology. Many of DARPA's research projects have

eventually made their way into the commercial sector; the Global Positioning System, or GPS, is one of the more notable examples.

Conclusion

While much of what the Defense-wide account funds can be classified as back-office functions, substantial portions of this budget category go directly to the heart of DoD's mission. DoD can and should find more efficient ways to do things like human resources management and accounting, but capricious cuts to the Defense-wide account, based on the mistaken perception that it is all overhead risk damaging the department's warfighting efficacy, as these three examples demonstrate.

Conclusions and Next Steps

The 2019 President's Budget request for the Department of Defense grew by \$40 billion over the total requested in 2018.⁶⁰ Having now reviewed every line item, figuring out what grew (end strength and procurement), what was cut (not much), and what stayed about the same (training and maintenance), we can draw a few conclusions. Forty billion dollars is an enormous sum. However, once we account for inflation and cost growth above inflation in personnel and maintenance accounts, the increase is likely not enough to execute the administration's ambitious new National Defense Strategy – though in fairness, it is rare that an administration can honestly claim that its strategy is fully resourced.⁶¹ Furthermore, the administration has not spent these funds to greatest effect. 2019 was the best chance for the Trump administration to reshape the future joint force. Instead of doing so by directing most of this new investment toward the strategy's priority of strategic competition with China and Russia, the department's request spreads it around like peanut butter, investing just a bit more money across a great many existing programs and activities. Any budgeteer will tell you that it is much easier to make new investments when there is new money to back them (i.e., money not already claimed by a program), rather than having to take money from existing programs (which have advocates prepared to defend those funds fiercely in the budget process). Funding levels for 2020 to 2023 released along with the 2019 budget request indicate that there is no new influx of cash coming for defense. Consequently, the administration has missed its best chance to reshape the joint force by deciding instead to more or less sustain the status quo.

The Strategy and the Budget

Budgets should not announce strategy, but it would be foolish not to look at them as evidence of an administration's priorities. Budgets can also reveal what vague or overbroad strategies do not: what the administration plans to deemphasize, or where it has decided to accept risk. Though the unclassified summary of the National Defense Strategy, released just a month prior to the President's Budget request, does identify clear priorities, notably strategic competition with China and Russia, it does not indicate any areas that DoD intends to deemphasize or provide guidance on where or how to accept risk. We hope that the complete, classified version of the strategy provides this guidance to the department. However, if it does not, the strategy attempts to be everything to everyone, an unexecutable ambition.

The department's budget request has the same lack of focus. In this sense, the two are aligned, which is the good news. The bad news is that without guidance about what to stop doing or to do less of, DoD is saddled with more mission than it can afford to sustain. The department has spent the past several years taking a series of peanut-butter-spread cuts (i.e., cuts that skim a bit off

into space. This level of investment is one of the reasons why Congress continues to be frustrated by the department's lack of attention to space, despite DoD's focus on space capability in public statements and strategy documents. Conversely, the Air Force has substantially increased investment in its Next Generation Air Dominance program, designed to ensure continued technological advantage in the air domain decades into the future. So while the Air Force may be the smallest it has ever been, it remains the service most focused on retaining overmatch into the future.⁶⁴

- The Army received the largest increase in this budget cycle, 10 percent more than its 2018 request.⁶⁵ However, due to a series of failed modernization programs, the Army finds itself without next-generation systems ready to enter production and in which to invest this influx of new funding.⁶⁶ Instead, the service is pumping billions into keeping its legacy combat systems like Abrams tanks and Bradley Fighting Vehicles going. However, General Dan Allyn, former Vice Chief of Staff of the Army,

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the top of most organizations and programs, rather than cutting entire programs or activities). At least these cuts were accompanied by attempts to reduce DoD's obligations (e.g., the 2012 Defense Strategic Guidance decision that the force "will no longer be sized to conduct large-scale, prolonged stability operations").⁶² What we now see is the opposite – a series of peanut-butter-spread adds, which is a perplexing approach given that the strategy's expansion is focused on strategic competition with China and Russia. We are left to conclude that the budget appears insufficient to meet the administration's strategic ambition. For example:

- The Air Force grew at the lowest rate of the three military departments, a mere 6 percent over its 2018 request.⁶³ This outcome is difficult to justify, given the Air Force's responsibility for so many advanced capabilities required to retain a technological advantage over Chinese and Russian competitors – the priority announced in the strategy. In particular, investment in space remains insufficient to recapitalize existing systems and invest in the new capabilities required to cope with a war that extends

has stated that these legacy systems leave the Army "outranged, outgunned, and outdated" and "at risk of losing overmatch in every domain."⁶⁷ Prior to releasing the budget request, the Army announced new modernization priorities and plans to revamp its requirements and acquisition processes to speed development of next-generation systems.⁶⁸ But for now, the nation is left with a decidedly unmodern ground force, one that is thoroughly capable of continuing current missions in the Middle East and confronting regional adversaries such as North Korea but that may find itself inadequately equipped to face an adversary with the most advanced battlefield capabilities.

- The Navy and Marine Corps' 2019 request came in at the middle, at about 8 percent over its original 2018 request.⁶⁹ Unfortunately, its plan remains unbalanced, investing in new ships and aircraft (though not as many as many as one would expect given the Navy's force structure goals) but without the training and maintenance capacity required to ensure a ready force. This decision is inconsistent with findings

regarding the root causes of 2017's ship collisions and aviation mishaps – factors like inadequate training and crew fatigue.⁷⁰ Furthermore, the request does not adequately emphasize investment in the kinds of capabilities that would make a difference in a fight with China or Russia. For example, the Navy chose to buy far more fourth-generation F/A-18E/F Super Hornets than stealthy fifth-generation F-35Cs. The request also does not substantially increase subsurface capability or capacity, a domain where the United States currently retains an advantage over the competition.⁷¹ In sum, this budget request will not solve the readiness problems currently plaguing the Navy (low ship and aircraft availability and inadequate training), nor will it adequately prepare the Navy to fight in a future conflict against a highly capable adversary.

These deficiencies are emblematic of the Trump administration's approach to the distribution of new defense resources. Instead of aggressively going after known challenges in the space domain or significantly increasing investment in areas like undersea warfare, where the United States has a known asymmetric advantage over the advanced capabilities of its rivals, the 2019 budget request generally just does more of the same. An influx of \$40 billion presented the department with an incredible opportunity to reexamine what it wants the

These deficiencies are emblematic of the Trump administration's approach to the distribution of new defense resources.

future joint force to look like and then begin to make it so. Instead, the administration is doubling down on combat systems that are already out-of-date, like the Abrams tank and the Super Hornet. There is logic in this approach. DoD has cash in hand today, but the future remains uncertain. Investing in developmental programs is wise only if there will be money in future years to bring those programs into production. Instead of taking this chance, the department has for the most part opted to buy tried-and-true systems that are available today. Without stability in the defense budgets, it is difficult to blame the department for going this safer route. However, another influx of cash of this magnitude does not appear on the horizon. In this sense, the department

missed the rare opportunity presented for the 2019 budget request to make significant changes to the future years' defense programs.

Next Steps

The President's Budget is the first step in the process; it is the administration's request to Congress for resources. It is now up to Congress to decide how much money it will give the department and how the department may spend that money. Unfortunately, Congress has a pretty terrible track record of providing timely and stable defense budgets. Congress has made a deal to adjust discretionary budget caps for both fiscal years 2018 and 2019, increasing the caps on national defense spending by \$80 billion for fiscal 2018 and \$85 billion for fiscal 2019 over the original caps defined by the Budget Control Act of 2011.⁷² For fiscal year 2018, Congress has also finally passed a defense appropriation, halfway through the fiscal year. DoD now has less than six months to spend an additional \$30 billion, which will be difficult if not impossible. DoD Comptroller David Norquist sought additional flexibility from Congress to allow the department to execute this additional funding.⁷³ Congress has provided DoD with some limited additional spending flexibility, but it will still be difficult to execute these new funds efficiently, ensuring that taxpayer dollars go to the department's highest priorities.⁷⁴

Now that Congress has appropriated funds for 2018, the defense authorizing committees (Senate and House Armed Services) will begin work on the 2019 National Defense Authorization Act (NDAA). This bill provides DoD with the authority to spend money, but not with the money itself; providing funds is the remit of appropriations bills, which are developed with real resource constraints. As a result, the funding levels contained in the NDAA are frequently higher than those in the final appropriation. The appropriations committees (Defense Subcommittees of House and Senate Appropriations) usually begin their work after the authorizing committees are close to finalizing the NDAA. They develop a defense appropriations bill that is usually passed as part of an omnibus federal funding package but is occasionally taken up on its own, if Congress wishes to fund DoD before it is ready to provide funds for the rest of the federal government.

The two-year budget deal, covering both fiscal years 2018 and 2019, should, in theory, allow Congress to pass a 2019 budget on time, before the new fiscal year begins on October 1. If Congress does so, it would be the first time since 2009. However, this outcome is not assured. As recently as 2017, Congress elected not to abide by

the second year of a two-year budget deal, resulting in the longest string of continuing resolutions in recent memory. Furthermore, Office of Management and Budget Director Mick Mulvaney has already indicated that he would like to alter the terms of the current budget deal by reducing funding for non-defense discretionary accounts to levels lower than what the post-deal caps provide, which is not a good sign for the deal's future.⁷⁵ The 2018 midterm elections add another layer of complexity. If either Republicans or Democrats choose to walk away from the budget deal, the result will likely be another round of long continuing resolutions, potential shutdowns, and continued budget chaos.⁷⁶

Beyond 2019

Even if the current two-year deal survives its full term, the law of the land requires a return to the draconian 2011 Budget Control Act caps for fiscal year 2020 unless Congress negotiates yet another deal, reinforcing the continued instability and uncertainty in the defense budgeting process.⁷⁷ Both the White House's Office of Management and Budget and DoD have committed to a Future Years Defense Program (FYDP) that increases the defense budget by around 2 percent per year from 2020 to 2023. Under the most optimistic assumptions, this growth may just cover inflation. Consequently, we can predict that DoD will not be receiving any additional windfall in the near to mid-term. The best it can hope for is to hold on to the planned 2018 and 2019 funding levels.

Further complicating matters, the future of Overseas Contingency Operations (OCO) funds remains an open question. OCO funds were designed to help the department get the funds it needed to prosecute the wars in Iraq and Afghanistan as those conflicts evolved. When used appropriately, they provide increased transparency on the costs of war. However, following the 2011 Budget

and permanent infrastructure in the Middle East. In presenting the 2019 budget request, DoD Comptroller David Norquist announced an intent to gradually shift enduring costs currently in OCO into the base budget over the next several years, an intent that the Obama administration shared.⁷⁸ However, doing so without reducing DoD's overall topline is contingent upon Congress granting further relief from the existing base budget caps – a tall order, to say the least.

Conclusion

Deputy Secretary of Defense Patrick Shanahan has described the 2020 budget request as “the masterpiece,” but in fact it might be the Trump administration's last chance.⁷⁹ It is the last budget that this administration will execute before the 2020 presidential election. In truth, this administration has already missed its best chance to make substantial changes to the defense program. There is logic to the department's decision to emphasize acquiring or upgrading existing systems rather than more aggressively pursuing next-generation systems, given continued uncertainty and instability in future defense budgets. However, the opportunity presented by a large increase in topline to pursue the kinds of programs that will keep the U.S. military competitive against China and Russia into the future is rare indeed, and the 2019 President's Budget request for defense does not make the most of it.

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Control Act, OCO funds, which are not subject to the spending caps, were the only release valve available for an overpressurized defense budget. Congress, the White House, and DoD were all complicit in using OCO funds to support enduring requirements such as ship operations

Endnotes

- Executive Office of the President, *Office of Management and Budget, Analytical Perspectives: Budget of the U.S. Government Fiscal Year 2018*, <https://www.gpo.gov/fdsys/pkg/BUDGET-2018-PER/pdf/BUDGET-2018-PER.pdf>.
- U.S. House of Representatives, Bipartisan Budget Act of 2018, H.R.1892, 115th Congress, <https://www.congress.gov/bill/115th-congress/house-bill/1892>.
- Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, (January 19, 2018), <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.
- Susanna V. Blume, "How the United States Can Get More Strategic Bang for Its Force Structure Buck," War on the Rocks, February 01, 2018, <https://warontherocks.com/2018/02/united-states-can-get-strategic-bang-force-structure-buck/>.
- Department of Defense, *President's Budget Fiscal Year 2009*, (2008), <https://www.gpo.gov/fdsys/pkg/BUDGET-2009-BUD/pdf/BUDGET-2009-BUD-11.pdf>. U.S. House of Representatives, *Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009*, H.R.2638, 110th Congress, <https://www.congress.gov/bill/110th-congress/house-bill/2638>. Executive Office of the President, Office of Management and Budget, *A New Era of Responsibility: Renewing America's Promise*, (2009), <https://www.gpo.gov/fdsys/pkg/BUDGET-2010-BUD/pdf/BUDGET-2010-BUD.pdf>. U.S. House of Representatives, *Legislative Branch Appropriations Act, 2010*, H.R.2918, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-bill/2918/actions>. U.S. House of Representatives, *Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010*, H.R.2996, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-bill/2996>. U.S. House of Representatives, *Department of Defense Appropriations Act, 2010*, H.R.3326, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-bill/3326>. Executive Office of the President, Office of Management and Budget, *Budget of the U.S. Government: Fiscal Year 2011*, (2010), <https://www.gpo.gov/fdsys/pkg/BUDGET-2011-BUD/pdf/BUDGET-2011-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations Act, 2011*, H.R.3081, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-bill/3081>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2011, and for other purposes*, H.J.Res.101, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-joint-resolution/101>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2011, and for other purposes*, H.J.Res.105, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-joint-resolution/105>. U.S. House of Representatives, *Continuing Appropriations and Surface Transportation Extensions Act, 2011*, H.R.3082, 111th Congress, <https://www.congress.gov/bill/111th-congress/house-bill/3082>. U.S. House of Representatives, *Further Continuing Appropriations Amendments, 2011*, H.J.Res.44, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-joint-resolution/44>. U.S. House of Representatives, *Additional Continuing Appropriations Amendments, 2011*, H.J.Res.48, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-joint-resolution/48>. U.S. House of Representatives, *Further Additional Continuing Appropriations Amendments, 2011*, H.R.1363, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-bill/1363>. U.S. House of Representatives, *Department of Defense and Full-Year Continuing Appropriations Act, 2011*, H.R.1473, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-bill/1473>. Executive Office of the President, Office of Management and Budget, *Fiscal Year 2012 Budget of the U.S. Government*, (2011), <https://www.gpo.gov/fdsys/pkg/BUDGET-2012-BUD/pdf/BUDGET-2012-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations Act, 2012*, H.R.2017, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-bill/2017>. U.S. House of Representatives, *Continuing Appropriations Act, 2012*, H.R.2608, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-bill/2608>. U.S. House of Representatives, *Consolidated and Further Continuing Appropriations Act, 2012*, H.R.2112, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-bill/2112>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2012, and for other purposes*, H.J.Res.94, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-joint-resolution/94>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2012, and for other purposes*, H.J.Res.95, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-joint-resolution/95>. U.S. House of Representatives, *Consolidated Appropriations Act, 2012*, H.R.2055, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-bill/2055>. Executive Office of the President, Office of Management and Budget, *Fiscal Year 2013 Budget of the U.S. Government*, (2012), <https://www.gpo.gov/fdsys/pkg/BUDGET-2013-BUD/pdf/BUDGET-2013-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations Resolution, 2013*, H.J.Res.117, 112th Congress, <https://www.congress.gov/bill/112th-congress/house-joint-resolution/117>. U.S. House of Representatives, *Consolidated and Further Continuing Appropriations Act, 2013*, H.R.933, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-bill/933>. Executive Office of the President, Office of Management and Budget, *Fiscal Year 2014 Budget of the U.S. Government*, (2013), <https://www.gpo.gov/fdsys/pkg/BUDGET-2014-BUD/pdf/BUDGET-2014-BUD.pdf>. U.S. House of Representatives, *Pay Our Military Act*, H.R.3210, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-bill/3210>. U.S. House of Representatives, *Continuing Appropriations Act, 2014*, H.R.2775, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-bill/2775>. U.S. House of Representatives, *Continuing Appropriations Resolution*,

- 2014, H.J.Res.59, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-joint-resolution/59>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2014, and for other purposes*, H.J.Res.106, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-joint-resolution/106>. U.S. House of Representatives, *Consolidated Appropriations Act, 2014*, H.R.3547, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-bill/3547>. Executive Office of the President, Office of Management and Budget, *Fiscal Year 2015 Budget of the U.S. Government*, (2014), <https://www.gpo.gov/fdsys/pkg/BUDGET-2015-BUD/pdf/BUDGET-2015-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations Resolution, 2015*, H.J.Res.124, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-joint-resolution/124>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2015, and for other purposes*, H.J.Res.130, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-joint-resolution/130>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2015, and for other purposes*, H.J.Res.131, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-joint-resolution/131>. U.S. House of Representatives, *Consolidated and Further Continuing Appropriations Act, 2015*, H.R.83, 113th Congress, <https://www.congress.gov/bill/113th-congress/house-bill/83>. Executive Office of the President, Office of Management and Budget, *Fiscal Year 2016 Budget of the U.S. Government*, (2015), <https://www.gpo.gov/fdsys/pkg/BUDGET-2016-BUD/pdf/BUDGET-2016-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations Act, 2016*, H.R.719, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/719>. U.S. House of Representatives, *Further Continuing Appropriations Act, 2016*, H.R.2250, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/2250>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2016, and for other purposes*, H.J.Res.78, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-joint-resolution/78?r=2>. U.S. House of Representatives, *Consolidated Appropriations Act, 2016*, H.R.2029, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/2029>. Executive Office of the President, Office of Management and Budget, *Budget of the U.S. Government: Fiscal Year 2017*, (2016), <https://www.gpo.gov/fdsys/pkg/BUDGET-2017-BUD/pdf/BUDGET-2017-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations and Military Construction, Veterans Affairs, and Related Agencies Appropriations Act, 2017*, and *Zika Response and Preparedness Act*, H.R.5325, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/5325>. U.S. House of Representatives, *Further Continuing and Security Assistance Appropriations Act, 2017*, H.R.2028, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/2028>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2017, and for other purposes*, H.J.Res.99, 115th Congress, <https://www.congress.gov/bill/115th-congress/house-joint-resolution/99>. U.S. House of Representatives, *Consolidated Appropriations Act, 2017*, H.R.244, 115th Congress, <https://www.congress.gov/bill/115th-congress/house-bill/244>. Executive Office of the President, Office of Management and Budget, *Budget of the U.S. Government, A New Foundation for American Greatness, Fiscal Year 2018*, (2017), <https://www.gpo.gov/fdsys/pkg/BUDGET-2018-BUD/pdf/BUDGET-2018-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations and Military Construction, Veterans Affairs, and Related Agencies Appropriations Act, 2017*, and *Zika Response and Preparedness Act*, H.R.5325, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/5325>. U.S. House of Representatives, *Further Continuing and Security Assistance Appropriations Act, 2017*, H.R.2028, 114th Congress, <https://www.congress.gov/bill/114th-congress/house-bill/2028>. U.S. House of Representatives, *Making further continuing appropriations for fiscal year 2017, and for other purposes*, H.J.Res.99, 115th Congress, <https://www.congress.gov/bill/115th-congress/house-joint-resolution/99>. U.S. House of Representatives, *Consolidated Appropriations Act, 2017*, H.R.244, 115th Congress, <https://www.congress.gov/bill/115th-congress/house-bill/244>. Executive Office of the President, Office of Management and Budget, *Budget of the U.S. Government, A New Foundation for American Greatness, Fiscal Year 2018*, (2018), <https://www.gpo.gov/fdsys/pkg/BUDGET-2018-BUD/pdf/BUDGET-2018-BUD.pdf>. U.S. House of Representatives, *Continuing Appropriations Act, 2018 and Supplemental Appropriations for Disaster Relief Requirements Act, 2017*, H.R.601, 115th Congress, <https://www.congress.gov/bill/115th-congress/house-bill/601?q=%7B%22search%22%3A%5B%22h.r.601%22%5D%7D&r=1>.
6. Includes FY 2018 budget request amendments for missile defense, ship repair, increased presence in Afghanistan, and hurricane recovery. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf. Mulvaney, Mick to Donald J. Trump, November 3, 2017. In *Estimate #3 — FY 2018 Budget Amendments*, https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/DOD_budgetamendment_package_nov2017.pdf. Department of Defense, *Details in support of the FY2018 Budget Amendment Request for Recovery from Hurricanes Harvey, Irma, and Maria*, (November 2017), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/November2017HurricaneAmended/FY18_DoD_Budget_Amendment-Hurricane_Recovery_Nov2017.pdf.
 7. Susanna V. Blume and Lauren Fish, “What to Expect in the President’s 2019 Budget Request,” (Center for a New American Security, February 8, 2018), <https://www.cnas.org/publications/analysis/articles-and-essays/what-to-expect-in-the-presidents-2019-budget-request>.

org/publications/reports/what-to-expect-in-the-presidents-2019-budget-request.

8. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Defense Budget Overview: United States Department of Defense Fiscal Year 2018 Budget Request*, (May 2017), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request_Overview_Book.pdf. The White House, Executive Office of the President, Office of Management and Budget, *DOD Budget Amendment Package November 2017*, (November 2017), https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/DOD_budgetamendment_package_nov2017.pdf. Department of Defense, *Details in support of the FY 2018 Budget Amendment Request for Recovery from Hurricanes Harvey, Irma, and Maria*, (November 2017), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/November2017HurricaneAmended/FY18_DoD_Budget_Amendment-Hurricane-Recovery_Nov2017.pdf. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018) http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Defense Budget Overview: United States Department of Defense Fiscal Year 2017 Budget Request*, 4-555B0A9 (Feb. 2016), 1-5, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2017/FY2017_Budget_Request_Overview_Book.pdf. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2019), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf.
9. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, (January 19, 2018), <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.
10. Department of Defense, Missile Defense Agency, “Elements: Ground-based Midcourse Defense,” <https://www.mda.mil/system/gmd.html>.
11. Department of Defense, Missile Defense Agency, “Elements: Aegis Ballistic Missile Defense,” https://www.mda.mil/system/aegis_bmd.html. Department of Defense, Missile Defense Agency, “Elements: Terminal High Altitude Area Defense (THAAD),” <https://www.mda.mil/system/thaad.html>.
12. “Transcript of Donald Trump’s speech on national security in Philadelphia,” Pundits Blog on TheHill.com, September 7, 2016, <http://thehill.com/blogs/pundits-blog/campaign/294817-transcript-of-donald-trumps-speech-on-national-security-in>.
13. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, Revised Defense Budget Overview: United States Department of Defense Fiscal Year 2019 Budget Request, (February 13, 2018), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request_Overview_Book.pdf. Of this total, \$37.9 billion is known as the “pass through”; these funds are literally passed through the Air Force budget and on to other DoD programs not controlled by the Air Force. Subtracting the pass through from the total request leaves \$156 billion in Air Force controlled budget authority. For more information, see United States Air Force, Financial Management and Comptroller, Fiscal Year 2019 Budget Overview, (February 2018), www.saffm.hq.af.mil/Portals/84/documents/FY19/FY19_BOB_FINAL_v3.pdf?ver=2018-02-13-150300-757.
14. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1) [Microsoft Excels], (February 2018). Totals in the graphic differ from those reported in the DoD Comptroller’s overview documents. The overview documents report budget authority, while the “-1s” used to produce this graphic report total obligation authority. The differences include treatment of reprogramming, rescissions, unobligated balances, and offsetting receipts. For more information, see the National Defense Budget Estimates, or “Green Book.” Graphic includes pass through and excludes “less reimbursables,” a negative line item in MILPERS account.
15. U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 7, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf.
16. United States Air Force, Secretary of the Air Force Public Affairs, *Air Force outlines future of bomber force*, (February 12, 2018), <http://www.af.mil/News/Article-Display/Article/1438634/air-force-outlines-future-of-bomber-force/>.
17. Colin Clark, “SecAF Says B-21 ‘On Schedule’ As China Rises To Air Force’s Top Threat,” Breaking Defense, February 14, 2018, <https://breakingdefense.com/2018/02/secaf-says-b-21-on-schedule-as-china-rises-to-air-forces-top-threat/>.
18. Jerry Hendrix, “Don’t Retire Our Stealth Bombers,” National Review, February 14, 2018, <https://www.national-review.com/2018/02/dont-retire-stealth-bombers-budget-better/>.
19. United States Air Force, “E-8C Joint Stars”, September 23, 2015, <http://www.af.mil/About-Us/Fact-Sheets/Display/Article/104507/e-8c-joint-stars/>.

20. United States Air Force, "Space Based Infrared System", November 23, 2015, <http://www.af.mil/About-Us/Fact-Sheets/Display/Article/104549/space-based-infrared-system/>.
21. Department of Defense, Office of the Secretary of Defense, *Nuclear Posture Review*, (February 2018), <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>.
22. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 7, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf.
23. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf.
24. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1) [Microsoft Excels], (February 2018). Totals in the graphic differ from those reported in the DoD Comptroller's overview documents. The overview documents report budget authority (BA), while the "-1s" used to produce this graphic report total obligation authority (TOA). The differences include treatment of reprogramming, rescissions, unobligated balances, and offsetting receipts. For more information, see the National Defense Budget Estimates, or "Green Book." Graphic excludes "less reimbursibles," a negative line item in MILPERS account
25. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (February 2018). Totals in the graphic differ from those reported in the DoD Comptroller's overview documents. The overview documents report budget authority (BA), while the "-1s" used to produce this graphic report total obligation authority (TOA). The differences include treatment of reprogramming, rescissions, unobligated balances, and offsetting receipts. For more information, see the *National Defense Budget Estimates*, or "Green Book." Graphic excludes "less reimbursibles," a negative line item in MILPERS account.
26. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 7, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf.
27. Under Secretary of Defense Robert L. Wilkie to Secretaries of the Military Departments, Chairman of the Joint Chiefs of Staff, Under Secretaries of Defense, Deputy Chief Management Officer, Chief of National Guard Bureau, Director of Cost Assessment and Program Evaluation, February 14, 2018, Department of Defense, Office of Personnel and Readiness, DoD Retention Policy for Non-Deployable Service Members, <https://1yxsm73j7a-op3quc9y5ifaw3-wpengine.netdna-ssl.com/wp-content/uploads/2018/02/Untitled-attachment-00016.pdf>.
28. Terri Moon Cronk, "Mattis: New Policy Cracks Down on Force Deployability," DoD News, Department of Defense, February 18, 2018, <https://www.defense.gov/News/Article/Article/1444961/mattis-new-policy-cracks-down-on-force-deployability/>.
29. Phillip Carter, Katherine Kidder, Amy Schaefer, and Andrew Swick, "AVF 4.0: The Future of All-Volunteer Force," (Center for a New American Security, March 28, 2017), <https://www.cnas.org/publications/reports/avf-4-0-the-future-of-the-all-volunteer-force>.
30. United States Department of Labor, Bureau of Labor Statistics, "(Seas) Unemployment rate," https://data.bls.gov/pdq/SurveyOutputServlet?request_action=wh&graph_name=LN_cpsbref3.
31. General Mark A. Miller, Ryan D. McCarthy, "Modernization Priorities for the United States of Army," October 3, 2017, <https://admin.govexec.com/media/untitled.pdf>.
32. Christopher G. Pernin, Elliot Axelband, Jeffrey A. Drezner, Brian Dille, John Gordon IV, Bruce Held, K. Scott McMahon, Walter L. Perry, et al, "Lessons from the Army's Future Combat Systems Program," Santa Monica, CA: RAND Corporation, 2012. <https://www.rand.org/pubs/monographs/MG1206.html>.
33. Mark T. Esper, Secretary of the Army, testimony to the Committee on Armed Services, United States Senate, December 7, 2017, https://www.armed-services.senate.gov/imo/media/doc/Esper_12-07-17.pdf
34. Executive Office of the President, *National Security Strategy of the United States of America*, (December 2017), <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, (January 19, 2018), <https://www.defense.gov/Portals/1/Documents/>

pubs/2018-National-Defense-Strategy-Summary.pdf.

35. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *European Deterrence Initiative: Department of Defense Budget Fiscal Year (FY) 2019*, (February 2018), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/fy2019_EDLJBook.pdf.
36. U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf. Fiscal year 2018 figure does not include amended requests for ship repairs, missile defense, or hurricane recovery.
37. Sarah Sicard and Jared Keller, “The KC-130 Crash Is Just The Latest Tragedy In The Marine Corps’ Worsening Aviation Mishap Crisis,” July 11, 2017, <https://taskandpurpose.com/marine-plane-crash-data/>. Department of the Navy, “Enclosure (1) Report on the Collision between USS Fitzgerald (DDG 62) and Motor Vessel ACX CRYSTAL and Enclosure (2) Report on the Collision between USS JOHN S MCCAIN (DDG 56) and Motor Vessel ALNIC MC,” October 23, 2017, <https://www.cnas.org/publications/reports/presidents-2019-navy-marine-corps-budget-request#fn1>.
38. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1) [Microsoft Excels], (February 2018). Totals in the graphic differ from those reported in the DoD Comptroller’s overview documents. The overview documents report budget authority (BA), while the “-1s” used to produce this graphic report total obligation authority (TOA). The differences include treatment of reprogramming, rescissions, unobligated balances, and offsetting receipts. For more information, see the National Defense Budget Estimates, or “Green Book.” Graphic excludes “less reimbursables,” a negative line item in MILPERS account. The “aviation” wedge under procurement includes both Navy and Marine Corps aircraft and aircraft support
39. Office of the Chief of Naval Operations, Deputy Chief of Naval Operations (Warfare Systems) (N9), *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019*, F-9428887, January 31, 2018, http://www.secnave.navy.mil/fmc/fmb/Documents/19pres/LONGRANGE_SHIP_PLAN.pdf.
40. Office of the Secretary of the Navy, “Secretary of the Navy Announces Need for 355-ship Navy,” December 16, 2016, http://www.navy.mil/submit/display.asp?story_id=98160.
41. Department of Defense, Office of the Chief of Naval Operations, Deputy Chief of Naval Operations, *Report to Congress on the Annual Long-Range Plan for Construction of Naval Vessels for Fiscal Year 2019*, (February 2018), http://www.secnave.navy.mil/fmc/fmb/Documents/19pres/LONGRANGE_SHIP_PLAN.pdf.
42. Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob Heim, Jeff Hagen, Sheng Tao Li, Jeffrey Engstrom, et al, “Chinese Threats to U.S. Surface Ships: An Assessment of Relative Capabilities, 1996–2017,” Santa Monica, CA: RAND Corporation, 2015. https://www.rand.org/pubs/research_briefs/RB9858z4.html.
43. Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob Heim, Jeff Hagen, Sheng Tao Li, Jeffrey Engstrom, et al, “Tallying the U.S.-China Military Scorecard: Relative Capabilities and the Evolving Balance of Power, 1996–2017,” Santa Monica, CA: RAND Corporation, 2015. https://www.rand.org/pubs/research_briefs/RB9858z1.html.
44. Rear Admiral Roy Kelley, “F-35C Integration into the Fleet,” Navy Live, March 26, 2018, <http://navylive.dodlive.mil/2017/08/03/f-35c-integration-into-the-fleet/>.
45. United States Navy, “Fact File: MQ-25 UAS (Formerly UCLASS),” February 7, 2017, http://www.navy.mil/navydata/fact_display.asp?cid=4350&tid=800&ct=4.
46. In U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf.
47. Secretary of the Navy, Office of Budget, *Highlights of the Department of the Navy FY 2019 Budget*, (2018), http://www.secnave.navy.mil/fmc/fmb/Documents/19pres/Highlights_book.pdf.
48. Sicard and Keller, “The KC-130 Crash Is Just The Latest Tragedy In The Marine Corps’ Worsening Aviation Mishap Crisis,” July 11, 2017, <https://taskandpurpose.com/marine-plane-crash-data/>. Department of the Navy, “Enclosure (1) Report on the Collision between USS Fitzgerald (DDG 62) and Motor Vessel ACX CRYSTAL and Enclosure (2) Report on the Collision between USS JOHN S MCCAIN (DDG 56) and Motor Vessel ALNIC MC,” October 23, 2017, <https://www.cnas.org/publications/reports/presidents-2019-navy-marine-corps-budget-request#fn1>.
49. U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Under Secretary of

- Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf.
50. 114-92 U.S.C., “National Defense Authorization Act for Fiscal Year 2016,” <https://www.congress.gov/114/plaws/publ92/PLAW-114publ92.pdf>.
 51. “Off-Camera, On-The-Record Media Availability with Deputy Secretary Shanahan,” Interview, U.S. Department of Defense, December 21, 2017, <https://www.defense.gov/News/Transcripts/Transcript-View/Article/1402941/off-camera-on-the-record-media-availability-with-deputy-secretary-shanahan/>.
 52. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (February 2018). Totals in the graphic differ from those reported in the DoD Comptroller’s overview documents. The overview documents report budget authority (BA), while the “-1s” used to produce this graphic report total obligation authority (TOA). The differences include treatment of reprogramming, rescissions, unobligated balances, and offsetting receipts. For more information, see the National Defense Budget Estimates, or “Green Book.”
 53. Department of Defense, Missile Defense Agency, *PB 2019-23 Budget Summary*, (March 2018), https://www.mda.mil/global/documents/pdf/budgetfy19_summary.pdf.
 54. Department of Defense, Missile Defense Agency, *Fiscal Year (FY) 2019 Budget Estimates Overview*, (March 14, 2018), <https://www.mda.mil/global/documents/pdf/budgetfy19.pdf>.
 55. Department of Defense, Missile Defense Agency, “Elements: Ground-based Midcourse Defense,” <https://www.mda.mil/system/gmd.html>. Department of Defense, Missile Defense Agency, “Elements: Terminal High Altitude Area Defense (THAAD),” <https://www.mda.mil/system/thaad.html>.
 56. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (February 2018). Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2018 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (May 2017).
 57. “Contracting,” Special Operation Forces Acquisition, Technology & Logistics, <http://www.socom.mil/sof-atl/Pages/contracting.aspx>.
 58. “About DARPA,” Defense Advanced Research Projects Agency, <https://www.darpa.mil/about-us/about-darpa>.
 59. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (February 2018). Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2018 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (May 2017).
 60. Includes FY 2018 budget request amendments for missile defense, ship repair, increased presence in Afghanistan, and hurricane recovery. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf. Mick Mulvaney to Donald J. Trump, November 3, 2017. In *Estimate #3 – FY 2018 Budget Amendments*, https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/DOD_budgetamendment_package_nov2017.pdf. Department of Defense, *Details in support of the FY2018 Budget Amendment Request for Recovery from Hurricanes Harvey, Irma, and Maria*, (November 2017), http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/November2017HurricaneAmended/FY18_DoD_Budget_Amendment-Hurricane_Recovery_Nov2017.pdf.
 61. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, (January 19, 2018), <https://www.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.
 62. Department of Defense, *Sustaining U.S. Global Leadership: Priorities for the 21st Century Defense*, (January 2012), http://archive.defense.gov/news/Defense_Strategic_Guidance.pdf.

63. Susanna V. Blume and Lauren Fish, "2019 President's Budget Request for the Air Force," (Center for a New American Security, February 28, 2018), <https://www.cnas.org/publications/reports/presidents-2019-air-force-budget-request>. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf. Fiscal year 2018 figure does not include amended requests for ship repairs, missile defense, or hurricane recovery.
64. Terri Moon Cronk, "Air Force Chief of Staff Outlines Future Challenges of Military Readiness," DoD News, Department of Defense, February 23, 2017, <https://www.defense.gov/News/Article/Article/1092743/air-force-chief-of-staff-outlines-future-challenges-of-military-readiness/>.
65. Susanna V. Blume and Lauren Fish, "2019 President's Budget Request for the Army," (Center for a New American Security, March 5, 2018), <https://www.cnas.org/publications/reports/presidents-2019-army-budget-request>.
66. Pernin, Axelband, Drezner, Dille, Gordon IV, Held, McMahon, et al, "Lessons from the Army's Future Combat Systems Program," Santa Monica, CA: RAND Corporation, 2012. <https://www.rand.org/pubs/monographs/MG1206.html>.
67. General Daniel Allyn, Vice Chief of Staff United States Army, testimony to the House Armed Services Committee, United States House of Representatives, February 7th, 2017, <http://docs.house.gov/meetings/AS/AS00/20170207/105530/HHRG-115-AS00-Wstate-AllynD-20170207.pdf>. Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2019 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (February 2018). Department of Defense, Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Department of Defense Budget Fiscal Year 2018 Military Personnel Programs (M-1), Operation and Maintenance Programs (O-1), Revolving and Management Funds (RF-1), Procurement Programs (P-1), Procurement Programs (P-1R) Reserve Components, RDT&E Programs (R-1), Construction Programs (C-1)* [Microsoft Excels], (May 2017).
68. General Mark A. Miller, Ryan D. McCarthy, "Modernization Priorities for the United States of Army," October 3, 2017, <https://admin.govexec.com/media/untitled.pdf>. Mark T. Esper, Secretary of the Army, testimony to the Committee on Armed Services, United States Senate, December 7, 2017. https://www.armed-services.senate.gov/imo/media/doc/Esper_12-07-17.pdf.
69. Susanna V. Blume and Lauren Fish, "2019 President's Budget Request for the Navy and Marine Corps," (Center for a New American Security, March 12, 2018). <https://www.cnas.org/publications/reports/presidents-2019-navy-marine-corps-budget-request>. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2019 Budget Request*, (February 2018), 20, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request.pdf. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller) Chief Financial Officer, *Fiscal Year 2018 Budget Request*, (May 2017), 21, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2018/fy2018_Budget_Request.pdf. Fiscal year 2018 figure does not include amended requests for ship repairs, missile defense, or hurricane recovery.
70. Department of the Navy, "Enclosure (1) Report on the Collision between USS Fitzgerald (DDG 62) and Motor Vessel ACX CRYSTAL and Enclosure (2) Report on the Collision between USS JOHN S MCCAIN (DDG 56) and Motor Vessel ALNIC MC," October 23, 2017, <https://www.cnas.org/publications/reports/presidents-2019-navy-marine-corps-budget-request#fn1>. Sicard and Keller, "The KC-130 Crash Is Just The Latest Tragedy In The Marine Corps' Worsening Aviation Mishap Crisis," July 11, 2017, <https://taskandpurpose.com/marine-plane-crash-data/>.
71. Heginbotham, Nixon, Morgan, Heim, Hagen, Li, Engstrom, et al, "Tallying the U.S.-China Military Scorecard: Relative Capabilities and the Evolving Balance of Power, 1996–2017," Santa Monica, CA: RAND Corporation, 2015. https://www.rand.org/pubs/research_briefs/RB9858z1.html.
72. 115-123 U.S.C., "Bipartisan Budget Act of 2018," February 2, 2018, <https://www.congress.gov/bill/115th-congress/house-bill/1892?q=%7B%22search%22%3A%5B%22bipartisan+budget+act+of+2018%22%5D%7D&r=1>.
73. "Pentagon Audit and Business Operations," C-Span.org, March 7, 2018, <https://www.c-span.org/video/?442192-1/senate-holds-hearing-pentagon-business-operations>.
74. Ramona Adams, "Report: David Norquist Asks Lawmakers for Defense Spending Flexibility in FY 2018," ExecutiveGov.com, March 9, 2018, <http://www.executivegov.com/2018/03/report-david-norquist-asks-lawmakers-for-defense-spending-flexibility-in-fy-2018/>.
75. "Press Briefing by OMB Director Mick Mulvaney on President Trump's FY2019 Budget," Interview, Office of Management and Budget, February 12, 2018, <https://www.whitehouse.gov/briefings-statements/press-briefing-omb-director-mick-mulvaney-president-trumps-fy2018-budget/>.
76. Susanna V. Blume and Lauren Fish, "A Brief History of Defense Budget Instability," (Center for a New American

Security, November 8, 2017), <https://www.cnas.org/publications/reports/a-brief-history-of-defense-budget-instability>.

77. 112-25 U.S.C., “Budget Control Act of 2011,” August 2, 2011, <https://www.congress.gov/bill/112th-congress/senate-bill/365/text>.
78. Department of Defense, Press Operations, “Department of Defense News Briefing on the President’s Fiscal Year 2019 Budget,” February 12, 2018, <https://www.defense.gov/News/Transcripts/Transcript-View/Article/1439782/department-of-defense-news-briefing-on-the-presidents-fiscal-year-2019-defense/>.
79. “Off-Camera, On-The-Record Media Availability with Deputy Secretary Shanahan,” Interview, U.S. Department of Defense, December 21, 2017, <https://www.defense.gov/News/Transcripts/Transcript-View/Article/1402941/off-camera-on-the-record-media-availability-with-deputy-secretary-shanahan/>.

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