United States Government Accountability Office

Report to Congressional Committees

November 2021

MISSILE DEFENSE

Recent Acquisition Policy Changes Balance Risk and Flexibility, but Actions Needed to Refine Requirements Process

GAO-22-563

GAO@100

Highlights

Highlights of GAO-22-563, a report to congressional committees

November 2021

MISSILE DEFENSE

Recent Acquisition Policy Changes Balance Risk and Flexibility, but Actions Needed to Refine Requirements Process

Why GAO Did This Study

Since MDA was established in 2002, DOD has invested over $174 billion developing and fielding missile defense capabilities. MDA has used its acquisition flexibilities to quickly develop and field capabilities, but has also had setbacks. In 2020, DOD determined that modifications to MDA's acquisition flexibilities were needed to better balance risk.

Congress recently prohibited DOD from changing certain missile defense acquisition processes and responsibilities unless certain requirements were met. Congress also required DOD to enter into a contract for an independent study of MDA's acquisition process and organizational placement within DOD. The National Defense Authorization Act for Fiscal Year 2021 included a provision for GAO to assess whether DOD complied with these requirements. This report assesses the effects of recent changes DOD made to missile defense non-standard acquisition processes and responsibilities and whether, in doing so, it met the statutory requirements.

GAO reviewed DOD documents and policies issued in 2020 and interviewed DOD officials.

What GAO Recommends

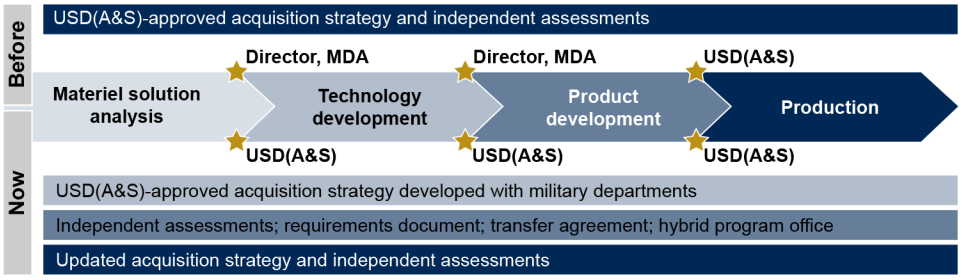
GAO recommends that DOD establish processes and products to align missile defense capabilities in early development with operational-level warfighter requirements. The Under Secretary of Defense for Research and Engineering did not agree with GAO's recommendations but various other DOD components, such as U.S. Strategic Command, agreed. GAO maintains the recommendations are valid, as discussed in this report.

View GAO-22-563. For more information, contact John D. Sawyer at (202) 512-4841 or sawyerj@gao.gov.

What GAO Found

In 2002, the Department of Defense (DOD) provided the Missile Defense Agency (MDA) with flexibilities to diverge from traditional requirements-setting and acquisition processes and instead implement a unique approach to managing its acquisitions. After completing studies in 2019, DOD revised those flexibilities in 2020 by making significant changes to MDA's requirements-setting and acquisition processes (see figure). Most notably, the Under Secretary of Defense for Acquisition and Sustainment, rather than the MDA Director, now determines whether major MDA programs may progress through the development phases.

2020 Department of Defense Changes to Missile Defense Acquisition Process



★ Decision authority
MDA = Missile Defense Agency
USD(A&S) = Under Secretary of Defense for Acquisition and Sustainment
Source: GAO analysis of Department of Defense information. | GAO-22-563

Most of the changes are consistent with GAO's identified acquisition best practices and align with changes GAO previously recommended. For example, MDA must now obtain independent cost estimates and Under Secretary of Defense approval of its acquisition strategies. The warfighter (military planners and weapon system operators) also now has greater requirements-setting responsibility. GAO previously recommended these actions to improve the likelihood of MDA delivering effective capabilities to the warfighter as promised.

However, DOD did not establish processes and products that would fully align missile defense capabilities in early development with operational-level warfighter requirements. Instead, DOD continues to rely on MDA to identify its own operational-level requirements, which could result in MDA later having to make costly, time-consuming design changes to meet warfighter needs.

GAO also found that DOD generally met the statutory requirements Congress established for changing missile defense non-standard acquisition processes and responsibilities by: (a) consulting with required DOD officials; (b) certifying this consultation occurred; (c) reporting the changes to Congress; and (d) generally waiting the required 120 days before implementing the changes. U.S. Strategic Command determined that it did not need to take these same actions on changes it made to requirements-setting processes. GAO also found that DOD generally met a statutory requirement to obtain an independent study on MDA's acquisition process and organizational placement within DOD. As required, DOD updated congressional defense committees on the scope of the study report and provided the report to congressional committees. However, DOD exceeded the statutorily mandated reporting deadline by 13 days.

Contents

Tables

Figures

Abbreviations

AOA	analysis of alternatives
CAPE	Cost Assessment and Program Evaluation
DOD	Department of Defense
DTM	directive-type memorandum
FFRDC	federally funded research and development center
IDA	Institute for Defense Analyses
JCIDS	Joint Capabilities Integration and Development System
MDA	Missile Defense Agency
MDEB	Missile Defense Executive Board
MDIPL	Missile Defense Integrated Priority List
MDR	Missile Defense Review
MDS	Missile Defense System
NDAA	National Defense Authorization Act
NGI	Next Generation Interceptor
OSD	Office of the Secretary of Defense
OUSD	Office of the Under Secretary of Defense
SI	U.S. Strategic Command Instruction
TLRD	Top Level Requirements Document
USD	Under Secretary of Defense
USD(A&S)	Under Secretary of Defense for Acquisition and Sustainment
USD(R&E)	Under Secretary of Defense for Research and Engineering
USSTRATCOM	U.S. Strategic Command
WIP	Warfighter Involvement Process

441 G St. N.W.
Washington, DC 20548

November 10, 2021

Congressional Committees

Since the Missile Defense Agency (MDA) was established in 2002, the Department of Defense (DOD) has invested over $174 billion developing and fielding missile defense capabilities to counter missile threats to the U.S. homeland, deployed forces, and allies. MDA was granted exceptional flexibilities to diverge from DOD's traditional processes for determining capability requirements and managing acquisitions. Instead, MDA has unique processes and responsibilities for acquiring missile defense capabilities.[1] DOD directed MDA to use these acquisition flexibilities to quickly develop and field capabilities, and the agency responded by meeting challenging priorities, such as: a 2002 presidential directive to achieve an operational homeland missile defense system by 2004; a 2009 presidential announcement to begin fielding missile defense capabilities in Europe in 2011; and a 2013 statement by the Secretary of Defense that DOD would field 14 homeland missile defense interceptors by the end of 2017. According to MDA, its acquisition flexibilities and non-standard process for determining missile defense requirements have enabled the agency to meet presidential and departmental deadlines for delivering critically needed capabilities to the warfighter.

However, we have reported over the past 18 years that MDA has struggled to achieve its annual acquisition goals, and DOD has canceled a number of missile defense programs due to cost and technical challenges.[2] Moreover, according to DOD, concerns over capability requirements, technical authorities, cost burden, and programmatic risks have prevented the department from meeting a legislative directive to

[1]DOD generally refers to the capabilities needed to address warfighting deficiencies as capability requirements.

[2]For examples, see GAO, *Missile Defense: Fiscal Year 2020 Delivery and Testing Progressed, but Annual Goals Unmet*, GAO-21-314 (Washington, D.C.: Apr. 28, 2021); *Missile Defense: Ballistic Missile Defense System Testing Delays Affect Delivery of Capabilities*, GAO-16-339R (Washington, D.C.: Apr. 28, 2016); *Defense Acquisitions: Production and Fielding of Missile Defense Components Continue with Less Testing and Validation Than Planned*, GAO-09-338 (Washington, D.C.: Mar. 13, 2009); *Defense Acquisitions: Missile Defense Agency Fields Initial Capability but Falls Short of Original Goals*, GAO-06-327 (Washington, D.C.: Mar. 15, 2006); and *Missile Defense: Knowledge-Based Practices Are Being Adopted, but Risks Remain*, GAO-03-441 (Washington, D.C.: Apr. 30, 2003).

transfer programs from MDA to the military services once they reach the production phase of the acquisition process.[3]

In an April 2019 memorandum, the Deputy Secretary of Defense stated that a modified acquisition approach that better balances program schedule with technical, cost, and integration risk may be justified now that the department has fielded missile defense capabilities. As a result, the Deputy Secretary directed a review of MDA's acquisition approaches to identify changes that will promote transferring programs to the military services and reduce risk in missile defense development while ensuring MDA retains acquisition flexibilities to address evolving missile threats. DOD performed the review and coordinated with stakeholders on drafting a directive-type memorandum (DTM) that would establish new processes and responsibilities for acquiring missile defense capabilities.[4] The Deputy Secretary approved the memorandum in March 2020, which went into effect 5 months later. In 2019, DOD also reviewed the warfighter's process for advocating for missile defense capabilities.[5] Following the review, U.S. Strategic Command (USSTRATCOM) drafted an update to its instruction that governs the warfighter advocacy process, coordinated the proposed changes with DOD stakeholders, and issued the instruction in July 2020.

Section 1688(b) of the National Defense Authorization Act (NDAA) for Fiscal Year 2020, enacted on December 20, 2019, prohibited the

[3]See Deputy Secretary of Defense Memorandum, *Task to Review Missile Defense Agency Acquisition Approaches and Programs for Transfer* (Washington, D.C.: Apr. 04, 2019). In the National Defense Authorization Act for Fiscal Year 2018, Congress mandated that MDA transfer the acquisition and total obligation authority of its missile defense programs that received Milestone C (i.e., production start) approval in accordance with 10 U.S.C. § 2366 to the military services by the time the President's fiscal year 2021 budget was submitted. Pub. L. No. 115-91, § 1676(b). In the National Defense Authorization Act for Fiscal Year 2021, Congress extended this deadline to the President's fiscal year 2023 budget submission. Pub. L. No. 116-283, § 1643.

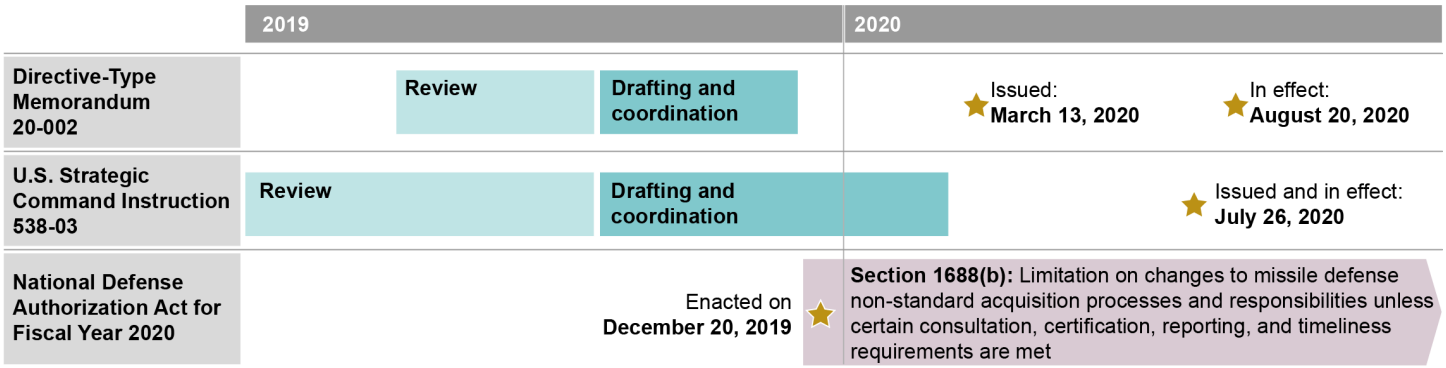
[4]A directive-type memorandum (DTM) establishes DOD policy or implements policy established in existing DOD directives and instructions, assigns responsibilities, and may provide procedures. According to DOD, a DTM will only be issued for time-sensitive actions and only when time constraints prevent incorporating into an existing or new directive or instruction. DTMs are not allowed by DOD to be used to permanently change or supplement existing issuances and cannot be effective for longer than 12 months from the date signed, unless extended in accordance with the issuance.

[5]For the purpose of this report, the term "warfighter" refers to combatant commands, military services, and joint staff personnel and leaders serving in a military planning capacity that participate in DOD's process for identifying, assessing, validating, and approving capability requirements.

Secretary of Defense from making any changes to missile defense non-standard acquisition processes and responsibilities unless certain consultation, certification, reporting, and timeliness requirements were met. Section 1688(a) included a requirement for DOD to enter into a contract with a federally funded research and development center for an independent study assessing MDA's organizational placement within DOD and potentially transitioning MDA to DOD's standard acquisition process.

Figure 1 shows the timing of DOD's memorandum, USSTRATCOM's instruction, and enactment of the NDAA for Fiscal Year 2020.

Figure 1: Timeline for Missile Defense Policies Issued after the National Defense Authorization Act for Fiscal Year 2020



Source: GAO analysis of Department of Defense information and Pub. L. No. 116-92. | GAO-22-563

Section 1641 of the NDAA for Fiscal Year 2021 included a provision for GAO to assess whether the Secretary of Defense complied with section 1688 of the NDAA for Fiscal Year 2020. This report addresses: (1) the extent to which DOD made changes to missile defense requirements-setting and acquisition management processes and responsibilities since the NDAA for Fiscal Year 2020 was enacted; (2) how these changes may affect capability development and timeliness of delivery; (3) whether DOD, in making changes, met requirements in section 1688(b) of the NDAA for Fiscal Year 2020; and (4) whether DOD, in obtaining an independent study assessing the organizational structure of MDA and

potential transition to DOD's standard acquisition process, met requirements in section 1688(a) of the NDAA for Fiscal Year 2020.[6]

To evaluate the extent to which DOD made changes to missile defense requirements-setting and acquisition management processes and responsibilities after the enactment of the NDAA for Fiscal Year 2020, we reviewed policy changes DOD implemented in the March 13, 2020, DTM 20-002, "Missile Defense System Policies and Governance"; and the July 26, 2020, version of U.S. Strategic Command Instruction (SI) 538-03, "Missile Defense (MD) Warfighter Involvement Process (WIP)." We then compared the policy changes to processes and responsibilities previously established in the (1) January 2, 2002, Secretary of Defense memorandum, "Missile Defense Program Direction"; (2) September 17, 2009, DOD Directive 5134.09, "Missile Defense Agency (MDA)"; and (3) the June 18, 2013, version of SI 538-03. We also reviewed documentation and interviewed relevant DOD officials across multiple DOD components regarding the policy changes made to missile defense requirements-setting and acquisition management processes and responsibilities.

To evaluate how the policy changes to missile defense requirements-setting and acquisition management processes may affect capability development and timeliness of delivery, we assessed DOD's rationale for and intended effects of the changes. We obtained from DOD a number of documents pertaining to the origination, coordination, and issuance of DTM 20-002 and the 2020 updated version of SI 538-03. We also compared the changes to leading practices for knowledge-based defense acquisitions and lessons learned specific to missile defense acquisitions we identified in our prior work. In addition, we identified and reviewed steps DOD has taken to implement the new policy changes and analysis MDA performed to measure the effect of the policy changes on missile defense capability development and timeliness of delivery.

To evaluate whether DOD met statutory requirements in section 1688(b) of the NDAA for Fiscal Year 2020, we reviewed an April 22, 2020, letter and report from the Secretary of Defense that notified congressional defense committees that DOD intended to make changes that were subject to the section 1688(b) requirements. We also reviewed a September 25, 2020, memorandum from USSTRATCOM regarding a

[6]"Requirements-setting" generally refers to the process in which capability requirements are identified, assessed, and vetted.

legal review it conducted on the applicability of section 1688(b) requirements to the changes it made in the July 2020 update to SI 538-03.

To further evaluate the extent to which DOD met the requirements from section 1688(a), we reviewed the independent study that was produced by a federally funded research and development center to satisfy the section 1688(a) requirements. We also reviewed DOD contract documents, letters to congressional committees from the Office of the Under Secretary of Defense for Research and Engineering (USD(R&E)), and briefing materials from MDA. We also met with the DOD officials involved with the independent study to discuss actions the department took to meet section 1688(a) requirements.

We also evaluated DOD's compliance with section 1688(c) by determining whether any billets were transferred from MDA during fiscal year 2020.[7] Section 1688(c) prohibited DOD from transferring any civilian or military billets from MDA to any DOD element under the USD(R&E) during fiscal year 2020 unless certain statutory notification and timeliness requirements were met. According to a response we received from MDA in March 2021, the agency did not transfer or lose any billets to USD(R&E) in fiscal year 2020. Accordingly, DOD did not take any actions that would prompt DOD to apply the statutory requirements. For more information on our objectives, scope, and methodology, see appendix I. For the full text of the section 1688 requirements, see appendix II.

We conducted this performance audit from January 2021 to November 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

[7]A billet is a personnel position or assignment that may be filled by one person.

Missile Defense Non-Standard Requirements-Setting and Acquisition Management Process

Most DOD weapon system programs are managed within DOD's traditional acquisition framework, which includes distinct decision-support processes for determining capability requirements and managing the acquisition system. Each process is managed and overseen by different organizations—also referred to as components—and leaders within DOD and the military services. At the DOD level, the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) is responsible for the acquisition function and the Joint Chiefs of Staff are responsible for implementing the capability requirements process through the Joint Capabilities Integration and Development System (JCIDS). As part of this process, operational-level capability requirements are identified, assessed, and validated by the joint staff and military services and then are further refined into system-level requirements in the early stages of an acquisition program.[8]

As an acquisition program goes through iterative phases of the acquisition process, the military service chiefs' role diminishes and the acquisition executive's role becomes more prominent. The Defense Acquisition System provides the overarching management principles, mandatory polices, and the Adaptive Acquisition Framework. In January 2020, DOD issued Instruction 5000.02, "Operation of the Adaptive Acquisition Framework," which replaced the department's previous acquisition guidance.[9] This framework provides a number of distinct pathways for structuring an acquisition program, but all have the common goal of responding to operational-level capability requirements that have

[8]For the purpose of this assessment, we generally distinguish between two orders of capability requirements: operational-level and system-level. Operational-level requirements include attributes that describe high-level mission needs, goals, qualities, and quantities and mission-specific performance attributes. System-level requirements include technical requirements and system specifications.

[9]According to DOD Instruction 5000.02, the Adaptive Acquisition Framework supports the Defense Acquisition System with the objective of delivering effective, suitable, survivable, sustainable, and affordable solutions to the end user in a timely manner. To achieve those objectives, decision authorities and program managers have broad authority to plan and manage their programs consistent with sound business practices through multiple acquisition pathways.

been validated by the warfighter and necessitate the acquisition of a materiel solution.[10]

In January 2002, the Secretary of Defense issued a memorandum that adopted a new model for acquiring missile defense capability.[11] Specifically, the Secretary delegated to the newly established MDA the authority to manage all ballistic missile defense systems under development and shifted programs being executed or developed by the military services to MDA. The Secretary instructed MDA to develop a single integrated system, now called the Missile Defense System (MDS), capable of intercepting enemy missiles launched from all ranges and in all phases of their flight.[12]

Through this memorandum, the Secretary called for a capabilities-based approach and an evolutionary development program. Under MDA's capabilities-based, spiral development approach, according to the agency, the developer designs a system for a desired capability based on the technology available, but the end-state requirements are unknown at the start of the program.[13] Instead, requirements are established based on an uncertain and evolving threat and refined based on feedback from the warfighter and other considerations. Further, the memorandum granted MDA exceptional flexibilities to expedite the fielding of assets and capabilities. These flexibilities effectively allowed MDA to diverge from DOD's traditional requirements-setting and acquisition management process and defer the application of certain acquisition policies and laws designed to facilitate oversight and accountability until a mature capability is ready to be transferred to a military service for production and operation.

[10]See GAO, *Weapon Systems Annual Assessment: Updated Program Oversight Approach Needed,* GAO-21-222 (Washington, D.C.: June 8, 2021) for further discussion of the Adaptive Acquisition Framework and our recommendation for DOD to update its oversight approach for programs using multiple efforts or pathways under the Adaptive Acquisition Framework.

[11]Department of Defense, Secretary of Defense, *Missile Defense Program Direction* (Washington D.C.: Jan. 2, 2002).

[12]From 2002 until 2019, the system was called the Ballistic Missile Defense System. MDA renamed it to the Missile Defense System to reflect the system's broadened focus on ballistic, cruise, and hypersonic missiles.

[13]MDA, *Acquisition Management*, MDA Instruction 5013.02-INS (Aug. 24, 2013).

In September 2009, a DOD directive referred to as the "MDA charter" established the roles, responsibilities, and authorities for MDA and DOD components involved in the development of the MDS.[14] This directive provided the MDA Director authority as not only the head of the agency, but also the head of contracting activity, program manager for the MDS, and the MDS acquisition executive. As the acquisition executive, the Director was responsible for exercising all MDS-related source selection and milestone decision authorities up to, but not including, production decisions.[15]

In contrast to DOD's traditional requirements-setting process, requirements for missile defense capabilities are determined through a process called the Warfighter Involvement Process (WIP). USSTRATCOM, in its capacity as the administrator of the WIP, issued SI 538-03 in June 2008 and updated it in June 2013 to define the WIP and outline roles and responsibilities.[16] Among the primary components outlined by the instruction were the processes by which the combatant commands, military services, and other stakeholders collaborate to develop a list of missile defense capability needs, or request changes to capabilities already fielded but for which MDA continues to be responsible for developing capability improvements and modifications. Specifically, under the 2013 version, this included the following:

- A Prioritized Capabilities List, developed by USSTRATCOM with input from combatant commanders and military services, to define and identify missile defense capability needs.
- An Achievable Capability List, MDA's formal response to USSTRATCOM, containing an appraisal of the capabilities in the Prioritized Capabilities List compared to the capabilities and limitations of MDA program plans.

[14]DOD, *Missile Defense Agency (MDA)*, DOD Directive 5134.09 (Washington, D.C.: Sept. 17, 2009).

[15]The term "milestone decision authority," with respect to a major defense acquisition program or a major subprogram, means the official within DOD designated with the overall responsibility and authority for acquisition decisions for the program or subprogram, including authority to approve entry of the program or subprogram into the next phase of the acquisition process. 10 USC § 2366a(d)(7).

[16]SI 538-03 describes the WIP as a collaborative process with the combatant commands, military services, joint staff, and other defense agencies that enables stakeholders to identify, define, assess, prioritize, and advocate for desired missile defense capabilities.

- Modification and Fielding Request Process, to identify the warfighter's desired modifications to missile defense capabilities already fielded.

Balancing MDA's Acquisition Flexibilities with Oversight and Accountability

DOD credits MDA for rapidly fielding missile defense capabilities and attributes its success, in part, to the acquisition flexibilities that have been granted to the agency.[17] However, we have previously found that these acquisition flexibilities have come at the expense of oversight and accountability and that high levels of uncertainty about capability requirements and program cost estimates effectively set the missile defense program on a path to an undefined destination at an unknown cost.[18] Our prior work has shown that knowledge-based acquisition practices—such as performing analyses of alternatives, independent cost estimates, and technical risk assessments—take time to complete but are intended to identify issues that could later derail a program.[19] However, we found that MDA did not always perform these reviews due to its acquisition flexibilities, and DOD has canceled MDA programs citing concerns over high-risk acquisition strategies and technical challenges.[20] In March 2020, we found that MDA had taken important steps in recent years to improve management practices, reduce acquisition risks, and deliver capabilities, but could further align itself with acquisition best practices.[21] Some of the key acquisition best practices we have

[17]For example, see DOD, *Missile Defense Review 2019* (Jan. 17, 2019); DOD, *Ballistic Missile Defense Review Report* (February 2010); and Deputy Secretary of Defense Memorandum, *Ballistic Missile Defense System (BMDS) Life Cycle Management Process* (Washington, D.C.: Sept. 25, 2008).

[18]GAO, *Missile Defense: Actions Needed to Improve Transparency and Accountability*, GAO-11-555T (Washington, D.C.: Apr. 13, 2011).

[19]See GAO-21-222; *Missile Defense: Some Progress Delivering Capabilities, but Challenges with Testing Transparency and Requirements Development Need to Be Addressed*, GAO-17-381 (Washington, D.C.: May 30, 2017); *Missile Defense: Mixed Progress in Achieving Acquisition Goals and Improving Accountability*, GAO-14-351 (Washington, D.C.: Apr. 1, 2014); and *Missile Defense: Opportunity to Refocus on Strengthening Acquisition Management*, GAO-13-432 (Washington, D.C.: Apr. 26, 2013).

[20]We previously reported that MDA did not consider a broad range of alternatives or fully assess program or technical risks before committing to the Aegis Ballistic Missile Defense Standard Missile-3 Block IIB and Precision Tracking Space System. See GAO-14-351; *Missile Defense: Precision Tracking Space System Evaluation of Alternatives*, GAO-13-747R (Washington, D.C.: July 25, 2013); *Standard Missile-3 Block IIB Analysis of Alternatives*, GAO-13-382R (Washington, D.C.: Feb. 11, 2013); and GAO-13-432.

[21]GAO, *Missile Defense: Lessons Learned from Acquisition Efforts*, GAO-20-490T (Washington, D.C.: Mar. 12, 2020).

emphasized in our reporting on missile defense acquisition include the following:

- **Establishing a sound business case for MDA's new efforts**. In May 2017, we found that a sound business case represents the most acceptable compromise among competing priorities, namely capabilities needed versus resources available. As indicated by our prior work on defense acquisitions, establishing a sound business case requires patience to take the necessary time up-front to produce well-informed capability requirements and ensure that technologies are mature.[22] A sound business case can be useful for decision makers because it provides credible evidence that warfighter needs are valid and can best be met with the chosen concept, and that the chosen concept can be developed and produced within existing resources.[23]
- **Incorporating knowledge-based practices into missile defense acquisitions**. In October 2020, we found that one of the key lessons learned from some of the challenges MDA encountered acquiring the Ground-based Midcourse Defense system was utilizing knowledge-based acquisition practices.[24] Our body of work has shown that attaining high levels of knowledge before significant commitments are made during product development drives positive acquisition outcomes.[25] Examples of knowledge-based practices include

[22]See GAO-17-381; *Weapon System Requirements: Detailed Systems Engineering Prior to Product Development Positions Programs for Success*, GAO-17-77 (Washington, D.C.: Nov. 17, 2016); *Missile Defense: Opportunity Exists to Strengthen Acquisitions by Reducing Concurrency*, GAO-12-486 (Washington, D.C.: Apr. 20, 2012); and *Best Practices: Better Management of Technology Development Can Improve Weapon System Outcomes*, GAO/NSIAD-99-162 (Washington, D.C.: July 30, 1999).

[23]See GAO-17-381; *Defense Acquisitions: Sound Business Case Needed to Implement Missile Defense Agency's Targets Program*, GAO-08-1113 (Washington, D.C.: Sept. 26, 2008); *Defense Acquisitions: Missile Defense Acquisition Strategy Generates Results but Delivers Less at a Higher Cost*, GAO-07-387 (Washington, D.C.: Mar. 15, 2007); and *Defense Acquisitions: Improved Business Case Is Needed for Future Combat System's Successful Outcome*, GAO-06-367 (Washington, D.C.: Mar. 14, 2006).

[24]GAO, *Missile Defense: Observations on Ground-based Midcourse Defense Acquisition Challenges and Potential Contract Strategy Changes*, GAO-21-135R (Washington, D.C.: Oct. 21, 2020).

[25]For examples, see GAO, *Best Practices: DOD Can Achieve Better Outcomes by Standardizing the Way Manufacturing Risks Are Managed*, GAO-10-439 (Washington, D.C.: Apr. 22, 2010); and *Defense Acquisitions: A Knowledge-Based Funding Approach Could Improve Major Weapon System Program Outcomes*, GAO-08-619 (Washington, D.C.: July 2, 2008).

demonstrating that technologies are mature, designs are stable, and production processes are in control before transitioning between acquisition phases.

- **Utilizing missile defense stakeholders and obtaining independent reviews**. Our prior work on missile defense acquisitions has shown that establishing buy-in from decision makers is a key enabler for achieving better acquisition outcomes because DOD components provide varying perspectives due to their unique areas of expertise and experience.[26] We found that, by working closely with stakeholders throughout the development of its programs, MDA would increase the likelihood that the capabilities it pursues are needed, affordable, effective, and delivered to the warfighter as quickly as feasible. Our prior work also emphasized the value of conducting independent reviews at major milestones because such reviews offer greater objectivity, as the reviewers are not responsible for the activities being evaluated, and programs benefit from the wide variety of expertise and experience represented by the review team.[27] Such reviews can help position programs for success and help decision makers by tempering over-optimism in program planning and identifying significant program risks up front so decision makers can provide additional resources or choose to pursue other options.[28]

[26]For examples, see GAO, *Missile Defense: Further Collaboration with the Intelligence Community Would Help MDA Keep Pace with Emerging Threats*, GAO-20-177 (Washington, D.C.: Dec. 11, 2019); GAO-17-381; and GAO-03-441.

[27]For examples, see GAO, *Technology Readiness Assessment Guide: Best Practices for Evaluating the Readiness of Technology for Use in Acquisition Programs and Projects*, GAO-20-48G (Washington, D.C.: January 2020); *Space Command and Control: Comprehensive Planning and Oversight Could Help DOD Acquire Critical Capabilities and Address Challenges*, GAO-20-146 (Washington, D.C.: Oct. 30, 2019); and *Schedule Assessment Guide: Best Practices for Project Schedules*, GAO-16-89G (Washington, D.C.: December 2015).

[28]See GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, GAO-20-195G (Washington, D.C.: March 2020); and *Defense Acquisitions: Joint Action Needed by DOD and Congress to Improve Outcomes*, GAO-16-187T (Washington, D.C.: Oct. 27, 2015).

Congressional Limitations on DOD Changing Missile Defense Non-Standard Acquisition Processes and Responsibilities

Since fiscal year 2017, Congress has prohibited the Secretary of Defense in several authorization acts from making changes to missile defense non-standard acquisition processes and responsibilities unless certain notification requirements to congressional defense committees were met.[29] Specifically, prohibitions were included in section 1688 of the NDAA for Fiscal Year 2020. Appendix II provides the full text of those requirements. The notification requirement in section 1688 ensured that congressional defense committees were made aware of any proposed changes that the Secretary of Defense intended to make to missile defense non-standard acquisition processes and responsibilities before they went into effect. The timeliness requirement following the notifications provide the congressional defense committees a window of opportunity to take a number of actions, if desired, such as requesting briefings from DOD and conducting hearings. The consultation, certification, and reporting requirements in section 1688(b) also ensure that a wide array of senior defense officials with responsibility for aspects of missile defense are afforded an opportunity to review and provide their views on the proposed changes to the Secretary of Defense who, in turn, reports those views to the congressional defense committees.

DOD Made Significant Changes to Missile Defense Acquisition Management and Requirements-Setting Processes in 2020

DOD issued a memorandum in March 2020 that required new planning documents, shifted external independent cost and technology risk assessments to occur earlier in program development, and elevated decision authority to USD(A&S) for entry into earlier acquisition phases. Separately, in July 2020, USSTRATCOM reissued a key instruction for the first time since 2013 that increased the pace of processes designed to identify and advocate for missile defense warfighter needs. The instruction also clarified missile defense requirements-setting responsibilities and established a new process for identifying capability gaps.

[29]See Pub. L. No. 114-328, § 1684(b); Pub. L. No. 115-232, § 1681(a); Pub. L. No. 116-92, § 1688(b); and Pub. L. No. 116-283, § 1641.

DOD Memorandum Required New Program Assessments, Shifted Reviews Earlier in the Process, and Elevated Decision Authority

The Deputy Secretary of Defense issued a directive-type memorandum in March 2020 (DTM 20-002) that formalized significant changes to the acquisition process for the missile defense system, adding new policy requirements and responsibilities affecting stakeholders across DOD.[30] These changes followed a DOD review of missile defense acquisition approaches. The review found that early external program assessments—such as independent cost estimates and technical risk assessments—and military service engagement are important to successful program outcomes.

Consistent with DOD's review findings, the memorandum imposed new policy requirements and shifted several existing policy requirements to occur earlier in the acquisition process. DOD expects the changes to reduce risk in missile defense development and promote the transfer of MDA programs to the military services, while also retaining acquisition flexibility for MDA. The new policy requirements include the following:

- A Top Level Requirements Document (TLRD) to define performance and functionality attributes or parameters of an MDS element. The TLRD is developed by MDA in coordination with the lead military services, USSTRATCOM, and other combatant commands as applicable, and approved by the Missile Defense Executive Board (MDEB).[31]
- A Capability and Utility Assessment to assess the relationship between the capabilities provided by the system and the impact that operating that system has on the ability of the combatant commands or military services to carry out their missions. USSTRATCOM conducts this assessment in coordination with MDA, the lead military service, and combatant commands as applicable.
- A transfer agreement developed by MDA in conjunction with the lead military service to establish transfer criteria, including funding responsibilities.

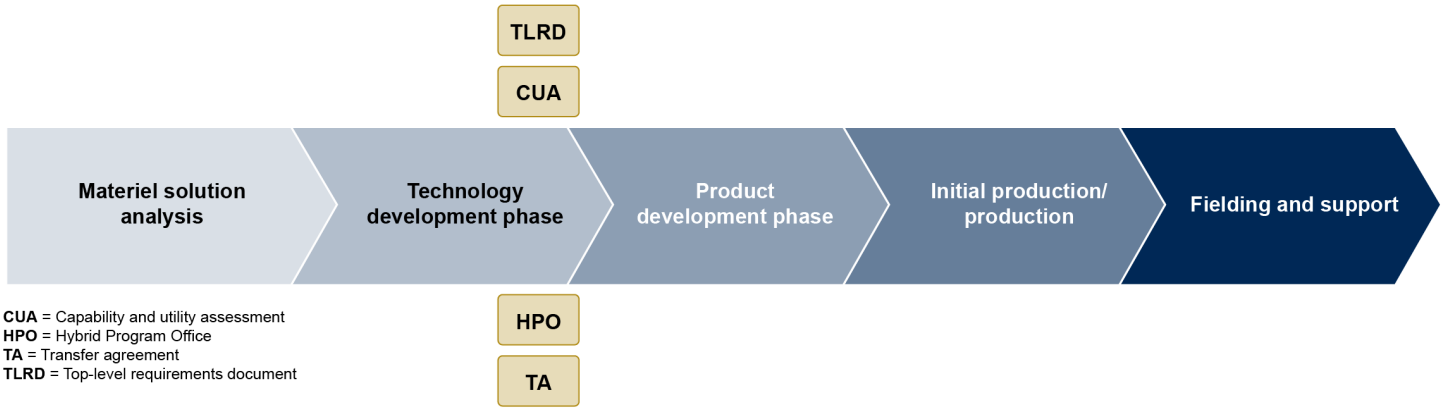
[30]Deputy Secretary of Defense, *Directive-type Memorandum (DTM) 20-002 – "Missile Defense System Policies and Governance"* (Mar. 13, 2020).

[31]The MDEB is a senior deliberative body that reviews and makes recommendations regarding the implementation of strategic policies and plans, program priorities, and investment options to protect the U.S. and allies from missile attack. USD(R&E) and USD(A&S) serve as co-chairs of the board.

- A hybrid program office established between MDA and the lead military service to facilitate transfer of the element.

The policy requirements for a TLRD and Capability and Utility Assessment apply to major or special interest programs, while the transfer agreement and hybrid program office apply to all programs.[32] These new policy requirements are due prior to entering the product development phase (see fig. 2).

Figure 2: New Requirements for Missile Defense Acquisitions, per Department of Defense Directive-Type Memorandum 20-002, March 2020



Source: GAO analysis of Department of Defense information. | GAO-22-563

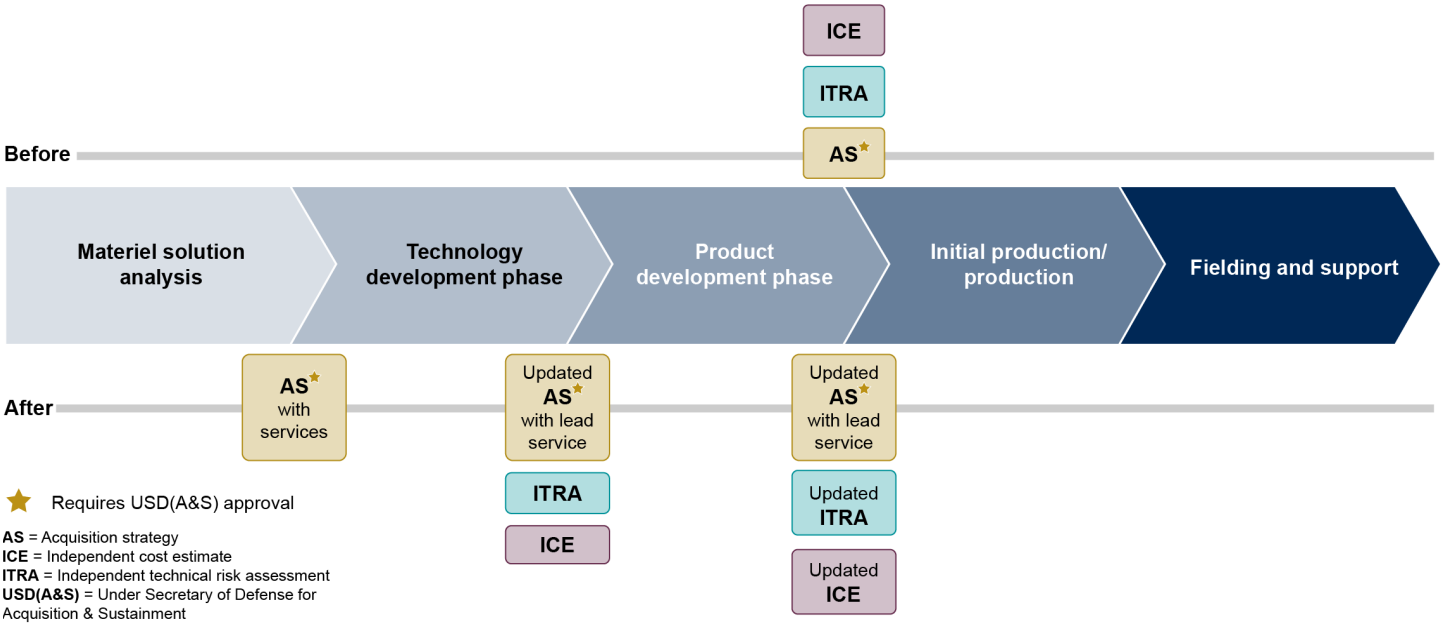
Further, existing policy requirements that were previously due before entering production shifted earlier in the acquisition life cycle (see fig. 3). These include the following, which apply to major or special interest programs:

- An acquisition strategy developed by MDA in coordination with the military services for USD(A&S) approval before technology development. The strategy will then be updated with the lead military service prior to product development and production.

[32]"Major programs" include MDS elements that exceed the research, development, test, and evaluation dollar threshold for Acquisition Category I programs (over $525 million), or may be of special interest, unless delegated to the Director, MDA.

- An independent cost estimate developed by the Director for Cost Assessment and Program Evaluation (CAPE) prior to product development and updated prior to production.
- An independent technical risk assessment conducted by USD(R&E) prior to product development and updated prior to production.

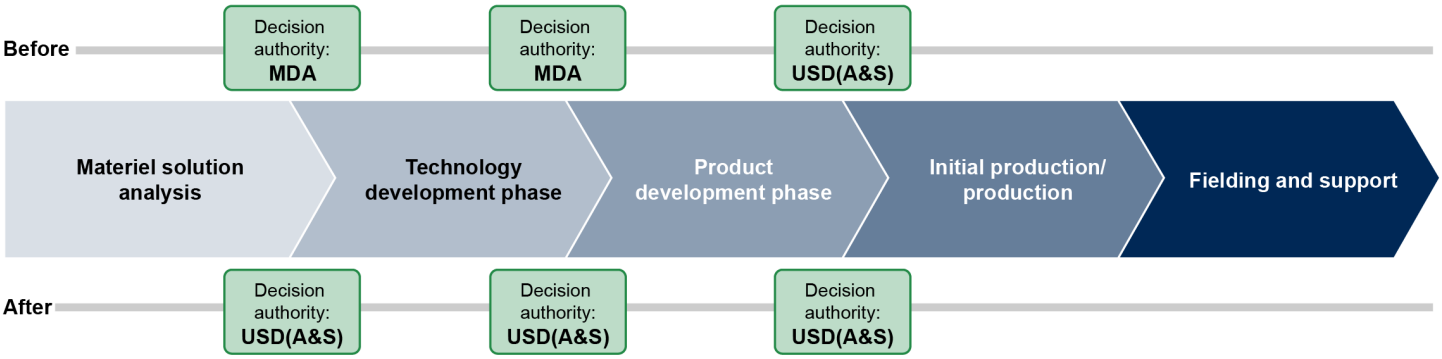
Figure 3: Shifting Requirements for Missile Defense Acquisitions according to Department of Defense Directive-Type Memorandum 20-002, March 2020



Source: GAO analysis of Department of Defense information. | GAO-22-563

Lastly, the memorandum elevated the decision authority to enter the technology and product development phases to USD(A&S) for major or special interest missile defense programs. These decisions were previously the responsibility of the Director, MDA. Figure 4 provides an overview of the revised decision authorities for the missile defense acquisitions life cycle, before and after implementation of the 2020 DOD memorandum.

Figure 4: Changes to Missile Defense Acquisition Decision Authority according to Department of Defense Directive-Type Memorandum 20-002, March 2020



USD(A&S) = Under Secretary of Defense for Acquisition & Sustainment
MDA = Missile Defense Agency

Source: GAO analysis of Department of Defense information. | GAO-22-563

USSTRATCOM Instruction Aligned the Requirements Process with the Annual Budget Cycle and Introduced a New Process for Identifying Capability Gaps

USSTRATCOM issued an instruction in July 2020 (SI 538-03) that updated key processes that serve as the foundation of the WIP—the way in which the warfighter advocates for missile defense capability needs to the developers of the missile defense system.[33] This instruction superseded the previous version issued by USSTRATCOM in June 2013 and made changes to the processes designed to identify and address warfighter needs.

USSTRATCOM, as administrator of the WIP, represents and articulates the views of the warfighter on missile defense capability needs. USSTRATCOM has done so principally through development of a Prioritized Capabilities List; this list is now called the Missile Defense Integrated Priority List (MDIPL). The new MDIPL now aligns with the annual budget after operating on a biennial cycle in recent years, and the instruction describes a process whereby MDA responds, through either the agency's Achievable Capability List or another appropriate MDA product. According to MDA, the agency is currently considering process changes to follow a similar timeline and submit the Achievable Capability List on an annual basis. The Achievable Capability List documents the MDA program of record compared against the MDIPL, and addresses the

[33]U.S. Strategic Command, *United States Strategic Command Instruction (SI) 538-03 "Missile Defense (MD) Warfighter Involvement Process (WIP)"* (July 26, 2020).

technology, budget, schedule, or other factors regarding the implementation of each required warfighter capability.

Further, the updated instruction requires a more frequent process than the 2013 instruction for evaluating warfighter requests for modifications to systems and capabilities already fielded. USSTRATCOM, MDA, and other stakeholders from the warfighter community will now meet quarterly, instead of annually, to review the active Modification and Fielding Request submissions to fix or enhance systems and components still under MDA control. See table 1 for an overview of these key changes to the timelines for addressing warfighter needs.

Table 1: New U.S. Strategic Command (USSTRATCOM) Instruction (SI) 538-03 Accelerates Aspects of Missile Defense Requirements Process

Missile defense requirements processes	2013	2020
Combatant commands and military services identify and prioritize key missile defense capability needs	Annually[a]	Annually
Missile Defense Agency (MDA) assesses warfighter capability needs and provides response	Biennially	Annually
USSTRATCOM, MDA, and other stakeholders meet to review the status of active warfighter requests for modifications (e.g., fixes or enhancements) to missile defense systems and capabilities that are already fielded but still under MDA control	Annually	Quarterly

Source: GAO analysis of Department of Defense documents. | GAO-22-563

[a]While the 2013 SI described an annual process for identifying and prioritizing these capability needs, in practice it had shifted to biennial in recent years to align with MDA's process. This list of warfighter capability needs was recently produced in 2016, 2018, and 2020.

USSTRATCOM's new instruction also provides greater clarity into roles and responsibilities for different types of missile defense requirements. Specifically, the instruction underscores that these requirements are to be determined through the WIP, in accordance with the 2019 Missile Defense Review (MDR), and assigns responsibility for the three distinct tiers described in table 2.[34]

[34]The 2019 Missile Defense Review presented the policies, strategies, and capabilities that guide DOD's missile defense initiatives and programs through the next several years.

Table 2: Changes to Missile Defense Requirements-Setting Roles and Responsibilities

Tier	Type and description	Previous allocation of responsibilities	Allocation of responsibilities after the July 2020 update to U.S. Strategic Command Instruction 538-03
1 High Level	Capability Requirements. Operational attributes that describe high-level mission needs and goals, quality, and quantity.	Missile Defense Agency with input from U.S. Strategic Command, representing the views of the combatant commands, military services, and joint staff	U.S. Strategic Command, representing the views of the combatant commands, military services, and joint staff
2 System Level	Performance Attributes. Define and describe the preferred solution and/or approach, to include performance and characteristics of the proposed solution.	Missile Defense Agency	Missile Defense Agency, in coordination with U.S. Strategic Command
3 Design Level	Technical Requirements, System Specifications. Specifications for engineering design, materials, integration, interoperability, etc.	Missile Defense Agency	Missile Defense Agency

Source: GAO analysis of Department of Defense documentation. | GAO-22-563

In 2017, we reported that MDA's process for determining requirements was designed to quickly define requirements and allow flexibility for MDA to respond to evolving needs and changes to missile threats.[35] Under this process, the "developer" (i.e., MDA) instead of the "user" (i.e., the warfighter) set the requirements. Allowing MDA to define both the operational- and system-level requirements enabled the agency to make trade-offs between resources and performance attributes, which provided the agency with significant flexibility to make fundamental changes to what it ultimately delivers to the warfighter. However, with the 2019 MDR and 2020 USSTRATCOM instruction, some of this requirements-setting responsibility now falls to the warfighter through the WIP, providing the warfighter with more input during this process.

Also among the changes, the instruction introduced a new Missile Defense Gap Assessment. The assessment is intended to evaluate a mission area to assess the capability and capacity of the joint force to complete its mission successfully. If the assessment identifies risk, then capability requirements and recommendations for solutions may be submitted to the Missile Defense Executive Board for review, approval, and subsequent advocacy within DOD. While MDA is exempt from the JCIDS process, the Missile Defense Gap Assessment is modeled after a

[35]GAO-17-381.

JCIDS Capability Based Assessment, which the instruction references as a template.

DOD's Changes Have the Potential to Improve Missile Defense Acquisition Outcomes but Capability Development Not Fully Aligned to Warfighter Requirements

Both the Deputy Secretary of Defense's memorandum (DTM 20-002) and USSTRATCOM's instruction (SI 538-03) implemented recommendations from 2019 departmental studies that have the potential to better balance acquisition risk and provide the warfighter with greater responsibility for determining operational-level requirements. DOD's changes are generally consistent with acquisition best practices we have identified and address some of our prior findings and recommendations. However, DOD's changes did not fully align missile defense programs undergoing early development to warfighter-validated requirements, increasing the risk of MDA delivering capabilities that do not fully meet the warfighter's needs. DOD is in the early stages of implementing the changes from the memorandum and instruction and it is therefore too soon to measure their actual effects.

Changes to Missile Defense Requirements-Setting and Acquisition Management Processes Were Based on Improvements Identified in Previous DOD Reviews

The Secretary of Defense stated in an April 22, 2020, letter to the congressional defense committees that the changes DOD made will reduce risk, increase successful program fielding, and promote transfer of missile defense capabilities to the military services while also maintaining agility in fielding these capabilities to the warfighter. According to the Secretary of Defense's letter, the department intended to modify its processes and responsibilities for acquiring missile defense capabilities based on the results of a 2019 review performed by the Office of the Secretary of Defense (OSD) at the direction of the Deputy Secretary of Defense. The results of the review were included in the Secretary of Defense's letter and included the following findings:

- MDA's acquisition flexibilities allowed the agency to quickly begin product development, but multiple programs have experienced cost and schedule growth and/or reduced capabilities.
- Now that initial missile defense capabilities have been fielded, the department should consider better balancing program schedule and delivery speed with technical, cost, integration, and transfer risks.
- Since the MDA charter was last issued in 2009, various legislative directives and organizational changes have occurred that must be

addressed, such as the dissolution of the office of Under Secretary of Defense for Acquisition, Technology, and Logistics.[36]

- Early external program assessments and military service engagement are important to successful missile defense program outcomes but MDA did not always consistently apply these early actions, in part, because they were not required in missile defense acquisition guidance.
- Early military service involvement and independent reviews entail up front work but, when acted upon by decision makers, can result in lower life-cycle cost, more reliable schedule, and greater capability delivered.

USSTRATCOM updated SI 538-03 in July 2020, in part to implement recommendations identified in a 2019 MDR-directed review of the WIP that was intended to determine whether improvements were needed to the warfighter's missile defense advocacy processes. The Joint Staff J8 Joint Integrated Air and Missile Defense Organization led a working group consisting of DOD stakeholders to perform this review. In July 2019, the working group briefed the MDEB and issued its report with findings and recommendations to improve the WIP. USSTRATCOM implemented most of the recommendations in its update to SI 538-03 and is in the process of addressing the outstanding recommendations, as indicated in table 3.

[36]The National Defense Authorization Act for Fiscal Year 2017 reorganized the Office of the Secretary of Defense by dissolving the Under Secretary of Defense for Acquisition, Technology, and Logistics and establishing the USD(R&E) and USD(A&S). See Pub. L. No. 114-328, § 901.

Table 3: U.S. Strategic Command Implementation of Recommendations from a 2019 Joint Staff-Led Review of the Missile Defense Warfighter Involvement Process (WIP)

WIP review findings, recommendations, and status	Status
1. Synchronization of the WIP with the Department of Defense (DOD) budget	**Implemented**
Finding: U.S. Strategic Command's (USSTRATCOM) process for prioritizing needed capabilities occurs biennially (in practice), unlike the rest of the Planning, Programming, Budgeting, and Execution process in DOD. The lack of synchronization introduces risk that warfighter input will be too late to inform the annual DOD budget. Recommendation: Examine the optimal timing for the WIP cycle. Status: The July 2020 update to U.S. Strategic Command Instruction (SI) 538-03 requires the production of the Missile Defense Integrated Priority List (MDIPL) to be aligned with the budget cycle. According to the Missile Defense Agency (MDA), the agency is considering process changes to submit the Achievable Capability List on an annual basis.	
2. Communication among stakeholders	**In progress**
Finding: The warfighter's prioritized list of needed capabilities lacks specificity, making it difficult for MDA to understand which attributes and features will provide maximum military utility. Warfighters also generally lack the requisite experience and workforce to attend the volume of MDA meetings and provide constant feedback. Recommendation: Specify the precise operational features needed in missile defense capabilities and establish touchpoints for warfighters to influence missile defense capability development. Status: USSTRATCOM is evaluating a process for validating missile defense requirements that will provide specificity and inform MDA's development of missile defense capabilities. The MDIPL will also include appendixes for each of the combatant command's integrated priority lists and the military services missile defense needs, which will provide additional detail on desired capabilities. In addition, MDA is developing a Capability Gap Tracker tool intended to allow warfighter input on missile defense capabilities. The tool is planned for use in 2021 but the prototype has not yet been implemented by the combatant commands. MDA proposed quarterly reviews with the warfighter to review the tool and discuss the status of capability development.	
3. Prioritization of capabilities needed	**Implemented**
Finding: The process for prioritizing needed capabilities does not contain a method to indicate the risks associated with capability gaps. Recommendation: Consider risks associated with capability gaps as part of the process for prioritizing the list of capabilities needed. Status: According to USSTRATCOM officials, the Joint Staff Capability Gap Assessment, a recognized risk product, is now used to align risk levels and recommendations to missile defense needs and the prioritization method for ranking missile defense needs. USSTRATCOM intends to codify this practice in its next revision to the WIP.	
4. Linking warfighting concepts to capability development	**Implemented**
Finding: Joint concepts (i.e., how a commander might employ new or existing capabilities to meet current or envisioned real-world challenges) inform future force development, but there is no formal linkage between joint concepts and missile defense capability development. Recommendation: Develop a methodology to link joint concepts with missile defense capability development. Status: USSTRATCOM updated SI 538-03, in part, to align the WIP to the Joint Capabilities Integration and Development System (JCIDS) processes to the maximum extent practical, in part, to formally link joint concepts with missile defense capability development.[a] USSTRATCOM is using an existing integrated air and missile defense joint concept document to inform future force development and an updated version is currently undergoing a working group review and includes missile defense capabilities needed in joint force development, design, and warfighting approach.	
5. Operational planning	**In progress**
Finding: The warfighter desires metrics and a method for quantifying progress in closing capability gaps. Recommendation: Develop a mechanism for tracking mitigation and closure of missile defense capability gaps. Status: USSTRATCOM is developing a method to track and assess MDA's response to the warfighter-identified capability gaps. According to MDA, the Capability Gap Tracker Tool is planned to provide greater traceability between MDA's capability increments and the warfighter identified-capability gaps.	

WIP review findings, recommendations, and status	Status
6. DOD organizational changes	**Implemented**
Finding: Many changes have occurred since SI 538-03 was last updated in 2013, including the reorganization of the Office of the Secretary of Defense and changes in roles and responsibilities to DOD components.	
Recommendation: Update missile defense governing documents with fact-of-life changes.	
Status: The updated SI 538-03 was revised to incorporate organizational changes within DOD.	

Source: GAO analysis of DOD information. | GAO-22-563

[a]JCIDS is the systematic method to support the Joint Requirements Oversight Council and Chairman of the Joint Chiefs of Staff in identifying, assessing, validating, and prioritizing joint military capability requirements.

DOD's Changes Have the Potential to Better Balance Acquisition Risk and Improve Alignment between MDA-Pursued Capabilities and Requirements Set by the Warfighter

The changes in DTM 20-002 and SI 538-03 generally align with acquisition best practices we have identified in our prior work, and actions needed to address some of our prior findings and recommendations intended to improve capability development and timeliness of delivery to the warfighter. Our prior work has shown that programs that implement these practices increase the likelihood that capability will be delivered when needed, within budget, and with the expected performance.[37] Table 4 demonstrates how several of the changes DOD implemented in DTM 20-002 and SI 538-03 align with our identified knowledge-based acquisition best practices.

[37]For examples, see GAO-20-490T; GAO-17-381; GAO-16-187T; GAO-12-486; GAO-08-1113; and *Missile Defense: Additional Knowledge Needed in Developing System for Intercepting Long-Range Missiles*, GAO-03-600 (Washington, D.C.: Aug. 21, 2003).

Table 4: Recent Changes to Missile Defense Acquisition Management and Requirements-Setting Processes Generally Align with GAO's Identified Knowledge-Based Acquisition Best Practices

Key knowledge-based acquisition best practices for missile defense:

#1: Ensure warfighter's needs are valid and can best be met with chosen concept.

#2: Base decision to start development on resources matching customer needs.

#3: Utilize stakeholders and obtain independent reviews.

Recent DOD changes to missile defense acquisition management and requirements-setting processes[a]	Key practice #1	Key practice #2	Key practice #3
Acquisition strategies: coordinated with lead military services and approved by USD(A&S) before starting technology development	●	●	●
Capability and utility assessments: performed by U.S. Strategic Command before starting product development	●	●	●
Hybrid program management office: established between MDA and lead military service before starting product development	●	●	●
Independent cost estimates: performed by CAPE before starting product development	●	●	●
Independent technical risk assessments: performed by USD(R&E) before starting product development	●	●	●
Stakeholder reviews via milestone decision authority: elevated to USD(A&S) for decisions to start technology development and product development. Under Secretaries and Service Secretaries are expected to consult and coordinate with one another[b]	●	●	●
Transfer agreements: established between MDA and lead military service before starting product development to later enable the MDA-developed capability to be handed over to the military service for production and sustainment	●	●	●
Requirements determination: U.S. Strategic Command identifies capability requirements; MDA defines system-level performance attributes in coordination with the U.S. Strategic Command	●	●	●
Missile defense gap assessments: performed by U.S. Strategic Command and approved by MDEB; recommendations to address gaps validated by MDEB	○	●	●
U.S. Strategic Command officials stated they lack a process to validate the MDGA recommendations—a process that best practices indicate is essential to ensuring warfighter needs are necessary and achievable			
Analysis of alternatives: CAPE provides guidance and conducts sufficiency reviews for any AOAs MDA performs.	●	○	●
Best practices indicate that a robust AOA should be performed prior to initiating a new program. CAPE guidance and sufficiency reviews should help ensure MDA's AOAs are robust. However, DOD did not require MDA to obtain AOAs in its recent policy changes but MDA has performed them on its recent efforts.			
Top level requirements documents: derived, in part, from warfighter-established requirements; MDA coordinates with lead military service and U.S. Strategic Command to produce the TLRD and is approved by MDEB before starting product development	○	○	●
U.S. Strategic Command lacks a process to ensure requirements included in the TLRD are valid (see above). DOD policy also does not require a TLRD at the start of technology development. Best practices indicate that well-informed requirements are essential to ensuring customer needs will be met when starting development.			

Legend: ● = aligns with best practice; ○ = partially aligns with best practice; x = does not align

AOA = analysis of alternatives

CAPE = Cost Assessment and Program Evaluation

DOD = Department of Defense

MDA = Missile Defense Agency

MDEB = Missile Defense Executive Board

TLRD = Top Level Requirements Document

USD(A&S) = Under Secretary of Defense for Acquisition and Sustainment

USD(R&E) = Under Secretary of Defense for Research and Engineering

Source: GAO analysis of DOD information. | GAO-22-563

Notes: Acquisition strategies, Capability and Utility Assessments, Independent Cost Estimates, Independent Technical Risk Assessments, milestone decision authority, and Top Level Requirements Document only apply to special interest efforts and those exceeding the Acquisition Category I program Research, Development, Test and Evaluation dollar threshold. Programs that do not meet the dollar threshold are not subject to these requirements, unless specifically designated by USD(A&S).

[a]See Deputy Secretary of Defense, *Missile Defense System Policies and Governance*, Department of Defense Directive-Type Memorandum 20-002 (Washington, D.C.: Mar. 13, 2020) and U.S. Strategic Command, *Missile Defense (MD) Warfighter Involvement Process*, U.S. Strategic Command Instruction 538-03 (July 26, 2020).

[b]See Deputy Secretary of Defense, *Acquisition Roles and Responsibilities* (Washington, D.C.: Dec. 20, 2019).

DOD's recent changes to missile defense acquisition management and requirements-setting processes align with or enable actions we previously recommended and address some of the challenges we previously raised in our reporting on missile defense acquisition. For example:

- **Acquisition strategies**: In May 2017, we recommended that MDA's acquisition strategy be subject to review and approval by the Under Secretary of Defense (USD) for Acquisition, Technology, and Logistics—responsibility that now generally rests with USD(R&E) and USD(A&S).[38] We recently closed this recommendation as implemented because DOD subjected the Next Generation Interceptor (NGI) acquisition strategy to review and approval by the USD(R&E) and USD(A&S). DTM 20-002 now requires that USD(A&S) review and approve all acquisition strategies for major MDA programs, effectively codifying the actions MDA took on the NGI acquisition strategy into MDA's acquisition management process. As we stated in May 2017, the intent of our recommendation for senior-level DOD oversight of MDA's acquisition strategies was to help

[38]GAO-17-381.

ensure that the strategies for MDA's new efforts are robust, risk-balanced, and supported across the department.

- **Independent cost estimates**: In February 2010, we recommended that the Secretary of Defense direct MDA to obtain independent cost estimates from CAPE in support of its cost baselines.[39] In December 2014, we found that less than 25 percent of MDA's baselined program costs were verified by independent cost estimates and subsequently closed the recommendation as not implemented.[40] DTM 20-002 now requires the Director, CAPE to develop an independent cost estimate for MDA's major programs prior to the product development decision. Independent cost estimates provide an unbiased test of whether MDA's cost estimates are reasonable and can be used to identify risks related to budget shortfalls or excesses.
- **Milestone decision authority and stakeholder input**: As stated above, DTM 20-002 elevated the milestone decision authority for major MDA programs from the Director, MDA to USD(A&S). In exercising this authority for a technology development decision for NGI in January 2021, USD(A&S) directed MDA to ensure the threat and threat scenarios for NGI are operationally realistic by taking a number of actions, including working closely with the Defense Intelligence Agency.[41] All of the directed actions align with our December 2019 findings and recommendations to improve how MDA prioritizes and provides resources for its threat assessment needs, obtains and uses input from the defense intelligence community, and validates its threat models.[42] As we reported in 2019, MDA was taking

[39]GAO, *Defense Acquisitions: Missile Defense Transition Provides Opportunity to Strengthen Acquisition Approach*, GAO-10-311 (Washington, D.C.: Feb. 25, 2010).

[40]GAO, *Missile Defense: Cost Estimating Practices Have Improved, and Continued Evaluation Will Determine Effectiveness*, GAO-15-210R (Washington, D.C.: Dec. 12, 2014).

[41]USD(A&S) directed MDA to: (a) include representation from the Defense Intelligence Agency at all formal engineering technical reviews; (b) ensure threat and threat scenarios are operationally realistic; (c) develop a Homeland Ballistic Missile Defense Validated Online Lifecycle Threat; (d) use the Validated Online Lifecycle Threat to update NGI performance specifications as needed; and (e) perform red teaming exercises (an independent group that, from the perspective of an adversary, challenges an organization to improve its effectiveness and avoid false mindsets, biases, and group thinking). USD(A&S) also requested the Defense Intelligence Agency to coordinate with MDA on its threat assessment needs and ensure threat models are available and validated to support MDA.

[42]GAO-20-177.

steps to work more closely with the defense intelligence community but was not providing it with full insight into its key threat related processes and products.

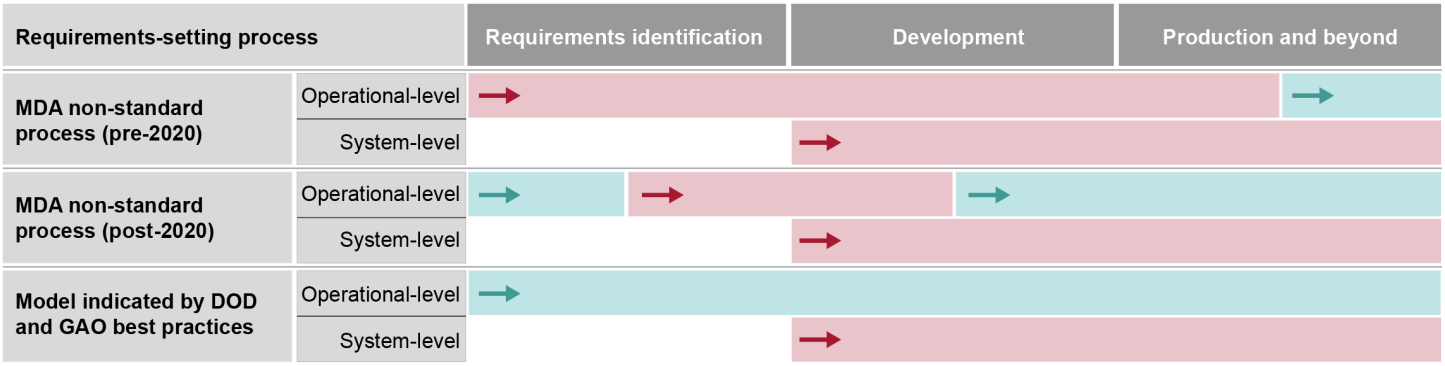
DOD's Changes Provide Greater Warfighter Input but Did Not Fully Align MDA-Pursued Capabilities to Warfighter Requirements

DOD has taken significant steps to address our previous recommendation to transition responsibility for determining operational-level requirements to the warfighter, but DOD has not provided the warfighter with full responsibility. In May 2017, we found that MDA's capability requirements lacked warfighter approval and unduly favored MDA's needs over those of the warfighter.[43] We recommended that the Secretary of Defense transition the responsibility of determining operational-level requirements to the warfighter. DOD's 2019 Missile Defense Review established that missile defense requirements are determined through the WIP. Further, as noted above, USSTRATCOM's July 2020 update to SI 538-03 clarified requirements-setting responsibilities and established new JCIDS-like processes to promote commonality, where feasible, between the WIP and JCIDS, according to USSTRATCOM officials. DTM 20-002 further connected warfighter-determined capability requirements and MDA programs through the production of a TLRD prior to starting product development.

The recent changes provided the warfighter with increased requirements-setting responsibilities; however, DOD continues to rely on MDA to discern operational-level requirements during early program development. This may result in MDA later delivering capabilities that do not fully meet the warfighter's needs. This is similar to what we found in May 2017 that led us to recommend that DOD should transition responsibility to the warfighter for determining operational-level requirements. Although DOD has taken steps to do so, figure 5 demonstrates how MDA retains some responsibility for determining operational-level requirements. As a result, MDA is left to make its own requirements determinations during key development activities, such as: (a) refining operational-level requirements and making performance trade-offs; (b) evaluating weapon systems concepts and selecting one to pursue that will achieve the operationally required performance; (c) establishing the weapon system's design and baselining its performance to align with operational-level requirements; and (d) awarding contract(s) to develop the weapon system.

[43]GAO-17-381.

Figure 5: MDA and Warfighter Responsibilities for Determining Missile Defense Requirements



DOD = Department of Defense
MDA = Missile Defense Agency

Source: GAO analysis of DOD information. | GAO-22-563

Note: In this figure, requirements identification includes materiel solution analysis and development includes technology development and product development. DOD's standard process has acquisition phases and decision points that are similar to but not the same as MDA's acquisition process.

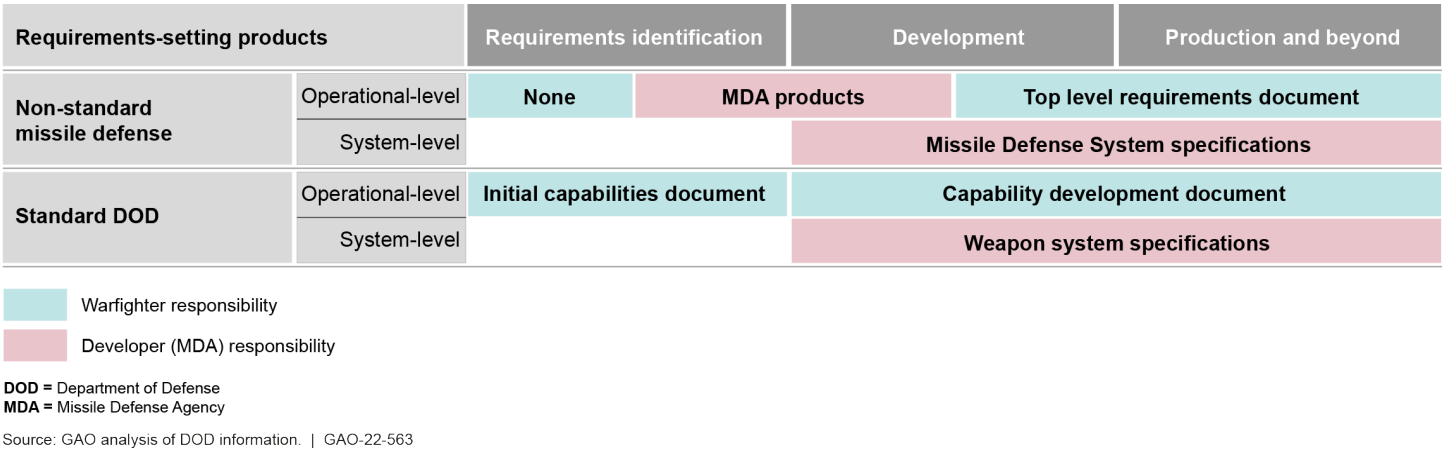
The absence of continuity in warfighter-established, operational-level requirements guiding MDS programs through early development creates the potential for later challenges that could result in significant program disruptions. In June 2015, we found cost and schedule growth in major acquisition programs were directly related to a lack of discipline and rigor in the process of defining and understanding a program's initial requirements.[44] MDA could wait until it has produced a TLRD at the start of product development on a program by program basis to break down the warfighter's operational-level requirements into each of the system's preliminary designs. However, we found in November 2016 that other DOD programs that waited until the start of product development to break down operational-level requirements often experienced increased cost and schedule delays because the program started product development with a limited understanding of the challenges posed by initial requirements.[45]

[44]GAO, *Defense Acquisition Process: Military Service Chiefs' Concerns Reflect Need to Better Define Requirements before Programs Start*, GAO-15-469 (Washington, D.C.: June 11, 2015).

[45]GAO-17-77.

Figure 6 below demonstrates that DOD's recent changes did not establish warfighter requirements-setting processes and products during the early stages of MDS program development.

Figure 6: Warfighter-Owned Requirements-Setting Products Not in Place for Early Missile Defense Program Development



DOD = Department of Defense
MDA = Missile Defense Agency

Source: GAO analysis of DOD information. | GAO-22-563

Note: In this figure, requirements identification includes materiel solution analysis and development includes technology development and product development. DOD's standard process has acquisition phases and decision points that are similar to but not the same as MDA's acquisition process.

Warfighter Currently Lacks a Process to Document and Validate Initial Requirements

USSTRATCOM officials told us that they identified a need for a process to validate and document operational-level missile defense requirements—a process that was not defined in the 2020 update to SI 538-03. In DOD's standard requirements-setting process, the warfighter performs capability gap analyses, such as the Capabilities Based Assessment, to determine whether there are any capability gaps that present an unacceptable level of risk and, if so, whether a capability solution is needed to mitigate or eliminate the gap. An Initial Capabilities Document captures the results of the assessment and identifies the operational attributes needed. This document undergoes a senior-level warfighter validation process, which is generally required to initiate the acquisition process for a new weapon system program. The updated SI 538-03 created the Missile Defense Gap Assessment as an analog to a Capabilities Based Assessment but did not establish a process for documenting and validating the results in a requirements document.

USSTRATCOM previously attempted a pathfinder effort to trial an initial requirements document to provide MDA with greater specificity of the warfighter's operational-level requirements. However, MDA did not support the effort due to concerns that it encroached on MDA's technical

design authority and ability to make performance trade-offs and ensure integration among elements of the MDS, according to the agency. Nonetheless, DOD's 2019 review of the WIP reinforced the need for a warfighter-validated initial requirements document, recommending that USSTRATCOM specify the precise operational features needed in missile defense capabilities (see table 3 above). In the absence of warfighter-validated initial requirements, MDA's concerns for cost and schedule as the material developer may unduly influence the solutions it chooses to pursue, as has previously happened.[46] USSTRATCOM officials told us in April 2021 that they are exploring a potential method for validating and documenting operational-level requirements in their next update to SI 538-03, which is currently planned for 2022.

MDA Evaluates and Selects New Capabilities to Pursue without Initial Warfighter-Validated Requirements

Under DOD's traditional acquisition framework, major defense acquisition programs conduct analyses of alternatives (AOAs) to compare potential solutions and determine the most cost-effective weapon system to acquire.[47] In April 2013, we found that MDA had not conducted robust AOAs for some of its new efforts, in part, because it was not required to do so as a result of the acquisition flexibilities the agency had been granted.[48] We also found that performing robust AOAs that consider a broad range of alternatives is a best practice because it provides decision makers with information needed to determine whether a concept can be developed and produced within existing resources and if it is the best solution to meet the warfighter's needs. We therefore recommended the Secretary of Defense direct MDA to perform robust AOAs for its new programs. MDA subsequently performed AOAs for four of its new programs and, in 2017, we closed our recommendation as implemented.

MDA has performed AOAs for its new programs but DOD did not codify the practice in DTM 20-002, nor did it put processes in place to do so. According to an OSD official who was part of the 2019 review team that drafted the DTM, the department sought to focus on high-value processes that were occurring either inconsistently or too late in the process to inform early missile defense program decisions. The review team

[46]See GAO-17-381. We found that MDA made requirements trade-offs for some of its new programs that favored fielding capabilities sooner and less expensively, but performance was compromised to the extent that the solutions chosen may be insufficient to defeat current and future missile threats.

[47]10 U.S.C. § 2366a and § 2366b.

[48]See GAO-13-432 for more information, including a list of key questions an AOA should address in order to be considered "robust."

therefore did not include a requirement in the DTM for MDA to perform AOAs because MDA performed them on its recent programs. Although it may have been prudent for the review team to prioritize the changes that were needed to improve missile defense acquisitions, codifying the best practice of performing AOAs for new MDS programs would ensure that MDA continues to do so going forward.

DOD also did not put processes in place in the DTM to ensure that initial, operational-level warfighter requirements were used to inform MDA's AOAs. The absence of warfighter-validated initial requirements precludes MDA from having such information to use in its AOAs and concept selections. AOAs are a critically important step in linking warfighter requirements to acquisition efforts because alternative concepts are evaluated, in part, based on whether they will address the warfighter's needs.[49] Without a sufficient comparison of alternatives, AOAs may identify solutions that are not feasible and decision makers may approve programs based on limited knowledge. DOD has an opportunity to codify MDA's practice of performing AOAs and ensure the analyses are based on initial warfighter-validated, operational-level requirements as part of the department's current effort to update the MDA charter with the DTM changes.

TLRD Occurs after Key Technology Development Decisions Are Made

Under DTM 20-002, MDA produces a TLRD that is coordinated with the combatant commands and lead military service at the start of the product development phase for MDS programs. However, there are no warfighter-approved requirements for the start of the technology development phase. OSD and USSTRATCOM officials told us that it would be feasible to develop an initial TLRD sooner—prior to the start of the technology development phase for MDS programs—as was done for the NGI program prior to the issuance of DTM 20-002.[50] MDA officials told us that the TLRD concept was based on a best practice the agency previously

[49]GAO, *Defense Acquisitions: Many Analyses of Alternatives Have Not Provided a Robust Assessment of Weapon System Options*, GAO-09-665 (Washington, D.C.: Sept. 24, 2009).

[50]MDA produced a TLRD for NGI prior to DTM 20-002's effective date of August 20, 2020. According to a response we received from MDA in May 2021, the agency produced the NGI TLRD as a result of OSD coordination on the NGI acquisition plan, which included a requirement for a TLRD. MDA indicated in its response that the NGI TLRD was not produced in direct response to the DTM.

developed in 2014 when it produced a “Homeland BMD [Ballistic Missile Defense] Capabilities Document” that it coordinated with the joint staff.[51]

According to OSD officials who participated in drafting the DTM, the TLRD was intended to have a similar purpose and function as a Capability Development Document produced under DOD’s standard requirements-setting and acquisition process. As part of this process, the results of an AOA are used to develop a draft Capability Development Document which, in turn, supports the decision on whether to start the technology development phase for a major defense acquisition program. The draft Capability Development Document also contains operational-level requirements—as does the TLRD— for the solution selected and is further refined and then validated by senior-level warfighters as the program enters the product development phase—when the TLRD is currently first developed.

OSD officials told us that they focused on producing the TLRD prior to the product development decision because they wanted to ensure the TLRD was validated by the MDEB, similar to the timing in the acquisition process when a draft Capability Development Document is validated under DOD’s standard requirements-setting process. OSD officials stated it would have been premature to validate the TLRD prior to the technology development decision but agreed that it would be feasible to develop an initial version of the TLRD at that decision point. OSD and USSTRATCOM officials also agreed that developing an initial TLRD would promote a better linkage between WIP processes and the TLRD.

In addition, the Joint Staff and USSTRATCOM told us that the TLRD should be authored by the combatant commands and military services, in coordination with MDA (the responsibilities are currently reversed under DTM 20-002). As stated above, warfighter responsibility for authoring operational-level requirements documents is consistent with DOD and GAO-identified best practices, in part, because the warfighter has unique operational expertise based on decades of experience gained from operating missile defense systems. DOD has an opportunity to consider accelerating the development of a TLRD and ensure the warfighter is responsible for authoring the TLRD as part of the department’s ongoing effort to update the MDA charter with the DTM changes.

[51]See GAO-17-381 for more information on the requirements document MDA coordinated with the joint staff.

Too Soon to Assess Practical Effects of DOD's Recent Changes to Acquisition Management Practices

DTM 20-002 required the changes in the directive to be incorporated into the MDA charter (DOD Directive 5134.09) and MDA acquisition management policies. DOD is currently updating the MDA charter and acquisition management policies to implement the changes. The memorandum has been in effect for over 14 months and was set to expire on August 21, 2021. However, on June 24, 2021, DOD issued a change to the DTM that extended the memorandum's expiration to August 21, 2022. OSD officials told us in June 2021 that the revision has taken longer than initially expected and that additional time was needed to complete the effort.

Although a majority of stakeholders agreed with elevating the milestone decision authority to an Under Secretary of Defense (USD), MDA and the USD for Policy expressed concerns about the potential effects of the changes to MDA's acquisition process. According to MDA, the agency disagreed with the Deputy Secretary's decision to elevate MDA's milestone decision authority because the agency was concerned that the additional levels of review would slow down decision making and accountability would be lost through coordination with various OSD staff. The USD for Policy similarly told the Deputy Secretary in a November 2019 memorandum that elevating the milestone decision authority could create lengthy external reviews, affect speed of product development, and detrimentally impact fielding and deployment.

However, it is too soon to know the real world results of the changes or measure any potential delays from USD(A&S)'s new milestone decision authority. USD(A&S) exercised its milestone decision authority on one program activity thus far and plans to do so for only one other activity in the near future.[52] In May 2021, MDA completed an assessment of the impact of DTM 20-002 changes to MDS programs and found that of the total 38 program activities identified, five were now subject to USD(A&S) decision authority as a result of the issuance of DTM 20-002 and four were yet to be determined. Of the five activities subject to USD(A&S) approval, MDA requested and received delegated authority for two and is awaiting a decision on one. USD(A&S) exercised its decision authority for approving the start of technology development on the NGI program in January 2021 and is retaining its decision authority for the Glide Phase

[52]The upcoming program activities MDA identified are planned to occur between the third quarter of fiscal year 2021 and the fourth quarter of fiscal year 2023.

Interceptor technology development decision, which is estimated to occur in the third quarter of fiscal year 2022.

Our prior work has shown that establishing a sound business case and obtaining department-wide support for new acquisition efforts requires patience to take the necessary time up front to produce well-informed requirements, acquisition strategies, and cost estimates.[53] In January 2021, a DOD-sponsored independent study of MDA's acquisition process found that MDA has consolidated responsibilities and authorities across DOD for designing, developing, and building the MDS and plays the central role in establishing missile defense requirements.[54] MDA's ability to operate with a significant degree of autonomy within DOD may streamline decision-making. However, as we previously found, MDA runs the risk of allowing its own preferences as an acquisition organization to lead it down paths that may not be fully supported within DOD or that may commit the services to capabilities for which they are later unwilling to accept responsibility.[55] Although there is no guarantee that additional oversight will prevent MDA's acquisition programs from experiencing significant cost growth, schedule delays, or technical issues, the potential benefits that can come from identifying and mitigating problems during early program development are worthwhile investments.

DOD Generally Met Statutory Requirements When Making Changes to Missile Defense Non-Standard Acquisition Processes and Responsibilities

Prior to the effective date for the changes made in a 2020 DOD memorandum to missile defense non-standard acquisition processes and responsibilities, the Secretary of Defense generally met the section 1688(b) requirements in the NDAA for Fiscal Year 2020 to: consult with a number of specific senior DOD officials on the changes; certify the consultation and submit a report on the changes to the congressional defense committees; and wait 120 days from this submission before implementing the changes. Also, USSTRATCOM made changes to the instruction that governs the WIP but determined that the statutory requirements did not apply to these changes. USSTRATCOM viewed the changes as not altering missile defense non-standard acquisition processes and responsibilities. In May 2021, USSTRATCOM provided us

[53]GAO-17-381.

[54]Institute for Defense Analyses, *Independent Study of the Organizational Location and Acquisition Processes of the Missile Defense Agency*, P-20437 (Alexandria, Va.: January 2021).

[55]GAO, *Missile Defense: Assessment of Testing Approach Needed as Delays and Changes Persist*, GAO-20-432 (Washington, D.C.: July 23, 2020); GAO-20-177; GAO-17-381; and GAO-10-311.

with a memorandum in response to our review stating that it intends to follow the consultation, certification, reporting, and timeliness requirements in section 1688(b) and that congressional notification will be made prior to making changes or updates to SI 538-03.

DOD Generally Met Statutory Consultation, Certification, Reporting, and Waiting Period Requirements in Issuing Its 2020 Memorandum

DOD generally met the requirements set forth in section 1688(b)(1) of the NDAA for Fiscal Year 2020 prior to DTM 20-002's effective date in August 2020. According to section 1688(b), the Secretary of Defense, without delegation, must fulfill a set of requirements prior to making any changes to missile defense non-standard acquisition processes and responsibilities.[56] These statutory requirements include consultation with a number of senior DOD officials, a certification to the congressional defense committees, submitting a report to the congressional defense committees, and a waiting period of 120 days from this submission before the changes are made. While DTM 20-002 was issued in March 2020, the Secretary of Defense notified the congressional defense committees in April 2020 that DOD intended to wait to implement the modifications to MDA's processes and responsibilities until after the 120 day waiting period. Table 5 describes the extent to which DOD met the section 1688(b) requirements in its issuance of DTM 20-002.

[56]According to section 1688(b)(2) of the NDAA for Fiscal Year 2020, missile defense non-standard acquisition processes and responsibilities are such processes and responsibilities described in the memorandum of the Secretary of Defense titled "Missile Defense Program Direction" signed on January 2, 2002; the Department of Defense Directive 5134.09, as in effect on the date of the enactment of the NDAA for Fiscal Year 2020, December 20, 2019; and United States Strategic Command Instruction 538-3 (statute cited to 583-3, which is a drafting error since this document is non-existent; see appendix I).

Table 5: GAO Assessment of the Department of Defense's Compliance with Section 1688(b) of the National Defense Authorization Act for Fiscal Year 2020 in Issuing Directive-Type Memorandum 20-002

Section 1688(b) requirements	Generally met	Not met
(1) The Secretary may not make any changes to the missile defense non-standard acquisition processes and responsibilities until the Secretary, without delegation—	✓	
(A) has consulted with the Under Secretary of Defense for Research and Engineering, the Under Secretary of Defense for Acquisition and Sustainment, the Under Secretary of Defense for Policy, the secretaries of the military departments, the Chairman of the Joint Chiefs of Staff, the Commander of United States Strategic Command, the Commander of United States Northern Command, and the Director of the Missile Defense Agency;[a]	✓	
(B) certifies to the congressional defense committees that the Secretary has coordinated the changes with and received the views of the individuals referred to in subparagraph (A);	✓	
(C) submits to the congressional defense committees a report describing the changes, the rationale for the changes, and the views of the individuals referred to in subparagraph (A) with respect to such changes; and	✓	
(D) a period of 120 days has elapsed following the date on which the Secretary submits such report.[b]	✓	

Source: GAO analysis of Department of Defense documentation. | GAO-22-563

[a]10 U.S.C. § 101(a)(8) defines "military departments" as the Department of the Army, the Department of the Navy, and the Department of the Air Force.

[b]While the report was dated April 22, 2020, the report was submitted to and received by the congressional defense committees on April 23, 2020. The directive-type memorandum went into effect August 20, 2020, 119 days after submission to the congressional defense committees.

The Secretary of Defense generally met the consultation requirement by reviewing the views of DOD components that CAPE obtained during the DTM coordination process. Section 1688(b) required the Secretary of Defense to, without delegation, consult with a number of senior DOD officials prior to making any changes to missile defense non-standard acquisition processes and responsibilities. As previously discussed, DOD performed a review in 2019 and identified changes to improve missile defense acquisition approaches. At the direction of the Deputy Secretary of Defense, CAPE incorporated the changes into a draft DTM. CAPE coordinated the draft DTM following DOD's standard issuance process, culminating in the Deputy Secretary of Defense's approval of the DTM in March 2020.[57] Appendix III provides additional information on the coordination effort that occurred on DTM 20-002.

DOD met the consultation requirement by including the views obtained from DOD components through the DTM coordination process in the Secretary of Defense's April 2020 congressional notification review

[57]See Department of Defense, *DOD Issuances Program*, Instruction 5025.01 (Aug. 1, 2016).

package. The Secretary of Defense subsequently approved submitting the certification letters and report to the congressional defense committees on April 22, 2020. Table 6 indicates the DOD component views that CAPE obtained during two rounds of coordination on the draft DTM in late 2019.

Table 6: Department of Defense Coordination on Directive-Type Memorandum 20-002

DOD components that coordinated on DTM 20-002	Air Force	Army	Joint Staff	MDA	USNORTHCOM	Navy	USSTRATCOM	USD (A&S)	USD (P)	USD (R&E)
First round of coordination: August 2019	●	○	●	●	●	●	●	●		●
Second round of coordination: September - November 2019	●	●	●	●	●	●	●	●	●	●

Legend: ● = formal coordination; ○ = informal coordination

DOD = Department of Defense

DTM = directive-type memorandum

MDA = Missile Defense Agency

USNORTHCOM = U.S. Northern Command

USSTRATCOM = U.S. Strategic Command

USD(A&S) = Under Secretary of Defense for Acquisition and Sustainment

USD(P) = Under Secretary of Defense for Policy

USD(R&E) = Under Secretary of Defense for Research and Engineering

Source: GAO analysis of DOD information. | GAO-22-563

Note: The Office of the Director, Cost Assessment and Program Evaluation coordinated changes to DTM 20-002 with a number of DOD components. This table only presents coordination that occurred with the DOD components that were required by Pub. L. No. 116-92, § 1688(b)(1)(A) to be consulted if changes are made to missile defense non-standard acquisition processes and responsibilities.

DOD also generally met the section 1688(b) certification, reporting, and waiting period requirements. The Secretary of Defense, in an April 22, 2020, letter to the congressional defense committees, certified that the DTM changes were coordinated with, and views were received from, the required DOD components cited in table 6 above. The Secretary of Defense also submitted an April 2020 report to the congressional defense committees along with the certification letters.[58] The report included a

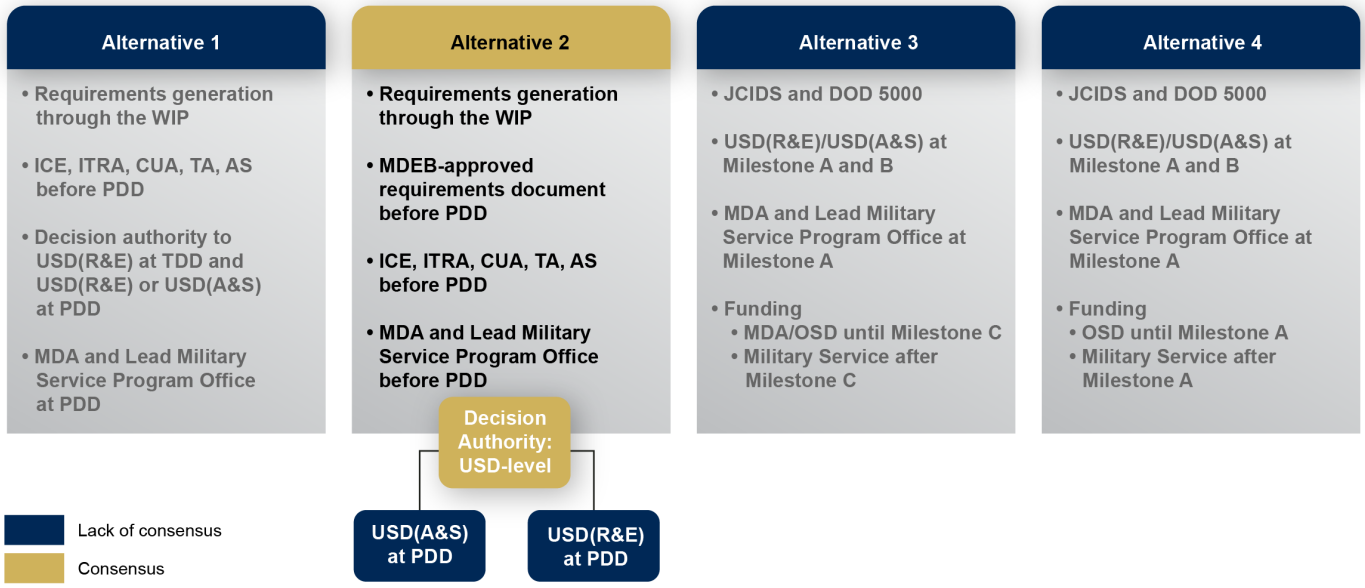
[58]Department of Defense, *Report to Satisfy Section 1688(b) of the Fiscal Year 2020 National Defense Authorization Act: Notification of Changes to Nonstandard Acquisition Processes and Responsibilities of the Missile Defense Agency* (April 2020).

description of: (a) the changes made in the DTM; (b) the rationale for the changes; and (c) the views of all 10 senior DOD officials that were required to be consulted—meeting the section 1688(b) requirements. The Secretary of Defense also stated in the certification letters that DOD would wait at least 120 days after submission to implement the changes. The DTM, which included the changes described in the Secretary of Defense's report, went into effect 120 days (August 20, 2020) after the Secretary of Defense signed the April 22, 2020, letter.[59]

Although the Secretary of Defense's report included a description of senior DOD officials' views with respect to the DTM changes, as required by section 1688(b), the report did not provide the congressional defense committees with insight into each of the official's specific views or any outstanding concerns they may have had. As we previously discussed, both MDA and the USD for Policy raised concerns during the DTM coordination process regarding the changes to elevate the milestone decision authority. These views, however, were not included in the Secretary of Defense's report. Instead, DOD officials' views were presented in the report in a consolidated manner and in the form of preferences (see fig. 7). Specifically, the report included an overview of the four alternative approaches proposed by the review team, one of which had broad consensus from stakeholders.

[59]While the report was dated April 22, 2020, the report was submitted to and received by the congressional defense committees on April 23, 2020. The DTM went into effect August 20, 2020, 119 days after submission to the congressional defense committees.

Figure 7: Senior Department of Defense Officials' Views Presented in the Secretary of Defense's April 2020 Report to the Congressional Defense Committees



AS = Acquisition strategy
ACAT = Acquisition Category
CUA = Capability and utility assessment
DOD = Department of Defense
ICE = Independent cost estimate
ITRA = Independent technical risk assessment

JCIDS = Joint Capabilities Integration and Development System
MDA = Missile Defense Agency
MDEB = Missile Defense Executive Board
OSD = Office of the Secretary of Defense
PDD = Production Development Decision
TA = Transfer agreement

TLRD = Top-level requirements document
USD = Under Secretary of Defense
USD(A&S) = Under Secretary of Defense for Acquisition and Sustainment
USD(R&E) = Under Secretary of Defense for Research and Engineering
WIP = Warfighter Involvement Process

Source: GAO analysis of Department of Defense information. | GAO-22-563

While a majority of the DOD components that indicated a preference supported elevating the milestone decision authority to the USD-level, there was no consensus among stakeholders on whether USD(A&S) or USD(R&E) should be the decision authority for missile defense programs of special interest or over the Acquisition Category I threshold. The report acknowledged the lack of consensus, but did not include any stakeholder preferences or additional comments on this issue. A couple of DOD components preferred the decision authority for starting technology development to be USD(R&E) and product development to be USD(A&S). Others preferred USD(A&S) as the decision authority for starting product development but differed on whether USD(R&E) or USD(A&S) should be the decision authority for starting technology development. The Deputy Secretary of Defense decided the matter in a December 2019 memorandum, naming USD(A&S) as the milestone decision authority throughout the life cycle of an acquisition program.

During a March 2021 meeting we held with MDA and OSD organizations, MDA officials stated they were not provided the opportunity to review and have their views directly included in the report that was sent to the congressional defense committees. MDA officials also told us they were not aware that the DTM coordination would be used to meet section 1688(b) requirements and that they concurred with the DTM changes because USD(R&E) concurred.[60] Officials from the offices of USD(A&S), USD(R&E), and CAPE did not raise similar concerns to us. An official from OSD's Office of General Counsel stated during the meeting that MDA was provided the opportunity to comment on the DTM, and that DOD coordinated the DTM changes and received its views, as required by section 1688(b).

USSTRATCOM Determined That the Statutory Requirements Did Not Apply to 2020 Changes to Its Instruction but Intends to Apply the Requirements for Future Updates

USSTRATCOM conducted a legal review in March 2020 and determined that it did not need to apply the section 1688(b) requirements to the changes it subsequently made to SI 538-03. According to USSTRATCOM's legal review, both the 2013 and 2020 versions of SI 538-03 prescribe a Modification and Fielding Request process that starts with warfighter input, creating a prioritized list, and sending the prioritized list to MDA for solutions. The legal review concluded that these are not acquisition processes and responsibilities and thus USSTRATCOM did not initiate section 1688(b) congressional notification. USSTRATCOM also stated in a September 2020 congressional inquiry response that the revised SI 538-03 should not be subject to section 1688 requirements, as the instruction does not change MDA's non-standard acquisition processes and responsibilities.

Going forward, however, USSTRATCOM intends to apply the section 1688(b) requirements to future changes to SI 538-03. In May 2021, USSTRATCOM provided us with a memorandum in response to our review stating that it intends to follow the consultation, certification, reporting, and timeliness requirements in section 1688(b) and that congressional notification will be made prior to making changes or updates to SI 538-03. USSTRATCOM officials stated they would adhere to the section 1688 requirements in order to engage the congressional defense committees on any future changes to the instruction, including those to the missile defense acquisition management process, and to respond to feedback from committee staff, who generally expressed the

[60]MDA is under the authority, direction, and control of USD(R&E). 10 U.S.C. § 205.

view that the section 1688(b) requirements should have been applied to USSTRATCOM's July 2020 update to SI 538-03.

As indicated in table 7, all of the DOD components that were required to be consulted under section 1688(b) participated in USSTRATCOM's 2019 WIP review and most coordinated on drafting the 2020 update to SI 538-03.

Table 7: Department of Defense Review and Coordination on Changes to the Missile Defense Warfighter Involvement Process

	DOD components that participated in coordination efforts									
DOD efforts to improve and update the WIP	**Air Force**	**Army**	**Joint Staff**	**MDA**	**USNORTH-COM**	**Navy**	**USSTRAT-COM**	**USD (A&S)**	**USD(P)**	**USD (R&E)**
MDR-directed review of the WIP: February – July 2019	●	●	●	●	●	●	●	●	●	●
Drafting an update to SI 538-03: January – February 2020	●	●	●	●	●	●	●			

DOD = Department of Defense

MDA = Missile Defense Agency

MDR = Missile Defense Review

SI = U.S. Strategic Command Instruction

USD(A&S) = Under Secretary of Defense for Acquisition and Sustainment

USD(P) = Under Secretary of Defense for Policy

USD(R&E) = Under Secretary of Defense for Research and Engineering

USNORTHCOM = U.S. Northern Command

USSTRATCOM = U.S. Strategic Command

WIP = Warfighter Involvement Process

Source: GAO analysis of DOD information. | GAO-22-563

Note: USSTRATCOM coordinated changes to SI 538-03 with a number of DOD components. This table only presents coordination that occurred with the DOD components that were required by Pub. L. No. 116-92, § 1688(b)(1)(A) to be consulted if changes are made to missile defense non-standard acquisition processes and responsibilities.

USSTRATCOM was generally responsive to implementing stakeholders' comments and most of the stakeholders that provided comments concurred with the update to SI 538-03. MDA indicated its preference to USSTRATCOM for the WIP to remain unchanged, indicating that the process was working well and that the revisions placed the agency's ability to develop, procure, and field the MDS at risk by slowing down the process for determining capability requirements and eliminating MDA's ability to make trade-offs in developing the MDS. As such, MDA told us in June 2021 that it non-concurred with the update to SI 538-03, in part, because it disagreed with changes to the WIP that brought it closer in

alignment to JCIDS and the inclusion of references to JCIDS terms and documents in the instruction. However, MDA previously told us in December 2020 in a response to a questionnaire we sent to the agency that it did not anticipate any changes to the requirements-setting process or warfighter interactions based on the updates to SI 538-03 because the updated instruction preserves MDA's existing authorities. MDA also agreed that the new instruction provides clear responsibility for determining operational- and system-level requirements.

DOD Met Some but Not All NDAA for Fiscal Year 2020 Statutory Requirements for Obtaining an Independent Study on MDA's Acquisition Process and Placement in DOD

DOD generally met the statutory requirement in section 1688(a) of the NDAA for Fiscal Year 2020 to enter into a contract with a federally funded research and development center (FFRDC) to conduct an independent study on the organizational placement of MDA within DOD and the risks and benefits of transitioning MDA to standard acquisition processes. DOD also generally met the section 1688(a) requirement to update the congressional defense committees regarding the scope of the study before entering into the contract. However, DOD did not modify the FFRDC's contract to include the study until after the date the FFRDC was statutorily required to submit the study to DOD. In addition, DOD submitted the study to the congressional defense committees but did not meet the statutorily mandated deadline. As such, the department did not fully meet all section 1688(a) requirements.

DOD Generally Met the Independent Study and Congressional Update Requirements

DOD generally met a requirement in the NDAA for Fiscal Year 2020 to award a contract to an FFRDC for an independent study to assess MDA's organizational placement within DOD as well as transitioning MDA's acquisition process to the standard acquisition process.[61] Table 8 describes DOD's compliance with section 1688(a) requirements.

[61]National Defense Authorization Act (NDAA) for Fiscal Year 2020, Pub. L. No. 116-92, § 1688(a). FFRDCs provide federal agencies with research and development functions, technical systems engineering capabilities, and policy development and decision-making studies, among other things. See FAR §35.017.

Table 8: Assessment of the Department of Defense's (DOD) Compliance with the National Defense Authorization Act (NDAA) for Fiscal Year 2020, Section 1688(a)

Section 1688(a) requirements	Generally met	Not met
(1) Secretary of Defense shall seek to enter into a contract with a federally funded research and development center [FFRDC] to conduct a study assessing—	✓	
(A) the organization of the Missile Defense Agency under the Under Secretary of Defense for Research and Engineering;	✓	
(B) alternative ways to organize the Agency under other officials of DOD including the Under Secretary of Defense for Acquisition and Sustainment and any other official of the department the federally funded research and development center determines appropriate; and	✓	
(C) transitioning the agency to the standard acquisition process including both the risks and benefits of making such a transition.	✓	
(2) Before entering into the contract with a federally funded research and development center to conduct the study, the Secretary shall provide to the congressional defense committees an update on the scope of such study.	✓	
(3) Not later than 30 days after the date on which the federally funded research and development center submits to the Secretary the study, the Secretary shall submit to the congressional defense committees the study, without change.		✓
	DOD submitted the report to the congressional defense committees 43 days after the date on which the FFRDC submitted the study to DOD.	

Source: GAO analysis of DOD documentation. | GAO-22-563

Note: In addition to DOD requirements, the NDAA for Fiscal Year 2020 section 1688(a)(3) also included a requirement for the federally funded research and development center: "Not later than 180 days after the date of the enactment of this Act, the federally funded research and development center shall submit to the Secretary the study" conducted under section 1688(a)(1).

DOD met the statutory requirement to enter into a contract for an independent study with an FFRDC through its contract award to the Institute for Defense Analyses (IDA) for the report, "Independent Study of the Organizational Location and Acquisition Processes of the Missile Defense Agency (MDA)."[62] As part of this statutory requirement, DOD issued a solicitation for an indefinite delivery, indefinite quantity contract in May 2018 in support of OSD, the joint staff, the combatant commands, the defense agencies, and other DOD components. The solicitation had an award date to IDA of March 25, 2019. The contract modification to include the independent study was not signed until September 2020. IDA initiated the independent study in August 2020. After completing its assessment, IDA came to several conclusions:

[62]Institute for Defense Analyses, *Independent Study of the Organizational Location and Acquisition Processes of the Missile Defense Agency*, P-20437 (Alexandria, Va.: January 2021).

- **Alternative organizational placements of MDA within DOD**: The study found that neither USD(R&E) or USD(A&S) has all of the expertise or authorities to oversee the full range of MDA responsibilities. However, the study found the authorities, expertise, and culture of USD(A&S) most closely aligns with MDA responsibilities and would be a good location for MDA. The study also looked at placing MDA under the military services represented by Space Force, under the combatant commands represented by USSTRATCOM, and under the Deputy Secretary of Defense, but none of these options were preferred over USD(A&S). According to the study, each military service lacks capabilities across the full range of missile defense responsibilities, and the Space Force in particular lacks the authorities and expertise for surface-based systems. Similarly, USSTRATCOM lacks acquisition authorities and acquisition expertise, and would need to be provided those authorities by law, according to the study. The Deputy Secretary of Defense, meanwhile, was not preferred because it already has high visibility into MDA's activities and would likely delegate oversight to an Under Secretary of Defense.

  Transitioning MDA to DOD's standard acquisition process: The study came to no definitive conclusion in regard to transitioning MDA to DOD's standard acquisition processes. The study stated that while MDA's process—after the changes from DTM 20-002—is now closer to DOD's restructured acquisition process, both are new and DOD lacks practical experience on their effects. The study recommended revisiting the question of transitioning MDA to standard acquisition processes once DOD has more experience with acquisitions under the DTM and Adaptive Acquisition Framework. The study did state, however, that MDA should not be under JCIDS at this time. Table 9 describes the selected benefits and risks IDA identified for placing MDA under JCIDS. IDA stated that MDA could seek the Joint Requirements Oversight Council's endorsement through less time-consuming pathways, as was recently done for NGI, but these pathways generally do not include the multiple in-depth reviews of technical and operational issues required by the current JCIDS process.[63] IDA noted that if DOD can establish streamlined processes that provide effective oversight, MDA's special authorities would perhaps not be needed.

[63]The Joint Requirements Oversight Council is comprised of the Vice Chiefs of Staff from each of the military services and advises the Chairman of the Joint Chiefs of Staff on capability requirements undergoing a validation review in the JCIDS process.

Table 9: Independent Study's Findings on Placing Missile Defense Agency (MDA) Under the Joint Capabilities Integration and Development System (JCIDS)

Selected benefits of placing MDA under JCIDS	Selected risks of placing MDA under JCIDS
• Serves as a forum for adjudicating the military services' and combatant commanders' equities • Requires extensive reviews which may identify program issues sooner • Establishes formal relationships with military service operators early via the production of an Initial Capability Document that is required to support the initiation of a new acquisition program	• The process is perceived to take too much time and could delay missile defense capability development and delivery • Can lead to requirements "creep" where requirements changes are made after a program has started, contributing to cost and schedule increases • Can lock in requirements too early, before their viabilities are established and reduce MDA's flexibility to negotiate trade-offs with the warfighter

Source: Institute for Defense Analyses. | GAO-22-563

DOD met its statutory requirement to provide the congressional defense committees with an update on the scope of the study before entering into the contract with an FFRDC. DOD awarded the indefinite delivery, indefinite quantity contract to IDA in March 2019, before the NDAA for Fiscal Year 2020 was enacted in December 2019. However, DOD provided the congressional defense committees with an update in early July 2020 before DOD modified IDA's contract to complete the independent study required by the statute. DOD's update to the congressional defense committees stated that the IDA Systems and Analyses Center would be the FFRDC conducting the study, and included the study approach, IDA's delivery estimate of the final report to DOD—approximately 180 days from the contract award—and DOD's statement that the report would be submitted without change to the congressional defense committees 30 days after receipt from IDA.

DOD Submitted the Final Study to the Congressional Defense Committees but Reporting Deadlines Were Not Met

DOD did not modify its contract with IDA to include the independent study until after the date the FFRDC was statutorily required to submit the study to DOD. Section 1688(a)(3) of the NDAA for Fiscal Year 2020 required that the FFRDC submit the independent study to the Secretary of Defense no later than 180 days after the NDAA for Fiscal Year 2020's December 20, 2019, enactment date, which would have been June 17, 2020. However, DOD signed the modification to its contract with IDA to perform the required independent study on September 9, 2020, which was after the 180-day statutory deadline had passed. Ultimately, IDA submitted the final report to DOD in March 2021—over 14 months after the NDAA for Fiscal Year 2020's enactment date.

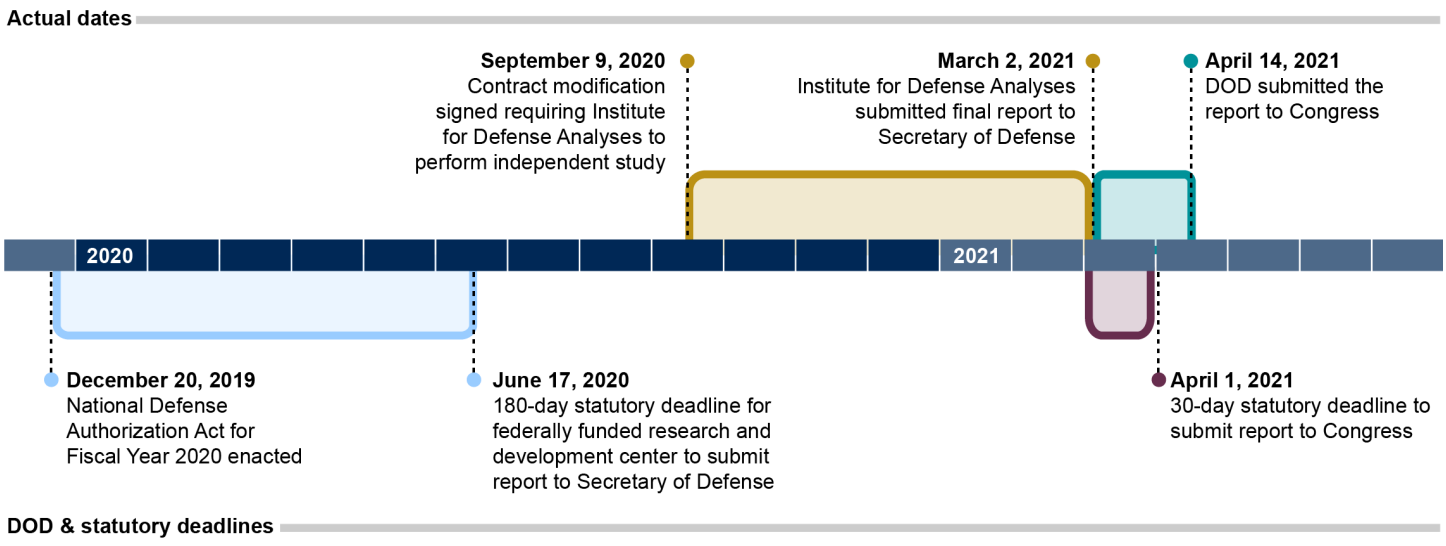
According to a senior USD(R&E) official, the delay in awarding the contract to the FFRDC was largely due to deliberations among DOD leadership over which office should be assigned contracting responsibility

for the study. The official stated that OUSD(R&E) was eventually assigned the responsibility but the contract award was delayed by another few weeks as OUSD(R&E) considered which agency or office should execute the contract. MDA was subsequently assigned responsibility for sponsoring the study.

In addition, DOD did not meet its statutory deadline to submit IDA's study to the congressional defense committees. Section 1688(a)(4) of the NDAA for Fiscal Year 2020 required the Secretary of Defense to submit the study, without change, to the congressional defense committees no later than 30 days after the FFRDC submitted the study to the Secretary of Defense. IDA submitted the study to DOD on March 2, 2021 and, as such, DOD was required to submit the study to the congressional defense committees by April 1, 2021. DOD submitted the study to the congressional defense committees on April 14, 2021, exceeding the 30-day deadline. DOD had no additional comments to provide regarding the missed statutory deadlines.

Figure 8 shows the statutory deadlines and DOD's actions.

Figure 8: Comparison of Section 1688(a) Deadlines and Timing of Department of Defense (DOD) Actions for Obtaining the Independent Study



Source: GAO analysis of Department of Defense information and Pub. L. No. 116-92 | GAO-22-563

Conclusions

The changes DOD made in 2020 to missile defense requirements-setting and acquisition management processes were intended to enable MDA to more consistently meet its commitments to develop and deliver timely capabilities to the warfighter. Although the changes DOD made are generally consistent with our identified acquisition best practices, the potential benefits could be significantly diminished if MDA programs are not fully aligned to warfighter-determined requirements. DOD previously attempted to achieve this alignment by generally deferring to MDA and its engineering expertise to respond to warfighter needs. Over the past few years, DOD has increasingly recognized that the warfighter should determine operational-level requirements and has made steady progress in transitioning that authority to the warfighter, as we recommended in May 2017.

MDA continues to retain the ability to determine operational-level requirements during early program development, which may result in MDA making late-cycle design changes—which has proven to likely raise cost and create schedule delays—or delivering capabilities that do not fully meet the warfighter's needs to defeat missile threats. DOD did not fully address this issue in its recent policy changes, in part, because MDA had concerns about losing the design flexibility the agency says it needs to make performance trade-offs and integrate the elements of the MDS. However, MDA's early collaboration with the warfighter on NGI's top level requirements document serves as a proof-of-concept that DOD can retain MDA's design flexibility while also anchoring MDS programs to warfighter requirements. DOD has the ability to do this for all MDS programs by documenting and validating the warfighter's initial operational-level requirements for subsequent use in evaluating and developing missile defense capabilities. DOD has an opportunity to codify these actions in policy updates the department is planning over the next several months.

Recommendations for Executive Action

We are making the following three recommendations to DOD:

The Commander of U.S. Strategic Command should include in the next update to U.S. Strategic Command Instruction 538-03 a process for documenting and validating operational-level warfighter requirements in an initial requirements document. (Recommendation 1)

The Secretary of Defense should include in the next update to DOD Directive 5134.09 a requirement for MDA to perform analyses of alternatives for all major MDS programs using warfighter-validated initial requirements documents. (Recommendation 2)

The Secretary of Defense should include in the next update to DOD Directive 5134.09 a requirement for the combatant commands and military services, in coordination with MDA, to produce for MDS programs: (1) initial Top Level Requirements Documents prior to starting technology development activities; and (2) Top Level Requirements Documents that are approved by the Missile Defense Executive Board prior to starting product development activities. (Recommendation 3)

Agency Comments and Our Evaluation

We provided a draft of this report to DOD for review and comment. USD(R&E), in coordination with MDA, provided comments to our report on behalf of DOD (reproduced in appendix IV) and did not concur with any of our three recommendations. Several DOD components provided us with their official positions on our recommendations, which were previously provided to USD(R&E) but were not reflected in the department's response to our report. OUSD(A&S), for example, stated in a September 2021 memorandum to USD(R&E) that all three of our recommendations would: (1) involve the warfighter earlier in MDS development to ensure operational requirements are met; and (2) potentially reduce the risk of having to make costly, time-consuming changes later in the process. OUSD(A&S) proposed that stakeholders collaborate on implementing our recommendations in the upcoming revisions to policies that govern MDA, the MDEB, and the WIP.

We describe the positions of the various DOD components in our evaluation below. We also incorporated technical comments from DOD components, as appropriate, and modified our third recommendation, as discussed below.

In non-concurring with our first recommendation, USD(R&E) stated that the recommendation is counter to the department's codified direction regarding MDA's capability development process, which provides the agency with the flexibility to develop capabilities based on existing technology rather than warfighter requirements established through JCIDS. MDA also indicated in its technical comments that it does not set operational-level requirements but instead translates the warfighter's capability needs into actionable technical requirements and specifications.

We disagree with this position. MDA's systems engineering plan defines specific processes and products the agency employs to establish its own operational-level requirements through which it designs and develops the MDS. More specifically, MDA performs extensive missile threat and MDS architecture analyses to identify capability gaps and warfighting needs.

The results of MDA's analyses are captured in Initial Requirements Documents, which are similar to an Initial Capabilities Document under JCIDS, in that they identify top-level initial requirements to address capability gaps and possible alternative concepts to serve as the basis for future AOAs. MDA also leverages its Initial Requirements Documents to respond to the warfighter's MDIPL. MDA's use of an Initial Requirements Document is indicative of how the agency establishes operational-level requirements within its capabilities-based, non-JCIDS approach.

We continue to maintain that DOD should assign responsibility to the warfighter for determining operational-level requirements for missile defense capabilities because the warfighter has unique expertise based on decades of experience operating missile defense systems. As we discussed in this report, MDA's capabilities-based approach and acquisition flexibilities have allowed the agency to exercise a significant degree of autonomy and consolidate responsibilities that are generally reserved for the military services, combatant commands, and joint staff. We have also described in our previous missile defense reports the potential conflicts of interest that may arise for MDA if acquisition influences pressure the agency into tailoring missile threats and requirements to suit the currently feasible MDS design and preferred weapon system solutions.[64] Assigning requirements-setting responsibility to the warfighter would help ensure that MDS design, development, and testing is not unduly influenced by acquisition considerations.

Although USD(R&E) indicated in its response that it did not concur with our first recommendation, the Joint Chiefs of Staff are in the process of implementing changes that could potentially address our recommendation. USSTRATCOM stated in an August 2021 memorandum to USD(R&E) that it supported a requirements validation process that has recently been proposed by the Joint Staff to "normalize" missile defense requirements within DOD. According to a Joint Staff official, this proposed process—called the Integrated Air and Missile Defense Capability Portfolio Management Review—would result in an annually produced list of prioritized integrated air and missile defense requirements that is validated by the Joint Requirements Oversight Council. The council is scheduled to review the proposed process before the end of this year.

[64]See GAO-20-177 and GAO-17-381.

USSTRATCOM also stated in its August 2021 memorandum to USD(R&E) that it concurred with our first recommendation and that the Joint Staff's proposed process would meet the intent of our recommendation. In addition, USSTRATCOM stated that any process changes would be captured in memorandums from the Joint Requirements Oversight Council, satisfying our recommendation to document the process. Similarly, the Joint Staff, USNORTHCOM, U.S. Navy, U.S. Air Force, and CAPE also informed USD(R&E) that they concurred with our recommendation; OUSD(A&S) partially concurred.

USD(R&E) also non-concurred with our second recommendation, but stated that MDA would recommend an edit to the MDA charter so that MDA would conduct AOAs in collaboration with CAPE and the warfighter for all major MDS programs using warfighter-provided initial requirements. MDA's proposed revision would effectively implement our recommendation. Moreover, as part of this collaboration, CAPE could ensure that MDA uses warfighter-approved initial requirements documents when it performs its currently required sufficiency reviews of MDA's AOAs. In fact, CAPE informed USD(R&E) that it concurred with our recommendation, as did the several other DOD components that concurred with our first recommendation.

Lastly, USD(R&E) did not concur with our third recommendation, stating that it would be premature to develop and coordinate a TLRD prior to a technology development decision. Although USD(R&E) did not provide any specific reasons as to why producing an initial TLRD would be premature, OSD officials told us during a March 2021 meeting that doing so was feasible and prudent because it would promote a better linkage between the WIP and the TLRD. USSTRATCOM, USNORTHCOM, U.S. Air Force, U.S. Navy, and CAPE also informed USD(R&E) that they concurred with our recommendation; OUSD(A&S) and Joint Staff partially concurred. We continue to maintain that developing an initial TLRD—as MDA was directed to do for NGI—would help ensure that MDS programs in the early stages of development maintain their linkage to warfighter-approved requirements.

In the draft report that we provided to DOD for comment, we recommended that MDA, in coordination with the combatant commands and the military services, produce the initial TLRD. The Joint Staff informed USD(R&E) that it partially concurred with our recommendation, stating that the combatant commands and military services, rather than MDA, should be responsible for leading production of the TLRD because the warfighter should author requirements documents. USSTRATCOM

provided similar comments to USD(R&E). Warfighter authorship of requirements documents is consistent with DOD and GAO's identified best practices. As such, we revised the recommendation so that the warfighter would have responsibility for leading production of both the initial version and MDEB-approved version of the TLRD.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Commander of U.S. Strategic Command, and the Director, MDA. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-4841 or SawyerJ@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.

John D. Sawyer
Acting Director, Contracting and National Security Acquisitions

List of Committees

The Honorable Jack Reed
Chairman
The Honorable James M. Inhofe
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Jon Tester
Chairman
The Honorable Richard Shelby
Ranking Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Adam Smith
Chairman
The Honorable Mike Rogers
Ranking Member
Committee on Armed Services
House of Representatives

The Honorable Betty McCollum
Chair
The Honorable Ken Calvert
Ranking Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives

Appendix I: Objectives, Scope, and Methodology

Section 1641 of the National Defense Authorization Act (NDAA) for Fiscal Year 2021 included a provision for GAO to assess whether the Secretary of Defense is in compliance with section 1688 of the NDAA for Fiscal Year 2020. This report addresses: (1) the extent to which the Department of Defense (DOD) made changes to missile defense requirements-setting and acquisition management processes and responsibilities since the NDAA for Fiscal Year 2020 was enacted; (2) how these changes may affect capability development and timeliness of delivery; (3) whether DOD, in making changes, met requirements in section 1688(b) of the NDAA for Fiscal Year 2020; and (4) whether DOD, in obtaining an independent study assessing the organizational structure of MDA and potential transition to DOD's standard acquisition process, met requirements in section 1688(a) of the NDAA for Fiscal Year 2020.

To evaluate the extent to which DOD made changes to missile defense requirements-setting and acquisition management processes and responsibilities after the NDAA for Fiscal Year 2020 was enacted on December 20, 2019, we reviewed the DOD directives and instruction cited in section 1688(b)(2) of the NDAA for Fiscal Year 2020 as describing the non-standard missile defense acquisition processes and responsibilities. These documents included: (1) the Secretary of Defense 2002 memorandum, "Missile Defense Program Direction"; (2) the 2009 DOD Directive 5134.09; and (3) the 2013 version of U.S. Strategic Command (USSTRATCOM) Instruction (SI) 538-03.[1] We identified the processes and responsibilities described in these documents and compared them, as appropriate, to the processes and responsibilities described in DOD's Directive-Type Memorandum (DTM) 20-002 and the 2020 updated version of SI 538-03 to identify changes. We also reviewed the Secretary of Defense's April 2020 congressional notification report and other DOD documents describing the changes. We discussed the changes with officials from the Office of the Under Secretary of Defense (OUSD) for Acquisition and Sustainment (A&S); OUSD for Research and Engineering (R&E); Cost Assessment and Program Evaluation (CAPE); Missile Defense Agency (MDA); Office of the Secretary of Defense (OSD) General Counsel; and USSTRATCOM.

[1]Pub. L. No. 116-92 § 1688(b)(2)(C) references "United States Strategic Command Instruction 583-3." According to a USSTRATCOM official, no such USSTRATCOM instruction numbered 583-3 exists. For the purposes of our review, we understood Pub. L. No. 116-92 § 1688(b)(2)(C) to reference U.S. Strategic Command, Integrated Air and Missile Defense (IAMD) Warfighter Involvement Process (WIP), Strategic Instruction (SI) 538-03 (June 18, 2013).

To evaluate how the changes to missile defense requirements-setting and acquisition management processes may affect capability development and timeliness of delivery, we assessed DOD's rationale for making the changes to identify the effects DOD intended as a result of the changes. To identify these intended effects, we obtained from DOD and congressional committees a number of documents pertaining to the origination, directives, rationale, coordination, and issuance of DTM 20-002 and SI 538-03, such as: (1) an August 1, 2019, briefing on DOD's review of MDA's acquisition approaches and programs for transfer; (2) the July 2019 study of the Warfighter Involvement Process (WIP) that was led by the Joint Staff J8 Joint Integrated Air and Missile Defense Organization and tasked by the January 2019 Missile Defense Review; (3) the review package that was provided to the Deputy Secretary for approving issuance of DTM 20-002; (4) the review package that was provided to the Secretary of Defense for approving the congressional notification of DTM 20-002 changes; (5) the Secretary's April 2020 certification letters and congressional notification report; and (6) responses provided to congressional defense committee staff regarding the effects of changes DOD made.

We also obtained from DOD the internal comments provided by DOD officials at both the working-level and principal-level through the multiple rounds of coordination that occurred over the course of 2019 through 2020 on draft versions of DTM 20-002 and SI 538-03 from all 10 of the DOD components cited in section 1688(b)(1)(A).[2] We reviewed these coordination comments to gain further insight into the effects DOD intended to achieve and any potential negative effects on capability development and timeliness of delivery as a result of the changes.

We compared the changes DOD made in DTM 20-002 and SI 538-03 to best practices we identified for knowledge-based defense acquisitions and lessons learned specific to missile defense acquisitions we identified

[2]Pub. L. No. 116-92 § 1688(b)(1)(A) references the: (1) Under Secretary of Defense for Research and Engineering; (2) Under Secretary of Defense for Acquisition and Sustainment; (3) Under Secretary of Defense for Policy: (4) Secretary of the Army; (5) Secretary of the Navy; (6) Secretary of the Air Force; (7) Chairman of the Joint Chiefs of Staff; (8) Commander of the U.S. Strategic Command; (9) Commander of the U.S. Northern Command; and (10) Director of the Missile Defense Agency. 10 U.S.C. § 101(a)(8) defines "military departments" as the Department of the Army, the Department of the Navy, and the Department of the Air Force.

in our prior work.[3] We also compared the changes in DTM 20-002 and SI 538-03 to findings from the 62 reports we previously issued and 134 recommendations we made on missile defense acquisitions since MDA was established in 2002.[4] We identified any changes DOD made that: (a) may address or perpetuate problems we previously reported; or (b) are consistent or inconsistent with actions we previously recommended in our prior missile defense reporting. In addition, we obtained responses to questionnaires and met with OUSD(A&S), OUSD(R&E), CAPE, MDA, OSD General Counsel, and USSTRATCOM to discuss the changes in DTM 20-002 and SI 538-03.

To evaluate whether DOD met requirements in section 1688(b) of the NDAA for Fiscal Year 2020 in its issuance of DTM 20-002, we reviewed an April 2020 letter and report from the Secretary of Defense that notified the congressional defense committees that DOD intended to make changes that were subject to the section 1688(b) requirements. We also obtained responses from both the OSD General Counsel and MDA on whether the department formally made changes to the 2002 Secretary of Defense memorandum. We confirmed with DOD that changes described in the Secretary of Defense's letter and report were those from DTM 20-002. OSD General Counsel told us that the consultation requirement was met through DOD's internal coordination process on the draft DTM 20-002 and the views obtained during that process were provided to the

[3]For examples, see GAO, *Missile Defense: Some Progress Delivering Capabilities, but Challenges with Testing Transparency and Requirements Development Need to Be Addressed*, GAO-17-381 (Washington, D.C.: May 30, 2017); *Defense Acquisitions: Joint Action Needed by DOD and Congress to Improve Outcomes*, GAO-16-187T (Washington, D.C: Oct. 27, 2015); *Missile Defense: Opportunity Exists to Strengthen Acquisitions by Reducing Concurrency*, GAO-12-486 (Washington, D.C.: Apr. 20, 2012); *Best Practices: DOD Can Achieve Better Outcomes by Standardizing the Way Manufacturing Risks Are Managed*, GAO-10-439 (Washington, D.C.: Apr. 22, 2010); *Best Practices: High Levels of Knowledge at Key Points Differentiate Commercial Shipbuilding from Navy Shipbuilding*, GAO-09-322 (Washington, D.C.: May 13, 2009); *Defense Acquisitions: A Knowledge-Based Funding Approach Could Improve Major Weapon System Program Outcomes*, GAO-08-619 (Washington, D.C.: July 2, 2008); *Best Practices: Capturing Design and Manufacturing Knowledge Early Improves Acquisition Outcomes*, GAO-02-701 (Washington, D.C.: July 15, 2002); *Best Practices: Better Matching of Needs and Resources Will Lead to Better Weapon System Outcomes*, GAO-01-288 (Washington, D.C.: Mar. 8, 2001); and *Best Practices: Better Management of Technology Development Can Improve Weapon System Outcomes*, GAO/NSIAD-99-162 (Washington, D.C.: July 30, 1999).

[4]In our October 2020 report, we listed the 60 reports issued to date at that time (see GAO-21-135R). In addition to issuing GAO-21-135R, we also have since issued GAO, *Missile Defense: Fiscal Year 2020 Delivery and Testing Progressed, but Annual Goals Unmet*, GAO-21-314 (Washington, D.C.: Apr. 28, 2021).

Secretary of Defense as part of the congressional notification package for changes to missile defense non-standard acquisition processes and responsibilities.

- To evaluate whether DOD met the consultation requirement, we obtained from each of the DOD components required to be consulted under section 1688(b)(1)(A): (1) any input their principal formally provided to the Secretary of Defense in response to section 1688(b) pertaining to the issuance of DTM 20-002; and (2) any other input their respective office provided through coordination on DTM 20-002. We developed a timeline of events based on the information we received and identified which DOD components coordinated on the draft DTM and when. We then compared these results to the list of DOD components identified under section 1688(b)(1)(A). We discussed and confirmed the accuracy and completeness of our data collection effort and timeline with OSD officials during meetings in March and April 2021. To evaluate whether the Secretary of Defense, performed the required consultation without delegation, we reviewed the package of documents that the Secretary of Defense received to review and approve congressional notification to determine whether it contained the views of all 10 DOD components that were required to be consulted.[5]
- To evaluate whether DOD met the certification requirement, we reviewed the letters the Secretary of Defense sent to the congressional defense committees in April 2020 to determine whether the Secretary certified that he had consulted with all of the officials required under section 1688(b)(1)(A). Our evaluation of whether DOD met the consultation requirement enabled us to corroborate the Secretary's certification. We also obtained proof of delivery of the Secretary's letter to the congressional defense committees.
- To determine whether DOD met the reporting requirements, we reviewed the content in the Secretary of Defense's April 2020 congressional notification report to determine if it contained a description of the: (1) changes; (2) rationale for the changes; and (3) views of the individuals referred to in section 1688(b)(1)(A) with

[5]The coordination sheet included in the Secretary of Defense's review package stated that the content in the congressional notification report was taken from the briefing describing the results of the 2019 review of MDA's acquisition approaches (also included in the Secretary's review package) and that the briefing results were coordinated at the principal level in August 2019 with the following offices in preparation for a September 5, 2020, decision meeting with the Deputy Secretary of Defense: Army, Navy, Air Force, Joint Staff, USD(R&E), USD(A&S), USD for Policy, USD Comptroller, USSTRATCOM, U.S. Northern Command, OSD General Counsel, CAPE, and MDA.

respect to such changes. We also obtained proof of delivery of the Secretary's report and confirmation of receipt from the congressional defense committees.

- To determine whether DOD met the timeliness requirement, we compared the date of the Secretary of Defense's April 2020 congressional certification letter and notification report to the date the DTM 20-002 went into effect. We also obtained proof of delivery of the Secretary's letter and report and confirmation of receipt from the congressional defense committees.

During our initial meeting with DOD in February 2020, DOD officials were uncertain when the congressional defense committees received the Secretary of Defense's certification letters and congressional notification report. We obtained from DOD's Washington Headquarters Service proof of delivery and receipt of physical copies of the letters and the report to the congressional defense committees, which occurred on April 23, 2020. We used this information in our evaluation of whether DOD met the section 1688(b) certification, reporting, and timeliness requirements in making changes through DTM 20-002.

To evaluate whether USSTRATCOM met section 1688(b) requirements in making changes to SI 538-03, we obtained from USSTRATCOM a September 25, 2020, memorandum documenting a legal review it performed of SI 538-03 in March 2020 and responses it provided to the House Armed Services Committee and Senate Armed Services Committee professional staff members in September 2020 describing why it did not apply the statutory requirements in updating SI 538-03. We met with USSTRATCOM officials to obtain additional clarification on how it interpreted the section 1688(b) requirements, whether it intended to make changes to SI 538-03 in the near future, and, if so, whether it would apply the section 1688(b) requirements. Lastly, we obtained and reviewed the internal comments provided by DOD officials at both the working-level and principal-level through the multiple rounds of coordination that occurred over the course of 2019 and 2020 on draft versions of SI 538-03 to determine the extent to which USSTRATCOM met the section 1688(b) consultation requirement.

To analyze the extent to which DOD met the requirements from section 1688(a) of the NDAA for Fiscal Year 2020, we reviewed OSD documentation and conducted meetings with the DOD officials involved with the Institute for Defense Analyses (IDA) study to discuss actions taken. As part of this review, we assessed a DOD contract and contract modification to determine whether DOD sought to enter into a contract

with a federally funded research and development center (FFRDC). We reviewed DOD's contract with IDA and the contract modification to determine whether DOD requested IDA to assess the organization of MDA under the USD(R&E); alternative ways to organize the agency under other DOD officials including the USD(A&S) and any other DOD official IDA determined appropriate; and transitioning the agency to the standard acquisition process, including both the risks and benefits of making such a transition.

In addition, we analyzed the final IDA report, "Independent Study of the Organizational Location and Acquisition Processes of the Missile Defense Agency (MDA)," to identify whether IDA addressed the section 1688(a) requirements, and whether the report was submitted to the Secretary of Defense within the required time frame. We collected a briefing, letters, and other forms of communication intended to update the congressional defense committees on the status of the contract to be awarded to determine whether DOD met statutory requirements to update them on the scope of the study before DOD entered into a contract with an FFRDC for the study and submitted the final report to them within the required time frame.

In order to evaluate DOD's compliance with section 1688(c) requirements, we first sought to determine whether any billets were transferred from MDA during fiscal year 2020. During our February 2021 entrance conference with DOD, we were told by MDA officials that no billets were transferred from MDA during fiscal year 2020. We subsequently requested an official response from MDA confirming that information. In the interim, we developed an objective to evaluate whether DOD met the section 1688(c) requirements in the circumstance that billets had been transferred from MDA during fiscal year 2020. We received an official response from MDA in March 2021 confirming that no such billet transfer occurred. Based on the response we received from MDA, there was no need for further evaluation of whether DOD met the statutory requirements.

Appendix II: Section 1688 of the National Defense Authorization Act for Fiscal Year 2020

Table 10: Section 1688 of the National Defense Authorization Act for Fiscal Year 2020, Enacted December 20, 2019

SEC. 1688. ORGANIZATION, AUTHORITIES, AND BILLETS OF THE MISSILE DEFENSE AGENCY.
(a) INDEPENDENT STUDY.—
(1) ASSESSMENT.—In accordance with paragraph (2), the Secretary of Defense shall seek to enter into a contract with a federally funded research and development center to conduct a study assessing—
(A) the organization of the Missile Defense Agency under the Secretary of Defense for Research and Engineering pursuant to section 205(b) of title 10, United States Code;
(B) alternative ways to organize the Agency under other officials of the Department of Defense, including the Under Secretary of Defense for Acquisition and Sustainment and any other official of the Department the federally funded research and development center determines appropriate; and
(C) transitioning the Agency to the standard acquisition process pursuant to Department of Defense Instruction 5000, including both the risks and benefits of making such a transition.
(2) SCOPE OF STUDY.—Before entering into the contract with a federally funded research and development center to conduct the study under paragraph (1), the Secretary shall provide to the congressional defense committees an update on the scope of such study.
(3) SUBMISSION TO DOD.—Not later than 180 days after the date of the enactment of this Act, the federally funded research and development center shall submit to the Secretary the study conducted under paragraph (1).
(4) SUBMISSION TO CONGRESS.—Not later than 30 days after the date on which the federally funded research and development center submits to the Secretary the study under paragraph (1), the Secretary shall submit to the congressional defense committees the study, without change.
(b) NOTIFICATION OF CHANGES TO NON-STANDARD ACQUISITION PROCESSES AND RESPONSIBILITIES.—
(1) REQUIREMENTS.—The Secretary may not make any changes to the missile defense non-standard acquisition processes and responsibilities described in paragraph (2) until the Secretary, without delegation—
(A) has consulted with the Under Secretary of Defense for Research and Engineering, the Under Secretary of Defense for Acquisition and Sustainment, the Under Secretary of Defense for Policy, the secretaries of the military departments, the Chairman of the Joint Chiefs of Staff, the Commander of the United States Strategic Command, Commander of the United States Northern Command, and the Director of the Missile Defense Agency;
(B) certifies to the congressional defense committees that the Secretary has coordinated the changes with and received the views of the individuals referred to in subparagraph (A);
(C) submits to the congressional defense committees a report describing the changes, the rationale for the changes, and the views of the individuals referred to in subparagraph (A) with respect to such changes; and

(D) a period of 120 days has elapsed following the date on which the Secretary submits such report.

(2) NON-STANDARD ACQUISITION PROCESSES AND RESPONSIBILITIES DESCRIBED.—The non-standard acquisition processes and responsibilities described in this paragraph are such processes and responsibilities described in—

(A) the memorandum of the Secretary of Defense titled “Missile Defense Program Direction” signed on January 2, 2002;

(B) Department of Defense Directive 5134.09, as in effect on the date of the enactment of this Act; and

(C) United States Strategic Command Instruction 583-3.

(c) LIMITATION ON CERTAIN TRANSFERS OF BILLETS.—During fiscal year 2020, the Secretary of Defense may not transfer civilian or military billets from the Missile Defense Agency to any element of the Department under the Under Secretary of Defense for Research and Engineering until, for each such transfer—

(1) the Secretary notifies the congressional defense committees of such proposed transfer; and

(2) a period of 90 days has elapsed following the date of such notification.

Source: Pub. L. No. 116-92, § 1688. | GAO-22-563

Appendix III: Department of Defense Coordination on Directive-Type Memorandum 20-002

The Department of Defense (DOD) performed a review in 2019 and identified changes to improve missile defense acquisition approaches. At the direction of the Deputy Secretary of Defense, the Director, Cost Assessment and Program Evaluation (CAPE) incorporated the changes into a draft directive-type memorandum (DTM). Events pertaining to the coordination and issuance of DTM 20-002 and the congressional notification on changes to missile defense non-standard acquisition processes and responsibilities included:

- **February 8, 2019**: The Director, CAPE requested principal-level coordination from the Under Secretary of Defense (USD) for Research and Engineering (R&E) and USD for Acquisition and Sustainment (A&S) on a draft Deputy Secretary of Defense memorandum that would direct a review of DOD Directive 5134.09, "Missile Defense Agency (MDA)."
- **April 4, 2019**: The Deputy Secretary of Defense issued a memorandum tasking USD(R&E), USD(A&S), USD(Comptroller), and CAPE, in coordination with the military services, to review MDA acquisition approaches and propose changes to promote program transfer to the military services, reduce acquisition risk, and ensure alignment with the 2019 Missile Defense Review (MDR).
- **April 23, 2019 – July 31, 2019**: The review team, consisting of officials from the offices of USD(R&E), USD(A&S), USD(Comptroller), and CAPE, held meetings with stakeholders to discuss the approach for performing the review, obtaining information, and receiving feedback on the study results. CAPE drafted an initial DTM based on the study results and briefed leaders in several DOD components.
- **August 1, 2019 – August 23, 2019**: CAPE requested and obtained principal-level review of the draft DTM. DOD components were asked to indicate their recommendation for either USD(R&E) or USD(A&S) as the decision authority for product development decisions for large and special interest programs. There was no consensus on preferred decision authority amongst the DOD components that indicated their preference.
- **September 5, 2019**: The Deputy Secretary of Defense met with USD(R&E), USD(A&S), USD Policy, MDA, CAPE, and other DOD officials to discuss changes to MDA's acquisition approach. The Deputy Secretary approved the recommended changes from the review team and directed CAPE to codify them in a draft DTM. Officials stated that the Deputy Secretary requested CAPE to obtain additional feedback from DOD components on whether USD(A&S), USD(R&E), or both should have milestone decision authority.

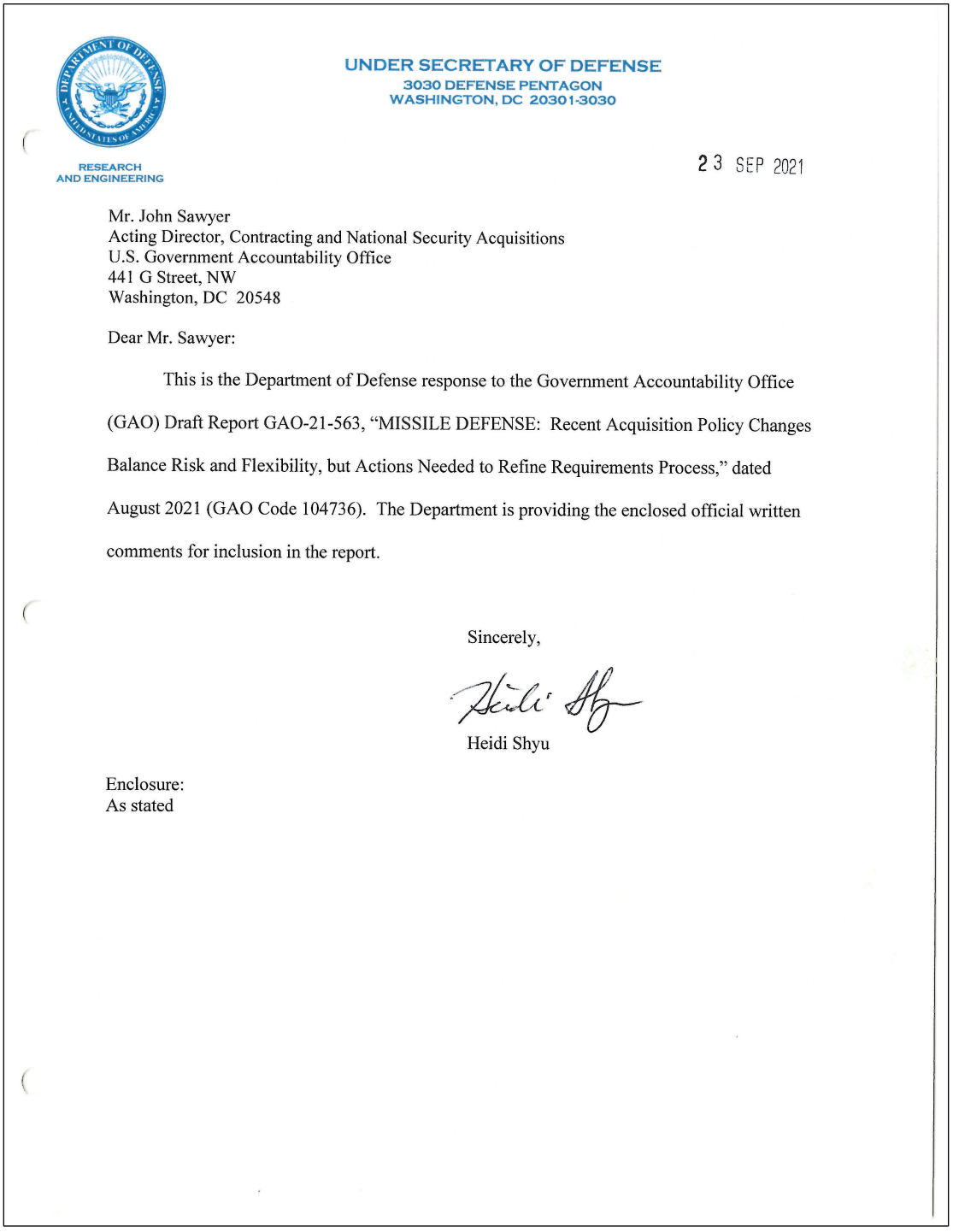
- **September 25, 2019 – November 20, 2019**: CAPE formally requested and obtained principal-level coordination on the draft DTM for technical corrections and feedback on which office should have the milestone decision authority for major MDA programs. Although most stakeholders agreed that large or special interest missile defense programs warrant USD-level oversight, consensus was not reached on which USD should have the responsibility.
- **December 20, 2019**: The Deputy Secretary of Defense signed a memorandum that designated USD(A&S) as the milestone decision authority for the life cycle of acquisition programs. CAPE revised the draft DTM to incorporate the Deputy Secretary of Defense's guidance, making USD(A&S) the milestone decision authority for major missile defense programs throughout the acquisition life cycle.
- **February 11, 2020**: CAPE submitted a memorandum and review material to the Deputy Secretary of Defense seeking approval for the proposed DTM.
- **March 9, 2020**: USD(R&E) performed a final review of the draft DTM. USD(R&E) coordinated with the Director, MDA and provided their comments to the Deputy Secretary of Defense.
- **March 13, 2020**: The Deputy Secretary of Defense approved issuance of DTM 20-002, "Missile Defense System Polices and Governance," Although the DTM was issued, it did not go into effect until August, 20, 2020.
- **April 17, 2020**: CAPE submitted to the Secretary of Defense a memorandum and review material seeking approval to notify the congressional defense committees of pending changes to missile defense acquisition processes.
- **April 22, 2020**: The Secretary of Defense signed letters addressed to the congressional defense committees with an attached report to satisfy requirements from section 1688(b) of the National Defense Authorization Act for Fiscal Year 2020. The letters and attached report were delivered to the congressional defense committees the following day.
- **August 20, 2020**: DTM 20-002 went into effect 120 days after the Secretary of Defense signed the April 22, 2020, letters addressed to the congressional defense committees.

Table 11: Principal-level Department of Defense (DOD) Officials that Coordinated on Directive-Type Memorandum (DTM 20-002)

DOD officials required to be consulted under Section 1688(b)(1)(A) of the National Defense Authorization Act for Fiscal Year 2020	First round of coordination on DTM 20-002: August 2019	Second round of coordination on DTM 20-002: September – November 2019
Chairman of the Joint Chiefs of Staff	Vice Director, Joint Staff	Vice Director, Joint Staff
Commander, U.S. Northern Command	Commander, U.S. Northern Command	Commander, U.S. Northern Command
Commander, U.S. Strategic Commander	Commander, U.S. Strategic Command	Director, Capability and Resource Integration, U.S. Strategic Command
Director, Missile Defense Agency	Director of Acquisition, Missile Defense Agency	Director of Acquisition, Missile Defense Agency
Secretary of the Air Force	Acting Secretary of the Air Force	Principal Deputy Assistant Secretary of the Air Force (Acquisition, Technology and Logistics)
Secretary of the Army	None (Army officials provided informal, in-person comments)	Assistant Secretary of the Army for Acquisition, Logistics and Technology
Secretary of the Navy	Assistant Secretary of the Navy (Research, Development and Acquisition)	Assistant Secretary of the Navy (Research, Development and Acquisition)
Under Secretary of Defense for Acquisition and Sustainment	Under Secretary of Defense for Acquisition and Sustainment	Under Secretary of Defense for Acquisition and Sustainment
Under Secretary of Defense for Policy	None	Under Secretary of Defense for Policy
Under Secretary of Defense for Research and Engineering	Under Secretary of Defense for Research and Engineering	Under Secretary of Defense for Research and Engineering

Source: GAO analysis of DOD information. | GAO-22-563

Appendix IV: Comments from the Department of Defense



UNDER SECRETARY OF DEFENSE
3030 DEFENSE PENTAGON
WASHINGTON, DC 20301-3030

RESEARCH
AND ENGINEERING

23 SEP 2021

Mr. John Sawyer
Acting Director, Contracting and National Security Acquisitions
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Sawyer:

This is the Department of Defense response to the Government Accountability Office (GAO) Draft Report GAO-21-563, "MISSILE DEFENSE: Recent Acquisition Policy Changes Balance Risk and Flexibility, but Actions Needed to Refine Requirements Process," dated August 2021 (GAO Code 104736). The Department is providing the enclosed official written comments for inclusion in the report.

Sincerely,

Heidi Shyu

Enclosure:
As stated

DEPARTMENT OF DEFENSE
RESPONSE TO
GOVERNMENT ACCOUNTABILITY OFFICE
REQUEST FOR INFORMATION
"MISSILE DEFENSE NON-STANDARD ACQUISITION" #104736
RESPONSES TO RECOMMENDATIONS
GAO DRAFT REPORT GAO-21-563

REQUEST: Provide responses to Recommendations 1-3 in the GAO draft report.

RECOMMENDATION 1: The Commander of U.S. Strategic Command should include in the next update to U.S. Strategic Command Instruction 538-03 a process for documenting and validating operational-level warfighter requirements in an initial requirements document.

RESPONSE 1: Non-Concur. This recommendation is counter to the Department's codified direction regarding MDA's capability development processes. MDA is a SECDEF directed "Capabilities Based" development organization (SECDEF Memo 2002). MDA receives Warfighter "Required Capabilities" based on Warfighter perceived missile defense capability gaps via the USSTRATCOM led Warfighter Involvement Process (WIP). USSTRATCOM administers the WIP and produces the Missile Defense integrated Priority List (MDIPL) showing in prioritized fashion what capabilities the Warfighter values the most and requests MDA develop. MDA in turn develops the Achievable Capabilities List (ACL) as a response to the MDIPL showing the capabilities MDA will pursue in its Program of Record based on existing technology, budget and schedule.

An initial requirements document is part of the JCIDS process from which MDA is exempt (SECDEF Memo 2002). It is important to understand the difference between "requirements" in the JCIDS sense and "required capabilities" in a Capabilities Based Approach sense. "Requirements" in the JCIDS sense requires one to have complete knowledge of the threat a requirement will counter as well as all of the engineering parameters, attributes and capabilities. This level of detail is then run through the JCIDS Boards and vetting process until it is "validated" by the JROC. "Required capabilities" on the other hand provide the developer, MDA in this case, with the flexibility to develop capabilities against an "emerging threat" where all of the details and parameters are unknown. Capabilities based development" provides the developer with needed flexibility to begin to develop a capability based on today's technology with the flexibility and agility to enhance and improve that capability through "spiral development" over time.

RECOMMENDATION 2: The Secretary of Defense should include in the next update to DOD Directive 5134.09 a requirement for MDA to perform analyses of alternatives for all major MDS programs using warfighter-validated initial requirements documents.

RESPONSE 2: Non-Concur. As described in the GAO draft report, MDA responded to a 2013 recommendation and conducts Analysis of Alternatives (AoAs) on new programs and mission areas. GAO subsequently closed the recommendation to incorporate AoAs. AoAs are already directed in DoDD 5134.09. Paragraph 6. i (3) states the Secretaries of the Military Departments shall "Lead, in collaboration with the Chairman of the Joint Chiefs of Staff and MDA, analysis of alternatives, wargames, exercise and other activities … early enough in the developmental phase…" Additionally, the CAPE's management of AoAs is already documented in other DoD Directives (e.g., DoDD 5105.84). MDA will recommend an edit to DoD 5134.09 to make MDA the lead in conducting AoAs in collaboration with the Warfighter and CAPE, for all major MDS programs using warfighter initial requirements as provided through the Warfighter Involvement Process.

RECOMMENDATION 3: The Secretary of Defense should include in the next update to DOD Directive 5134.09 a requirement for MDA, in coordination with the combatant commands and military services, to produce an initial Top Level Requirements Documents for MDS programs prior to starting technology development activities.

RESPONSE 3: Non-Concur. It is important for a technology development program to have definitive capability goals, however, mandating development and coordination of Top-Level Requirements (TLRs) prior to a Technology Development Decision is premature. DoDD 5134.09 already directs this early engagement with the Warfighter to develop capability needs ("features and approaches"). Specifically, it directs MDA to "Obtain warfighter community (including Combatant Commanders and the Chairman of the Joint Chiefs of Staff) participation and advice on desired operational features and approaches to system fielding prior to and throughout development. Participate in the USSTRATCOM Missile Defense Warfighter Involvement Process to establish capability standards, evaluate technical, operational, and fielding features and approaches and permit comparison and allocation of capabilities across all BMDS elements…" (reference: DoDD 5134.09, paragraph 6. c. (12)). Finalizing, coordinating, and approving specific TLRs prior to refining "features and approaches" is premature. TLRs at the Product Development Decision is the more appropriate timing.

Appendix V: GAO Contact and Staff Acknowledgments

GAO contact

John D. Sawyer, (202) 512-4841 or SawyerJ@gao.gov

Staff acknowledgments

In addition to the contact listed above, LaTonya Miller (Assistant Director), Pete Anderson, Lorraine Ettaro, Michael Moran, Sylvia Schatz, Roxanna Sun, Brian Tittle, Nicole Warder, and Alyssa B. Weir made key contributions to this report.

Related GAO Products

Missile Defense: Fiscal Year 2020 Delivery and Testing Progressed, but Annual Goals Unmet. GAO-21-314. Washington, D.C.: April 28, 2021.

Missile Defense: Observations on Ground-based Midcourse Defense Acquisition Challenges and Potential Contract Strategy Changes. GAO-21-135R. Washington, D.C.: October 21, 2020.

Missile Defense: Assessment of Testing Approach Needed as Delays and Changes Persist. GAO-20-432. Washington, D.C.: July 23, 2020.

Missile Defense: Lessons Learned from Acquisition Efforts. GAO-20-490T. Washington, D.C.: March 12, 2020.

Missile Defense: Further Collaboration with the Intelligence Community Would Help MDA Keep Pace with Emerging Threats. GAO-20-177. Washington, D.C.: December 11, 2019.

Missile Defense: Delivery Delays Provide Opportunity for Increased Testing to Better Understand Capability. GAO-19-387. Washington, D.C.: June 6, 2019.

Missile Defense: Air Force Report to Congress Included Information on the Capabilities, Operational Availability, and Funding Plan for Cobra Dane. GAO-19-68. Washington, D.C.: December 17, 2018.

Missile Defense: The Warfighter and Decision Makers Would Benefit from Better Communication about the System's Capabilities and Limitations. GAO-18-324. Washington, D.C.: May 30, 2018.

Missile Defense: Some Progress Delivering Capabilities, but Challenges with Testing Transparency and Requirements Development Need to Be Addressed. GAO-17-381. Washington, D.C.: May 30, 2017.

Missile Defense: Ballistic Missile Defense System Testing Delays Affect Delivery of Capabilities. GAO-16-339R. Washington, D.C.: April 28, 2016.

Missile Defense: Assessment of DOD's Reports on Status of Efforts and Options for Improving Homeland Missile Defense. GAO-16-254R. Washington, D.C.: February 17, 2016.

Missile Defense: Opportunities Exist to Reduce Acquisition Risk and Improve Reporting on System Capabilities. GAO-15-345. Washington, D.C.: May 6, 2015.

Missile Defense: Cost Estimating Practices Have Improved, and Continued Evaluation Will Determine Effectiveness. GAO-15-210R. Washington, D.C.: December 12, 2014.

Regional Missile Defense: DOD's 2014 Report Generally Addressed Required Reporting Elements, but Excluded Additional Key Details. GAO-15-32. Washington, D.C.: December 1, 2014.

Missile Defense: DOD's Report Provides Limited Insight on Improvements to Homeland Missile Defense and Acquisition Plans. GAO-14-626R. Washington, D.C.: July 17, 2014.

Missile Defense: DOD's Report Provides Limited Insight on Testing Options for the Ground-based Midcourse Defense System. GAO-14-350R. Washington, D.C.: April 30, 2014.

Ballistic Missile Defense: Actions Needed to Address Implementation Issues and Estimate Long-Term Costs for European Capabilities. GAO-14-314. Washington, D.C.: April 11, 2014.

Missile Defense: Mixed Progress in Achieving Acquisition Goals and Improving Accountability. GAO-14-481T. Washington, D.C.: April 2, 2014.

Regional Missile Defense: DOD's Report Provided Limited Information; Assessment of Acquisition Risks is Optimistic. GAO-14-248R. Washington, D.C.: March 14, 2014.

Missile Defense: Precision Tracking Space System Evaluation of Alternatives. GAO-13-747R. Washington, D.C.: July 25, 2013.

Missile Defense: Opportunity to Refocus on Strengthening Acquisition Management. GAO-13-604T. Washington, D.C.: May 9, 2013.

Missile Defense: Opportunity to Refocus on Strengthening Acquisition Management. GAO-13-432. Washington, D.C.: April 26, 2013.

Standard Missile-3 Block IIB Analysis of Alternatives. GAO-13-382R. Washington, D.C.: February 11, 2013.

Schedule Best Practices Provide Opportunity to Enhance Missile Defense Agency Accountability and Program Execution. GAO-12-720R. Washington. D.C.: July 19, 2012.

Missile Defense: Opportunities Exist to Strengthen Acquisitions by Reducing Concurrency and Improving Parts Quality. GAO-12-600T. Washington, D.C.: April 25, 2012.

Missile Defense: Opportunity Exists to Strengthen Acquisitions by Reducing Concurrency. GAO-12-486. Washington, D.C.: April 20, 2012.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through our website. Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. You can also subscribe to GAO's email updates to receive notification of newly posted products.

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, https://www.gao.gov/ordering.htm.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on Facebook, Flickr, Twitter, and YouTube.
Subscribe to our RSS Feeds or Email Updates. Listen to our Podcasts.
Visit GAO on the web at https://www.gao.gov.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact FraudNet:

Website: https://www.gao.gov/about/what-gao-does/fraudnet

Automated answering system: (800) 424-5454 or (202) 512-7700

Congressional Relations

A. Nicole Clowers, Managing Director, ClowersA@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

Strategic Planning and External Liaison

Stephen J. Sanford, Managing Director, spel@gao.gov, (202) 512-4707
U.S. Government Accountability Office, 441 G Street NW, Room 7814,
Washington, DC 20548