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MIDDLE-TIER DEFENSE ACQUISITIONS

Rapid Prototyping and Fielding Requires Changes to Oversight and Development Approaches

Accessible Version

GAO Highlights

MIDDLE-TIER DEFENSE ACQUISITIONS

Rapid Prototyping and Fielding Requires Changes to Oversight and Development Approaches

Why GAO Did This Study

DOD is continually challenged to deliver capabilities to its warfighters at the pace of innovation. Section 804 of the National Defense Authorization Act for Fiscal Year 2016 required DOD to establish guidance for an alternative acquisition process, now referred to as MTA. Since GAO's June 2019 report on the use of MTA authorities, DOD has reported an increase in programs using the pathway, from 35 programs to nearly 100 in 2022.

In light of this increased use, GAO was asked to review DOD's oversight and execution of MTA programs. This report assesses the extent to which (1) DOD effectively implemented policies, guidance, and processes to provide DOD with reliable data for MTA oversight; and (2) military components' MTA policies and selected programs implement leading principles for product development.

GAO selected a non-generalizable sample of 15 active MTA programs. This selection includes MTA rapid prototyping and rapid fielding programs from the Air Force, Army, Navy, and SOCOM. DOD estimates these programs will require more than $12 billion in funding. GAO also reviewed DOD MTA policies, guidance, and program documentation; compared component MTA policies and programs to the principles; and interviewed DOD officials to corroborate its assessments.

What GAO Recommends

GAO is making 26 recommendations aimed at improving MTA oversight and development through policy and process changes. DOD concurred with 25 recommendations and partially concurred with one.

What GAO Found

The Department of Defense (DOD) intends to facilitate rapid prototyping and rapid fielding of new weapons and other resources the military has identified it needs. This approach, known as the middle tier of acquisition (MTA), seeks to provide capabilities within 2 to 5 years of an acquisition program's start. DOD established policies and guidance for managing the MTA pathway, but several factors hinder effective implementation and oversight.

For example, an unclear data framework and reporting guidance limit the visibility of MTA program structures, scope, and technical data. As a result, the oversight role of the Under Secretary of Defense for Acquisition and Sustainment with regard to the MTA pathway is diminished. GAO also found that DOD components provided the Under Secretary with inaccurate data. Together, these issues complicate DOD's efforts to conduct data-driven oversight of the MTA pathway.

MTA policies from the Air Force, Army, Navy, and Special Operations Command (SOCOM) each partially implemented at least some of the four key product development principles that leading companies rely on to innovate quickly and successfully.

Component Policies Reflect Some Leading Product Development Principles

Leading principle	Air Force	Army	Navy	Special Operations Command
Attain a sound business case	◧	◧	◧	◧
Use an iterative design approach	☐	☐	◧	☐
Prioritize schedule	◧	◧	◧	◧
Collect customer feedback	◧	☐	☐	◧

■ The component's policies for MTA programs **fully implemented** all sub-principles in a category.

◧ The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.

☐ The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.

Source: GAO analysis of Department of Defense Middle-Tier Acquisition (MTA) policies. | GAO-23-105008

Data table for Component Policies Reflect Some Leading Product Development Principles

Leading principle	Air Force	Army	Navy	Special Operations Command
Attain a sound business case	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.
Use an iterative design approach	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.
Prioritize schedule	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.
Collect customer feedback	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.

Source: GAO analysis of Department of Defense Middle-Tier Acquisition (MTA) policies | GAO-23-105008

As GAO's latest study of leading acquisition practices found in March 2022, leading companies rely on key principles for successful product development. These include attaining sound business cases, applying iterative design approaches, off-ramping capabilities when needed to prioritize schedule, and incorporating feedback from users of initial capabilities. If the military departments and other DOD components incorporated these leading principles more fully into their MTA policies, they would be better positioned to meet their users' needs with greater speed—the core goal of the MTA pathway.

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Abbreviations

AAF	Adaptive Acquisition Framework
AKCP	Angry Kitten Combat Pod
CAE	Component Acquisition Executive
CPS	Conventional Prompt Strike
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DOD	Department of Defense
DSS-DWP	Deployable Surveillance Systems - Deep Water Passive
ERCA	Extended Range Cannon Artillery
FORGE	Future Operationally Resilient Ground Evolution
FS-MTPS	Fire Support - Mission Training & Preparation System
GOPSS	Ground Organic Precision Strike Systems
ITN	Integrated Tactical Network
IVAS	Integrated Visual Augmentation System
MDAP	major defense acquisition program
MPS-AGM	Mission Planning Systems - Agile Global Mobility
MTA	middle tier of acquisition
NDAA	National Defense Authorization Act
PEO	Program Executive Officer
SM-2 Block IIIC	STANDARD Missile-2 Block IIIC
SOCOM	Special Operations Command
SOF CD	Special Operations Forces Combat Diving
SRR	Short Range Reconnaissance
TRL	technology readiness level
USD(A&S)	Under Secretary of Defense for Acquisition and Sustainment

February 7, 2023

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

The Department of Defense (DOD) is continually challenged to deliver capabilities to its warfighters at the pace of innovation. Too often, the defense acquisition system has provided new materiel solutions that are nearing obsolescence on arrival and ill suited to readily adapt to the needs posed by the ever-changing global environment. Key attributes that characterize modern innovations, including increased reliance on software and use of modular architectures, introduce opportunities to change this paradigm. At the same time, DOD has recognized that traditional acquisition approaches are incompatible with delivering on the promise of future innovations. In a series of statutory and policy changes dating back several years, Congress and DOD have revamped key elements of the defense acquisition system in an ongoing effort to improve acquisition performance.

As one means to address these issues, Section 804 of the National Defense Authorization Act (NDAA) for Fiscal Year 2016 required DOD to establish guidance for an alternative acquisition process, now referred to as middle tier of acquisition (MTA).[1] DOD intends for MTA to facilitate rapid prototyping and rapid fielding of capabilities within 2 to 5 years of a program's start. DOD generally exempts MTA programs from its

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[1]National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114–92, § 804 (2015).

traditional acquisition and requirement development policies.[2] These exemptions are intended to reduce bureaucratic processes and could afford MTA programs greater capacity to innovate and deliver new capabilities with speed—themes consistent with leading principles for product development that we found in prior work.[3]

DOD does not identify a dollar limit for programs using the MTA pathway and MTA programs have increasingly taken root across the military departments, including as complex, expensive programs that DOD identifies as critical to meeting its mission. We initially reported on the use of the MTA pathway in June 2019; at that time, we reported that DOD identified 35 active MTA programs.[4] By April 2022, that number had increased to nearly 100—15 of which are among DOD's most expensive acquisition programs, according to DOD.[5]

In light of this growth, you asked us to review DOD's oversight and execution of MTA programs. This report assesses the extent to which (1) DOD effectively implemented policies, guidance, and processes that

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[2]Throughout this report, we refer to programs currently using the MTA pathway as MTA programs, although some of these programs may also currently use or plan to subsequently use one or more other pathways before fielding an eventual capability. For the purposes of this report, we use the word effort to refer specifically to the activities undertaken using a single Adaptive Acquisition Framework (AAF) pathway or any of the paths provided by an AAF pathway (for example, the rapid prototyping path of the MTA pathway). Our use of the word effort excludes other paths or pathways that a program may be using simultaneously, or may plan to use in the future, to field an eventual capability.

[3]GAO, *Leading Practices: Agency Acquisition Policies Could Better Implement Key Product Development Principles,* GAO-22-104513 (Washington, D.C.: March 10, 2022).

[4]GAO, *DOD Acquisition Reform: Leadership Attention Needed to Effectively Implement Changes to Acquisition Oversight*, GAO-19-439 (Washington, D.C.: June 5, 2019).

[5]We use the phrase "DOD's most expensive acquisition programs" to describe programs equivalent to or exceeding the major defense acquisition program (MDAP) dollar threshold. MDAPs generally include those programs that are not a highly sensitive classified program and that are either (1) designated by the Secretary of Defense as an MDAP; or that are (2) estimated to require an eventual total expenditure for research, development, test, and evaluation, including all planned increments or spirals, of more than $525 million in fiscal year 2020 constant dollars or, for procurement, including all planned increments or spirals, of more than $3.065 billion in fiscal year 2020 constant dollars. See 10 U.S.C. § 4201(a); DOD Instruction 5000.85, *Major Capability Acquisition* (Aug. 6, 2020) (Change 1 Effective Nov. 4, 2021) (reflecting statutory MDAP dollar thresholds in fiscal year 2020 constant dollars). Certain programs that meet these thresholds, including programs using the MTA pathway, are not considered MDAPs. See 10 U.S.C. § 4201(b). We refer to MTAs that meet these thresholds as MDAP-equivalent MTA programs.

provide DOD with reliable data to inform MTA oversight; and (2) military components' MTA policies and selected programs implemented leading principles for product development.

To inform our work, we focused our review on DOD components that had active MTA programs in March 2021—Air Force, Army, Navy, and Special Operations Command (SOCOM). We selected a non-generalizable sample of 15 active, unclassified MTA programs as case studies for our objectives. We selected the 15 case studies to get a range of MTA programs, including some that are major defense acquisition program (MDAP) equivalent MTA programs, rapid fielding, and rapid prototyping efforts. DOD estimates that the 15 MTA programs we selected will require more than $12 billion in funding. See appendix I for additional details on the case study selection process.

To assess the extent to which DOD effectively implemented policies, guidance, and processes to provide DOD with reliable data to inform MTA oversight, we reviewed the statute creating and outlining requirements for the MTA pathway. We also analyzed DOD and component policies, guidance, and processes related to MTA programs. To understand the status of implementing policies, guidance, and processes, we interviewed DOD officials in various oversight roles to understand their responsibilities and perspectives on the status of implementation. We also obtained from DOD components data and supplemental information for each of our 15 case study programs. We compared these data and supplemental information, which included responses to questionnaires we developed, to other data we obtained from non-component sources in DOD responsible for MTA pathway oversight. We also reviewed DOD's data reporting requirements for MTA programs and interviewed officials responsible for reporting and verifying the accuracy of the data.

To determine the extent to which DOD components' MTA policies and selected programs implemented leading principles for product development, we assessed component-wide policies applicable to MTA programs. We interviewed component officials to understand their perspectives on the implementation of the leading principles for product development and corroborate our findings. We also reviewed information from our case studies to understand how leading principles in product development are reflected in program plans and execution.

Appendix I provides additional information on our objectives, scope, and methodology.

We conducted this performance audit from February 2021 to February 2023 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

DOD Acquisition Policy

DOD generally acquires its weapon systems through a management process known as the Defense Acquisition System. Table 1 describes the department-wide policies that govern the defense acquisition system.

Table 1: DOD Acquisition Policies

Department of Defense Policy	Description of Policy
Department of Defense Directive 5000.01	Establishes policy and assigns responsibilities for managing all acquisition programs, including for life-cycle management, design, and test and evaluation, among other things
Department of Defense Instruction 5000.02	Establishes the groundwork for the operation of the Adaptive Acquisition Framework

Source: GAO summary of Department of Defense (DOD) policies. | GAO-23-105008

In an effort to deliver more effective, suitable, survivable, sustainable, and affordable solutions to the warfighter in a timelier manner, DOD revamped its department-wide acquisition policies in 2020. These policy changes responded to long-standing concerns from some members of Congress and DOD that the defense acquisition process was overly bureaucratic and too slow to deliver capabilities to the warfighter. Among the key changes, DOD Directive 5000.01 calls for delivering performance at the speed of relevance, and acquiring products and services that satisfy user needs. DOD Directive 5000.01 also establishes key tenets that govern the Defense Acquisition System. These include simplifying acquisition policy, employing tailored acquisition approaches, and conducting data-driven analysis. To achieve these objectives, DOD Instruction 5000.02 established an Adaptive Acquisition Framework with six different pathways an acquisition program can follow—each with unique requirements for milestones, cost and schedule goals, and reporting. Figure 1 illustrates the Adaptive Acquisition Framework, including key activities and policies specific to each pathway.

Figure 1: DOD Adaptive Acquisition Framework

Pathway		Policy Issued

Urgent capability acquisition — Pre-development, Development, Production and development (DD), < 2 years — DODI 5000.81

Middle tier of acquisition — Rapid prototyping (OD), ≤ 5 years; Rapid fielding, ≤ 5 years — DODI 5000.80

Major capability acquisition — Materiel development decision, Milestone A, Materiel solutions analysis, Technology maturation and risk reduction, Milestone B, Engineering and manufacturing development, Milestone C, Production and deployment, Initial operational capability, Full operational capability — DODI 5000.85

Software acquisition — Planning phase (0, 1); Execution phase: I1, I2..., In MVP, In MVCR, Rn; <1 year — DODI 5000.87

Defense business systems — Capability need identification; Authority to proceed — Solution analysis; Authority to proceed — Functional requirements and acquisition planning; Authority to proceed — Acquisition, testing, and deployment; Authority to proceed — Capability support; Business Capability Acquisition Cycle — DODI 5000.75

Acquisition of services — Plan: (1) Form the team, (2) Review current strategy, (3) Perform market research; Develop: (4) Define requirements, (5) Develop acquisition strategy; Execute: (6) Execute strategy, (7) Manage performance — DODI 5000.74

(Vertical: Cybersecurity; Operations and sustainment)

I = Iteration
OD = Outcome determination
DD = Disposition decision
MVCR = Minimum viable capability release
MVP = Minimum viable product
R = Release
DODI = Department of Defense Instruction

Source: GAO analysis of Department of Defense (DOD) data. I GAO-23-105008

DOD Directive 5000.01 calls for DOD to use the Adaptive Acquisition Framework to emphasize several principles that include simplifying acquisition policy and conducting data-driven analysis to inform oversight.

The Adaptive Acquisition Framework calls for decision authorities to tailor program strategies and oversight based on the characteristics of the capability being acquired. Programs can use multiple acquisition pathways, simultaneously or sequentially, to provide value not otherwise available through use of a single pathway, and can undertake multiple distinct efforts using the same pathway, such as two or more rapid prototyping efforts using the MTA pathway.

Overview of the MTA Pathway

In response to Section 804 of the NDAA for Fiscal Year 2016, the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) issued interim guidance in April 2018 that provided DOD components with the authority to implement MTA programs on an interim basis.[6] The guidance laid out the broad purposes and requirements of the MTA pathway, and encouraged DOD components using the MTA pathway to develop specific implementation processes and procedures for the interim authority. Between April and September 2018, the Air Force, Army, Navy, and SOCOM each issued implementing guidance, which provided additional information about roles and responsibilities during the period of interim authority.[7]

In December 2019, DOD issued Instruction 5000.80, Operation of the Middle Tier of Acquisition, which formally established the department's MTA policy, assigned responsibilities, and prescribed procedures for the management of the MTA rapid prototyping and rapid fielding paths. The instruction states that the MTA pathway is intended to fill a gap in the Defense Acquisition System for capabilities with a level of maturity that allows them to be rapidly prototyped within an acquisition program or fielded within 5 years of MTA program start. The pathway may be used to accelerate capability maturation before transitioning to another acquisition

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[6]Department of Defense, Under Secretary of Defense (Acquisition and Sustainment), *Middle Tier of Acquisition (Rapid Prototyping/Rapid Fielding) Interim Authority and Guidance* (Apr. 16, 2018).

[7]Department of the Air Force, Office of the Assistant Secretary of the Air Force (Acquisition, Technology and Logistics), Memorandum No. AFGM2018-63-146-01: *Air Force Guidance Memorandum for Rapid Acquisition Activities* (June 13, 2018); Department of the Army, *Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology) Middle-Tier Acquisition Policy* (Sept. 25, 2018); Department of the Navy, Assistant Secretary (Research, Development and Acquisition), *Middle Tier Acquisition and Acquisition Agility Guidance* (Apr. 24, 2018); and United States Special Operations Command, *Middle Tier Acquisition Authorities and Guidance* (Aug. 1, 2018).

pathway or to minimally develop a capability before rapidly fielding. DOD Instruction 5000.80 also outlines the distinctions between the two MTA paths as described in statute:

- The **rapid prototyping** path provides for the use of innovative technologies to rapidly develop fieldable prototypes to demonstrate new capabilities and meet emerging military needs. The objective of a program using the rapid prototyping path is to field a prototype that meets defined requirements, which can be demonstrated in an operational environment and provide for residual operational capability within 5 years of the MTA program start date.[8] Virtual prototypes can meet this requirement if they result in a residual operational capability that can be fielded.

- The **rapid fielding** path provides for the use of proven technologies to field production quantities of new or upgraded systems with minimal development required. The objective of a program using the rapid fielding path is to begin production within 6 months and complete fielding within 5 years of the MTA program start date.[9]

DOD policy states that, for programs initiated on or after December 30, 2019, the MTA program start date is the date that an acquisition decision memorandum initiating the effort as an MTA program is signed by a decision authority. MTA programs designated before December 30, 2019, generally maintain their MTA program start date as the date that funds were first obligated. We refer to MTA programs that exceed the threshold of major systems as major MTA programs and those within this category that exceed the MDAP dollar threshold as MDAP-equivalent MTA programs.[10] We refer to MTA programs with dollar thresholds below the threshold for major systems as non-major MTA programs.

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[8]DOD Instruction 5000.80 states that for rapid prototyping programs, residual operational capability is any military utility for an operational user that can be fielded.

[9]The statutory objectives for MTA efforts are outlined in section 804 of the National Defense Authorization Act for Fiscal Year 2016. See Pub. L. No. 114–92, § 804(b) (2015).

[10]Major systems generally refer to a combination of elements that will function together to produce the capabilities required to fulfill a mission need, including hardware, equipment, software, or any combination thereof, but excluding construction or other improvements to real property. A DOD system is considered a major system if (1) the milestone decision authority designates it as a major system; or (2) it is estimated to require an eventual total expenditure for research, development, test, and evaluation of more than $200 million in fiscal year 2020 constant dollars, or, for procurement of more than $920 million in fiscal year 2020 constant dollars. See 10 U.S.C. § 3041(a)-(c); DOD Instruction 5000.85 (reflecting statutory major system cost thresholds in fiscal year 2020 constant dollars).

While DOD policy does not identify a dollar limit for programs using the MTA pathway, it acknowledges that not all programs are appropriate for the MTA pathway. For example, DOD Instruction 5000.80 discourages major systems from using the MTA pathway if they meet any of the following criteria:

- they are intended to satisfy requirements that are critical to a major interagency requirement or are primarily focused on technology development, or

- have significant international partner involvement.

General MTA Oversight Roles and Responsibilities

Oversight of DOD's MTA pathway and programs is shared between officials under the purview of the Secretary of Defense and the DOD component heads. Figure 2 depicts the reporting chain of DOD officials with MTA acquisition oversight responsibilities.

Figure 2: Reporting Structure for DOD's Middle Tier of Acquisition
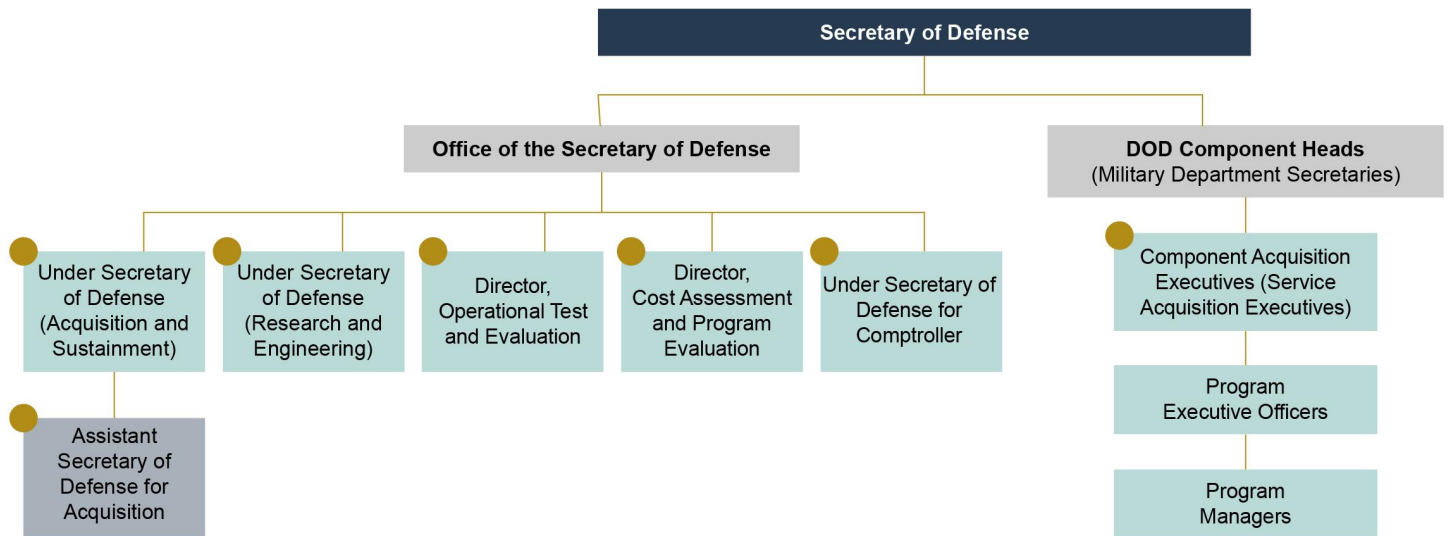
● Member of the Middle Tier Acquisition Advisory Board

Source: GAO analysis of Department of Defense (DOD) information. | GAO-23-105008

Text for Figure 2: Reporting Structure for DOD's Middle Tier of Acquisition

1. Secretary of Defense

    a. Office of the Secretary of Defense

        i. Under Secretary of Defense (Acquisition and Sustainment) (Member of the Middle Tier Acquisition Advisory Board)

            1. Assistant Secretary of Defense for Acquisition (Member of the Middle Tier Acquisition Advisory Board)

        ii. Under Secretary of Defense (Research and Engineering) (Member of the Middle Tier Acquisition Advisory Board)

        iii. Director, Operational Test and Evaluation (Member of the Middle Tier Acquisition Advisory Board)

        iv. Director, Cost Assessment and Program Evaluation (Member of the Middle Tier Acquisition Advisory Board)

        v. Under Secretary of Defense for Comptroller (Member of the Middle Tier Acquisition Advisory Board)

    b. DOD Component Heads (Military Department Secretaries) (Member of the Middle Tier Acquisition Advisory Board)

        i. Component Acquisition Executives (Service Acquisition Executives)

            1. Program Executive Officers

                a. Program Managers

Source: GAO analysis of Department of Defense (DOD) information. | GAO-23-105008

These officials' MTA oversight responsibilities include the following:

- **Under Secretary of Defense for Acquisition and Sustainment (USD(A&S))** establishes policy and provides guidance for the MTA pathway in consultation with other officials and oversees the use of the MTA pathway. USD(A&S) must provide written approval for the use of the MTA pathway for programs expected to exceed the dollar thresholds for an MDAP. USD(A&S) may determine any MTA program—MDAP- equivalent, major, or non-major—is not appropriate for the pathway and direct the use of an alternative pathway. USD(A&S) maintains this authority throughout the life cycle of the program.

  USD(A&S) also retains the authority to provide waivers to MTA policy requirements in some instances. For example, an MTA program may not be planned to exceed 5 years and, in execution, cannot exceed 5 years after it starts without a waiver from USD(A&S). In addition, the production start date for rapid fielding programs will not exceed 6 months after MTA program start without a waiver from USD(A&S).

- The **Office of USD(A&S)** supports USD(A&S) in carrying out various roles and responsibilities. The office includes subject matter experts for the various pathways and supporting groups, such as the those that aid USD(A&S) in managing and reporting acquisition data used to inform oversight.

- **Assistant Secretary of Defense for Acquisition** was delegated the authority by USD(A&S) in September 2020 to chair an MTA Advisory Board (discussed below). USD(A&S) also delegated its authority to approve waivers to provisions within DOD Instruction 5000.80 for MTA programs that do not exceed the MDAP dollar threshold.

- **Under Secretary of Defense for Comptroller** reviews and advises on funding of programs using the MTA pathway.

- **Under Secretary of Defense for Research and Engineering** advises USD(A&S) on MTA program technologies developmental testing and program risks, among other things, as well as MTA program performance and execution metrics.

- **Director, Cost Assessment and Program Evaluation** advises USD(A&S) on the schedule, resource allocation, affordability, cost estimation, and performance implications of proposed MTA programs. The Director, Cost Assessment and Program Evaluation also establishes policies and prescribes procedures for the collection of cost data and cost estimates for MTA programs, as appropriate.

- **Director, Operational Test and Evaluation** advises USD(A&S) and DOD components on testing and monitors the planning and execution

of MTA program operational demonstrations, in coordination with component operational test agents. The Director, Operational Test and Evaluation can also select MTA programs for operational or live fire test and evaluation oversight.[11]

- **Component Acquisition Executive (CAE)** is the civilian official responsible for overseeing all acquisition functions within an individual DOD component. CAEs are responsible for implementing the MTA procedures established by DOD policy. According to DOD's MTA policy, CAEs will serve as the decision authority for programs approved for the MTA pathway, unless delegated by CAEs. In some instances, CAEs delegate the decision authority to other component officials. The following officials serve as the CAE for the military components included in this review:

  - The Assistant Secretary of the Air Force (Acquisition, Technology and Logistics);

  - The Assistant Secretary of the Army (Acquisition, Logistics and Technology);

  - The Assistant Secretary of the Navy (Research, Development and Acquisition); and

  - U.S. Special Operations Command Acquisition Executive, for Special Operations Forces Acquisition, Technology and Logistics.

- **Program Executive Officers** oversee a portfolio of acquisition programs and deliver a suite of capability to users. Program Executive Officers can also be delegated decision authority for MTAs.

- **Program Managers** plan and prepare programs for key decisions, develop acquisition documentation, report program status, and execute approved acquisition and product support strategies.

In addition, an **MTA Advisory Board** supports USD(A&S) in the role of overseeing the MTA portfolio and meets at least twice per year to support DOD's development of the President's Budget and program objective memorandum.[12] The board is chaired by USD(A&S) and includes

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[11]The Director, Operational Test and Evaluation may select MTA programs for operational and/or live fire test and evaluation oversight using the authority in 10 U.S.C. §§ 139, 4172, 4171, and 4231, as applicable.

[12]Military components develop a program objective memorandum as part of the programming phase of DOD's annual resource allocation process. The memorandum identifies and prioritizes requirements and total funding needs for the current budget year and 4 additional years into the future.

representation from CAEs, the Vice Chair of the Joint Chiefs of Staff, Under Secretary of Defense for Research and Engineering, Cost Analysis and Program Evaluation, Director of Operational Test and Evaluation, Under Secretary of Defense for Comptroller, and other individuals requested by USD(A&S).

Further, the **Defense Acquisition University (DAU)** also supports USD(A&S) by disseminating guidance applicable to the MTA pathway.[13] DAU develops education, training, research, and publications to guide acquisition with the goal of improving outcomes.

DOD's Requirements for MTA Program Documentation

Programs using the MTA pathway are generally exempt from the documentation requirements in DOD Directive 5000.01 and the Chair of the Joint Chiefs of Staff Instruction 5123.01, which outlines processes to implement DOD's traditional requirements process. According to DOD Instruction 5000.80, each DOD component must develop processes that result in required documentation for programs using the MTA pathway. Table 2 summarizes DOD's required processes and documentation requirements.

Table 2: DOD Directed Processes and Documentation Requirements for Middle Tier of Acquisition (MTA) Programs

Path	Required processes	Resulting documents
Rapid prototyping and rapid fielding MTA	Develop requirements	• Succinct requirements document within 6 months of MTA initiation.
	Implement acquisition and full funding strategies	• Acquisition strategy • Cost estimate
Rapid prototyping MTA	Consider innovative technologies and new capabilities to meet certain needs	• Acquisition decision memorandum at initiation that validates the use of the MTA pathway and identifies full funding required. Process also results in an approved requirement.

[13]In 1990, Congress enacted the Defense Acquisition Workforce Improvement Act (DAWIA) as part of the National Defense Authorization Act for Fiscal Year 1991. See Pub. L. No. 101-510, § 1201-1211 (1990) (codified as amended at 10 U.S.C. § 1701-1766). Among other things, the DAWIA directed the Secretary of Defense to establish and maintain a Defense Acquisition University (DAU) structure to provide for (1) the professional educational development and training of the acquisition workforce; and (2) research and analysis of defense acquisition policy issues from an academic perspective. See Pub. L. No. 101-510, § 1202 (codified as amended at 10 U.S.C. § 1746). See also DOD Instruction 5000.57, *Defense Acquisition University (DAU)* (Dec. 18, 2013) (Change 3 Effective May 7, 2019).

Path	Required processes	Resulting documents
	Demonstrate performance and evaluate current operational purposes of proposed products and technologies	• Test strategy or an assessment of test results (included in the acquisition strategy)
	Transition successful prototypes to new or existing acquisition programs	• Transition plan (included in the acquisition strategy) providing a timeline for completion within 2 years of required documentation for transition
Rapid fielding MTA	Consider existing products and proven technologies to meet certain needs	• Acquisition decision memorandum at initiation that includes minimum fielding plan criteria and identifies full funding required. Process also results in an approved requirement.
	Demonstrate performance and evaluate current operational purposes of the proposed products and technologies	• Test strategy or an assessment of test results (included in the acquisition strategy)
	Consider life-cycle costs and address issues of logistics support, training, interoperability, and cooperative opportunities, among other things	• Life-cycle sustainment plan
	Identify and exploit opportunities to reduce total ownership costs	• Life-cycle sustainment plan
	Transition successful programs to operations and sustainment.	• Transition plan (included in the acquisition strategy) providing a timeline for completion within 2 years of required documentation for transition

Source: GAO analysis of Department of Defense (DOD) policy. | GAO-23-105008

In addition to the documentation requirements outlined in table 2, DOD Instruction 5000.80 directs program managers to tailor-in reviews, assessments, and relevant documentation, which results in an acquisition strategy customized to the unique characteristics and risks of their programs. The decision authority for each program will approve MTA program documentation within its purview, according to the policy, and approval authority for each capability requirement is delegated to a level that promotes rapid action. Each DOD component has its own set of documentation requirements, which often expand on the requirements outlined in DOD's policy.

Office of the USD(A&S) Data Collection for MTA Programs

The Office of the USD(A&S) began collecting some MTA program data from components in November 2018 as part of an effort to conduct data-driven oversight and ensure that the MTA pathway was being used appropriately across DOD. Since then, the Office of the USD(A&S) has refined the data collected and established a data framework to facilitate oversight of the MTA pathway, assess statutory compliance, and report to congressional stakeholders on MTA programs, among other things.

At program initiation, DOD's MTA policy requires non-major MTA programs to submit an acquisition decision memorandum signed by the decision authority to the Office of the USD(A&S) that, among other things, identifies the full funding required for the MTA effort.[14] That policy also requires major MTAs, including MDAP-equivalent MTAs, to submit the following documents to the Office of the USD(A&S) at program initiation:

- acquisition decision memorandum;

- approved requirements;

- a cost estimate;

- a life-cycle sustainment plan (for programs using the rapid fielding path); and

- an acquisition strategy that includes:

  - security, schedule, and technical risks (for programs using the rapid prototyping path); or

  - security, schedule, and production risks (for programs using the rapid fielding path); and

  - a test strategy or an assessment of test results, and a transition plan.

DOD Instruction 5000.80 also requires CAEs to ensure the availability of MTA program identification data. Specifically, CAEs must submit program information data updates with the President's Budget and a program objective memorandum to the Office of the USD(A&S) via DOD's acquisition reporting framework, known as the Defense Acquisition Visibility Environment. These reports include the following:

- general program information, such as the name, component, MTA path (rapid prototyping or rapid fielding), and the mission or description of what is being acquired;

- technologies, including demonstrated and projected technology readiness levels, that support a required weapon or information system capability;

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[14]DOD Instruction 5000.80. For programs using the rapid prototyping path, the acquisition decision memorandum must validate the rationale for using the MTA pathway. For programs using the rapid fielding path, the acquisition decision memorandum must provide minimum fielding plan criteria.

- schedule information, such as when the program first obligated funds, plans operational demonstration, and estimates program completion; and

- projected budget information and funding sources.

Program information data reporting also supports the oversight conducted by the MTA Advisory Board and is used to address statutory reporting requirements for certain MTA programs.[15] Similarly, Congress has taken action related to data reliability challenges to support its oversight of MTAs. The NDAA for Fiscal Year 2022 directed DOD to prepare a plan for identifying and gathering the data required for effective decision-making by program managers and DOD leadership for certain acquisition programs, including MDAP-equivalent MTAs.[16] As of September 2022, DOD had not yet completed this plan.

Prior GAO Work on MTAs

We first reported on DOD's use of the MTA pathway in June 2019.[17] We found that DOD had yet to fully determine how it would oversee MTA programs, including what information was needed to ensure informed decisions about program selection and how to measure program performance. We recommended that DOD identify, in final guidance, the types of business case elements that potential MTA programs should develop and decision makers should consider at program initiation to assess the soundness of programs' business cases, including whether programs are well positioned to meet statutory objectives. We also recommended that DOD determine and identify in final guidance for MTA programs the metrics that will be used to assess the performance of MTA programs across the military departments, including whether programs are meeting statutory objectives. DOD concurred and implemented these recommendations when it finalized its MTA policy in December 2019 and the program information data metrics in January 2020.

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[15]At the end of each fiscal year quarter, DOD is required to submit a Selected Acquisition Report to Congress on current MDAPs and any program that is estimated to meet the statutory cost thresholds for MDAP designation. See 10 U.S.C. § 4351. MTA programs that meet these thresholds are covered by this reporting requirement.

[16]National Defense Authorization Act for Fiscal Year 2022, Pub. L. No. 117–81, § 805 (2021).

[17]GAO-19-439.

We have reported on selected major MTA programs in our weapon systems annual assessments since 2020.[18] Through these assessments, we have identified DOD's increasing use of the MTA pathway and reported on challenges with data reliability for MTA programs. For example, in our 2021 assessment, we found that DOD had yet to establish consistent practices for monitoring efforts to acquire weapon capabilities under the Adaptive Acquisition Framework. This included finalizing metrics for all acquisition pathways, defining a program, and determining how to track cumulative cost, schedule, and performance data for the delivery of capabilities that leverage multiple efforts or pathways.[19] We recommended that USD(A&S) ensure that internal and external reporting for capabilities developed using multiple efforts or pathways provide information on each individual effort, as well as the overall planned cost and schedule required to deliver the eventual capability. DOD developed guidance to help improve visibility of the total cost of capabilities, but has yet to address how it will report on schedules. In our 2022 assessment, we also found that some MTA programs have experienced challenges that have delayed interim milestones and depleted schedule margin toward planned completion dates, suggesting that initial plans may have been overly optimistic.[20]

Leading Principles for Product Development

In a March 2022 report, we found that leading companies prioritize developing and delivering new, innovative products to customers with speed—goals similar to those DOD has associated with use of the MTA pathway.[21] To achieve this, leading companies rely on four principles that, when implemented in a product development, position them to satisfy their customers' needs and correspondingly retain or grow their market share. Figure 3 below outlines these four principles, which also comprise several related sub-principles, detailed in appendix II.

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[18]GAO, *Weapon Systems Annual Assessment: Challenges to Fielding Capabilities Faster Persist*, GAO-22-105230 (Washington, D.C.: June 8, 2022); *Weapon Systems Annual Assessment: Updated Program Oversight Approach Needed,* GAO-21-222 (Washington, D.C.: June 8, 2021); and *Defense Acquisitions Annual Assessment: Drive to Deliver Capabilities Faster Increases Importance of Program Knowledge and Consistent Data for Oversight*, GAO-20-439 (Washington, D.C.: June 3, 2020).

[19]GAO-21-222.

[20]GAO-22-105230.

[21]GAO-22-104513.

Figure 3: Leading Companies Rely on Four Principles to Enable Successful Product Development

Principle 1
Attain a sound business case that is informed by research along with collaboration with customers
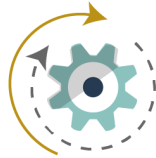
Principle 2
Use an iterative design approach that results in minimum marketable products

Principle 3
Prioritize schedule by off-ramping capabilities when necessary

Principle 4
Collect customer feedback to inform improvements to the minimum marketable product

Source: GAO summary of company information. | GAO-23-105008

Text for Figure 3: Leading Companies Rely on Four Principles to Enable Successful Product Development

Principle 1: Attain a sound business case that is informed by research along with collaboration with customers

Principle 2: Use an iterative design approach that results in minimum marketable products

Principle 3: Prioritize schedule by off-ramping capabilities when necessary

Principle 4: Collect customer feedback to inform improvements to the minimum marketable product

Source: GAO summary of company information. | GAO-23-105008

As part of this work, we also found that DOD's primary, department-wide acquisition policies—including those associated with the MTA pathway—partially implement the four key product development principles and their accompanying sub-principles. Our work found that the DOD policies include multiple examples of language that emphasizes attaining a sound business case, iterating on design, prioritizing schedule through a realistic assessment of product development activities, and collecting end-user feedback. However, in many cases, we found that this policy language was limited to certain product types—such as software—and did not generally apply across all acquisition programs.

Senior DOD officials generally endorsed the applicability of these principles to DOD's acquisition programs but stated that the principles are already employed through informal practices, such as working groups or forums, or in lower-level guidance. DOD officials acknowledged that

incorporating the principles into department-wide acquisition policies would facilitate more consistent implementation across DOD programs, particularly in an era of decentralized oversight. We made four recommendations that DOD update its acquisition policies to fully implement the four principles throughout development. DOD concurred with our four recommendations and noted that it will consider implementing the leading product development principles when it next updates its acquisition policies, which it estimates it will complete in June 2024.

Multiple Factors Hinder the Effective Implementation and Oversight of the MTA Pathway

Lack of clear guidance, slow implementation of required processes, and data reliability issues hinder DOD from effectively implementing and conducting oversight of the MTA pathway. We found that key guidance outlining MTA documentation requirements does not consistently reflect DOD policy. Further, DOD components that manage and oversee MTA programs have yet to establish processes required under DOD Instruction 5000.80 for the implementation of the MTA pathway. Additionally, while Office of the USD(A&S) established a data framework to aid its oversight of the pathway and components' oversight of and reporting on MTA programs, it has yet to clearly define some data requirements. Further, components have yet to fully implement some data reliability measures that would help DOD ensure the accuracy of MTA data received.

DAU Guidance on MTA Documentation Does Not Consistently Reflect DOD Policy and Statutory Requirements

Following the introduction of the Adaptive Acquisition Framework, DAU developed training materials, guidance, and online resources to help DOD's acquisition professionals understand the requirements for using all of DOD's acquisition pathways, including the MTA pathway. DOD's MTA policy states that additional information will be available to expand on DOD's MTA policy on DAU's website. Officials from the Office of the USD(A&S) told us that DAU's role in disseminating guidance is important to help ensure that new information about the MTA pathway is provided to acquisition personnel quickly. However, we found that this guidance did

not consistently reflect requirements outlined in statute and DOD policy, limiting its usefulness to DOD's acquisition personnel.

Officials from all four component acquisition executive offices and several program officials we interviewed stated they rely on the DAU website as a primary resource and source of guidance for MTA programs. Office of the USD(A&S) and component officials stated that the evolving statutory and regulatory requirements for programs using the MTA pathway have made it particularly challenging for acquisition officials to ensure programs are meeting documentation requirements. In response, DAU created the Adaptive Acquisition Framework Document Identification Tool (referred to as the Document Identification Tool going forward).[22] The Document Identification Tool is intended to support acquisition officials in their efforts to identify applicable statutory and regulatory documentation requirements for each of the six pathways within the Adaptive Acquisition Framework, including the MTA pathway. Officials from the Office of the USD(A&S) confirmed that DAU's guidance, including the Document Identification Tool, is intended to reflect existing statutory and regulatory requirements. They stated that DAU's guidance does not create new requirements and is not binding on MTA programs unless it is otherwise required by statute or DOD policy.

For the MTA pathway, DAU's Document Identification Tool provides a list of required deliverables, the timeline for submission, as well as a source for each requirement and the MTA program type that the requirement applies to—MDAP-equivalent, major, or non-major MTAs. However, we found several instances in which DAU's Document Identification Tool guidance did not consistently reflect the MTA documentation requirements outlined in policy and statute. For example, we found that the Document Identification Tool states that DOD's MTA policy mandates an affordability analysis for all MTA programs. However, affordability analyses are not identified as a documentation requirement in DOD's MTA policy. We also found that some of the MTA acquisition strategy documentation requirements, such as considerations of industrial base capabilities, are identified in the Document Identification Tool as required

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[22]Defense Acquisition University, "Adaptive Acquisition Framework Document Identification Tool," https://www.dau.edu/aafdid/Pages/MTA-Statutory-Regulatory-Requirements.aspx.

for both major and non-major MTA programs.[23] However, DOD's MTA policy directly mandates acquisition strategies only for major systems.[24]

Further, the Document Identification Tool identifies independent cost estimates as a regulatory requirement for all MTA programs, but cites statutory sources in addition to a regulatory source. The statutory sources cited did not specifically require MTA programs to conduct independent cost estimates.[25] The Document Identification Tool cited DOD Instruction 5000.73, which provides guidance and procedures on cost analysis, as a regulatory source. The instruction states that cost estimates for MTA programs are conducted by the Office of Cost Analysis and Program Evaluation, unless delegated to component cost agencies. The instruction further states that MTA programs that do not exceed the MDAP threshold must develop cost estimates in accordance with guidance issued by the relevant component cost agency. However, in some cases, components do not require independent cost estimates for MTA programs that are not MDAP-equivalent. For example, the Navy designates program managers, acting with support from Systems Command Cost Organizations, as the approval authority for cost estimate documentation for MTA programs that are not MDAP-equivalent.

We also found instances where DAU inaccurately cites the Document Identification Tool as a binding source of documentation requirements. For example, DAU cites the Document Identification Tool as a source of exit criteria, which are specific events and accomplishments that must be achieved before a program proceeds. However, as noted above, officials from the Office of the USD(A&S) stated that DAU's guidance, including the Document Identification Tool, is not currently binding on MTA

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[23]DAU defines the consideration of industrial base capabilities as an analysis that the skills and knowledge, processes, facilities, and equipment necessary to design, develop, manufacture, repair, and support a program are available and affordable. Defense industrial capabilities include private and public industrial activities.

[24]See 10 U.S.C. 4211(a) (requiring an acquisition strategy for each MDAP, each major automated information system, and each major system); and DOD Instruction 5000.80 (requiring an acquisition strategy as an entrance-level document for major systems only). DOD Instruction 5000.80 requires DOD components to develop processes that result in acquisition strategies. Because this requirement is directed at components and not at programs, we did not consider this provision to directly mandate that a program develop an acquisition strategy.

[25]The Document Identification Tool identified sections 3227 and 4323 of title 10, U.S. Code, as the sources of independent cost estimate requirements for MTAs. However, section 3227 does not specifically address independent cost estimates, and section 4323 relates to sustainment reviews conducted after declaration of initial operational capability.

programs. These officials plan to update the MTA policy in the future to include DAU's supplemental guidance as binding on MTA programs.

Component officials told us that the inconsistent reflection of the documentation requirements in the Document Identification Tool have caused confusion and required further research and clarification. Officials from the Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology) stated that they refined component-level guidance to outline the minimum required documents for MTA programs, in part, because inconsistent reflection of documentation requirements in the Document Identification Tool caused confusion. Additionally, officials from SOCOM's CAE office emphasized their reliance on DAU for MTA training and policy requirement updates. But, these officials stated they spend additional time verifying requirements to assist program officials because of the conflicting guidance and policy updates. Further, several MTA program officials stated that the confusion around documentation requirements is adding to bureaucracy and slowing down MTA program activities.

Developing and updating DAU's online guidance and Document Identification Tool for the various pathways is a coordinated effort between DAU officials and Office of the USD(A&S) subject matter experts for the respective pathways. According to officials from the Office of the USD(A&S), DAU only publishes content that the office's subject matter experts approve for dissemination. Officials acknowledged persisting deficiencies in the Document Identification Tool, but stated that sequencing policy and guidance updates for each of the pathways has been challenging. DAU and Office of the USD(A&S) officials also explained that the MTA pathway is dynamic and policy and guidance updates have stemmed from new statutory requirements, updated policy, and decisions reached during MTA Advisory Board meetings, among other things.

To address the above deficiencies, Office of the USD(A&S) officials plan to update the Document Identification Tool in coordination with DAU officials. The inconsistent reflection of documentation requirements in guidance and the delay in correcting them counters DAU's goal of rapidly providing information to meet the needs of DOD's acquisition workforce.

Military Components Have Yet to Fully Establish Required MTA Processes

In its interim guidance on the use of MTA authorities and its December 2019 MTA policy, DOD directed its components to develop processes for managing MTA programs. We found that the Air Force, Army, Navy, and SOCOM have all developed supplemental policies for the MTA pathway. Our review of these policies and supplemental guidance did not indicate that the components had documented all of the processes that DOD directed. Discussions with senior acquisition officials from each of the components corroborated that the development and documentation of these processes remains incomplete.

The processes DOD directed components to develop are intended to provide for a streamlined and coordinated requirements, budget, and acquisition process for MTA programs and result in specific documents or information DOD determined were needed for effective oversight. For example, to inform MTA program initiation, DOD's MTA policy requires components to develop a process for programs using the rapid prototyping path to consider innovative technologies and new capabilities to meet needs communicated by the Joint Chiefs of Staff and the Combatant Commanders. This process is designed to result in an acquisition decision memorandum that validates the rationale for using the MTA pathway and identifies the full funding requirements. CAEs are responsible for submitting initiation memorandums for all MTA programs—MDAP-equivalent, major, and non-major MTAs—via the Defense Acquisition Visibility Environment. This information can be used by USD(A&S) to determine whether components' MTA programs are inappropriate for the pathway.

Officials from the CAE offices from the Army, Air Force, Navy, and SOCOM confirmed that they are still working to establish required processes in policy or guidance. The following examples include summaries of those discussions.

- **Consider products and technologies for the MTA pathway.** Officials from the SOCOM and Air Force CAE offices stated that they have yet to fully establish these processes. SOCOM officials acknowledge these processes are not clearly documented in SOCOM's MTA policies. These officials added that SOCOM's acquisition process focuses on pursuing innovative and mature technologies, so most of SOCOM's acquisitions are well-suited for the

MTA pathway. Air Force officials plan to revise that component's requirements policy in fiscal year 2023 to include a process to determine the best pathway for acquisition programs in early planning stages.

- **Reduce total ownership costs.** Officials from the Army and Air Force CAE offices stated they have yet to establish processes to identify and exploit opportunities to use the rapid fielding pathway to reduce total ownership costs. SOCOM officials stated their focus is to transfer acquisition programs to the Air Force, Army, or Navy. As a result, they are less focused on total ownership costs and have yet to establish a process to assess them.

- **Transition MTA programs to other programs or to operations and sustainment.** Army and Navy officials acknowledged that they are continuing to establish processes for transitioning MTA programs to new acquisition programs, to existing programs, and to operations and sustainment. For example, officials from the Army and Navy CAE offices stated that only a few programs have transitioned from rapid prototyping to rapid fielding out of the MTA pathway and that they plan to determine the need for guidance on this process as lessons are learned.

Statutory and regulatory requirements related to the MTA pathway have evolved since the MTA pathway was created. Officials from all four components stated that they are balancing the establishment of MTA processes in policies and guidance with evolving statutory and regulatory requirements for all six pathways under the Adaptive Acquisition Framework. Component officials stated that in practice, they continue to apply lessons learned as MTA programs go through the acquisition process. Component officials also noted that they plan to continue to revise acquisition policies for the MTA pathway to address changing requirements. Standards for internal control state that management should implement control activities through policies and document the responsibilities of the organization. Without the components establishing and documenting the processes required by DOD's MTA policy, officials from the Office of the USD(A&S) and congressional stakeholders cannot ensure that the pathway is being implemented and used appropriately.

USD(A&S) Data Framework and Reporting Guidance Limit Visibility into MTA Program Structures and Key Metrics

Our analysis of 15 selected case studies identified information gaps between these programs' activities and the data they reported to Office of the USD(A&S). These gaps resulted from a lack of clarity in the Office of the USD(A&S)'s MTA program information data framework and guidance. The lack of clarity in guidance contributes to misunderstandings about program structure, scope, and technical status and preclude effective oversight of the MTA pathway. DOD depends on reliable data to conduct data-driven oversight. Without reliable data, decision makers lack a clear understanding of the purpose, execution risks, and interdependencies of each MTA program.

In June 2020, USD(A&S) initiated efforts to develop a Data and Analytics Strategy aimed at making data available to assess the progress of the implementation of the Adaptive Acquisition Framework pathways and conduct data-driven oversight. Soon thereafter, in September 2020, DOD issued a broader Data Strategy applicable to the entire defense enterprise. DOD's Data Strategy states that understanding data is critical to enable enhanced, more accurate, and timely decision-making. The Data Strategy further notes that without proper context, interpretation and analysis of data could be flawed and result in poor outcomes. We found specific program information data framework and guidance shortfalls, including the following:

- **Inadequate framework for reporting program structures.** Some MTA programs, such as the Army's Short Range Reconnaissance program that initiated as a rapid prototyping MTA and plans to transition to the major capability acquisition pathway, represent an independent development effort. The Air Force's F-22 rapid prototyping and rapid fielding efforts, in contrast, are subprograms to a broader F-22 program and comprise the development and fielding of multiple products. DOD's guidance for reporting MTA data outlines a process for programs to report on the acquisition structure, such as by identifying whether the MTA program is a subprogram of a larger program, or an increment of a larger program. However, reports generated do not include these fields.

  Office of the USD(A&S) officials stated that they initially did not require components to report this information because they wanted to provide component and program officials the flexibility to be innovative

in structuring MTA programs. These officials added that there was concern that stricter reporting requirements would hinder innovation in approaches. Office of the USD(A&S) officials stated that they recognize not collecting consistent information on program structure as a deficiency and acknowledged that it becomes more significant when reviewing data in aggregate. Data on program structure, if reliable, could help decision makers better understand program structures, including interdependencies, and improve USD(A&S) oversight of the MTA pathway.

- **Unclear reporting guidance for MTA program scope.** Data reported to Office of the USD(A&S) are intended to classify each MTA effort as either rapid prototyping or rapid fielding. However, we found some instances where programs reported as either rapid prototyping or rapid fielding, but were actually executing rapid prototyping and rapid fielding efforts concurrently or had transitioned from one MTA path to the other. For example, the Navy's Standard Missile – 2 Block IIIC program was identified as a rapid prototyping effort in its program information data submission. However, the program received approval to initiate its rapid fielding effort in April 2021 and was executing both MTA efforts. Standard Missile – 2 Block IIIC program officials stated they were not able to make updates to the relevant data fields to reflect the change, in part, because they could not update certain data fields in the Office of the USD(A&S)'s data framework.

Without clearer guidance for all MTA programs on how to report program scope and when to initiate new program entries, the Office of the USD(A&S) may not have a complete understanding of which programs are using the rapid prototyping and rapid fielding paths, and lack the information needed to ensure the pathway is being used appropriately.

Office of the USD(A&S) officials confirmed the limitations in updating some data fields, including the MTA path, and stated that the intent of not allowing updates to these fields was to preserve key program details from initiation. These officials also stated that each new use of MTA authorities requires a new program information data entry, so programs executing multiple MTA efforts concurrently or changing program paths should report on each effort separately. Officials noted that an acquisition decision memorandum is required to initiate a new MTA effort, which should trigger the addition of a new program information data entry.

Office of the USD(A&S) officials have taken some steps to ensure that program scope is reported appropriately. However, these officials

stated that in some cases this guidance has been provided on a program-by-program basis. For example, the Air Force initiated F-22 MTA efforts as a single program—F-22 Capability Pipeline. To improve transparency in reporting, the Air Force later restructured the F-22 Capability Pipeline program into distinct rapid prototyping and rapid fielding efforts. The Office of the USD(A&S) has yet to clarify this scoping and reporting issue in broader guidance.

- **Unclear reporting guidance for technical data.** We also found inconsistencies in how programs track and report on technology development, which can obscure the interpretation of key metrics. In a January 2020 report to Congress on data used to oversee the MTA pathway, USD(A&S) identified a group of technology data fields intended to help highlight critical technologies being matured.[26] The report noted that lower technology readiness levels (TRL) increase the likelihood of failing to meet the MTA pathway's 5-year objective or leave residual operational capability—key statutory objectives.[27] Our analysis found instances where programs reported technology data to Office of the USD(A&S) at the system level, but the programs were tracking multiple critical technologies at the component or technology level. For example, since its initial data submission in October 2018, the Army's Extended Range Cannon Artillery rapid prototyping program reported technology information to the Office of the USD(A&S) at the system level and identified a demonstrated TRL of 5. However, at that time, the Extended Range Cannon Artillery program was tracking eight critical technologies ranging in maturity from TRL 2 to TRL 6. Our prior work shows that increasing the TRL of even one technology can take multiple years and becomes more challenging as the technology approaches maturity.[28]

  Office of the USD(A&S) guidance for submitting program information data allows programs to report at the technology, component, or system level without guidance on when or why to report at these levels. Office of the USD(A&S) officials stated they wanted programs to be able to choose how to report technology readiness in order to

[26]Critical technology elements are those technologies that are new or novel, or used in a new or novel way, and are needed for a system to meet its operational performance requirements within defined cost and schedule parameters.

[27]DOD's January 2020 report to Congress states that final TRL objectives lower than TRL 7 for rapid prototyping and lower than TRL 8 for rapid fielding programs merit attention.

[28]GAO-21-222. According to GAO's Technology Assessment Guide, the TRL of a system is determined by the lowest TRL of critical technologies within a group, and is not an average of all the TRLs in a subset or larger group set.

avoid questions from program and component officials about how to enter the data. Office of the USD(A&S) stated that MTA programs are all different in structure and it has been challenging to identify standard reporting requirements. The lack of guidance tailored to accommodate different technology development approaches hinders the Office of the USD(A&S)'s ability to identify programs at risk of not meeting objectives of the MTA pathway.

Components Have Taken Action to Improve MTA Data Reliability, but Inaccuracies Persist

Components have a role in facilitating USD(A&S)'s goal of conducting data-driven oversight by providing reliable program data to the Office of the USD(A&S). In DOD's December 2019 MTA policy, USD(A&S) directed component acquisition executives to comply with online program identification data requirements. The MTA policy calls for programs to submit MTA program data at program initiation and submit updates with the President's Budget and the program objective memorandum. As noted above, DOD's Data Strategy states that understanding data is critical to enable enhanced, more accurate, and timely decision-making. We found that all four components have taken some actions to implement this direction, but that these actions have yet to prove sufficient in providing accurate data to the Office of the USD(A&S).

Our analysis of the data submitted to the Office of the USD(A&S) to inform the fiscal year 2023 budget development process found data submitted by all four components on our 15 selected programs to be generally complete. However, we found examples across all four components where programs reported inaccurate data. The types and prevalence of inaccuracies we found included the following:

- **Inaccurate data on system complexity and scope.** We found examples from all four components where responses lack accurate information on system complexity and scope. For example, in SOCOM's submission of data for the Special Operations Forces Combat Diving Navigation Program, officials reported a program description for both the system integration complexity and system demonstration scope data fields. However, the reported information did not provide context describing the planned level of development and integration. Officials from the Office of the USD(A&S) stated that these data elements were included in the MTA data framework to aid the Office of the Under Secretary of Defense for Research and

Engineering in fulfilling its role of supporting oversight of the MTA pathway. However, officials from the Office of the Under Secretary of Defense for Research and Engineering stated that data reported by programs are often inaccurate or lack the required context. As a result, these officials stated they often have to coordinate directly with component and programs to ensure they have the information necessary to support USD(A&S). Inaccurate data on systems integration complexity and system demonstration scope limit efficiencies DOD intends the data to provide in its oversight of the MTA pathway.

- **Inaccurate data on program schedules.** We found instances from three of the four components—Army, Navy, and SOCOM—where programs reported inaccurate schedule dates. In some cases, programs did not update their schedule data despite known delays and increasing schedule risk. For example, the Army's Extended Range Cannon Artillery Program did not report an updated schedule, despite encountering delays that prompted program officials to prepare a waiver request to the USD(A&S) to extend the 5-year MTA time frame. Officials acknowledged that the program was no longer planning to meet its reported operational demonstration date of June 2022 and stated they were working toward completing this milestone by September 2023. However, officials stated they did not plan to report an updated program schedule until decisions regarding the program's future status were made.

  In its January 2020 report to Congress on MTA data collection, USD(A&S) identified program schedules as the prominent factor in all of its MTA analyses because the objective of the MTA pathway is to complete the effort within 5 years. Without accurate schedule data, USD(A&S) will be limited in its ability to ascertain whether programs are appropriate for the MTA pathway.

- **Inaccurate data on other key program information.** We also found various inaccuracies from programs across all four components in data fields intended to identify program decision authorities, the status of programs (such as active or completed), and whether the program is a non-major, major, or MDAP-equivalent MTA. Inaccurate data in such fields hinder USD(A&S)'s ability to understand the scope and quantity of programs using the MTA pathway and ensure appropriate oversight.

We also previously reported on other data issues related to MTA programs, including programs' identifying funding needs beyond the current MTA effort or reporting inaccurate planned completion dates.[29]

CAE officials from the Air Force, Army, Navy, and SOCOM stated that they continue to work with the Office of the USD(A&S) through data centric working groups, the MTA Advisory Board, and on a program-by-program basis to improve reliability of MTA data they provide to the Office of the USD(A&S). However, we identified several causes for why data inaccuracies persist:

- The **Air Force** uses the Project Resource Management Tool to manage MTA data and has established policies and procedures for inputting MTA program data submissions. The Air Force's version of the tool interfaces with the Office of the USD(A&S)'s Defense Acquisition Visibility Environment and officials stated it has automated measures built in to ensure data provided to the Environment are complete and accurate. However, officials stated that these processes are less effective for narrative responses and in these instances, only verify that data are entered. In addition, Air Force officials also stated that they are working to address inaccuracies from prior data submissions that affect their current data verification process. Air Force officials stated that evolving data definitions affect the interface with the Defense Acquisition Visibility Environment.

- The **Army** also uses the Project Resource Management Tool, but its version does not yet have the capability to interface with the Defense Acquisition Visibility Environment. Consequently, Army program officials must manually extract, input, and transmit information from the tool to the Office of the USD(A&S)—a process that increases the risk of errors.

- **SOCOM** uses a different information system than the Air Force and Army. SOCOM officials reported that their CAE office manually enters and transmits data into the Defense Acquisition Visibility Environment for all of SOCOM's programs. These officials also reported that SOCOM does not have policy or guidance that outlines roles and responsibilities for MTA data, including verifying that such data are accurate prior to transmitting them to the Office of the USD(A&S).

- **Navy** officials reported that programs and program executive officers manage MTA program data in their own non-standardized tools and report required data into the Defense Acquisition Visibility

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[29]GAO-22-105230.

Environment independently. These officials stated that the Office of the Assistant Secretary of the Navy for Research, Development and Acquisition has its own information system and is in the process of building in an MTA-specific module to give it greater oversight capabilities on Navy MTA programs. As was the case with SOCOM, however, officials told us that the Navy does not have policy or guidance that outlines roles and responsibilities for MTA data, including verifying that such data are accurate prior to transmitting them to the Office of the USD(A&S).

Component MTA Policies Could Better Implement Leading Product Development Principles to Improve Program Outcomes

MTA policies from the Air Force, Army, Navy, and SOCOM each partially implement at least some of the four key product development principles that leading companies rely on to innovate quickly and successfully. Component officials stated that, while these principles are not reflected in policy, in many cases, programs employ them in practice. However, our review of selected MTA programs identified several inconsistencies with these principles. These inconsistencies further substantiate the value of having acquisition policies rooted in leading product development principles.

Component MTA Policies Partially Implement Some Leading Product Development Principles

We found that Air Force, Army, Navy, and SOCOM policies related to MTA programs partially implement several leading product development principles. Figure 4 depicts our analysis of the extent of this implementation.

Figure 4: Component Policies Reflect Some Leading Product Development Principles

Leading principle	Air Force	Army	Navy	Special Operations Command
Attain a sound business case that is informed by research along with collaboration with customers	partially	partially	partially	partially
Use an iterative design approach that results in minimum marketable products	did not	did not	partially	did not
Prioritize schedule by off-ramping capabilities when necessary	partially	partially	partially	partially
Collect customer feedback to inform improvements to the minimum marketable product	partially	did not	did not	partially

The component's policies for MTA programs **fully implemented** all sub-principles in a category.

The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.

The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.

Source: GAO analysis of Department of Defense Middle-Tier Acquisition (MTA) policies. | GAO-23-105008

Data table for Figure 4: Component Policies Reflect Some Leading Product Development Principles

Leading principle	Air Force	Army	Navy	Special Operations Command
Attain a sound business case that is informed by research along with collaboration with customers	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.
Use an iterative design approach that results in minimum marketable products	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.
Prioritize schedule by off-ramping capabilities when necessary	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.
Collect customer feedback to inform improvements to the minimum marketable product	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs **did not at least partially implement** the majority of the sub-principles in a category.	The component's policies for MTA programs at least **partially implemented** the majority of the sub-principles in a category.

Source: GAO analysis of Department of Defense Middle-Tier Acquisition (MTA) policies. | GAO-23-105008

Officials from all four component acquisition executive offices told us that in some cases these principles are already employed through informal practices, such as working groups or in lower-level guidance. Without fully implementing these leading principles into their MTA policies, DOD components could be missing opportunities to improve the speed in providing capability to users—a core tenet of the MTA pathway. Details of our policy analysis for each principle are outlined below.

Principle 1 Implementation in Components' MTA Policies

Air Force, Army, Navy, and SOCOM acquisition policies related to MTA programs at least partially implement most of the sub-principles that comprise Principle 1, which is to attain a sound business case. Figure 5 summarizes our analysis of the component MTA policies for the seven sub-principles that comprise principle 1.

Figure 5: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Attaining a Sound Business Case

	Air Force	Army	Navy	Special Operations Command
Principle 1: Attain a sound business case that is informed by research along with collaboration with customers	◧	◧	◧	◧

Sub-principles

	Air Force	Army	Navy	Special Operations Command
1) Invest time to research a marketable product.	◧	■	■	◧
2) Solicit early feedback from customers for both hardware and software development.	■	■	■	■
3) Develop cost, schedule, and performance tenets, or parameters, to define project goals before allocating initial funding.	■	■	◧	◧
4) Preserve institutional memory and share corporate knowledge in order to develop initial estimates, avoid earlier mistakes, and build on previous success.	■	☐	☐	◧
5) Continuously evaluate cost, schedule, and performance parameters to ensure a high level of confidence in the project team's ability to deliver the product within cost and schedule targets prior to committing to a public release date.	◧	◧	◧	◧
6) Employ right-sized teams that have sufficient experience and autonomy to develop the product.	■	◧	☐	■
7) Willing to end product development if the product no longer has a sound business case.	◧	◧	◧	◧

Principle 1 scores

■ The component's policies for MTA programs fully implement all Principle 1 sub-principles

◧ The component's policies for MTA programs at least partially implement the majority of the Principle 1 sub-principles

☐ The component's policies for MTA programs do not at least partially implement the majority of the Principle 1 sub-principles

Sub-principle scores

■ The component's policies for MTA programs fully implement the sub-principle

◧ The component's policies for MTA programs at least partially implement the sub-principle

☐ The component's policies for MTA programs do not at least partially implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

Data table for Figure 5: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Attaining a Sound Business Case

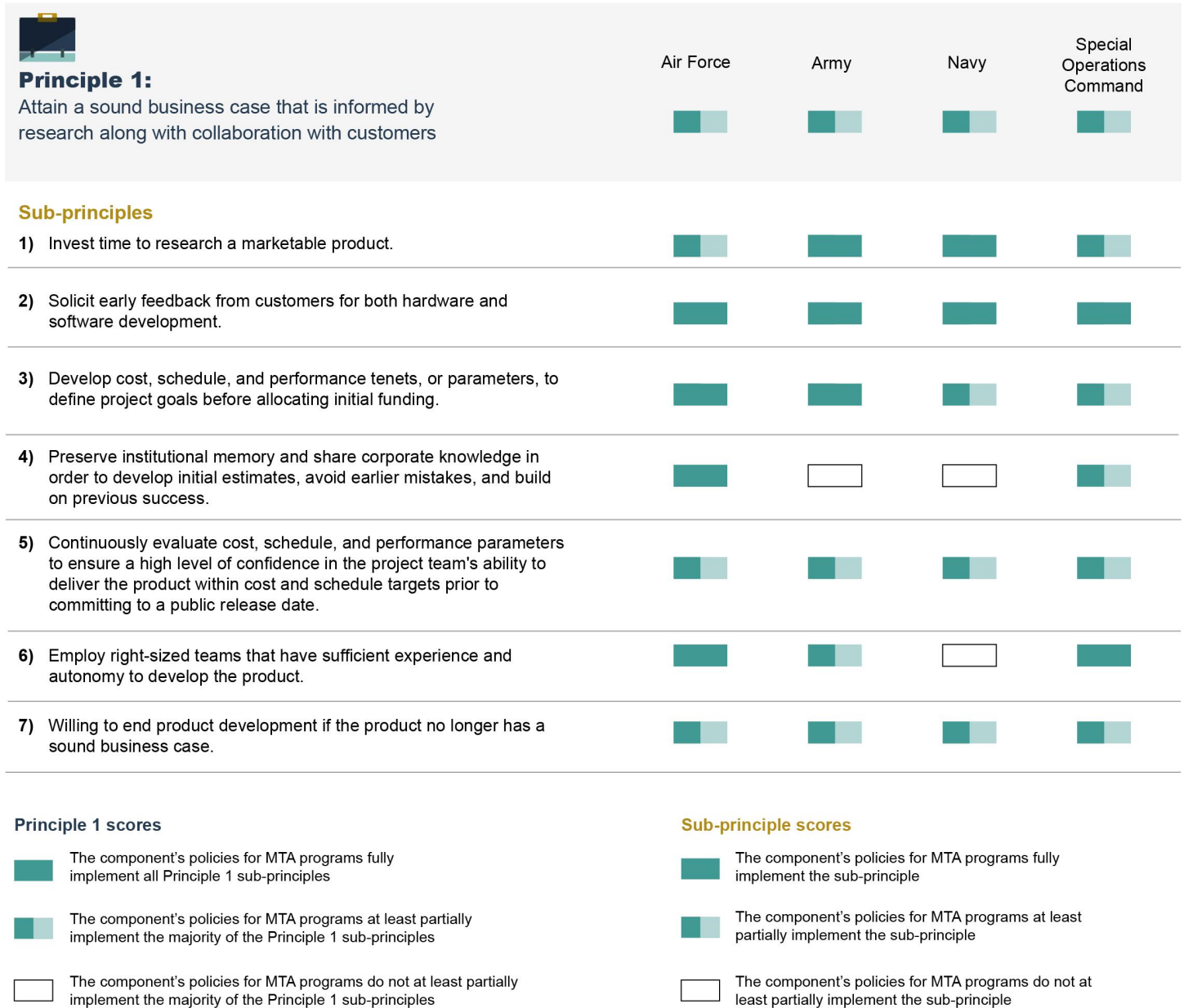| Type	Description	Air Force	Army	Navy	Special Operations Command
Principle 1:	Attain a sound business case that is informed by research along with collaboration with customers	The component's policies for MTA programs **at least partially** implement the majority of the Principle 1 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 1 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 1 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 1 sub-principles
Sub-principles	1) Invest time to research a marketable product.	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle
	2) Solicit early feedback from customers for both hardware and software development.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle
	3) Develop cost, schedule, and performance tenets, or parameters, to define project goals before allocating initial funding.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle
	4) Preserve institutional memory and share corporate knowledge in order to develop initial estimates, avoid earlier mistakes, and build on previous success.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle
	5) Continuously evaluate cost, schedule, and performance parameters to ensure a high level of confidence in the project team's ability to deliver the product within cost and schedule targets prior to committing to a public release date.	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle
	6) Employ right-sized teams that have sufficient experience and autonomy to develop the product.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle

Type	Description	Air Force	Army	Navy	Special Operations Command
	7) Willing to end product development if the product no longer has a sound business case.	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

We determined that all four components fully implemented the sub-principle that outlines the importance of soliciting early feedback from customers for both hardware and software development. However, as noted above, Air Force and SOCOM have yet to establish processes in the components' policies that would help officials consider products and technologies for the MTA pathway. Establishing these processes would help the Air Force and SOCOM address the sub-principle that outlines the importance of investing time to research a marketable product by ensuring officials consider the feasibility of developing or fielding the capability on the MTA pathway.

We also found that none of the four components fully implemented the sub-principle related to continuously evaluating cost, schedule, and performance parameters prior to committing to a public release date. Army, Navy, and SOCOM officials stated that their programs are continuously maturing these estimates to achieve a high level of confidence in practice, but that these requirements are not outlined in component policies for MTA programs. Air Force policy states that programs must ensure cost estimates are developed to achieve a high level of confidence that the program can be completed without the need for significant adjustment to program budgets. However, while the cost estimates must account for technical and schedule risks, the policy does not specifically require a high level of confidence in schedule or performance parameters. In addition, none of the component policies fully reflect a willingness to end product development if the product no longer has a sound business case that justifies continued investment. If fully implemented in component MTA policies, this principle could help MTA programs avoid common mistakes from previous efforts and prevent components from investing resources into MTA programs that lack a sound business case.

Principle 2 Implementation in Components' MTA Policies

None of the four components fully implement the use of iterative design approaches into policies that govern MTA programs. Figure 6

summarizes our analysis of the component MTA policies for the three sub-principles that comprise principle 2.

Figure 6: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Iterative Design Approaches that Result in Minimum Marketable Products

	Air Force	Army	Navy	Special Operations Command
Principle 2: Use an iterative design approach that results in minimum marketable products	(none)	(none)	partial	(none)
Sub-principles				
1) Use modern design tools during both hardware and software development that enable multiple design iterations.	partial	partial	full	(none)
2) Use elements of Agile development methodologies that promote iteration in both hardware and software product development.	(none)	(none)	partial	(none)
3) Use iterative design and testing to identify a minimum marketable product that can be followed by successive updates for both hardware and software development.	(none)	(none)	(none)	(none)

Principle 2 scores

■ The component's policies for MTA programs fully implement all Principle 2 sub-principles

◨ The component's policies for MTA programs at least partially implement the majority of the Principle 2 sub-principles

☐ The component's policies for MTA programs do not at least partially implement the majority of the Principle 2 sub-principles

Sub-principle scores

■ The component's policies for MTA programs fully implement the sub-principle

◨ The component's policies for MTA programs at least partially implement the sub-principle

☐ The component's policies for MTA programs do not at least partially implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

Data table for Figure 6: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Iterative Design Approaches that Result in Minimum Marketable Products

		Air Force	Army	Navy	Special Operations Command
Principle 2:	Use an iterative design approach that results in minimum marketable products	The component's policies for MTA programs **do not at least partially** implement the majority of the Principle 2 sub-principles	The component's policies for MTA programs **do not at least partially** implement the majority of the Principle 2 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 2 sub-principles	The component's policies for MTA programs **do not at least partially** implement the majority of the Principle 2 sub-principles
Sub-principles	1) Use modern design tools during both hardware and software development that enable multiple design iterations.	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle
	2) Use elements of Agile development methodologies that promote iteration in both hardware and software product development.	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle
	3) Use iterative design and testing to identify a minimum marketable product that can be followed by successive updates for both hardware and software development.	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

For example, none of the components' policies require development of a minimum viable product or initial capability to be improved by subsequent or evolving releases. Rather, officials from all four components stated that these sub-principles are generally captured by the components' software acquisition policies. However, our analysis of component software acquisition pathway policies identified persisting gaps. For example, we found that component-level policies that we reviewed for the software acquisition pathway do not specifically require the use of Agile or iterative development for hardware. In addition, we previously found that DOD's software acquisition pathway policy is also limited to software efforts and does not include hardware acquisitions or programs using other
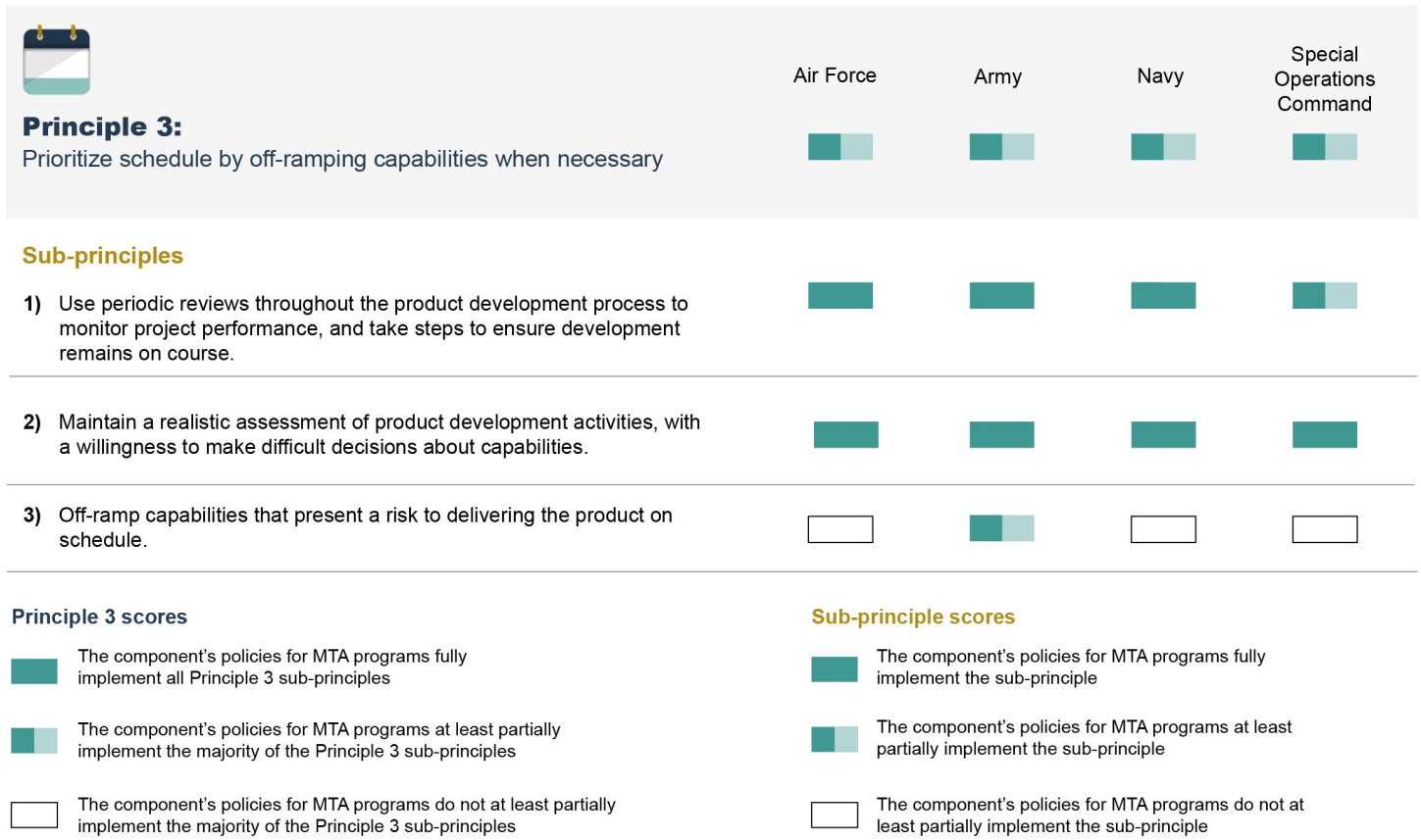
pathways, such as the MTA pathway.[30] Fully implementing this principle in component policies to apply to both hardware and software MTA programs could increase the chances of providing capability to end users quickly.

Principle 3 Implementation in Components' MTA Policies

Air Force, Army, Navy, and SOCOM MTA policies all at least partially implemented the majority of sub-principles that comprise Principle 3, which prioritizes schedule. Figure 7 summarizes our analysis of the component MTA policies for the three sub-principles that comprise principle 3.

[30]GAO-22-104513.

Figure 7: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Prioritizing Schedule by Off-Ramping Capability

| | Air Force | Army | Navy | Special Operations Command |

Principle 3:
Prioritize schedule by off-ramping capabilities when necessary

Sub-principles

1) Use periodic reviews throughout the product development process to monitor project performance, and take steps to ensure development remains on course.

2) Maintain a realistic assessment of product development activities, with a willingness to make difficult decisions about capabilities.

3) Off-ramp capabilities that present a risk to delivering the product on schedule.

Principle 3 scores

The component's policies for MTA programs fully implement all Principle 3 sub-principles

The component's policies for MTA programs at least partially implement the majority of the Principle 3 sub-principles

The component's policies for MTA programs do not at least partially implement the majority of the Principle 3 sub-principles

Sub-principle scores

The component's policies for MTA programs fully implement the sub-principle

The component's policies for MTA programs at least partially implement the sub-principle

The component's policies for MTA programs do not at least partially implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

Data table for Figure 7: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Prioritizing Schedule by Off-Ramping Capability

		Air Force	Army	Navy	Special Operations Command
Principle 3:	Prioritize schedule by off-ramping capabilities when necessary	The component's policies for MTA programs **at least partially** implement the majority of the Principle 3 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 3 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 3 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 3 sub-principles

		Air Force	Army	Navy	Special Operations Command
Sub-principles	1) Use periodic reviews throughout the product development process to monitor project performance, and take steps to ensure development remains on course.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle
	2) Maintain a realistic assessment of product development activities, with a willingness to make difficult decisions about capabilities.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle
	3) Off-ramp capabilities that present a risk to delivering the product on schedule.	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

Specifically, policies from all four components require proven or objective processes for review to evaluate product development activities and permit higher-level officials to redirect MTA programs or make trade-offs in the event of a problem. However, we found that none of the four components' MTA policies fully implemented the sub-principle related to off-ramping non-critical capabilities that present a risk to delivering the product on schedule.

Key factors that drive the inconsistency between component policies and this principle include the following:

- Air Force officials reported that they evaluate performance, schedule, cost, and risk trade-offs throughout the life cycles of programs. The Air Force's Integrated Life Cycle Management Policy states that the handling of these risks is based on the "best" option. Leading principles of product development, however, state that schedules should be the primary driver of these decisions to get capability to users quickly.

- Army and Navy officials stated the process of off-ramping capability to prioritize schedule can take place in practice. Army officials elaborated and stated that any off-ramping of capability requires

coordination between acquisition officials and the requirements community. For example, these officials explained that when the Army's Extended Range Cannon Artillery rapid prototyping program experienced schedule delays, acquisition officials had to work through the process of determining priorities with the requirements community to determine next steps for the program. The Army ultimately decided to extend the program's schedule 1 year beyond DOD's MTA policy objective of 5 years. We elaborate more on the circumstances of this program later in this report.

- SOCOM officials stated that determinations to release MTA capability conditionally or incrementally can be made through operational test and evaluation and the fielding determination. However, SOCOM policies governing operational test and evaluation and fielding determinations applicable to MTAs do not emphasize off-ramping capabilities that present a risk to delivering the product on schedule. Instead, SOCOM's policies outline a process that places emphasis on providing a system that is operationally suitable and operationally effective for use, among other things. These policies do not fully capture that MTA programs can be structured to deliver only prototypes or limited quantities, such as would be needed to support experimentation in the field.

If implemented, this principle could help MTA programs deliver needed capabilities to users within cost and schedule goals.

Principle 4 Implementation in Components' MTA Policies

None of the four components fully implemented the sub-principles related to collecting customer feedback to inform improvements. Figure 8 summarizes our analysis of the component MTA policies for the two sub-principles that comprise principle 4.

Figure 8: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Collecting Customer Feedback to Inform Improvements to a Minimum Marketable Product
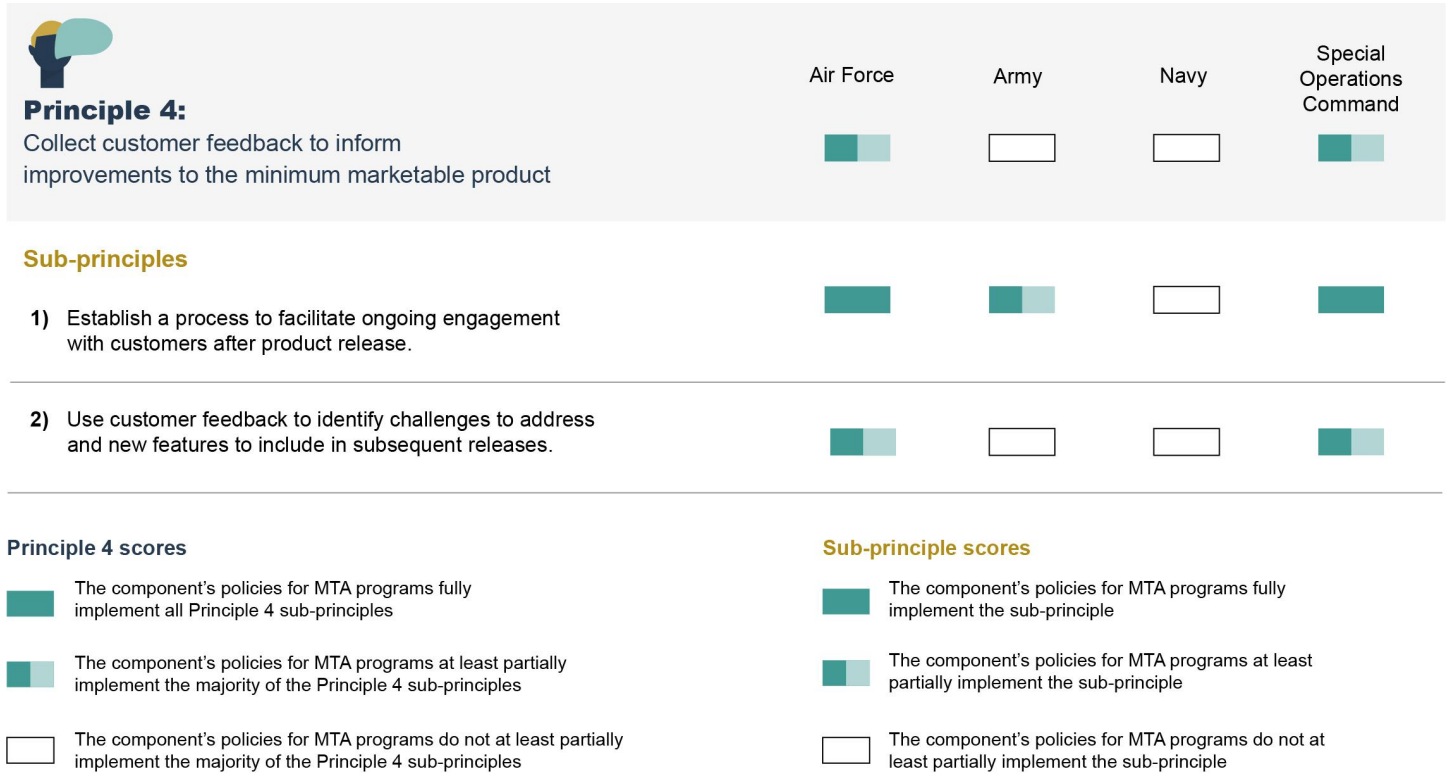
Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

Data table for Figure 8: DOD Components' MTA Policies Do Not Fully Implement Sub-Principles for Collecting Customer Feedback to Inform Improvements to a Minimum Marketable Product

		Air Force	Army	Navy	Special Operations Command
Principle 4:	Collect customer feedback to inform improvements to the minimum marketable product	The component's policies for MTA programs **at least partially** implement the majority of the Principle 4 sub-principles	The component's policies for MTA programs **do not at least partially** implement the majority of the Principle 4 sub-principles	The component's policies for MTA programs **do not at least partially** implement the majority of the Principle 4 sub-principles	The component's policies for MTA programs **at least partially** implement the majority of the Principle 4 sub-principles

		Air Force	Army	Navy	Special Operations Command
Sub-principles	1) Establish a process to facilitate ongoing engagement with customers after product release.	The component's policies for MTA programs **fully** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **fully** implement the sub-principle
	2) Use customer feedback to identify challenges to address and new features to include in subsequent releases.	The component's policies for MTA programs **at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **do not at least partially** implement the sub-principle	The component's policies for MTA programs **at least partially** implement the sub-principle

Source: GAO analysis of Department of Defense (DOD) components' Middle Tier of Acquisition (MTA) policies. | GAO-23-105008

Our analysis found that the Air Force, Army, and SOCOM have at least partially established processes to collect user feedback after product release. However, none of the components' MTA policies we reviewed fully addressed the sub-principle related to the inclusion of feedback from customers, stakeholders, or users to update deficiencies, upgrades, or subsequent releases of a product.

Component officials discussed the following factors that illustrate inconsistency between component policies and this principle:

- We found that Air Force policies require program managers to involve end users in reviews conducted after systems are fielded to ensure that issues, concerns, and priorities are communicated. However, Air Force policies do not specify that the information collected from end users is to inform subsequent releases of a product. Officials from the Office of the Assistant Secretary of the Air Force (Acquisition, Technology, and Logistics) stated that component policies for some non-MTA acquisition pathways include milestones where feedback from end users is one of the key tenets. They further stated that MTA programs are largely demonstrations of capability and part of the overall feedback process. These officials added that as a result, upgrades or subsequent releases for an MTA would likely be addressed as part of the transition process. However, as previously noted, we found that MTA rapid prototyping and rapid fielding programs are used and structured in various ways, which include developing multiple iterations of a product or developing software.

- We found that Army policies require user involvement in testing throughout the MTA development process, but they do not outline a feedback loop to the acquisition program that fields capability. Instead, officials from the Office of the Assistant Secretary of Defense

of the Army (Acquisition, Logistics, and Technology) stated that user feedback is generally provided to the requirements community. These officials added that the requirements community then determines how modifications, upgrades, or new releases are implemented.

- Officials from the Navy and SOCOM stated that collecting user feedback to inform subsequent iterations could comprise a sustainment, rather than acquisition, activity. Navy officials also stated that user feedback is generally included in transition plans or acquisition decision memorandums developed at MTA program completion.

If this principle was included in MTA policies, acquisition programs would be better positioned to understand user needs, iterate on designs within the MTA time frame, and develop capabilities to meet identified needs.

Selected MTA Programs Reflect Similar Inconsistencies with Leading Principles as Found in Components' MTA Policies

Our analysis identified examples from each of the four components where key MTA program acquisition plans and practices do not fully implement leading product development principles. In many cases, these gaps are similar to the ones we identified at the policy level for these same components. Appendix III provides detailed assessments of our 15 case study programs' implementation of leading principles in key acquisition planning documents. We identified inconsistencies with the following leading principles:

- **Principle 1: Attain a Sound Business Case.** Components approved funding for some programs despite significant disconnects among stakeholders in cost and schedule estimates. For example, the Air Force's Future Operationally Resilient Ground Evolution rapid prototyping MTA program was initiated on the MTA pathway in December 2019 prior to reconciling independent cost and schedule estimates that varied widely from program estimates.

  In addition, program acquisition strategies frequently documented known technology and design risks, but lacked corresponding triggers to enable efforts to fail fast when appropriate. Rather, we found examples where components have sustained their commitments to programs even after business cases deteriorated. For example, the Army initiated its Integrated Visual Augmentation System (IVAS) rapid fielding program in December 2020. In its approval of the Army's use

of the MTA rapid fielding pathway for IVAS, USD(A&S) directed the Army to verify corrections of the deficiencies identified in testing of the technology under the program's rapid prototyping effort prior to initial operational testing and fielding. The program awarded its production contract in March 2021. But, as of October 2022, Army officials stated the prototyping effort had yet to verify fixes necessary to address these deficiencies, which are needed to inform production activities. The program initiated a replan to address the additional deficiencies identified through prototypes and the increased schedule risk resulting from initiating the fielding effort without appropriate knowledge.

- **Principle 2: Use Iterative Design Approaches.** Use of iterative design approaches for development proved the exception rather than the rule in programs' acquisition strategies. Of the 15 programs we reviewed, eight implemented most elements of this principle, while another seven programs implemented few or none of the sub-principles. The Army's Short Range Reconnaissance program, which is executing in tranches—or phased capability releases—implemented most elements of this principle. The first tranche will provide a modified commercial off-the-shelf uncrewed aerial vehicle. Future tranches will be defined based on operational and data evaluations, including feedback from users, from the first tranche and take advantage of anticipated technology advancements. Program officials stated that this strategy will allow them to field new and innovative capabilities to operators that keep pace with industry innovations.

  Components structured some MTA programs with an expectation that they deliver full performance, system-level capabilities rather than minimum marketable (or viable) products. This appeared in acquisition strategies we reviewed in the form of linear development schedules, including ones that allot 5 years for rapid prototyping followed by 5 years for rapid fielding before capability is delivered to a warfighter. For example, the Navy's Conventional Prompt Strike, one of DOD's most expensive MTA programs, is executing in linear phases. The capabilities being developed in the current MTA effort are intended to advance technology in support of full capability systems planned for development under future rapid fielding and major capability acquisition efforts. Similarly, the next phase of the program will address additional requirements that the Navy has already defined, prior to obtaining user feedback on capabilities planned to deliver under the current program. Alternatively, leading product development principles emphasize iterative development approaches centered on minimum marketable products. Such

approaches reflect leading companies' understanding that a long-term product development effort might not prove as relevant or responsive to customers' needs 10 years from now as it appears today. This drives leading companies to deliver minimum capabilities sooner and then seek to improve upon them in follow-on iterations based on user feedback.

- **Principle 3: Prioritize Schedule.** Component decisions to off-ramp capabilities sometimes occurred late, after optimistic assumptions about the pace of development faltered, rather than early, following realistic appraisals of execution risk. We found instances where some components delayed making difficult decisions about capabilities. For example, the Army's Extended Range Cannon Artillery program was approved to use the MTA pathway in September 2018 and officials soon after discovered technical challenges greater than program officials had forecasted. According to Army officials, the program restructured and reduced its technical scope once it was determined that some planned capabilities could not be delivered within the 5-year MTA time frame. The program plans to achieve the improved range of fire within the current program, but other capabilities, such as rate of fire improvements, are planned to take place in a subsequent program phase. However, Army officials reported that additional technical deficiencies found following the program's restructure, coupled with COVID-19-related delays, led the Army to request a waiver from USD(A&S) of the 5-year MTA limitation. USD(A&S) denied the Army's request, but Army officials said they plan to continue technical development, following the 5-year MTA time frame under component acquisition executive oversight indefinitely until the Extended Range Cannon Artillery program meets its reduced set of requirements.

- **Principle 4: Collect Customer Feedback.** Program acquisition strategies usually emphasized obtaining user feedback throughout development, but generally did not identify processes for using that feedback to inform capability trades and follow-on efforts. For example, in our review of acquisition strategies we found examples from the Air Force, Army, and SOCOM—but none from the Navy—where programs accounted for feedback from end users (operators) on the products in development. At the same time, these strategies did not identify a process for using this feedback, such as in making prioritization decisions and identifying follow-on iterations of capability. For example, the acquisition strategy for SOCOM's Ground Organic Precision Strike System program identifies the program's plans for leveraging user evaluations and feedback to evaluate whether some

features should be included in the final product. However, the program did not outline plans to use the feedback provided by users to inform future iterations of the capability. None of the Navy acquisition strategies we reviewed identified a process for using end user feedback to inform future efforts.

Conclusions

The MTA pathway offers DOD a useful tool to develop and deliver innovative capabilities within 5 years of initiating work. Whether through an MTA rapid prototyping or rapid fielding effort, the policy emphasis is speed. However, such speed should not diminish timely and effective oversight of both the MTA pathway and the MTA programs within it. In fact, this oversight is vital for ensuring that programs are thoughtfully structured to go fast. Such oversight necessitates DOD having clear and consistent documentation requirements for the use of the pathway accompanied by component processes that meet the requirements of DOD's MTA policy.

Further, sound, data-driven oversight of the MTA pathway hinges on the availability of reliable program data. Existing data tools and reporting guidance that the Under Secretary of Defense for Acquisition and Sustainment relies on for oversight of the MTA pathway could be improved to better capture changes to program structures. Such improvements would provide clearer visibility across the MTA portfolio of investments and their suitability to the pathway. Components also have a critical role to play in improving MTA data reliability and oversight. Developing processes that consistently generate reliable program data is a reasonable expectation incumbent to components' use of the MTA pathway.

At the same time, successfully capitalizing on the potential of the MTA pathway requires DOD to be more thoughtful in the types of programs it pursues. Consistent with the principles that leading companies rely on for successful product developments, component policies that require MTA programs to attain sound business cases, apply iterative design approaches, off-ramp capabilities when needed, and incorporate feedback from users of initial capabilities are necessary to position DOD to achieve the goals it outlined in its policies.

Recommendations for Executive Action

We are making 26 recommendations to the Department of Defense.

The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment and President of the Defense Acquisition University together update the Adaptive Acquisition Framework Documentation Identification tool to accurately reflect MTA documentation requirements. (Recommendation 1)

The Secretary of Air Force should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented. (Recommendation 2)

The Secretary of the Army should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented. (Recommendation 3)

The Secretary of the Navy should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented. (Recommendation 4)

The Secretary of Defense should ensure that the Commander of Special Operations Command fully establishes and documents processes required under MTA policy for use of the MTA pathway. (Recommendation 5)

The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment improve its MTA data framework and reporting guidance to better capture program structure and changes in MTA program scope. (Recommendation 6)

The Secretary of the Air Force should identify and implement additional actions needed to improve the reliability of MTA program data the Air Force submits to the Under Secretary of Defense for Acquisition and Sustainment. (Recommendation 7)

The Secretary of the Army should identify and implement additional actions needed to improve the reliability of MTA program data the Army submits to the Under Secretary of Defense for Acquisition and Sustainment. (Recommendation 8)

The Secretary of the Navy should identify and implement additional actions needed to improve the reliability of MTA program data the Navy submits to the Under Secretary of Defense for Acquisition and Sustainment. (Recommendation 9)

The Secretary of Defense should ensure that the Commander of Special Operations Command identify and implement additional actions needed to improve the reliability of MTA program data the Command submits to the Under Secretary of Defense for Acquisition and Sustainment. (Recommendation 10)

The Secretary of the Air Force should update component MTA policies to fully implement the following principles throughout development:

- attaining a sound business case (Recommendation 11),
- applying iterative design approaches (Recommendation 12),
- off-ramping capabilities when needed to maintain schedule (Recommendation 13), and
- incorporating feedback from users of initial capabilities (Recommendation 14).

The Secretary of the Army should update component MTA policies to fully implement the following principles throughout development:

- attaining a sound business case (Recommendation 15),
- applying iterative design approaches (Recommendation 16),
- off-ramping capabilities when needed to maintain schedule (Recommendation 17), and
- incorporating feedback from users of initial capabilities (Recommendation 18).

The Secretary of Navy should update component MTA policies to fully implement the following principles throughout development:

- attaining a sound business case (Recommendation 19),
- applying iterative design approaches (Recommendation 20),
- off-ramping capabilities when needed to maintain schedule (Recommendation 21), and

- incorporating feedback from users of initial capabilities (Recommendation 22).

The Secretary of Defense should ensure that the Commander of Special Operations Command update component MTA policies to fully implement the following principles throughout development:

- attaining a sound business case (Recommendation 23),

- applying iterative design approaches (Recommendation 24),

- off-ramping capabilities when needed to maintain schedule (Recommendation 25), and

- incorporating feedback from users of initial capabilities (Recommendation 26).

Agency Comments and Our Evaluation

We provided a draft of this product to DOD for comment in October 2022. We received written comments from DOD in January 2023, which we reproduced in appendix IV and summarized below.

In its written comments, DOD concurred with 25 recommendations and partially concurred with one. DOD partially concurred with our recommendation for the Under Secretary of Defense for Acquisition and Sustainment to improve its MTA data framework and reporting guidance (Recommendation 6). In its response, DOD stated that it is reviewing the existing framework and reporting procedures and, upon completion, will determine whether it needs to make changes to its data reporting policies. As stated in the report, improvements to how the Under Secretary collects information on MTA program structure and changes in program scope could give decision makers better information to ensure military components are using the MTA pathway appropriately.

In concurring with the remaining 25 recommendations, DOD cited general concurrence or actions it plans to take for 15 of the 25 recommendations. In concurring with the remaining 10 recommendations, DOD referred to existing policies and processes in relation to the actions we recommended. However, those policies and processes are among the ones we identified as needing improvement. Specific instances of these inconsistencies include the following:
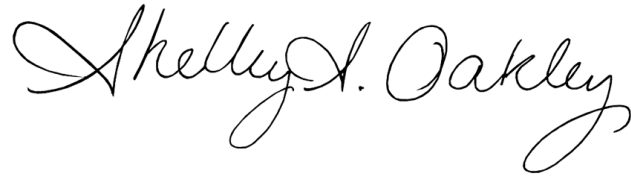
- Special Operations Command identified its primary requirements and acquisition policies—and selected program documents it associates with those policies—in relation to our recommendations for MTA process and policy improvements (Recommendations 5 and 23-26). These policies were among those that we found did not fully establish and document that component's MTA processes or implement acquisition leading principles for MTA programs. Consequently, SOCOM cannot rely on them in their current forms to improve MTA outcomes.

- The Army referred to an "MTA policy" it has developed for the initiation, execution, and transition of MTA programs in responding to our recommendation to improve the reliability of the MTA program data it submits to the Under Secretary of Defense for Acquisition and Sustainment (Recommendation 8). We reviewed the policy entitled "Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) Middle Tier of Acquisition Policy" and found it did not fully address the data reliability issues we identified. We are therefore unclear on what mechanisms this policy includes for improving Army MTA data reliability that are not already captured in the analysis that led to our recommendation.

- The Navy referred to its primary acquisition policy—and the component's implementation of that policy—as capturing many of the leading principles that we recommended for MTA programs (Recommendations 19-22). We disagree with the Navy's conclusion. Our analysis of the Navy's MTA policies found that it had only partially implemented three leading principles and had not implemented a fourth leading principle.

We believe it is important for DOD, including SOCOM and the military departments, to fully implement our recommendations, including updating its policies and processes as warranted.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Secretary of the Army, the Secretary of the Navy, the Secretary of the Air Force, and the Commander of the U.S. Special Operations Command. In addition, this report will be 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 OakleyS@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.

Shelby S. Oakley
Director, Contracting and National Security Acquisitions

Appendix I: Objectives, Scope, and Methodology

This report assesses the extent to which (1) DOD effectively implemented policies, guidance, and processes that provide DOD with reliable data to inform MTA oversight; and (2) military components' MTA policies and selected programs implemented leading principles for product development.

To inform our work, we focused our review on Department of Defense (DOD) components that had active middle tier of acquisition (MTA) programs in March 2021. We obtained a list of programs using the MTA rapid prototyping and rapid fielding path from DOD's Defense Acquisition Visibility Environment that were reported by DOD components as of March 2021. We determined that the Air Force, Army, Navy, and Special Operations Command (SOCOM) had active MTA programs. We selected a non-generalizable sample of 15 of the 70 active MTAs from the Air Force, Army, Navy, and SOCOM as case studies for our work. Our selection includes major MTAs, including some that exceed the major defense acquisition programs (MDAP) dollar threshold and non-major MTAs, rapid fielding and rapid prototyping efforts, MTAs initiated both before and after applicable policies were developed, and MTAs with varying structures of oversight.[1] We excluded classified MTAs from the scope of this review. Table 3 identifies our case studies and key factors for consideration in our selection process.

Table 3: Selection of Middle Tier of Acquisition (MTA) Case Studies

Component	Program	MTA path (rapid prototyping or fielding)	MTA oversight category	MTA designation date (month/year)	Decision authority
Air Force	Angry Kitten Combat Pod	Rapid prototyping	Non-major	3/2020	PEO

[1]Major defense acquisition programs (MDAP) generally include programs that are not a highly sensitive classified program and that are either (1) designated by the Secretary of Defense as a MDAP; or that are (2) estimated to require an eventual total expenditure for research, development, test, and evaluation, including all planned increments or spirals, of more than $525 million in fiscal year 2020 constant dollars or, for procurement, including all planned increments, of more than $3.065 billion in fiscal year 2020 constant dollars. See 10 U.S.C. § 4201(a); DOD Instruction 5000.85, Major Capability Acquisition (Aug. 6, 2020) (Change 1 Effective Nov. 4, 2021) (reflecting statutory MDAP cost thresholds in fiscal year 2020 constant dollars).

Component	Program	MTA path (rapid prototyping or fielding)	MTA oversight category	MTA designation date (month/year)	Decision authority
	F-22 Rapid Fielding	Rapid fielding	Non-major	9/2018	CAE
	F-22 Rapid Prototyping	Rapid prototyping	Major, MDAP-equivalent	9/2018	CAE
	Future Operationally Resilient Ground Evolution Rapid Prototype	Rapid prototyping	Major, MDAP-equivalent	12/2019	CAE
	Mission Planning – Agile Global Mobility Rapid Fielding	Rapid fielding	Non-major	11/2018	PEO
Army	Extended Range Cannon Artillery	Rapid prototyping	Major, MDAP-equivalent	9/2018	CAE
	Integrated Tactical Network – Rapid Prototyping	Rapid prototyping	Non-major	5/2019	PEO
	Integrated Visual Augmentation System Rapid Fielding	Rapid fielding	Major, MDAP-equivalent	12/2020	CAE
	Short Range Reconnaissance	Rapid prototyping	Non-major	1/2020	PEO
Navy	Deployable Surveillance Systems – Deep Water Passive	Rapid fielding	Non-major	3/2019	PEO
	Navy Conventional Prompt Strike	Rapid prototyping	Major, MDAP-equivalent	8/2019	CAE
	Standard Missile – 2 Block IIIC	Rapid prototyping	Major	11/2017	PEO
Special Operations Command	Fire Support – Mission Training and Preparation System	Rapid fielding	Non-major	4/2020	PEO
	Precision Strike System – Ground Precision Engagement	Rapid prototyping	Non-major	12/2018	PEO
	Special Operations Forces – Combat Diving Navigation	Rapid prototyping	Non-major	8/2018	PEO

Legend:

CAE = Component Acquisition Executive

PEO = Program Executive Officer

MDAP = major defense acquisition program

Source: GAO selection from Department of Defense (DOD) Middle-tier of Acquisition (MTA) data. | GAO-23-105008

To assess the extent to which components implemented DOD policies, guidance, and processes to provide DOD with reliable data to inform MTA oversight, we reviewed statutes creating and outlining requirements for the MTA pathway. We analyzed DOD and component policies, guidance, and processes related to MTA programs to determine whether

components have implemented DOD policy. To understand the status of implementing policies, guidance, and processes, we interviewed officials from offices that have a role on the MTA Advisory Board. These offices include Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)); Under Secretary of Defense for (Research & Engineering); Director, Cost Analysis and Program Evaluation; and Director, Office of Test & Evaluation. We also interviewed officials from the Air Force, Army, Navy, and SOCOM component acquisition executive offices to corroborate our findings and understand their responsibilities and perspectives on the status of implementation and planned next steps.

We also reviewed DOD's data reporting requirements for MTA programs and interviewed officials from the Office of the USD(A&S) responsible for establishing reporting requirements and reporting data to internal and external stakeholders, including congressional committees. To assess the quality, completeness, and accuracy of the data provided to DOD on MTA programs, we obtained DOD's MTA program information data set and analyzed the data from each of our selected case study program's submissions that informed the Office of the USD(A&S) MTA Advisory Board meeting in October 2021. To conduct this work, we distributed a questionnaire to our 15 selected case study programs. We used the questionnaire to obtain key program information including the decision authority, MTA path, schedule, critical technologies and technology readiness levels, and programs' schedules, among other things.

To help ensure the reliability of the data collected through our questionnaire, we leveraged pretests conducted for our Weapons Systems Annual Assessment to ensure our questions were clear, unbiased, and consistently interpreted.[2] Since our Weapons Systems Annual Assessment does not include non-major MTA programs or programs from SOCOM, we also pretested our questionnaire with the three non-major MTA programs we selected from SOCOM. We distributed the questionnaire as an Adobe Acrobat document to selected case study programs and obtained responses from all 15 programs in our sample from September to December 2021.

We compared data reported to the Office of the USD(A&S) to information we received in our questionnaires. We also reviewed and compared data reported to the Office of the USD(A&S) to additional information collected, including acquisition decision memorandums, acquisition strategies,

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[2]GAO-22-105230.

program cost and schedule estimates, and documents related to technical maturity and testing. When we identified discrepancies, we interviewed or received written responses from program officials to supplement and clarify the information.

We also interviewed officials within the Air Force, Army, Navy, and SOCOM component acquisition executive offices with knowledge of component-level acquisition data management systems and identified component policies and processes for inputting, verifying, and submitting MTA data to the Office of the USD(A&S). We also interviewed officials from offices that have a role on the MTA Advisory Board, including USD(A&S) and Under Secretary of Defense (Research & Engineering), to understand DOD's policies and procedures related to MTAs, roles in advising USD(A&S) on specific programs and the use of the MTA pathway, and use of program status submission data.

To determine the extent to which Air Force, Army, Navy, and SOCOM policies that govern the MTA pathway reflect leading principles of product development, we reviewed component-wide acquisition policies at the Air Force, Army, Navy, and SOCOM current as of June 2022. These policies are detailed below. We then compared the component acquisition policies with the leading principles that guide product development activities in leading companies to identify similarities and differences. For a full list of these principles and sub-principles, see appendix II.

We reviewed the following Air Force policies that govern the use of the MTA pathway:

- Air Force Operation of the Middle Tier of Acquisition (MTA) Supplemental Instruction DODI5000.80_DAFI163-146,

- Air Force Capabilities-Based Test and Evaluation Supplemental Instruction DODI5000.89_DAFI99-103,

- Air Force Integrated Life Cycle Management Instruction AFI 63-101/20-101, and

- Air Force Requirements Development Guidebook - Requirements Activities to Support Middle Tier of Acquisition Pathway.

We reviewed the following Army policies that govern the use of the MTA pathway:

- Office of the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) Middle Tier of Acquisition Policy,

- Acquisition Program Baseline Reporting for All Acquisition Category Programs and Middle Tier Acquisition Efforts,

- Cost-Estimating Activities Supporting Middle Tier of Acquisition (MTA) Pathways,

- Policy Directive for Test and Evaluation of Middle-Tier Acquisition Programs, and

- Policy Guidance on Implementing Modular Open Systems Approach in Army Acquisition Programs and Middle Tier of Acquisition Efforts.

We reviewed the following Navy policies that govern the use of the MTA pathway:

- SECNAV Instruction 5000.2G: Department of the Navy Implementation of the Defense Acquisition System and the Adaptive Acquisition Framework.

We reviewed the following SOCOM policies that govern the use of the MTA pathway:

- SOCOM Acquisition Management System Policy 70-1,

- SOCOM Capabilities Integration and Development System Directive 71-4, and

- SOCOM Operational Test and Evaluation Directive 71.5.

For each sub-principle, we identified and searched for key terms that best represented a translation of terms from the leading principles of product development sub-principles into language in the component policy documents. For instance, Principle 1, sub-principle 2 emphasizes the importance of soliciting early feedback from customers for hardware and software development. We used key words "stakeholder," "end user," and "warfighter" in our search of component policy documents. GAO analysts also reviewed the policy document text to identify any other relevant information that may not have been captured by our keywords.

For each sub-principle, two analysts performed and documented a content analysis of the relevant text we identified in the policy documents to assess whether it would be scored as Fully Implemented, Partially Implemented, or Not Implemented. For instance, in Principle 3, sub-principle 3, we categorized the Navy as not implementing the sub-principle because Navy policies for MTAs do not reference de-scoping, reallocating, or off-ramping capabilities to prioritize schedule. When there

were variances of opinion between analysts conducting this work, an independent analyst reviewed the work to inform the determination. Although language reflecting a given sub-principle may be found in multiple documents, we did not include all possible instances of such language if we found sufficient support for a fully implemented score. In these cases, we pulled illustrative quotations from one or two documents as appropriate to demonstrate where component policies appeared to meet the intent of the sub-principle. We then used a point system to determine the ratings at the principle level. For example, we scored each sub-principle as fully implemented, partially implemented, or not implemented. We provided two points for a fully implemented, one point for partially implemented, and no points for not implemented sub-principles. We tallied the scores of the sub-principles and determined the ratings for the principles as follows:

- MTA policies fully implement all sub-principles that comprise a principle.

- MTA policies at least partially implement the majority of the sub-principles that comprise a principle.

- MTA policies did not at least partially implement the majority of the sub-principles that comprise a category,

We interviewed senior acquisition officials from each component to better understand key acquisition processes for the MTA pathway outlined in the policies and how those function in practice. We also met with officials from those offices in order to obtain feedback on our content analysis of agency policy documents.

To understand how the leading principles of product development are reflected in program plans and execution, we reviewed the most recent acquisition strategies and other planning documentation for our 15 selected case study programs as of July 2022. We focused our review on the acquisition strategies because they are the key document that translates policy into practice. According to DOD Instruction (DODI) 5000.80, Operation of the Middle Tier of Acquisition (MTA), program managers "will 'tailor-in' reviews, assessments, and relevant documentation that results in an acquisition strategy customized to the unique characteristics and risks of their program." For both rapid prototyping and rapid fielding efforts, the acquisition strategies, according to DODI 5000.80, will include security, schedule and production risks; a test strategy or an assessment of test results; and a transition plan.

According to the Defense Acquisition University (DAU)—a key resource cited by the DOD components included in our review—acquisition strategies include the following characteristics:

- describes the program manager's plan to achieve program execution and programmatic goals across the entire program life cycle;

- summarizes the overall approach to acquiring the capability (to include the program schedule, structure, risks, funding, and the business strategy);

- contains sufficient detail to allow senior leadership and decision authority to assess whether the strategy makes good business sense, effectively implements laws and policies, and reflects management's priorities; and

- evolves over time and should continuously reflect the current status and desired goals of the program.

Similar to our policy analysis, an analyst performed and documented a content analysis of the relevant text we identified in the acquisition strategy or planning documents to assess whether it would be scored as Fully Implemented, Partially Implemented, or Not Implemented for each sub-principle. We verified our analysis by conducting the word searches of relevant key terms found through our policy analysis to confirm that analysis. An independent analyst verified this work and both GAO analysts reviewed the document text to identify any other relevant information that may not have been captured by our keywords. Based on whether the applicable text demonstrated that the acquisition strategy or planning documents addressed the sub-principle, we scored each sub-principle as Fully Implemented, Partially Implemented, or Not Implemented, using a point system. We provided two points for a fully implemented, one point for partially implemented, and no points for not implemented sub-principles. We tallied the scores of the sub-principles and determined the ratings for the principles as follows:

- To achieve a principle rating of fully implemented, all sub-principles must be fully implemented.

- To achieve a principle rating of mostly implemented, the majority of the total points for the principle must be achieved.

- For a rating of only implemented few or no elements of the sub-principles, less than half of the total points for the principle were achieved.

Our findings from this analysis are included in appendix III.

We also collected and analyzed program documentation and data to understand each program's status, challenges, and responses to challenges. We compared our findings to the leading principles in product development to ascertain themes associated with program plans and execution and identify illustrative examples of how these themes reflect or do not reflect leading principles in product development.

We conducted this performance audit from February 2021 to February 2023 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.

Appendix II: Leading Principles for Product Development

Figure 9: Leading Principles for Product Development

Principle 1: Attain a sound business case that is informed by research along with collaboration with customers

Sub-principles

1) Invest time to research a marketable product.

2) Solicit early feedback from customers for both hardware and software development.

3) Develop cost, schedule, and performance tenets, or parameters, to define project goals before allocating initial funding.

4) Preserve institutional memory and share corporate knowledge to develop initial estimates, avoid earlier mistakes, and build on previous success.

5) Continuously evaluate cost, schedule, and performance parameters to ensure a high level of confidence in the project team's ability to deliver the product within cost and schedule targets prior to committing to a public release date.

6) Employ right-sized teams that have sufficient experience and autonomy to develop the product.

7) Willing to end product development if the product no longer has a sound business case.

Principle 2: Use an iterative design approach that results in minimum marketable products

Sub-principles

1) Use modern design tools during both hardware and software development that enable multiple design iterations.

2) Use elements of Agile development methodologies that promote iteration in both hardware and software product development.

3) Use iterative design and testing to identify a minimum marketable product that can be followed by successive updates for both hardware and software development.

Principle 3: Prioritize schedule by off-ramping capabilities when necessary

Sub-principles

1) Use periodic reviews throughout the product development process to monitor project performance, and take steps to ensure development remains on course.

2) Maintain a realistic assessment of product development activities, with a willingness to make difficult decisions about capabilities.

3) Off-ramp capabilities that present a risk to delivering the product on schedule.

Principle 4: Collect customer feedback to inform improvements to the minimum marketable product

Sub-principles

1) Establish a process to facilitate ongoing engagement with customers after product release.

2) Use customer feedback to identify challenges to address and new features to include in subsequent releases.

Source: GAO summary of company information. | GAO-23-105008

Data table for Figure 9: Leading Principles for Product Development

Principle 1: Attain a sound business case that is informed by research along with collaboration with customers

Sub-principles

1. Invest time to research a marketable product.
2. Solicit early feedback from customers for both hardware and software development.
3. Develop cost, schedule, and performance tenets, or parameters, to define project goals before allocating initial funding.
4. Preserve institutional memory and share corporate knowledge to develop initial estimates, avoid earlier mistakes, and build on previous success.
5. Continuously evaluate cost, schedule, and performance parameters to ensure a high level of confidence in the project team's ability to deliver the product within cost and schedule targets prior to committing to a public release date.
6. Employ right-sized teams that have sufficient experience and autonomy to develop the product.
7. Willing to end product development if the product no longer has a sound business case.

Principle 2: Use an iterative design approach that results in minimum marketable products

Sub-principles

1. Use modern design tools during both hardware and software development that enable multiple design iterations.
2. Use elements of Agile development methodologies that promote iteration in both hardware and software product development.
3. Use iterative design and testing to identify a minimum marketable product that can be followed by successive updates for both hardware and software development.

Principle 3: Prioritize schedule by off-ramping capabilities when necessary

Sub-principles

1. Use periodic reviews throughout the product development process to monitor project performance, and take steps to ensure development remains on course.
2. Maintain a realistic assessment of product development activities, with a willingness to make difficult decisions about capabilities.
3. Off-ramp capabilities that present a risk to delivering the product on schedule.

Principle 4: Collect customer feedback to inform improvements to the minimum marketable product

Sub-principles

1. Establish a process to facilitate ongoing engagement with customers after product release.
2. Use customer feedback to identify challenges to address and new features to include in subsequent releases.

Source: GAO summary of company information. | GAO-23-105008

Appendix III: Selected MTA Programs' Planned Implementation of Leading Principles for Product Development

This appendix presents individual assessments of the 15 Department of Defense (DOD) middle tier of acquisition (MTA) programs we reviewed as part of this work. Each assessment presents current information as of July 2022. The assessments include standard elements, such as an image and program description. In addition, the assessments provide timelines with MTA milestones and changes to programs' acquisition strategies. We also include our assessment of each program's acquisition strategy against leading principles for product development. See figure 10 for an illustration of the layout of each two-page assessment.

Figure 10: Illustration of Two-Page Case Study Assessment
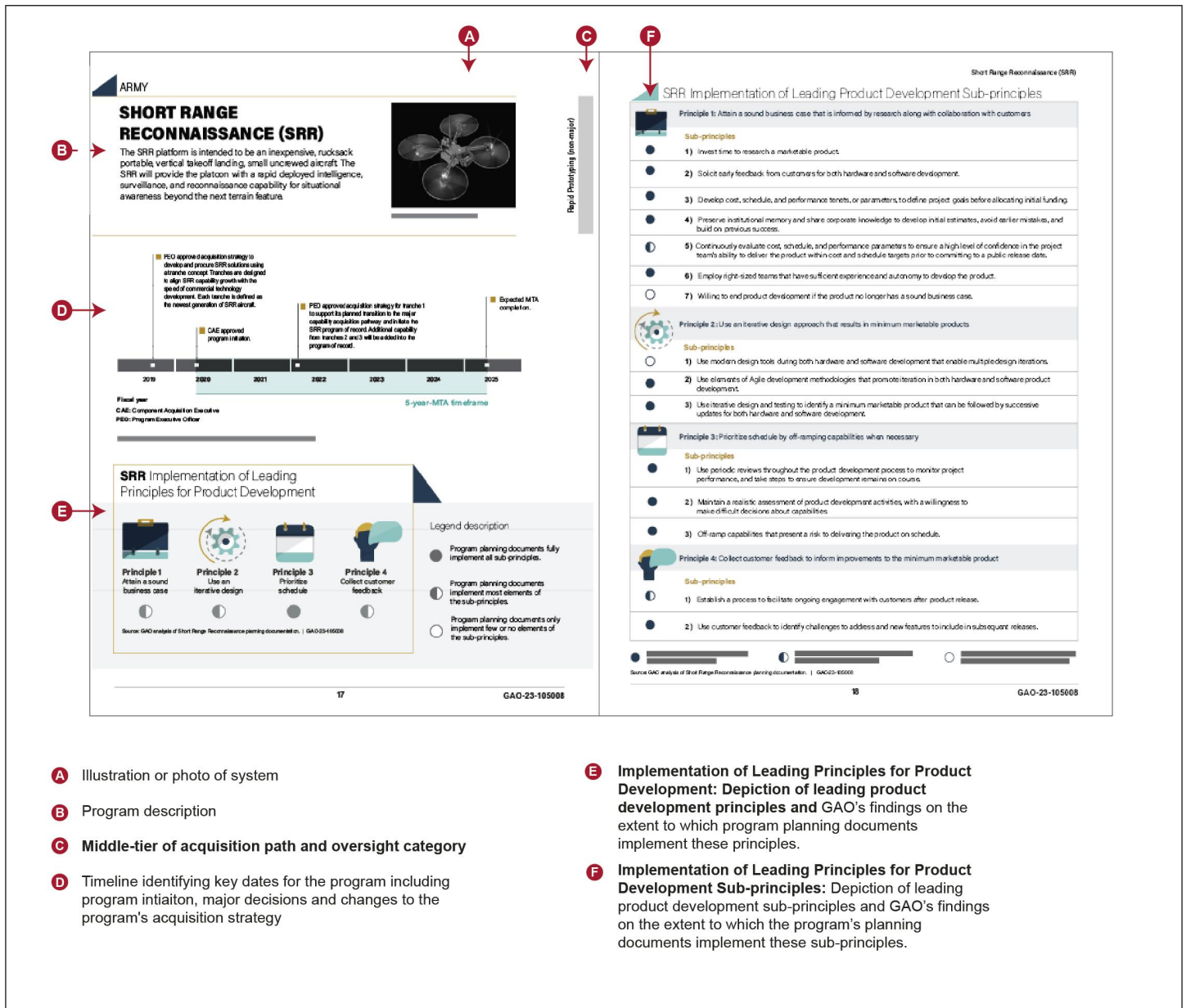
Ⓐ Illustration or photo of system

Ⓑ Program description

Ⓒ **Middle-tier of acquisition path and oversight category**

Ⓓ Timeline identifying key dates for the program including program intiaiton, major decisions and changes to the program's acquisition strategy

Ⓔ **Implementation of Leading Principles for Product Development: Depiction of leading product development principles and** GAO's findings on the extent to which program planning documents implement these principles.

Ⓕ **Implementation of Leading Principles for Product Development Sub-principles:** Depiction of leading product development sub-principles and GAO's findings on the extent to which the program's planning documents implement these sub-principles.

Source: GAO analysis. | GAO-23-105008

(Assessments start here)

Appendix IV: Comments from the Department of Defense

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
3600 DEFENSE PENTAGON
WASHINGTON, DC 20301-3600

ACQUISITION

January 18, 2023

Ms. Shelby Oakley
Director, Contracting and National Security Acquisitions
U.S. Government Accountability Office
441 G Street, NW
Washington DC 20548

Dear Ms. Oakley:

This is the Department of Defense (DoD) response to the GAO Draft Report
GAO-23-105008, "MIDDLE-TIER DEFENSE ACQUISTIONS: Rapid Prototyping and
Fielding Requires Changes to Oversight and Development Approaches," dated October 26, 2022
(GAO Code 105008).

The Department concurs with all recommendations in the GAO Draft Report except for
Recommendation 6 "The Secretary of Defense should ensure that the Under Secretary of
Defense for Acquisition and Sustainment improve its MTA data framework and reporting
guidance to better capture program structure and changes in MTA program scope." For
Recommendation 6, the Department Partially Concurs with the Recommendation and is in the
process of reviewing the exiting MTA data framework and reporting procedures. Upon
completion of the review, the Office will determine whether changes need to be made to the
existing policies for data reporting.

The Department is providing official written comments for inclusion in the report, which
is enclosed.

The Department appreciates the opportunity to comment on the Draft Final Report. My
point of contact for this effort is Ms. Katherine Coyne, (703) 692-0723.

Sincerely,

Tanya M. Skeen
Performing the Duties of Assistant Secretary
of Defense for Acquisition

Enclosure:
As stated

**GAO DRAFT REPORT DATED OCTOBER 26, 2022
GAO-23-105008 (GAO CODE 105008)**

"MIDDLE-TIER DEFENSE ACQUISITIONS: RAPID PROTOTYPING AND FIELDING REQUIRES CHANGES TO OVERSIGHT AND DEVELOPMENT APPROACHES"

**DEPARTMENT OF DEFENSE COMMENTS
TO THE GAO RECOMMENDATION**

RECOMMENDATION 1: The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment and President of the Defense Acquisition University together update the Adaptive Acquisition Framework Documentation Identification tool to accurately reflect MTA documentation requirements.

DoD RESPONSE: Concur. The Office of the Under Secretary of Defense for Acquisition and Sustainment is in the process of updating the Adaptive Acquisition Framework Documentation Identification tool to accurately reflect MTA documentation requirements.

RECOMMENDATION 2: The Secretary of Air Force should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented.

DoD RESPONSE: Concur, the Air Force will update guidance to ensure processes required under MTA policy for use of the MTA pathway are fully established and documented. Updates to Air Force guidance are ongoing.

RECOMMENDATION 3: The Secretary of the Army should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented.

DoD RESPONSE: Concur as written.

RECOMMENDATION 4: The Secretary of the Navy should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented.

DoD RESPONSE: Concur. The Department of the Navy will periodically review Secretary of the Navy Instruction (SNI) 5000.2G – Department of the Navy Implementation of the Defense Acquisition System and the Adaptive Acquisition Framework, to ensure processes are fully established and documented and leverage modern and agile tools to address identified gaps.

RECOMMENDATION 5: The Secretary of Defense should ensure that the Director of Special Operations Command fully establishes and documents processes required under MTA policy for use of the MTA pathway.

DoD RESPONSE: Concur. SOF AT&L Policy 70-1 and SOCOM Directive 71-4 exist for the SOF AT&L Acquisition Executive and the Program Executive Offices (PEO) to execute

programs to follow the Middle-Tier Acquisition (MTA) pathway. SOF AT&L P 70-1 shows the acquisition life-cycle of the MTA pathway. That life cycle identifies the major functions and documents required such as cost, strategy, plan, execution, and delivery/sustainment to meet MTA pathway requirements. The Acquisition Strategy & the Simplified Acquisition Management Plan (SAMP) are identified in the P 70-1 to document what functions will be accomplished following the MTA pathway.

RECOMMENDATION 6: The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment improve its MTA data framework and reporting guidance to better capture program structure and changes in MTA program scope.

DoD RESPONSE: Partially concur. The Office of the Under Secretary of Defense for Acquisition and Sustainment is in the process of reviewing the existing MTA data framework and reporting procedures. Upon completion of review, the Office will determine whether changes need to be made to the existing policies for data reporting.

RECOMMENDATION 7: The Secretary of the Air Force should identify and implement additional actions needed to improve the reliability of MTA program data the Air Force submits to the Under Secretary of Defense for Acquisition and Sustainment.

DoD RESPONSE: Concur, the Air Force will analyze and address causes impacting the reliability of MTA program data submitted to the USD(A&S) by 31 Dec 23.

RECOMMENDATION 8: The Secretary of the Army should identify and implement additional actions needed to improve the reliability of MTA program data the Army submits to the Under Secretary of Defense for Acquisition and Sustainment.

DoD RESPONSE: Concur, the Assistant Secretary of the Army (Acquisition, Logistics and Technology) has developed a MTA Policy that outlines policy and procedures for the initiation, execution, and transition of MTA Programs.

RECOMMENDATION 9: The Secretary of the Navy should identify and implement additional actions needed to improve the reliability of MTA program data the Navy submits to the Under Secretary of Defense for Acquisition and Sustainment.

DoD RESPONSE: Concur. The Department of the Navy adheres to all existing MTA program data submission requirements. The DON concurs that MTA data reliability can be improved, which may require program data submission implementation adjustments at DON and/or higher levels.

RECOMMENDATION 10: The Secretary of Defense should ensure that the Director of Special Operations Command identify and implement additional actions needed to improve the reliability of MTA program data the Command submits to the Under Secretary of Defense for Acquisition and Sustainment.

DoD RESPONSE: Concur. SOF AT&L Policy 70-1 states the MTA program information will be loaded into the Defense Acquisition Visibility Environment (DAVE) for OSD(A&S) awareness. SOF AT&L is working with OSD(A&S) to directly upload data from our Acquisition Management System (AMS) and our Adaptive Acquisition Framework Document Identification (AAFDID) tool to enable the alignment with POM Budget exhibit submissions.

RECOMMENDATION 11-14: The Secretary of the Air Force should update component MTA policies to fully implement the following principles throughout development:
    • attaining a sound business case (Recommendation 11),
    • applying iterative design approaches (Recommendation 12),
    • off-ramping capabilities when needed to maintain schedule (Recommendation 13), and
    • incorporating feedback from users of initial capabilities (Recommendation 14).

DoD RESPONSE: Concur, Air Force will update guidance to implement the four principles listed above on MTA programs. Updates to Air Force guidance on the implementation of the principles (recommendations 11-14) are ongoing.

RECOMMENDATION 15-18: The Secretary of the Army should update component MTA policies to fully implement the following principles throughout development:
    • attaining a sound business case (Recommendation 15),
    • applying iterative design approaches (Recommendation 16),
    • off-ramping capabilities when needed to maintain schedule (Recommendation 17), and
    • incorporating feedback from users of initial capabilities (Recommendation 18).

DoD RESPONSE: Concur with all.

RECOMMENDATION 19-22: The Secretary of Navy should update component MTA policies to fully implement the following principles throughout development:
    • attaining a sound business case (Recommendation 19),
    • applying iterative design approaches (Recommendation 20),
    • off-ramping capabilities when needed to maintain schedule (Recommendation 21), and
    • incorporating feedback from users of initial capabilities (Recommendation 22).

DoD RESPONSE: Concur. The Department of the Navy agrees that the leading principles identified by GAO can be used to rapidly prototype and field capability, which are aligned to MTA outcomes. The DON's SNI 5000.2G and implementation thereof captures many of these principles, and the DON will rely on periodic review of policy and modern and agile tools to address identified gaps.

RECOMMENDATION 23-26: The Secretary of Defense should ensure that the Director of Special Operations Command update component MTA policies to fully implement the following principles throughout development:
- attaining a sound business case (Recommendation 23),
- applying iterative design approaches (Recommendation 24),
- off-ramping capabilities when needed to maintain schedule (Recommendation 25), and
- incorporating feedback from users of initial capabilities (Recommendation 26).

DoD RESPONSE:

Recommendation 23: Concur. The P 70-1 defines the documents, ADM, Acquisition Strategy, SAMP, PPP, etc. that address the development of a sound business case. The Acquisition Strategy & the SAMP address the cost, schedule, & performance efforts involved in acquiring a capability. Those efforts are continually being evaluated at monthly IPRs with the Acquisition Executive. Also, evaluation of a Rapid Prototyping or Rapid Fielding capability need involves a business case analysis. USSOCOM has a process similar to JCIDS called Special Operation Force Capability Integrated Development System (SOFCIDS) led by the J8 Directorate, with final approval by the Vice Commander, that addresses capability business cases. That process is defined in USSOCOM Directive 71-4.

Recommendation 24: Concur. Program Managers (PM) can use an iterative design approach as appropriate when defining what capability achieves the requirement and what will provide the best value. SOF AT&L P 70-1 and SOCOM D 71-4 allow this flexibility.

Recommendation 25: Concur. SOF AT&L P 70-1 and SOCOM D 71-4 (and associated SOFCIDS process) allow this flexibility to off ramp when required to maintain schedule.

Recommendation 26: Concur. Current policy identifies the stakeholders of a program to include the users. Current policy as defined in D 71-4 addresses user feedback throughout requirements process up to and including program divestiture.

Text of Appendix IV: Comments from the Department of Defense

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

3600 DEFENSE PENTAGON

WASHINGTON, DC 20301-3600

ACQUISITION

January 18, 2023

Ms. Shelby Oakley

Director, Contracting and National Security Acquisitions

U.S. Government Accountability Office

441 G Street, NW

Washington DC 20548

Dear Ms. Oakley:

This is the Department of Defense (DoD) response to the GAO Draft Report GAO-23-105008, "MIDDLE-TIER DEFENSE ACQUISTIONS: Rapid Prototyping and Fielding Requires Changes to Oversight and Development Approaches," dated October 26, 2022 (GAO Code 105008).

The Department concurs with all recommendations in the GAO Draft Report except for Recommendation 6 "The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment improve its MTA data framework and reporting guidance to better capture program structure and changes in MTA program scope." For Recommendation 6, the Department Partially Concurs with the Recommendation and is in the process of reviewing the exiting MTA data framework and reporting procedures. Upon completion of the review, the Office will determine whether changes need to be made to the existing policies for data reporting.

The Department is providing official written comments for inclusion in the report, which is enclosed.

The Department appreciates the opportunity to comment on the Draft Final Report. My point of contact for this effort is Ms. Katherine Coyne, (703) 692-0723.

Sincerely,

Tanya M. Skeen

Performing the Duties of Assistant Secretary of Defense for Acquisition

Enclosure: As stated

GAO DRAFT REPORT DATED OCTOBER 26, 2022 GAO-23-105008 (GAO CODE 105008)

"MIDDLE-TIER DEFENSE ACQUISITIONS: RAPID PROTOTYPING AND FIELDING REQUIRES CHANGES TO OVERSIGHT AND DEVELOPMENT APPROACHES"

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATION

RECOMMENDATION 1: The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment and President of the Defense Acquisition University together update the Adaptive Acquisition Framework Documentation Identification tool to accurately reflect MTA documentation requirements.

DoD RESPONSE: Concur. The Office of the Under Secretary of Defense for Acquisition and Sustainment is in the process of updating the Adaptive Acquisition Framework Documentation Identification tool to accurately reflect MTA documentation requirements.

RECOMMENDATION 2: The Secretary of Air Force should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented.

DoD RESPONSE: Concur, the Air Force will update guidance to ensure processes required under MTA policy for use of the MTA pathway are fully established and documented. Updates to Air Force guidance are ongoing.

RECOMMENDATION 3: The Secretary of the Army should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented.

DoD RESPONSE: Concur as written.

RECOMMENDATION 4: The Secretary of the Navy should ensure that processes required under MTA policy for use of the MTA pathway are fully established and documented.

DoD RESPONSE: Concur. The Department of the Navy will periodically review Secretary of the Navy Instruction (SNI) 5000.2G – Department of the Navy Implementation of the Defense Acquisition System and the Adaptive Acquisition Framework, to ensure processes are fully established and documented and leverage modern and agile tools to address identified gaps.

RECOMMENDATION 5: The Secretary of Defense should ensure that the Director of Special Operations Command fully establishes and documents processes required under MTA policy for use of the MTA pathway.

DoD RESPONSE: Concur. SOF AT&L Policy 70-1 and SOCOM Directive 71-4 exist for the SOF AT&L Acquisition Executive and the Program Executive Offices (PEO) to execute programs to follow the Middle-Tier Acquisition (MTA) pathway. SOF AT&L P 70-1 shows the acquisition life-cycle of the MTA pathway. That life cycle identifies the major functions and documents required such as cost, strategy, plan, execution, and delivery/sustainment to meet MTA pathway requirements. The Acquisition Strategy & the Simplified Acquisition Management Plan (SAMP) are identified in the P 70-1 to document what functions will be accomplished following the MTA pathway.

RECOMMENDATION 6: The Secretary of Defense should ensure that the Under Secretary of Defense for Acquisition and Sustainment improve its MTA data framework and reporting guidance to better capture program structure and changes in MTA program scope.

DoD RESPONSE: Partially concur. The Office of the Under Secretary of Defense for Acquisition and Sustainment is in the process of reviewing the existing MTA data framework and reporting procedures. Upon completion of review, the Office will determine whether changes need to be made to the existing policies for data reporting.

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Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Shelby S. Oakley, (202) 512-4841 or oakleys@gao.gov

Staff Acknowledgments

Principal contributors to this report were Christopher R. Durbin, Assistant Director; Alexis S. Olson, Analyst-in-Charge; Vinayak K. Balasubramanian; Stephen Sean Deblasio; Stephanie Gustafson; Anastasia Kouloganes; Adie Lewis; Michael H. Moran; and Robin Wilson. Other key contributors included Erin Carson; Breanne Cave; Brenna Derritt; Alexandra Dew Silva; Margaret C. Fisher; Gina M. Hoover; Ethan Kennedy; Claire Li; Michael Holland; Diana Maurer; Anne McDonough; Rachel Adina Steiner-Dillon; Jenny Shinn; and Brian Smith.