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WEAPON SYSTEM REQUIREMENTS

Joint Staff Lacks Reliable Data on the Effectiveness of Its Revised Joint Approval Process

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Why GAO Did This Study

In the National Defense Authorization Act for Fiscal Year 2017, Congress mandated revisions to the JCIDS process by modifying the scope of the JROC's responsibilities. The accompanying Senate Armed Services Committee report noted that these changes were, in part, to improve the timeliness of the JCIDS process.

House Armed Services Committee report 116-120 included a provision for GAO to review the revisions to the JCIDS process. This report examines (1) key revisions to the process, (2) how many programs have been through the revised process and how long it took, and (3) the Joint Staff's ability to assess the timeliness of the process.

GAO reviewed JCIDS policies and guidance, and interviewed relevant DOD officials. GAO also selected a nongeneralizable sample of 12 capability documents from across the Air Force, Army, and Navy. GAO analyzed data associated with these documents from the Joint Staff's KM/DS information system and compared it to data provided by military department officials to determine the Joint Staff's ability to assess the timeliness of the document review process.

What GAO Recommends

GAO recommends that DOD (1) develop a plan for resolving the JCIDS information system operational deficiencies, and (2) establish a baseline based on reliable data and issues that affect the length of time to validate capability documents. DOD concurred with the recommendations.

View GAO-22-104432. For more information, contact John D. Sawyer at (202) 512-4841 or sawyerj@gao.gov.

What GAO Found

The Department of Defense (DOD) sets the foundation of its weapon system acquisitions in documented requirements for new or enhanced capabilities. DOD's Joint Staff uses the Joint Capabilities Integration and Development System (JCIDS) process to manage the review and approval of capability requirements documents. The Joint Requirements Oversight Council (JROC) oversees the process. At congressional direction, the Joint Staff revised the process in November 2018, reducing the JROC's role to focus on documents addressing requirements of multiple departments, while increasing the role of military departments for their unique capability documents.

GAO found that the Joint Staff lacks reliable data on the total number of programs that have completed the revised process. In addition, GAO found that Joint Staff data for the time to validate selected capability documents were also unreliable. Capability documents move through the JCIDS process in the Joint Staff's Knowledge Management and Decision Support (KM/DS) information system. GAO found discrepancies between KM/DS data and data from those that submit documents, known as sponsors. Joint Staff officials stated that deficiencies with the KM/DS system are at the root of its data issues. A detailed plan addressing these deficiencies will better position the Joint Staff to assess if the revised process is achieving stated JCIDS objectives. See figure below.

The Joint Staff cannot assess the JCIDS process because it lacks reliable data and a baseline to measure timeliness. Joint Staff guidance provides a notional length of time of 103 days to review documents in the JCIDS process, but this is not evidence-based. Joint Staff officials stated they have not measured the actual length of time that documents take to go through the JCIDS process. GAO analysis and sponsor officials confirmed that none of the selected capability documents completed the process within 103 days. Sponsor officials noted that certain issues can add time to the review process and emphasized document quality over fast review and approval. However, without a data-driven baseline that reflects issues that affect the length of time to validate capability documents, Joint Staff officials are not able to assess JCIDS' efficiency and effectiveness.

Discrepancies between Joint Staff and Sponsor Validation Timeline Data
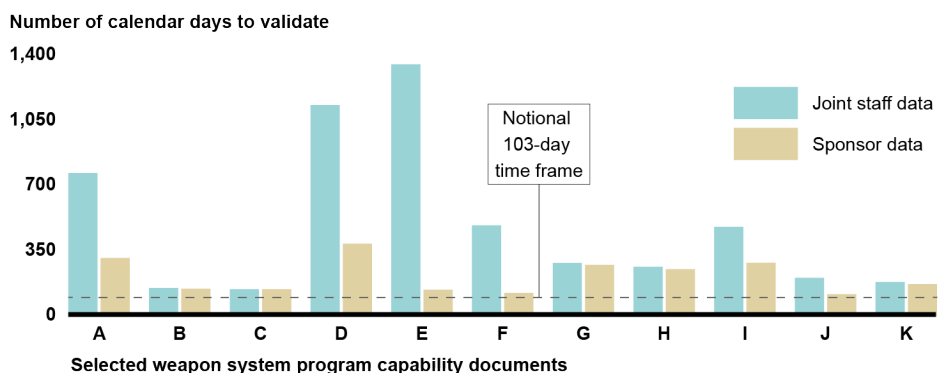
Source: GAO analysis of Department of Defense data. | GAO-22-104432
Note: One selected program is not included in the figure because the sponsor withdrew it from the process.

United States Government Accountability Office

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Abbreviations

ACAT	Acquisition Category
CDD	Capability Development Document
DOD	Department of Defense
ICD	Initial Capabilities Document
JCB	Joint Capabilities Board
JCIDS	Joint Capabilities Integration and Development System
JPR	Joint Performance Requirement
JROC	Joint Requirements Oversight Council
JSD	Joint Staffing Designator
KM/DS	Knowledge Management and Decision Support
RDT&E	Research, Development, Test, and Evaluation

October 21, 2021

Congressional Committees

Over time, the Department of Defense (DOD) has faced numerous impediments in its ability to efficiently acquire new weapon systems on time and within estimated costs. As such, DOD's process for managing acquisition programs for weapon systems—including ammunition, aircraft, ships, and satellites—has been characterized by organizations both internal and external to DOD as inefficient, cumbersome, and bureaucratic.[1] DOD uses three interrelated processes to deliver capabilities to the U.S. military: the Joint Capabilities Integration and Development System (JCIDS) to validate gaps in joint warfighting capabilities and requirements that resolve those gaps; the Defense Acquisition System to develop and field weapon systems to meet these requirements; and the Planning, Programming, Budgeting and Execution process to allocate the funding needed to develop, acquire, and field these weapon systems. DOD's efficient and effective execution of these three processes is critical to meeting the cost, schedule, and performance goals of weapon system acquisition programs.

DOD established JCIDS in 2003 to provide an integrated process to identify new capabilities from a joint perspective based on the national military strategy. The JCIDS process involves identifying, documenting, and prioritizing capability gaps and the weapon system capabilities to address those gaps, generally known as capability requirements.[2] The Joint Requirements Oversight Council (JROC) manages the JCIDS process in support of the Chairman of the Joint Chiefs of Staff. From 2003 to 2018, the JROC's responsibilities included the review and approval of the capability requirements documents associated with all DOD major defense acquisition programs.

Since 2007, we have reported on many challenges with the JCIDS process, such as not consistently prioritizing warfighter needs and capability gaps, or not considering overlap and duplication across

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[1]GAO, *Acquisition Reform*: *DOD Should Streamline Its Decision-Making Process for Weapon Systems to Reduce Inefficiencies*, GAO-15-192 (Washington, D.C.: Feb. 24, 2015).

[2]Capability requirements encompass the performance characteristics and key system attributes a weapon system development program is designed to deliver.

proposed programs.[3] The Senate Armed Services Committee report accompanying the National Defense Authorization Act for Fiscal Year 2017 noted that the JROC's process for defining and approving requirements was taking too long.[4] Subsequently, the act reformed JROC responsibilities to focus exclusively on those capabilities containing Joint Performance Requirements (JPR)—capability requirements critical to ensuring interoperability or fulfilling capability gaps for more than one military department.[5] For capability requirements unique to one military department, the respective department has the responsibility for validating its own requirements. Additionally, as we discussed in prior work, the National Defense Authorization Acts for Fiscal Years 2016 and 2017 included numerous reforms intended to streamline acquisition oversight and field capabilities faster.[6]

A House Armed Services Committee report accompanying a bill for the National Defense Authorization Act for Fiscal Year 2020 noted longstanding concerns with the effectiveness and efficiency of the JCIDS process. It also contained a provision for GAO to review the recent revisions to the JCIDS process.[7] This report (1) describes how DOD has implemented revisions to the JCIDS process; (2) examines how many programs have gone through the revised JCIDS process and how long it took them to do so; and (3) examines the Joint Staff's ability to assess the timeliness of the JCIDS review and approval process for DOD weapon system requirements.

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[3]For example, see GAO, *Weapon System Requirements: Detailed Systems Engineering Prior to Product Development Positions Programs for Success*, GAO-17-77 (Washington, D.C.: Nov. 17, 2016); *DOD Weapon Systems: Missed Trade-off Opportunities During Requirements Reviews*, GAO-11-502 (Washington, D.C.: June 16, 2011); and *Best Practices: An Integrated Portfolio Management Approach to Weapon System Investments Could Improve DOD's Acquisition Outcomes*, GAO-07-388 (Washington, D.C.: Mar. 30, 2007). DOD has largely implemented the recommendations made in these reports.

[4]S. Rep. No. 114-255, at 255 (May 18, 2016).

[5]National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 925 (2016). DOD's *Manual for the Operation of the Joint Capabilities Integration and Development System* (Aug. 31, 2018) includes a definition of interoperability as the ability of systems, units, or forces to exchange data, information, material, and services to enable them to effectively operate together.

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

[7]H.R. Rep. No. 116-120, at 176-177 (June 19, 2019).

To describe how DOD has implemented revisions to the JCIDS process, we reviewed current JROC policies and guidance for validating capability requirements and compared them against those in place prior to the National Defense Authorization Act for Fiscal Year 2017.[8] We interviewed JROC officials to further understand the implemented changes to the JROC's guidance. We also interviewed knowledgeable officials from the Departments of the Air Force, Army, and Navy to understand how the implemented revisions affected the JCIDS process.

To examine how many programs have been through the revised JCIDS process and how long it took, we collected and analyzed data from the information system that the JROC uses to manage the JCIDS process—the Knowledge Management and Decision Support system, known as KM/DS. To provide illustrative examples of how long the JCIDS review process took, both before and after the implementation of the 2018 reforms, we selected a nongeneralizable sample of 12 capability development documents outlining requirements for various types of programs from the Departments of the Air Force, Army, and Navy. The sample included documents that entered the JCIDS process during the 2 years before and the 2 years after the JROC implemented the JCIDS reforms. The total sample included document examples that were reviewed and validated either at the Joint Staff or the military department level. In total, we reviewed five Air Force, five Army, and two Navy programs. See appendix I for information on these programs.

To assess the reliability of KM/DS data for each of those selected programs, we compared it to similar data maintained by the military departments. We noted discrepancies between the two data sets, which we discussed with knowledgeable officials. We interviewed Joint Staff officials about the functionality of the KM/DS system and the extent to which officials used the system for data management and oversight activities. Based on discrepancies we found related to the total number of programs that went through the JCIDS review process and the length of time to conduct those reviews, we then evaluated the effectiveness of the KM/DS system as a tool for Joint Staff management and congressional oversight. We determined that the KM/DS system data were not sufficiently reliable for the purposes of addressing the objectives for our review, as described later in this report. However, we present selected data to illustrate issues with the KM/DS system.

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[8]Pub. L. No. 114-328, § 925.

To examine the Joint Staff's ability to assess the timeliness of the JCIDS review and approval process, we reviewed current JROC policies and guidance that govern the process. We also interviewed Joint Staff officials about the development of their guidance for the JCIDS document review timelines. In addition, we interviewed requirements officials from the Air Force and Army, and program-level officials from the Air Force, Army, and Navy to understand issues that affect the timeliness of the JCIDS process.

One of the provisions, included in the House report, overlaps with a separate provision directed to the Secretary of Defense in the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021.[9] Specifically, we were asked to review the extent to which the military services have assessed whether they have effective processes and sufficient qualified workforces to perform their requirements development and validation responsibilities.[10] However, the act directed the Secretary of Defense to conduct an assessment of the processes for developing and approving capability requirements for the acquisition programs of DOD and each of the military departments. The Secretary of Defense is to submit a report on the assessment to the congressional defense committees by October 2021.[11] Because DOD's assessment is to include the processes for each military department, we focused on the joint review and approval process.

We conducted this performance audit from July 2020 to October 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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[9]The William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Pub. L. No. 116-283 § 809 (Jan. 1, 2021).

[10]H.R. Rep. No. 116-120, at 177 (June 19, 2019).

[11]Pub. L. No. 116-283, § 809.

Background

The JROC, established in statute, is a body within DOD that supports the Chairman of the Joint Chiefs of Staff in advising the Secretary of Defense on military capabilities required to support the national military strategy.[12] The JROC's charter includes a number of tasks, such as (1) identifying gaps in joint military capabilities, (2) reviewing and validating proposed capabilities to fill an identified gap, and (3) establishing and approving joint performance requirements.[13] The Vice Chairman of the Joint Chiefs of Staff is the chair of the JROC, and other members of the council include a general or admiral from each of the military services. The JROC chairman may also direct the inclusion of combatant commanders. The Chairman of the Joint Chiefs of Staff selects the officers for membership based on recommendations from the secretaries of the military departments.

Multiple subordinate boards support the JROC in its duty to assess joint military capabilities. The Joint Capabilities Board (JCB) advises the JROC on issues within and across DOD's capability requirements portfolios, including battlespace awareness, force application, and logistics, and six Functional Capabilities Boards manage those portfolios. See figure 1 for the relationships between these boards.

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[12]The JROC is established in 10 U.S.C. § 181 (Joint Requirements Oversight Council).

[13]Chairman of the Joint Chiefs of Staff Instruction, *Charter of the Joint Requirements Oversight Council (JROC) and Implementation of the Joint Capabilities Integration and Development System (JCIDS)* CJCSI 5123.01H (Washington, D.C.: Aug. 31, 2018).

Figure 1: Joint Requirements Oversight Council (JROC) Organizational Structure
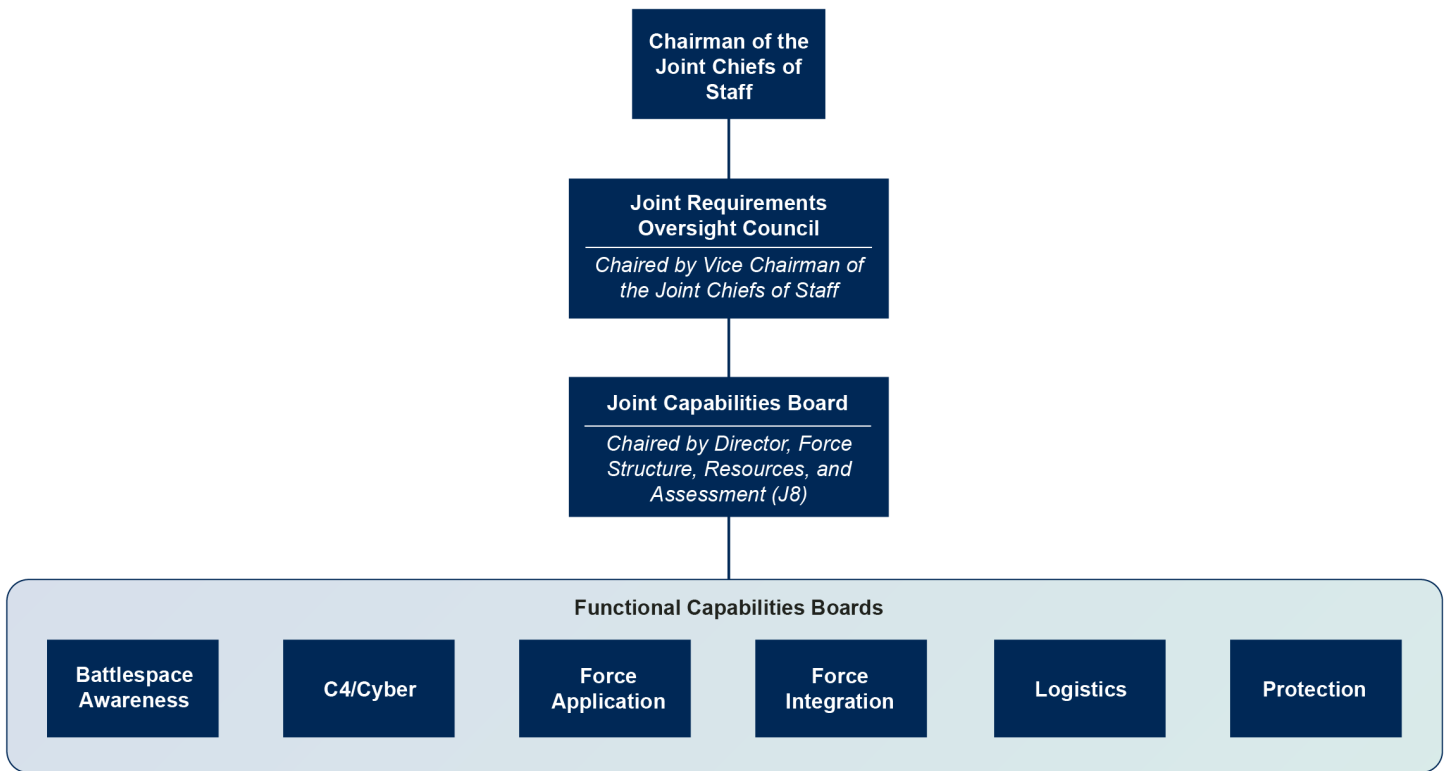
C4 = Command, Control, Communications, and Computers

Source: GAO analysis of Joint Capabilities Integration and Development System policy. | GAO-22-104432

The JROC uses the JCIDS process to execute its duties in assessing joint military capabilities.[14] Through the JCIDS process, a military department, defense agency, or other DOD organization will identify gaps in military capabilities and the potential solutions to address these gaps. They formally identify the gaps and solutions in two key documents:

- **Initial Capabilities Document (ICD).** An ICD identifies a specific gap or set of gaps that exist in joint warfighting capabilities and proposes various potential solutions to address those gaps. According to JCIDS

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[14]JCIDS has a deliberate process, as well as an urgent and emergent process. The deliberate process is used to address capability needs with an operational timeline greater than 2 years in the future. The urgent and emergent process is used to address capability gaps in ongoing or anticipated contingency operations, with an intent to field initial capabilities within 2 years. For the purposes of this report, we describe the JCIDS deliberate process and all references to JCIDS throughout this report are specific to the deliberate process.

guidance, an ICD should include (1) a description of the capability gap as a comparison between current capabilities (or those in development) and the capability requirement; (2) how the capability gap affects military operations; and (3) potential paths forward for how to close or mitigate the gaps, along with an expected time frame for the capability to be available.

- **Capability Development Document (CDD).** A CDD identifies the development proposal of a specific materiel solution—such as a new or upgraded weapon system—and the capability requirements against which the usefulness of that system will be measured. According to JCIDS guidance, a CDD should include (1) identifications of the gaps that this capability requirement will either close or mitigate; (2) the quantifiable and testable measures of performance for the system to be developed; and (3) the types and quantities of assets, along with associated target dates, needed for achieving an operational capability.

Military departments and other defense agencies responsible for drafting ICDs and CDDs, referred to in JCIDS guidance as sponsors, initiate the JCIDS review and validation process by uploading documents to the Joint Staff's KM/DS system. JCIDS guidance states that KM/DS is the authoritative system for processing, coordinating, tasking, and archiving capability documents and related data, including key dates. The system is intended to allow JCIDS officials to move capability documents step-by-step through the JCIDS process by assigning actions to predetermined users, and to collect, generate, and publish metrics for visibility and potential process improvement.

The Joint Staff Deputy Director for Requirements and Capability Development serves as the Joint Staff Gatekeeper and manages the JCIDS process on behalf of the JROC. The Joint Staff Gatekeeper is responsible for (1) serving as the single point of entry for submission of all capability documents, (2) ensuring that all capability documents are compliant with required format and content, (3) identifying the appropriate lead Functional Capabilities Board and validation authority, (4) managing the KM/DS system, and (5) generating metrics related to JCIDS, among other duties.
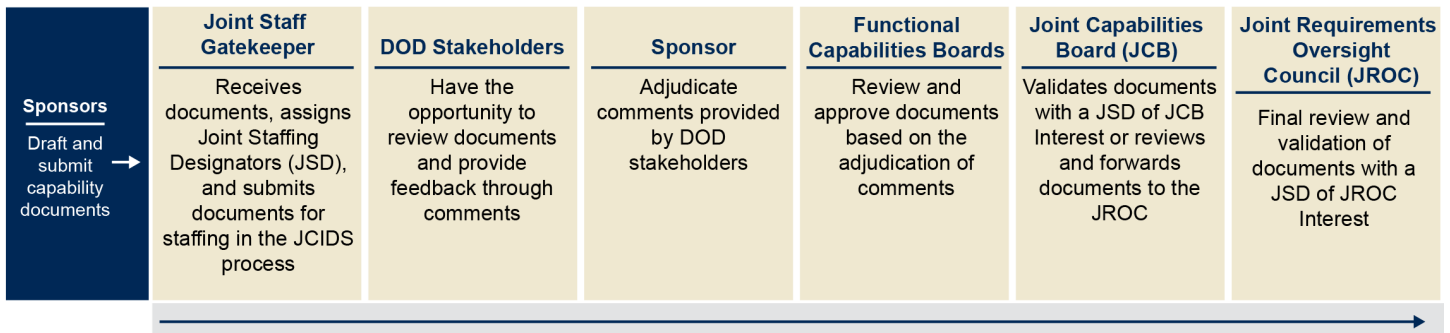
The Joint Staff Gatekeeper initiates the JCIDS review and validation process after receiving a capability document from the sponsor through the KM/DS system. The gatekeeper does this by assigning a Joint Staffing Designator (JSD) to the document upon receipt. A document's JSD will determine its ultimate staffing path, timeline, and final validation

authority. The Joint Staff Gatekeeper will assign a document one of three JSDs:

- **JROC Interest.** Final validation authority is the JROC.

- **JCB Interest.** Final validation authority is the JCB.

- **Joint Information.** Final validation authority is the sponsoring organization. According to JCIDS guidance, these documents exit the JCIDS process and return to the sponsoring organization after receiving the designation as Joint Information. Joint Information documents are used to provide the Joint Staff with awareness into the sponsor capability development efforts.

After assigning the JSD, the JCIDS process involves multiple stages of document review, comment, and revision, and JCIDS guidance suggests notional timelines for each stage. Before submission to the Joint Staff Gatekeeper, sponsors draft and develop the capability documents. Figure 2 depicts the JCIDS review process in greater detail.

Figure 2: Joint Capabilities Integration and Development System (JCIDS) Document Review and Validation Process

Sponsors	Joint Staff Gatekeeper	DOD Stakeholders	Sponsor	Functional Capabilities Boards	Joint Capabilities Board (JCB)	Joint Requirements Oversight Council (JROC)
Draft and submit capability documents	Receives documents, assigns Joint Staffing Designators (JSD), and submits documents for staffing in the JCIDS process	Have the opportunity to review documents and provide feedback through comments	Adjudicate comments provided by DOD stakeholders	Review and approve documents based on the adjudication of comments	Validates documents with a JSD of JCB Interest or reviews and forwards documents to the JROC	Final review and validation of documents with a JSD of JROC Interest

Source: GAO analysis of the Manual for the Operation of the Joint Capabilities Integration and Development System, Aug. 31, 2018. | GAO-22-104432

Note: JCB Interest documents exit the process after receiving JCB validation.

One feature of the JCIDS process is the opportunity for sponsors to receive feedback on their capability documents from stakeholders across DOD. JCIDS guidance defines stakeholders as military organizations with a direct interest and clear equity in the capability document. Examples of organizations that might serve as stakeholders for a given capability document include offices such as Cost Assessment and Program Evaluation, the Director of Operational Test and Evaluation, and the Office of the Under Secretary of Defense for Acquisition and Sustainment. According to JCIDS guidance, these stakeholders submit comments that

they designate as critical, substantive, or administrative.[15] Before the document progresses through the JCIDS process, the sponsors strive to adjudicate the critical and substantive comments to the stakeholders' satisfaction. The sponsors can accomplish this by either revising the document or meeting with the stakeholder to answer questions and discuss the issues at hand.

DOD Has Implemented Mandated Revisions through Updated JCIDS Guidance

In response to the National Defense Authorization Act for Fiscal Year 2017, the Chairman of the Joint Chiefs of Staff implemented revisions to the JCIDS process that reduced the role of the JROC in reviewing CDDs while increasing the responsibility of the military departments for their respective capability requirements.[16] Specifically, the revised JCIDS guidance that took effect in November 2018 eliminated the need for the JROC to review the CDDs for all of DOD's high-dollar value proposed weapon systems, known as major defense acquisition programs. Instead, the JROC's focus would be limited to those proposed weapon systems that have JPRs. According to the updated guidance, JPRs are performance requirements that will have a significant effect on joint warfighting, ensure interoperability, or fulfill a capability gap of more than one armed service. For example, a requirement from one military department to develop and deliver a system that needs to share information on DOD joint networks could be designated as a JPR. The inclusion of JPRs was a key revision under the new JCIDS guidance that shifted the balance of performance requirement review and validation responsibilities from the JROC to the chiefs of staff of the military departments, which we refer to as service chiefs.

Prior to the 2018 revisions, the review and approval authority for capability requirements within the JCIDS process was determined based on the estimated cost of the proposed weapon system. When a sponsor submitted a capability document into JCIDS, the Joint Staff Gatekeeper would then assign a JSD based on the potential program's acquisition

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[15]According to JCIDS guidance, critical comments recommend significant changes to better align the document with the needs of the joint force or applicable policy and guidance, or to correct significant factual inaccuracies. Substantive comments recommend minor or moderate changes to align the document with the needs of the joint force or applicable policy and guidance, or to correct or clarify minor factual inaccuracies. Administrative comments make recommendations to fix formatting, grammatical, or typographical errors, or to change writing style to make the document easier to read and understand.

[16]Pub. L. No. 114-328, § 925.

category. Under the former JCIDS review process, the JSDs were designated as JROC Interest for Acquisition Category I and JCB Interest for Acquisition Category II.[17] The service chiefs would then be responsible for reviewing and approving the capability requirements for proposed weapon systems that did not fall into these categories. We reported in June 2015 that service chiefs expressed an inability to influence trade-offs between requirements and resources because those trade-offs were occurring after requirements documents were validated and delivered to the acquisition community. Service chiefs were concerned that, after weapon system requirements are handed to the acquisition process, requirements are changed or added by the acquisition community, increasing the capabilities and cost of the system.[18]

The revised JCIDS process no longer ties the review and approval authority for a CDD to the program's estimated cost. Instead, it focuses on the nature of the capabilities themselves to determine whether the review and approval authority is the JROC, JCB, or military department. A military department still identifies its own requirements, develops capability documents, and submits the documents to the Joint Staff Gatekeeper for entry into the JCIDS process. A new part of the process, however, is designating within the CDD whether the proposed capability includes a JPR, in which case the requirements are subject to Joint-level review rather than approval by the service chief.

In developing the CDD, the sponsor recommends whether the capability requirements included in the document should also be designated as JPRs. After receiving the document from the sponsor, the Joint Staff Gatekeeper reviews the capability requirements and coordinates with the appropriate Functional Capabilities Board on whether those requirements should be considered JPRs. As part of this new process, the Joint Staff Gatekeeper has the ability to go against the sponsor's JPR recommendation contained in the CDD. In other words, the Joint Staff Gatekeeper may determine whether capability requirements are JPRs
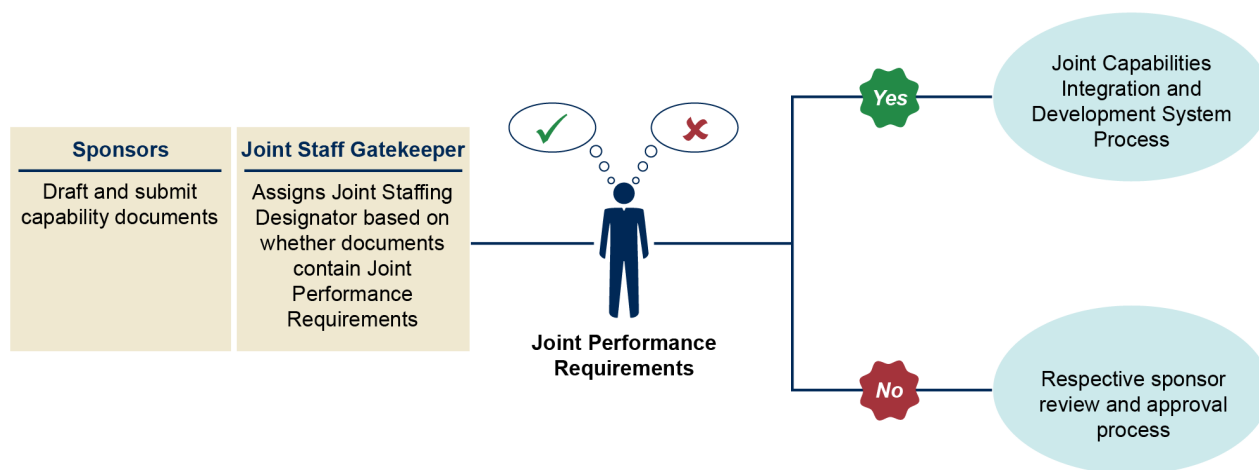
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[17]Acquisition Category (ACAT) I programs have a dollar value for all increments estimated to require an eventual total expenditure for Research, Development, Test, and Evaluation (RDT&E) of more than $525 million, or for procurement of more than $3.07 billion, in fiscal year 2020 constant dollars or have been designated as a special interest by the milestone decision authority. ACAT II programs are programs that do not meet the criteria for ACAT I and require an eventual total expenditure for RDT&E of more than $200 million or, for procurement, of more than $920 million in fiscal year 2020 constant dollars.

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

that the sponsor did not recommend, or whether capability requirements are not JPRs as recommended. However, JCIDS guidance also states that the JROC will seek and strongly consider the views of the service chiefs, as customers of the acquisition process, on matters pertaining to capabilities and JPRs.

Under the revised process, if the document contains JPRs, then the validation authority is at the Joint level and the Joint Staff Gatekeeper assigns a JSD of either JROC or JCB Interest based on professional judgment. Documents that do not contain JPRs are assigned a JSD of Joint Information and do not need to be reviewed through the JCIDS process. According to the revised JCIDS guidance, Joint Information documents return to the respective military departments and the service chiefs have the independent validation authority to approve those capability requirements. Figure 3 below shows how a capability document is initially routed in the revised JCIDS process based upon the Joint Staff Gatekeeper's JSD designation.

Figure 3: Initial Joint Capabilities Integration and Development System Document Routing Based on Joint Performance Requirements

Sponsors	Joint Staff Gatekeeper
Draft and submit capability documents	Assigns Joint Staffing Designator based on whether documents contain Joint Performance Requirements

Joint Performance Requirements

Yes → Joint Capabilities Integration and Development System Process

No → Respective sponsor review and approval process

Source: GAO analysis of Joint Capabilities Integration and Development System policy. | GAO-22-104432

Joint Staff Lacks Reliable Data on How Many Programs Went through the Process or How Long It Took

As noted earlier, the Joint Staff began implementation of its revised JCIDS process in November 2018, but our analysis determined that the data on the total number of programs reviewed by the JROC under this process were unreliable. During the course of our review, we requested that the Joint Staff provide us with the population of potential programs approved under the revised JCIDS process, and they supplied us with data from the KM/DS information system. After analyzing that data, we identified three programs that, based on the dates the programs initiated the JCIDS process, would have come under the process that was in place prior to the revisions. JCIDS officials confirmed our observation.

In addition, the data provided by the Joint Staff indicated that the Navy did not have any of its sponsored programs validated in the period between 2018 (when the JCIDS revision went into effect) and October 2020—the date the Joint Staff provided the data. However, Navy officials informed us that they had three programs approved during this period. The Joint Staff data did not list validation dates for two of these programs and did not include the third program at all. These issues initially raised questions about the reliability of the KM/DS data, and Joint Staff officials confirmed problems with the KM/DS system.

Further, following the initial KM/DS data issues that we identified, we interviewed military department officials from our selected sample of programs that went through the JCIDS process. Officials from one Army program told us that they had withdrawn the program entirely from the JCIDS review process; however, the Joint Staff data included this program and also showed a JCIDS validation date. Army officials stated that they withdrew the program from the JCIDS process in order to pursue a middle-tier acquisition approach.[19] They further noted that they were unsure why the KM/DS system would show that their document was validated after being withdrawn from the JCIDS process. While JCIDS guidance allows for the withdrawal of capability documents at any point by notifying the Joint Staff Gatekeeper, the guidance for using the KM/DS system does not discuss how to account for withdrawn documents. We discovered the withdrawal of this program from the JCIDS process after discussing it with program officials. Since a program can be removed from the JCIDS process and yet be shown in the KM/DS system as
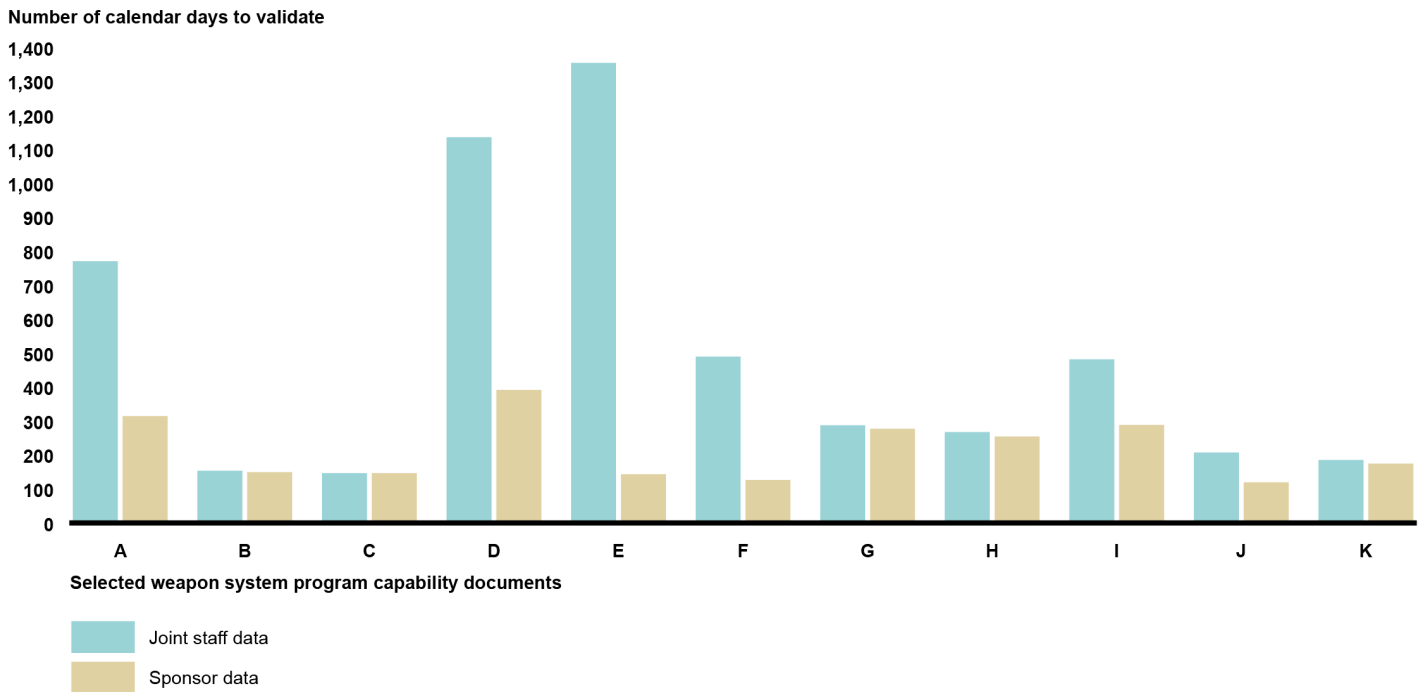
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[19]Middle-tier acquisitions are generally exempt from DOD's traditional acquisition and requirements development policies. The middle-tier acquisition pathway is intended to fill a gap in the defense acquisition system for those capabilities that have a level of maturity to allow them to be rapidly prototyped within an acquisition program or fielded within 5 years of middle-tier acquisition program start.

having completed validation, this increases the risk that KM/DS system data cannot be used to reliably determine the total number of programs that have been through the JCIDS process.

In addition to the reliability issues for the total number of programs going through JCIDS, we determined that the Joint Staff timeline data are unreliable for the purpose of establishing how long the JCIDS process takes to review and validate capability documents for the CDDs we selected. We identified timelines for our sample documents based on the dates of review provided by the Joint Staff from the KM/DS system data and the data provided by program sponsors. Our analysis showed that these timelines did not align between the two corresponding sets of data. For the documents in our sample, while several sets of data were close, one sponsor's data matched the corresponding timeline information from the KM/DS data and others were substantially different. The largest difference was the KM/DS data for one program indicated that the review timeline took more than nine times longer than the timeline information provided by the sponsor. Officials from both the sponsor and the Joint Staff stated that this discrepancy could be attributed to issues with the KM/DS system. Joint Staff officials noted that, when an individual accesses a document in the system that has already been validated, the system will then make the date of that most recent access appear as the validation date. Joint Staff officials further noted that the only way to verify the actual document validation dates would be to manually retrieve each individual document file, a process which would be both time consuming and subject to human error.

Figure 4 shows the discrepancies in the documentation validation times between the Joint Staff data from the KM/DS system and sponsor data provided from different information systems.

Figure 4: Validation Timeline Discrepancies between Joint Staff and Sponsor Data for Selected Capability Development Documents

Number of calendar days to validate

Selected weapon system program capability documents

- Joint staff data
- Sponsor data

Source: GAO analysis of Department of Defense data. | GAO-22-104432

Note: One Army program from our selected sample is not included in the figure because it was withdrawn from the Joint Capabilities Integration and Development System process.

The Army program cited above for its removal from the JCIDS process shows further issues with the KM/DS data. Our analysis of the KM/DS data showed that the JCIDS process took approximately 800 calendar days to validate the document. However, because this program was removed from the JCIDS process, the document should not have any review timeline or validation data in the system.

Joint Staff officials attributed the issues with KM/DS to a change in its operating system. The officials noted that the change limited the system's functionality and corrupted document review timeline data. The data corruption has also prevented the Joint Staff from being able to generate reliable metrics related to the JCIDS process. According to Joint Staff officials, the KM/DS system has functionality for processing and archiving capability documents, and for providing status updates related to the JCIDS review process. However, it does not track the number of documents reviewed under the JCIDS process or how long those

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documents took to be reviewed. Further, the current KM/DS system functions on a case-by-case basis and does not provide an overall view across the universe of reviewed programs.

According to the revised JCIDS guidance, the KM/DS system serves as the authoritative information system for the JCIDS process. The system is expected to produce metrics that the JROC can use for JCIDS process visibility and potential process improvement, including:

- **Timeliness.** Determine the length of time for each step in the JCIDS process and the total length of time for document validation.

- **Performance.** Assess the quality of both the submitted documents and the results of the steps in the JCIDS process.

Federal standards for internal control state that management should (1) design its information system to achieve objectives and respond to risks, (2) use quality information to achieve its objectives, and (3) internally and externally communicate the necessary quality information to achieve its objectives.[20] In this case, we found that the KM/DS system does not provide the JROC with reliable data on the total number of capability documents that have gone through the JCIDS process or reliable data on how long it took those documents to reach validation. In addition, the KM/DS system does not provide the JROC with the timeliness and performance metrics it needs to determine how the JCIDS process is functioning and whether that process needs improvement.

The data reliability concerns with KM/DS indicate that the JROC is unable to use the system, as intended, to make decisions regarding the performance of the JCIDS review process. Incorrect data provides a faulty foundation for making process improvements. In addition, without timeliness or performance metrics, the Joint Staff and Congress lack information needed to facilitate management oversight responsibilities, determine whether the revised JCIDS process is providing capabilities more quickly, or evaluate potential additional process revisions. Joint Staff officials acknowledged the problems with the KM/DS system and noted that they have had limited resources to address the issues. In addition, they stated that they lack a defined plan or time frame for fixing the KM/DS system. A detailed plan will better position the Joint Staff to

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[20]GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: Sept. 2014).

address data reliability issues and obtain pertinent information needed to assess whether it is effectively achieving stated JCIDS objectives.

Joint Staff Lacks a Meaningful Measure to Assess the Requirements Process

JCIDS guidance does not establish a meaningful measure—also known as an internal control baseline—to assess the current progress and monitor the timeliness of the requirements process. While the Joint Staff's JCIDS guidance provides a notional length of time that documents should take to go through the JCIDS review process, we found no analytical basis for this time frame. The guidance states that the review and validation of properly prepared requirements documents should take no more than 103 calendar days (see fig. 5). Our analysis and document sponsors from across DOD confirmed that none of the programs in our review completed the process within this time. JCIDS guidance also states that timely review and validation is a goal, but not at the expense of quality decision-making. The guidance does not include a process for monitoring and analyzing programs that exceed the notional time frame.

Figure 5: Joint Capabilities Integration and Development System (JCIDS) Notional Time Frames for Document Review

Sponsors	4 days (ICD) 10 days (CDD)	21 days	30 days	14 days	14 days	14 days
Draft and submit capability documents	**Joint Staff Gatekeeper** Receives documents, assigns Joint Staffing Designators (JSD), and submits documents for staffing in the JCIDS process	**DOD Stakeholders** Have the opportunity to review documents and provide feedback through comments	**Sponsor** Adjudicate comments provided by DOD stakeholders	**Functional Capabilities Boards** Review and approve documents based on the adjudication of comments	**Joint Capabilities Board (JCB)** Validates documents with a JSD of JCB Interest or reviews and forwards documents to the JROC	**Joint Requirements Oversight Council (JROC)** Final review and validation of documents with a JSD of JROC Interest
	103 calendar days total for the JCIDS review process					

ICD = Initial Capabilities Document
CDD = Capability Development Document

Source: GAO analysis of the Manual for the Operation of the Joint Capabilities Integration and Development System, Aug. 31, 2018. | GAO-22-104432

Note: The 103 calendar days is the total JCIDS review process notional time for a CDD. For an ICD, the JCIDS review process notional time is 97 calendar days.

Joint Staff officials confirmed that no one uses the time frame to assess the overall timeliness of the process because they view it as a frame of a reference rather than an internal control baseline. We found that prior to providing the 103-day guidance, the Joint Staff did not conduct any performance measurements with actual timeline data. One such measurement could be the average length of time to review documents

based on historical data; however, the Joint Staff's ability to perform these measurements is hindered by the lack of reliable data we outlined above.

Further, a variety of issues could affect the length of time that documents need to go through the JCIDS process, and these issues are not fully accounted for in the notional time frame provided in JCIDS guidance. One issue that could affect a document's timeline is the comment adjudication period. Joint Staff officials stated that, based on their experience, the comment adjudication period takes the greatest length of time during a JCIDS review. While JCIDS guidance outlines 30 calendar days for the completion of comment adjudication, document sponsor officials confirmed that most of the programs in our sample took longer than 30 days to adjudicate their comments.

Although adjudicating the comments may take longer than described in guidance, sponsor officials that we spoke with stated that they did not view the adjudication of stakeholder comments as a hindrance to the review process. The officials also stated that stakeholder input helped improve the overall quality of the document. We have previously reported that officials from the program office level through Office of the Secretary of Defense organizations considered the information required in capability documents as "highly valued."[21] In addition, we have also found that there is high value in having clearly defined and well-understood requirements in order to achieve program cost, schedule, and performance goals for a weapon system acquisition program.[22]

Military department reviews are another example of a variable that could affect an internal control baseline for JCIDS review timelines. For example, both the Air Force and Navy have department-level reviews that occur immediately after the respective programs adjudicate JCIDS stakeholder comments. The Air Force and Navy reviews take place before they resubmit documents back to the Joint Staff for the final stages of Joint-level review. Because the timing of these military department-level reviews occurs after a document's JCIDS timeline has already started, the document's timeline has the potential to increase while going through a function that is not part of the formal JCIDS process. Conversely, the Army's department-level document review occurs before the document is officially submitted into the JCIDS process, which would not add to a document's JCIDS timeline. With document sponsors

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[21]GAO-15-192.

[22]GAO-15-469.

managing the comment adjudication period, expansions of a document's timeline during this period could be attributed to the actions of the sponsor rather than the JCIDS process itself.

Additional issues that could affect a document's JCIDS review timeline include the initial quality of the document and the degree of management's prioritization of the potential weapon system program. Program sponsor officials told us that having a well-prepared document upon entry into the JCIDS process could reduce the number of comments that require adjudication, saving time in the process. Joint Staff officials are also expected to be able to track the percentage of documents initially accepted or rejected by the Joint Staff Gatekeeper as a measure of initial quality of the document submitted by the sponsor. Officials from one Army program told us that the Joint Staff returned their program's document after initial review due to the document missing a section of information. While the JCIDS review process properly served its function by discovering the missing information, the need for the Army officials to revise the document increased its timeline by approximately 30 calendar days. As noted above, however, the Joint Staff is unable to produce reliable metric data, including for the document's initial quality, due to the problems with the KM/DS system.

Officials from one Air Force program told us that debates by Air Force organizational management officials regarding the program's priority for funding delayed its JCIDS validation and added over 6 months—for a step that the notional timeline states should take 2 weeks—to the program's timeline. This is an example of a variable that can give the appearance of the JCIDS review process taking a lengthy amount of time, but the delay was not actually a function of the JCIDS process. These examples show that there are variables outside of the JCIDS review process that could be considered in an internal control baseline.

According to federal standards for internal control, the baseline is the current state of the system compared against management's design or expectation of that system.[23] Management can use that comparison to either improve the design of the system or its operational effectiveness. Internal control standards also state that organizations should establish and operate monitoring activities, such as supervisory and management reviews as part of the normal course of operations, for their processes and evaluate the results. In this case, without a baseline that is informed

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[23]GAO-14-704G.

by reliable data, along with various issues and considerations for the length of time to review documents in the JCIDS process, the Joint Staff lacks a data-driven measurement to make a determination for what is a "timely" review of a capability document. The Joint Staff also lacks an identification of variables that could affect how long it takes to conduct the JCIDS review process. The JROC then cannot monitor the operational effectiveness of the JCIDS review process, address variables that cause the process to take longer, or reevaluate how it has designed the timeline of the JCIDS review process in its guidance. When established, the JROC could use the baseline as criteria in evaluating the JCIDS process and making potential process improvements. Without a determination of timeliness, the Joint Staff and Congress cannot evaluate if the revisions made to the JCIDS process are having the intended effect of improving the efficiency and effectiveness of DOD weapon system acquisitions.

Conclusions

Effectively and efficiently identifying and documenting military capability requirements are critical to establishing achievable cost, schedule, and performance goals for developing and fielding weapon systems. DOD's response to the mandated 2017 revisions were aimed, in part, at making the process more efficient. However, without reliable timeliness and performance data, DOD cannot determine the success of those reforms. The data reliability problems with the JCIDS information system—currently the KM/DS system—prevent any type of assessment of the revised JCIDS process or the changes in review and approval responsibilities between the JROC and the military departments. By developing a plan to address the data reliability problems with the JCIDS information system, the Joint Staff will be better positioned to assess the effectiveness of revisions to the JCIDS process. The Joint Staff also lacks an informed measure of the baseline length of time to review documents in its JCIDS process. Without reliable data and knowledge of the different issues that can affect the length of time for document reviews to inform a baseline, DOD cannot determine whether it is achieving the stated objectives of process improvement or how well the process is working. Establishing a baseline that is informed by reliable data and accounts for these issues, as well as a process for comparing actual results against that baseline, could help the Joint Staff revise its guidance and expectations.

Recommendations for Executive Action

We are making the following two recommendations to the Secretary of Defense:

The Secretary of Defense should ensure that the Vice Chairman of the Joint Chiefs of Staff develop a plan for resolving the deficiencies of the

information system that facilitates the operation of the Joint Capabilities Integration and Development System (JCIDS), to include updating guidance for (a) assessing the system's effectiveness in providing reliable system data, (b) accounting for programs that have entered and exited the process, and (c) collecting and analyzing JCIDS' performance and timeliness metrics. (Recommendation 1)

After resolving the information system data reliability issues for the Joint Capabilities Integration and Development System (JCIDS), the Secretary of Defense should ensure that the Vice Chairman of the Joint Chiefs of Staff establish a baseline based on reliable data and relevant issues for determining a length time to validate capability documents and a process for using that baseline to assess JCIDS' efficiency and effectiveness in meeting management objectives and making improvements. (Recommendation 2)

Agency Comments

We provided a draft of this report to DOD for review and comment. In its comments, reproduced in appendix II, DOD concurred with our two recommendations.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, and other interested parties. In addition, the report is available at no charge on the GAO website at https://www.gao.gov.

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

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

List of Committees

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

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

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

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

Appendix I: Selected Sample of Capability Development Documents That Went through the Joint Capabilities Integration and Development System

The revisions to the Joint Capabilities Integration and Development System (JCIDS) review process became effective in November 2018. To provide illustrative examples of how JCIDS functioned both before and after the implementation of the November 2018 revisions, we selected a nongeneralizable sample of 12 capability development documents outlining requirements for various types of programs from the Departments of the Air Force, Army, and Navy. The sample included documents that entered the JCIDS process during the 2 years before and the 2 years after the Joint Requirements Oversight Council implemented the JCIDS reforms, and were reviewed and validated either at the Joint Staff or the military department level. Half of the documents we selected entered the JCIDS process prior to the November 2018 revisions, and the other half entered after the revisions. In total, we reviewed five Air Force, five Army, and two Navy programs. Table 1 identifies the specific program documents we selected.

Table 1: Selected Programs That Entered the Joint Capabilities Integration and Development System (JCIDS) Process Before and After 2018 Revisions

Date document submitted into the JCIDS process	Program name	Military department	Type of system
May 2016	MK 54 MOD 1 Lightweight Torpedo	Navy	Anti-submarine warfare torpedo
August 2016	Protected Tactical Enterprise Service	Air Force	Joint communications system
December 2016	Squad-Multipurpose Equipment Transport	Army	Robotic ground vehicle
February 2017	Carrier Based Unmanned Air System	Navy	Uncrewed aircraft
June 2017	Improved Turbine Engine Program	Army	Turbine engines
September 2017	Mission Planning Systems	Air Force	Automated mission planning support
November 2018 JCIDS revisions			
January 2019	Persistent Cyber Training Environment	Army	Cyberspace operations training platform
February 2019	Global Positioning System IIIF Operational Control Segment	Air Force	Ground-based satellite support stations
February 2019	Ground Based Strategic Deterrent	Air Force	Intercontinental ballistic missile
May 2019	Next Generation Biometric Collection Capability	Army	Biometric data identification system
October 2019	30mm Multi-Functional Munition	Army	Medium caliber ammunition
November 2019	B-52H Commercial Engine Replacement Program	Air Force	Military-configured commercial engine

Source: GAO analysis of Department of Defense data. | GAO-22-104432

Appendix II: Comments from the Department of Defense

THE JOINT STAFF

WASHINGTON, DC

6 October 2021

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

Dear Mr. Sawyer:

      On behalf of the Department of Defense (DoD), the Joint Staff provides the enclosed response to the Government Accountability Office (GAO) Draft Report, GAO-22-104432, "WEAPON SYSTEM REQUIREMENTS: Joint Staff Lacks Reliable Data on the Effectiveness of Its Revised Joint Approval Process," dated September 9, 2021 (GAO Code 104432). The DoD is providing official written comments for inclusion in the report.

      The Joint Staff point of contact is Mr. Randolph Wood; J-8; 703-614-9628, randolph.l.wood6.civ@mail.mil.

Sincerely,

GEORGE M. WIKOFF
Rear Admiral, U.S. Navy
Vice Director, Joint Staff

Enclosure:
As stated

UNCLASSIFIED

**GAO DRAFT REPORT DATED SEPTEMBER 9, 2021
GAO-22-104432 (GAO CODE 104432)**

**"WEAPON SYSTEM REQUIREMENTS: JOINT STAFF LACKS RELIABLE DATA
ON THE EFFECTIVENESS OF ITS REVISED JOINT APPROVAL PROCESS"**

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

RECOMMENDATION 1: The GAO recommends that the Secretary of Defense should ensure that the Vice Chairman of the Joint Chiefs of Staff develop a plan for resolving the Joint Capabilities Integration and Development System (JCIDS) information system operational deficiencies, to include updating guidance for (a) assessing the systems effectiveness in providing reliable systems data (b) accounting for programs that have entered and exited the process and (c) collecting and analyzing JCIDS' performance and timeliness metrics. (Recommendation 1)

DoD RESPONSE: Concur.

With recent information technology advances and a renewed focus on key data attributes and the applications that make use of that data, it is time for the Joint Staff to review the Knowledge Management/Decision Support (KM/DS) information system and the data supporting the Joint requirements process. The Joint Staff will use insights provided by this GAO report to engage key process stakeholders, to include Service and Combatant Command capability requirements sponsors, to review the key requirements that KM/DS is not currently meeting. The plan will be developed within 6 months, and after plan approval, necessary improvements will be implemented to close/mitigate key gaps in application performance and the data it draws upon. Estimates on the implementation timeline, and length of runtime of the improved system to generate more accurate metrics, will be provided upon overall plan development.

RECOMMENDATION 2: After resolving data reliability issues with the JCIDS information system, the Secretary of Defense should ensure that the Vice Chairman of the Joint Chiefs of Staff establish a baseline based on reliable data and relevant issues for determining a length of time to validate capability documents, and process for using that baseline to access JCIDS efficiency and effectiveness in meeting management objectives and making improvements. (Recommendation 2)

DoD RESPONSE: Concur.

The current baseline time requirements have generally been in place for over a decade. This baseline was intended to provide adequate time for stakeholder review, comment, and adjudication of issues during the staffing of proposed capability requirements documents without unduly lengthening the appropriate validation process. With the implementation of a more reliable supporting information system (from actions related to Recommendation 1), the current baseline will be adjusted as appropriate to provide more accurate and meaningful metrics and meet Joint Requirements Oversight Council management objectives to continually improve the Joint requirements process.

UNCLASSIFIED

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact	John D. Sawyer, (202) 512-4841 or SawyerJ@gao.gov
Staff Acknowledgments	In addition to the contact above, Travis J. Masters, Assistant Director; Stephen V. Marchesani, Analyst-in-Charge; Amos Mwesigwa; and Rachel A. Steiner-Dillon made key contributions to this report. Stephanie Gustafson; Gina Hoover; Christine L. Pecora; Cary Russell; and Roxanna Sun also made substantive contributions.