October 2020

# ARMY MODERNIZATION

Army Should Improve Use of Alternative Agreements and Approaches by Enhancing Oversight and Communication of Lessons Learned

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Why GAO Did This Study

The Army annually invests billions of dollars in science and technology projects to support weapon systems modernization. These projects often involve the use of alternative agreements outside the Federal Acquisition Regulation. The Army also uses alternative approaches to reduce barriers to partnerships with industry and academia. In doing so, the Army has lessons learned available to it about, for example, the type of alternative agreement to use or how to better execute an alternative approach.

GAO was asked to review the Army's alternative agreements and approaches for modernization. This report examines the Army's use, oversight efforts, and lessons learned practices for alternative agreements and approaches.

GAO reviewed information about the Army's use and oversight of alternative agreements and approaches; compared applicable Army portfolio management and lessons learned activities to GAO's leading practices; and interviewed Army officials.

What GAO Recommends

GAO is making six recommendations to the Army, including that Army Futures Command regularly analyzes information on alternative agreement use to inform modernization decisions and that Army organizations demonstrate consistent, coordinated practices that support sharing of lessons learned information on alternative agreements and approaches. The Army concurred with all six recommendations.

View GAO-21-8. For more information, contact Jon Ludwigson at (202) 512-4841 or LudwigsonJ@gao.gov.

What GAO Found

In its effort to modernize weapon systems capabilities, the Army increasingly uses alternative agreements instead of Federal Acquisition Regulation-based contracts for research and development and has expanded the use of alternative approaches that engage industry and academia. The Army's use of these agreements and approaches provides flexibilities and reduces barriers to creating new partnerships. One type of alternative agreement—other transactions for prototype projects, which help evaluate the feasibility or utility of a technology—has driven the recent expansion in the overall use of alternative agreements to support Army modernization (see figure).

Army Alternative Agreement Obligations, Fiscal Years 2017-2019
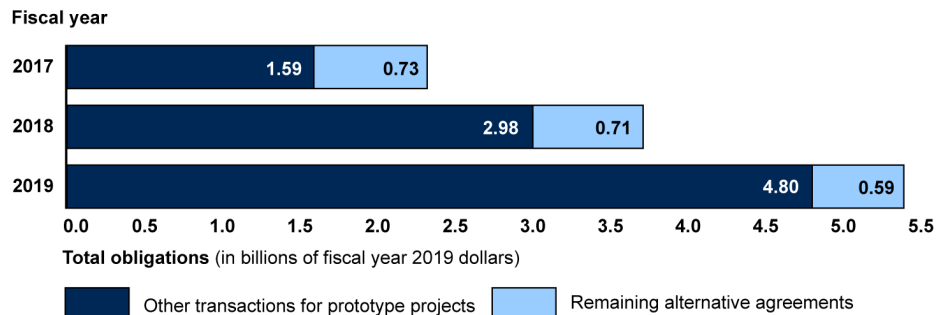
Source: GAO analysis of Army data. | GAO-21-8

Army organizations use established processes to oversee alternative approaches and agreements. For alternative approaches, Army Futures Command—the Army's lead for requirements and technology development—demonstrates an awareness of how these activities support modernization through the command's role as senior leadership or as an active participant. For alternative agreements, Army Futures Command has not regularly analyzed the use of alternative agreements to gain insight on the distribution and trends in use. Such analysis could provide the command and other Army stakeholders in contracting and acquisition with improved information to help manage risks in decision-making for development and acquisition in support of modernization.

GAO found that Army organizations lack consistent, coordinated practices to identify and share lessons learned from entering into alternative agreements or executing alternative approaches. The use of consistent, coordinated lessons learned practices for alternative agreements can improve the processes leading up to an agreement by including more diverse perspectives and ensuring that lessons learned are not confined to a subset of organizations or officials involved in decision-making. In addition, improvements to the lessons learned practices used for the Army's alternative approaches would provide its personnel with increased access to what has worked well and what has not when interacting with industry and academia. Improved sharing of these lessons learned can help the Army more effectively engage with new partners in support of its modernization goals.

United States Government Accountability Office

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GAO U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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

October 1, 2020

The Honorable Donald Norcross
Chairman
The Honorable Vicky Hartzler
Ranking Member
Subcommittee on Tactical Air and Land Forces
Committee on Armed Services
House of Representatives

The Honorable Michael Turner
House of Representatives

The Army invests billions of dollars each year to advance scientific discovery and innovation for weapon systems modernization and to maintain a technological edge over potential adversaries. The Army uses Federal Acquisition Regulation (FAR)-based contracts as well as non-FAR agreements—which we refer to as alternative agreements—to facilitate these investments. The FAR system establishes uniform policies and procedures for acquisition by all executive agencies, with a guiding principle of delivering the best value product or service to the government customer, while maintaining the public's trust and fulfilling public policy objectives. Different authorities govern the use of alternative agreements, which include grants, cooperative agreements, technology investment agreements, cooperative research and development agreements (CRADA), partnership intermediary agreements, and other transactions.[1] The Army increasingly uses these types of agreements and the flexibilities they provide to support the department's modernization pursuits. In addition to alternative agreements, Army organizations use alternative approaches to engage with academia and industry and to reduce barriers to participation in Army research and development efforts.

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[1]The term "other transactions" generally refers to agreements entered into under statutory authority for transactions other than contracts, grants, or cooperative agreements. Federal statutes authorize the Department of Defense's use of other transactions for research projects, prototype projects, and follow-on production for prototype projects. For the purposes of this report, we refer to other transactions authorized under 10 U.S.C. § 2371 as "other transactions for research projects." We refer to other transactions authorized under 10 U.S.C. § 2371b for prototype projects as "other transactions for prototype projects." Follow-on production for prototype other transactions are outside the scope of this report's focus on research and development for modernization.

You asked us to review the Army's use of alternative agreements and approaches to help Congress understand how their use facilitates weapon systems modernization as well as the oversight processes and information sharing practices that support them. This report (1) describes what is known about the Army's use of alternative agreements and approaches to support Army modernization; (2) assesses the Army's oversight and decision-making related to alternative agreements and approaches; and (3) evaluates the extent to which the Army is using leading practices to collect and share lessons learned for alternative agreements and approaches.

To address what is known about the Army's use of alternative agreements and approaches, we analyzed data on agreements from two federal databases—Federal Procurement Data System-Next Generation and Financial Assistance Award Data Collection—and additional information provided by Army officials affiliated with the agreement types in the scope of our review. We assessed the reliability of these data and determined that the data were sufficiently reliable for reporting on the use of alternative agreements. We also conducted interviews with Army officials from Army Contracting Command (ACC) Headquarters and contracting centers, as well as from the Army Futures Command (AFC) and Army Combat Capabilities Development Command (CCDC) to obtain information about the use of alternative agreements. Additionally, we interviewed officials from the Army Applications Laboratory, Army Research Laboratory, and Army Rapid Capabilities and Critical Technologies Office to obtain information about alternative approaches.

To assess the Army's oversight and decision-making for alternative agreements and approaches, we reviewed statutes, regulations, policy, and guidance governing their use. We also interviewed officials from ACC, AFC, and the office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology to gain insight into applicable oversight and decision-making activities. Additionally, we assessed alternative agreement tracking and analysis activities performed by AFC

against criteria we previously established regarding portfolio management, as well as criteria from the Project Management Institute.[2]

To evaluate the extent to which the Army uses leading practices to collect and share lessons learned for alternative agreements and approaches, we assessed the Army's activities against five leading practices we and others have previously identified.[3] We completed this assessment using Army documentation and information obtained through interviews and other communication with Army officials. Additional details on our scope and methodology can be found in appendix I. A list of reports supporting our review can be found in the related GAO products section of this report.

We conducted this performance audit from August 2019 to October 2020 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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[2]GAO, *Weapon System Acquisitions: Opportunities Exist to Improve the Department of Defense's Portfolio Management,* GAO-15-466 (Washington, D.C.: Aug. 27, 2015); 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). Project Management Institute, Inc., *The Standard for Portfolio Management*, Third Edition (Newtown Square, PA: 2013).

[3]GAO, *DOD Utilities Privatization: Improved Data Collection and Lessons Learned Archive Could Help Reduce Time to Award Contracts*, GAO-20-104 (Washington, D.C.; Apr. 2, 2020); *Project Management: DOE and NNSA Should Improve Their Lessons-Learned Process for Capital Asset Projects*, GAO-19-25 (Washington, D.C.: Dec. 21, 2018); and *Federal Real Property Security: Interagency Security Committee Should Implement a Lessons-Learned Process*, GAO-12-901 (Washington, D.C.: Sept. 10, 2012). Center for Army Lessons Learned, *Establishing a Lessons Learned Program*: *Observations, Insights, and Lessons* (Fort Leavenworth, KS: June 2011).

Background

Alternative Agreements and Approaches

The government typically acquires necessary goods and services—which can include research and development—through FAR-based contracts.[4] This report focuses on the Army's use of alternative agreements, which are governed by separate non-FAR statutes and regulations, shown in table 1.

Table 1: Overview of Alternative Agreements Available to the Army and Not Governed by the Federal Acquisition Regulation

Agreement type	Characteristics	Associated statutes and regulations
Cooperative agreement	• An agreement with a purpose of transferring something of value (e.g., funding) to a recipient to carry out a public purpose of support or stimulation—such as research or technology development—rather than acquiring property or services for the Department of Defense's direct benefit or use. • Substantial involvement is expected between the Department of Defense and the recipient when carrying out the intended activity.	10 U.S.C. § 2358; 31 U.S.C. § 6305 32 C.F.R. pts. 21, 22
Cooperative research and development agreement	• A federal laboratory agreement with a non-federal entity (e.g., a company or academic institution) under which the laboratory provides personnel, services, facilities, or other resources (but not federal funds). • The non-federal entity provides funds, personnel, services, facilities, or other resources toward specified research or development efforts.	10 U.S.C. § 2371a; 15 U.S.C. § 3710a
Grant	• An agreement with a principal purpose of transferring a thing of value (e.g., funding) to a recipient to carry out a public purpose of support or stimulation—such as research or technology development—rather than acquiring property or services for the Department of Defense's direct benefit or use. • Substantial involvement is not expected between the Department of Defense and the recipient when carrying out the intended activity.	10 U.S.C. § 2358; 31 U.S.C. § 6304 32 C.F.R. pts. 21, 22
Other transaction (prototype)	• An agreement, other than a contract, cooperative agreement, or grant, for carrying out a prototype project that is directly relevant to enhancing the mission effectiveness of military personnel and enhancing or improving existing or new supporting platforms, systems, components, or materials.	10 U.S.C. § 2371b
Other transaction (research)	• An agreement, other than a contract, cooperative agreement, or grant, for carrying out basic, applied, or advanced research.	10 U.S.C. § 2371
Partnership intermediary agreement	• A federal laboratory agreement with a state government, local government, or non-profit intermediary to engage with academia or small business firms to increase the likelihood of success in cooperative or joint activities with the laboratory.	10 U.S.C. § 2368 15 U.S.C. § 3715

[4]GAO, *Defense Contracting: DOD Needs Better Information on Incentive Outcomes*, GAO-17-291 (Washington, D.C.: July 11, 2017); and *Cost-Type Contracts: Procedures Needed for Sharing Information on Contract Choice Among Military Departments*, GAO-20-352 (Washington, D.C.: May 19, 2020).

Agreement type	Characteristics	Associated statutes and regulations
Technology investment agreement[a]	• A special type of agreement to increase involvement of commercial firms in defense research programs and for other purposes related to integrating the commercial and defense sectors of the nation's technology and industrial base.	32 C.F.R. pt. 37

Source: GAO analysis of federal statutes and regulations. | GAO-21-8

[a]Technology investment agreements can be awarded as cooperative agreements or research other transactions. The federal database through which obligations and other agreements information are reported does not distinguish either category for technology investment agreements.

As we previously reported, statutory authority for the Department of Defense's (DOD) use of other transactions that support prototype projects has evolved since 1993, when Congress authorized the Defense Advanced Research Projects Agency to carry out prototype projects using other transaction authority.[5] Specifically, in 1996 Congress expanded the authority to the military departments and other defense agencies, and in 2001, Congress authorized follow-on production in prototype other transactions.[6] DOD also encouraged the military departments to expand use of other transaction agreements and issued a guide on the use of other transaction authorities in 2017.

In addition to alternative agreements, DOD employs alternative approaches to identify and engage with potential partners in academia and industry in research and development that supports Army modernization. The alternative approaches can include a focus on engaging small businesses and companies that do not typically work with the federal government. We refer to these companies as non-traditional

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[5]National Defense Authorization Act for Fiscal Year 1994, Pub. L. No. 103-160, § 845 (1993). Other transactions enable DOD and companies to negotiate terms and conditions specific to a project without requiring them to comply with most federal regulations that apply to government procurement contracts. GAO, *Defense Acquisitions: DOD's Use of Other Transactions for Prototype Projects Has Increased,* GAO-20-84 (Washington, D.C.: Nov. 22, 2019).

[6]National Defense Authorization Act for Fiscal Year 1997, Pub. L. No. 104-201, § 804 (1996); and National Defense Authorization Act for Fiscal Year 2002, Pub. L. No. 107-107, § 822 (2001).

defense contractors.[7] We have previously reported on DOD-wide and Army-specific efforts to engage this type of company.[8]

Army Modernization

In 2017, the Army announced a modernization initiative to update its forces with improved equipment and capabilities. To facilitate modernization, the Army prioritized six capability needs and established eight cross-functional teams of Army subject matter experts from different disciplines to address these needs. Table 2 lists these priorities and the teams assigned to implement them.

Table 2: Army Modernization Priorities and Assigned Cross-Functional Teams

Army priority	Description of priority	Cross-functional team location
Long-Range Precision Fires	Capabilities include munitions that restore Army dominance in range, lethality, and target acquisition.	Long-Range Precision Fires – Fort Sill, OK.
Next Generation Combat Vehicle	Crewed and autonomous combat vehicles with modern firepower, protection, mobility, and power generation.	Next Generation Combat Vehicle – Detroit Arsenal, MI.
Future Vertical Lift	Crewed and autonomous platforms capable of attack, lift, and reconnaissance missions on modern and future battlefields.	Future Vertical Lift – Redstone Arsenal, AL.
Army Network	A mobile system of hardware, software, and infrastructure that can be used to fight cohesively in any environment where the electromagnetic spectrum is denied or degraded.	Network Command, Control, Communication, and Intelligence – Aberdeen Proving Ground, MD.
		Assured Positioning, Navigation, and Timing – Redstone Arsenal, AL.
Air and Missile Defense	Capabilities that ensure future combat formations are protected from modern and advanced air and missile threats.	Air and Missile Defense – Fort Sill, OK.
Soldier Lethality	Capabilities, equipment, and training for all fundamentals of combat—shooting, moving, communicating, protecting, and sustaining. This includes an expansion of simulated training.	Soldier Lethality – Fort Benning, GA.
		Synthetic Training Environment – Orlando, FL.

Source: GAO review of Army documentation. | GAO-21-8

Subsequently, the Army established AFC in 2018 as the focal point for requirements and technology development and realigned billions of dollars in science and technology funding to support modernization

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[7]For purposes of other transactions and procurements, a non-traditional defense contractor is an entity that has not performed on any DOD contract or subcontract that is subject to full coverage under the cost accounting standards for at least one year before DOD's solicitation for the procurement or other transaction. 10 U.S.C. § 2302(9).

[8]GAO, *Military Acquisitions: DOD Is Taking Steps to Address Challenges Faced by Certain Companies*, GAO-17-644 (Washington, D.C.: July 20, 2017); and *Army Modernization: Army Futures Command Should Take Steps to Improve Small Business Engagement for Research and Development*, GAO-19-511 (Washington, D.C.: July 17, 2019).

priorities. Coordination of AFC's activities and the Army's overall modernization efforts involves multiple organizations, as shown in figure 1.

Figure 1: Key Army Organizations Related to Alternative Agreements and Approaches Supporting Army Modernization
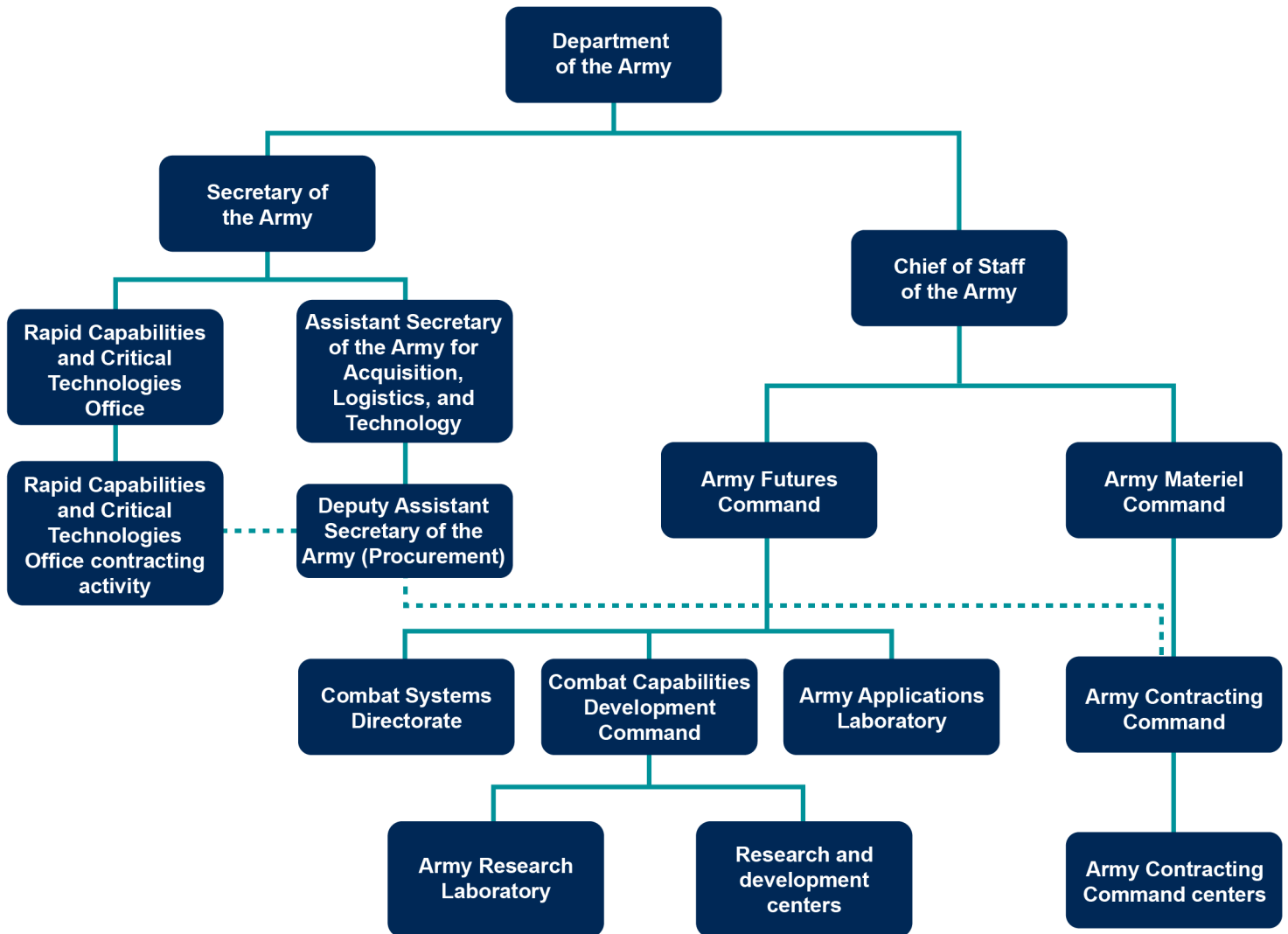
Source: GAO analysis of Army information. | GAO-21-8

Note: The Secretary of the Army is the head of the Department of the Army. The Chief of Staff of the Army presides over the Army Staff and performs other duties subject to the authority, direction, and control of the Secretary.

The Assistant Secretary of the Army for Acquisition, Logistics, and Technology is the civilian authority responsible for the overall supervision

GAO-21-8 Army Alternative Agreements and Approaches

of acquisition and contracting for the Army. The Assistant Secretary provides management and oversight for the Army contracting mission, which includes the use of alternative agreements. The Assistant Secretary's responsibilities and AFC's responsibilities necessitate that these organizations work together to pursue Army modernization efforts. To help integrate the interests of both organizations, AFC established the Combat Systems Directorate, which serves as a direct link to the office of the Assistant Secretary.

AFC, under the strategic direction of the Department of the Army Headquarters, develops and delivers future concepts and requirements. As such, AFC is responsible for identifying the needs, managing the budget, and executing the activities for science and technology efforts. These efforts include the use of alternative agreements and approaches. AFC has two primary organizations under its authority involved with the alternative agreements and approaches:

- CCDC manages the research and engineering enterprise for the Army, which includes the Army Research Laboratory, research and development centers like the Aviation & Missile Development Center, and the Army Research Office that manages basic scientific research. These organizations can use alternative agreements to support research and development. CCDC is also involved with alternative approaches through the Army Research Laboratory's efforts to conduct outreach and to build partnerships that support Army modernization.

- Established under AFC in 2018, the Army Applications Laboratory engages businesses, including small businesses and non-traditional defense contractors, in research and development activities that address the Army's modernization priorities. As a relatively new organization, the lab is still refining the portfolio of activities that supports its mission.

The Army Rapid Capabilities and Critical Technologies Office, which lies outside of AFC, conducts near term research and development to address modernization priorities. This office reports directly to a board of senior Army leadership led by the Secretary of the Army, and its focus areas include prototyping hypersonic and directed energy capabilities.
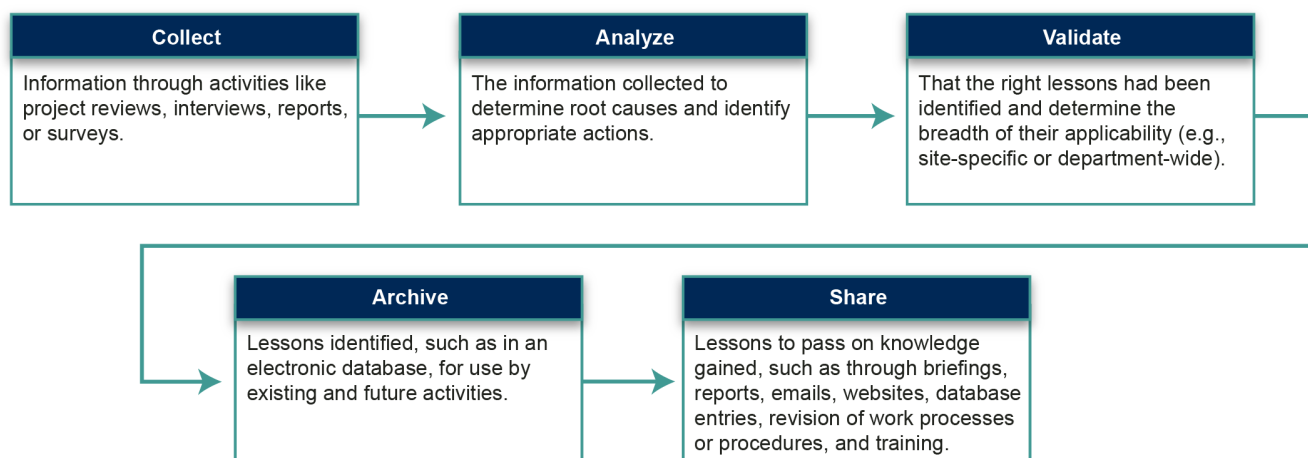
ACC is the military command that supports the award of contracts and alternative agreements across the Army. The command includes a headquarters office and six contracting centers. ACC organizations are responsible for advising AFC and the Office of the Assistant Secretary of

the Army for Acquisition, Logistics, and Technology on FAR-based contracts or alternative agreement award options.

Leading Practices for Lessons Learned

With the creation of AFC, the Army is in the midst of its largest organizational change in decades. AFC's strategic plans state that coordination and communication across its enterprise and among stakeholders are crucial to success and can help avoid conflicting efforts and ineffective use of resources. The use of lessons learned is a principal component of an organizational culture committed to continuous improvement and can increase communication and coordination. Leading practices for a lessons learned process we and others previously identified include collecting, analyzing, validating, archiving, and sharing information and knowledge gained on positive and negative experiences.[9] Figure 2 describes these leading practices.

Figure 2: Leading Practices of a Lessons Learned Process

Collect	Analyze	Validate
Information through activities like project reviews, interviews, reports, or surveys.	The information collected to determine root causes and identify appropriate actions.	That the right lessons had been identified and determine the breadth of their applicability (e.g., site-specific or department-wide).

Archive	Share
Lessons identified, such as in an electronic database, for use by existing and future activities.	Lessons to pass on knowledge gained, such as through briefings, reports, emails, websites, database entries, revision of work processes or procedures, and training.

Source: Analysis of prior GAO reports and the Center for Army Lessons Learned report, *Establishing a Lessons Learned Program: Observations, Insights, and Lessons.* | GAO-21-8

These leading practices generally build upon each other. For example, an organization with a consistent, coordinated archiving mechanism, such as an electronic database, is better able to demonstrate the leading practice for sharing lessons learned through access to such an archive.

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[9]GAO-20-104, GAO-19-25, and GAO-12-901. Center for Army Lessons Learned, *Establishing a Lessons Learned Program*.
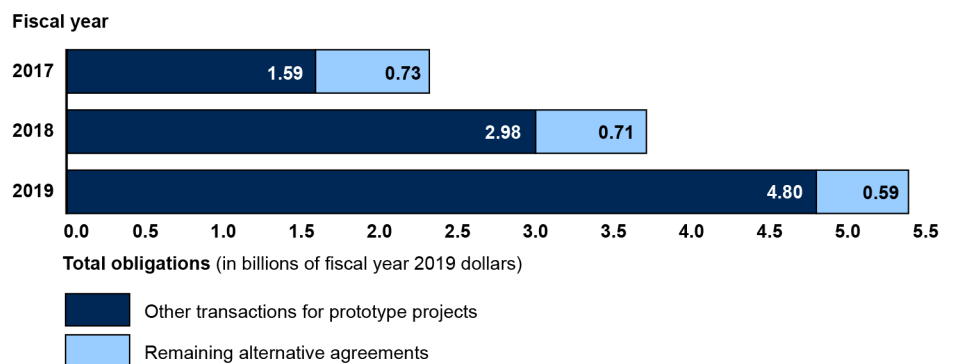
Army Has Significantly Expanded Use of Alternative Agreements and Alternative Approaches to Support Modernization

The Army expanded its overall use of alternative agreements in recent years through a significant increase in other transactions for prototype projects and expanded alternative approaches to foster partnerships to address Army modernization priorities. In comparison to other transactions, the use of the remaining types of alternative agreements declined overall. The Army has employed new or has built upon existing alternative approaches to engage academia and industry in scientific research and technology development that contributes to Army modernization.

Army Obligations on Other Transactions for Prototype Projects Tripled in Recent Years

The Army tripled its obligations on other transactions for prototype projects from fiscal years 2017 through 2019, with obligations totaling nearly $9.4 billion during this time frame.[10] The projects these agreements support can be used to evaluate the feasibility or utility of a technology through prototyping. The Army's use of other transactions for prototype projects increased to account for 89 percent of all obligations on alternative agreements in fiscal year 2019. Figure 3 shows the recent trends in obligations.

Figure 3: Army Alternative Agreement Obligations, Fiscal Years 2017-2019

Fiscal year

	Other transactions for prototype projects	Remaining alternative agreements
2017	1.59	0.73
2018	2.98	0.71
2019	4.80	0.59

Total obligations (in billions of fiscal year 2019 dollars)

■ Other transactions for prototype projects

■ Remaining alternative agreements

Source: GAO analysis of Army data. | GAO-21-8

[10]These obligations include actions executed by ACC but funded by other DOD organizations, such as the Navy and the Office of the Secretary of Defense. For example, ACC's Redstone Arsenal obligated approximately $296.4 million in fiscal year 2019, of which an ACC official confirmed nearly $225.9 million was obligated for Army customers and about $70.5 million was obligated on behalf of non-Army organizations.

In addition to increased obligations, the number of awards for prototype other transactions more than doubled over the same period. The number of ACC centers awarding other transactions that support prototyping has also expanded. In fiscal year 2015, only one center—ACC-New Jersey— awarded nearly all other transactions for prototype projects for the Army. By fiscal year 2019, all six centers had awarded at least one other transaction.

AFC is using other transaction authority to support prototyping across the Army's portfolio of modernization programs. AFC officials stated that, through January 2020, the Army had awarded about 70 prototype other transactions and anticipated awarding approximately 50 more during fiscal year 2020. Consistent with our previous findings, more than 75 percent of these active or planned other transactions involve, or are expected to involve, significant participation by non-traditional defense contractors.[11]

Overall Use of Other Types of Alternative Agreements Has Declined in Recent Years

In contrast to the use of other transactions for prototype projects, the Army's overall use of grants, cooperative agreements, technology investment agreements, other transactions for research, and partnership intermediary agreements to support scientific research and technology development declined in recent years. Army data for fiscal years 2017 through 2019 indicate grant awards—the Army's most frequently used alternative agreement type—declined by 30 percent. The Army's use of cooperative agreements varied during the same time frame but decreased overall. From fiscal years 2017 through 2019, the Army awarded fewer than 30 partnership intermediary agreements and other transactions for research, with average obligations of $28 million supporting them each year. An Army official noted, as an example, that the Army Research Laboratory obligated $1 million through partnership

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[11]To enter into a prototype other transaction, statute requires DOD to meet one of four conditions: (1) At least one non-traditional defense contractor or non-profit research institution participating to a significant extent; (2) all significant non-government participants are small businesses or non-traditional defense contractors; (3) at least one-third of the total cost is paid from funds provided by sources other than the federal government; or (4) the senior procurement executive determines that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract or would provide an opportunity to expand the defense supply base that would not be practical or feasible under a contract.10 U.S.C. § 2371b(d)(1)(A)-(D). In GAO-20-84, we reported that 88 percent of other transactions for prototype projects awarded from fiscal years 2016 through 2018 involved significant participation of non-traditional defense contractors.

intermediary agreements to provide mentoring and networking support to participants in the Army's Expeditionary Technology Search (xTechSearch) prize competitions.[12] In the rare instances where we found the Army used other transactions for research authority, it was to execute technology investment agreements.[13]

The Army uses grants, cooperative agreements, and technology investment agreements to support different levels of interaction and cost sharing with research partners. Army research officials said their laboratories have recently explored opportunities to increase cooperative agreement use to help ensure research is aligned with Army modernization priority topics. Though Army officials noted they use technology investment agreements infrequently, this type of agreement supports commercial industry's participation in defense research to provide broader access to technology options and to the companies that develop technologies. To the maximum extent practicable, the commercial industry or other non-federal party carrying out the research project under this type of agreement is to share at least half of the costs of the project with the federal government.

Unlike the general decline or infrequent use for most alternative agreement types in recent years, the Army laboratories and research and development centers use of CRADAs to support collaboration with academic and industry partners remained steady. From fiscal years 2017 through 2019, the Army reported an average of 861 CRADAs in use across its laboratories and research and development centers, with a high of 907 agreements in place in fiscal year 2019. CRADAs differ from other alternative agreement types, as they involve the use of government resources, such as laboratory facilities and personnel, but do not include government funding or require ACC's involvement to enter into the agreements. Instead, officials at the Army Research Laboratory and

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[12]By statute, DOD may carry out programs to competitively award cash prizes and other types of prizes that the Secretary of Defense determines are appropriate to recognize outstanding achievements in basic, advanced, and applied research; technology development; and prototype development that have potential for application to DOD military missions. 10 U.S.C. § 2374a.

[13]Technology investment agreement obligations are captured under either cooperative agreements or research other transactions in federal databases. Depending on the type of patent rights provision used and whether a recovery of funds provision is used, technology investment agreements are awarded as research other transactions or cooperative agreements. See 32 C.F.R. pt. 37, app. B.

research and development centers within CCDC enter into and manage these agreements.

Army Is Employing Alternative Approaches to Engage Partners for Modernization

In addition to using alternative agreements, the Army employs alternative approaches to engage academia and industry in research and development that supports modernization. We identified four specific Army alternative approaches as part of our review:

- Army Applications Laboratory's outreach and partnership efforts
- Army Research Laboratory's Open Campus partnership efforts
- Innovation Day events
- xTechSearch prize competitions

The Army Applications Laboratory seeks to enhance communication between Army personnel and commercial companies that may have solutions to Army modernization needs. For example, the lab partners with the Capital Factory, a co-working space and technology incubator in Austin, Texas. This partnership provides a publicly accessible office that removes barriers for non-traditional defense contractors and other prospective partners interested in engaging directly with Army officials. Such engagement could include discussions with Army scientists and engineers, or active duty soldiers, to help define and seek solutions to modernization problems. In addition to its physical space, the lab leverages an electronic customer relationship management system to measure and analyze engagement with non-traditional defense contractors. According to Army Applications Laboratory officials, they can use data about companies retained in this system to customize and refine solicitations, which can improve companies' response rates to Army requests and help the lab identify more non-traditional defense contractors.

The Army Research Laboratory's Open Campus is intended to expand opportunities for interaction between Army personnel and academic and industry researchers by increasing access to Army laboratories, facilities, and equipment. According to an Open Campus program official, when Open Campus was initiated in 2014, the Army Research Laboratory leveraged existing knowledge and infrastructure within Army organizations to establish practices for talent management, security, technology transfer, facility and equipment use, and information sharing to allow more flexible and open partnerships with the broader research and development community. For example, Army officials worked under

the Open Campus model to tailor security processes at their laboratories to allow external researchers access without compromising security standards. After piloting the model at Army Research Laboratory Headquarters, Open Campus expanded to four regional sites by early 2018. An Army official said this expansion was intended to more effectively develop partnerships that tap into technology centers across the country and to gain access to regional expertise that had not been leveraged by Army labs and centers. They also noted that the Army Research Laboratory has initiated 10 regional research centers as another means to advance collaborative fundamental research. Each center serves as a consortium of Open Campus partner organizations leveraging expertise, facilities, and capabilities to address Army research and development challenges.

The Army Rapid Capabilities and Critical Technologies Office hosted the first Innovation Day event in September 2019 and subsequently partnered with the Army Applications Laboratory in 2020, in part, to broaden the event. Outcomes from these events include:

- For the first Innovation Day in September 2019, officials from the Rapid Capabilities and Critical Technologies Office stated they reviewed presentations from 42 different companies and approved 12 companies—including nine non-traditional defense contractors—for consideration of other transaction for prototype project awards. Officials said they also referred 15 other companies with technology concepts that did not align with the office's needs to other Army organizations.

- For the second Innovation Day in February 2020, the Rapid Capabilities and Critical Technologies Office and the Army Applications Laboratory invited 34 participants—including 13 non-traditional defense contractors—to Austin, TX, to propose technologies. Officials from both organizations stated that 12 companies have been considered for awards, and they plan to continue partnering for future Innovation Days hosted at other strategic U.S. locations with significant commercial or academic science and technology activities.

The Assistant Secretary of the Army for Acquisition, Logistics, and Technology sponsors the xTechSearch prize competition program to provide cash awards to small businesses with new science and

technology solutions to Army modernization problems.[14] This approach uses a series of competitively awarded prizes to identify and refine new ideas for Army modernization. Two xTechSearch competitions have been completed since 2018 and three are ongoing. The completed competitions included a total of 24 finalists and over $4 million in prizes.

Army Uses Structured Oversight Processes for Alternative Agreements and Approaches, but AFC Has Not Used Agreement Information in Decision-Making

The Army uses established processes to oversee alternative agreements and approaches and generate information. While information is available on the types and number of alternative agreements in use for Army modernization, AFC has not fully analyzed this information to inform its decisions related to the Army's science and technology portfolio.

Regulations and Processes Guide Army Oversight of Alternative Agreements

For the award of each alternative agreement, the Army uses oversight and decision-making processes based on requirements from statutes, regulations, and policies. As part of complying with requirements and following guidance, ACC officials noted that their decision processes for each agreement require collaboration between the agreements officer, ACC legal counsel, and the program or project manager to determine the appropriate agreement type to support AFC's modernization interests. Army officials noted that they have tried to minimize the creation of additional Army-specific requirements to preserve the existing flexibilities for alternative agreements. Instead, the individual contracting centers have developed different forms of guidance to facilitate the use of alternative agreements. For example, ACC's Aberdeen Proving Ground contracting center has developed broad guidance that includes a supplement covering different agreement types. That same contracting center's Research Triangle Park division, which regularly awards most

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[14]The xTechSearch prize competition has evolved into an overarching xTech program, including the open topic xTechSearch competition that continues to operate each year. Though not included in our review, directed topic competitions that address specific problems have recently been added to the xTech program. These directed topic competitions, which can be sponsored by any Army organization, include the xTech COVID-19 ventilator challenge in May 2020, the Army Innovation Combine in July 2020, and the xTechBOLT basic research competition planned for fall 2020.

Army grants and cooperative agreements, maintains templates for these agreement types to help ensure awards meet requirements.

Within the center-specific guidance, some ACC contracting centers have created review standards—particularly for other transactions—that specify increased oversight for higher dollar value agreements prior to finalizing awards. For example, guidance from multiple ACC contracting centers specifies that the level of reviewer for all planned other transactions increases when the expected value exceeds $50 million. Further details on the guidance used by ACC can be found in appendix II.

In addition to the oversight and decision-making processes built into each agreement's award, ACC has practices in place to provide broader oversight of the processes that support the award of agreements, including:

> **Procurement management reviews.** Performed by the ACC Headquarters Management Assessment Division under the direction of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology, procurement management reviews use standardized question sets to evaluate a sample of agreements to identify practices and risks, ensure oversight and compliance with requirements, and determine leading practices. ACC Headquarters performs the procurement management reviews so that all ACC contracting centers are reviewed within a 3-year period. ACC officials said these reviews can include a mix of alternative agreements and FAR-based contracts. ACC also completes targeted procurement management reviews for areas of interest determined by ACC management. Army officials noted that targeted reviews can be tailored to focus on a specific period of time, contracting center, or agreement type. For example, ACC Headquarters officials said they completed targeted reviews in fiscal year 2019 focused on the Detroit Arsenal contracting center and on the Army's use of other transactions.

> **Self-assessment reviews.** Senior contracting officials across the ACC centers complete these reviews annually using similar question sets to those used for procurement management reviews. These reviews provide oversight of a random sample of actions that represent a range of award types used by each ACC contracting center. Once the reviews are completed, the information is reviewed by ACC Headquarters and is accessible to

other senior contracting officials within the command.[15] For example, an official from the Research Triangle Park division of ACC's Aberdeen Proving Ground contracting center said they completed a self-assessment review in 2019 with a stratified sample of 50 awards. The sample included 26 out of a total of 257 grants and cooperative agreements, as well as 2 other transactions and 22 FAR-based contracts.

ACC Headquarters regularly reports the results of procurement management and self-assessment reviews—which can include the number and type of alternative agreements used—as part of oversight efforts. For example, ACC's annual Summary Health Report for fiscal year 2019 outlines the overall results of the procurement management review process. In addition, ACC recently issued its first Procurement Management Review State of the Command Report, which contains observations from four scheduled reviews performed in fiscal year 2019. ACC officials told us that this type of reporting is typically provided to Army Materiel Command and the Deputy Assistant Secretary of the Army for Procurement, as well as made available to Army contracting personnel.

CCDC laboratories and research and development centers have responsibility for entering into and overseeing the use of CRADAs. Army officials noted that the Deputy Assistant Secretary of the Army for Research and Technology provides CCDC organizations with overarching policy and guidance for CRADA use, and AFC has oversight of the science and technology activities performed through the agreements. Similar to the ACC contracting centers, AFC's laboratories and research and development centers have developed guidance and oversight measures for CRADAs. For example, the Army Research Laboratory has a joint work statement template for CRADAs that it uses to outline specific research and development efforts under an agreement.

CCDC officials stated that the Army also relies on its Laboratory Quality Enhancement Program to address new or ongoing CRADA business matters, resolve issues, and provide policy and legal clarifications. CCDC Headquarters monitors and collects information on CRADA use through annual mandated technology transfer reporting and other information

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[15]A senior contracting official is a director of contracting, or a principal deputy to a director of contracting, serving in the office of the Secretary of a military department, the headquarters of a military department, or a subordinate command headquarters.

gathering activities as needed.[16] In our review of the information collected, we found that information contained in the annual reporting includes the number of active and new CRADAs, small business participation measures, and management plans for intellectual property. The Army also uses a database system to collect and share information on the basic characteristics of CRADAs.

Established Processes Guide Army Oversight of Alternative Approaches

The different Army organizations that manage the alternative approaches we reviewed have established their own oversight and decision-making processes. These approaches do not have the same statutory and regulatory frameworks as alternative agreements and rely more on the Army's organizational oversight structures to provide accountability and support decision-making. Oversight processes for the Army's alternative approaches include:

Army Applications Laboratory. AFC's Deputy Commanding General is responsible for oversight of the Army Applications Laboratory's activities. In addition, the lab's officials said the AFC cross-functional team directors perform reviews and endorse projects for the lab to pursue. As part of this oversight and direction, Army Applications Laboratory officials stated they hold regular meetings with AFC cross-functional teams and other Army stakeholders and keep a record of all decisions made. The lab has created its own teams for different focus areas, such as operations, technology, and program innovation, which help assess and measure performance in support of oversight. Lab officials also noted they collect and use a variety of information based on their interactions with companies to help with oversight and management efforts as well as outreach to industry and academia.

Army Research Laboratory Open Campus. Army officials said that, in response to AFC's research priorities, the Army Research Laboratory established a Futures Division that includes a Strategic Partnerships Office with oversight responsibility for Open Campus. In addition to oversight by the Open Campus program manager, Open Campus regional sites have leads that provide oversight and report activities up through a synchronization office to the

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[16]The Technology Transfer Commercialization Act of 2000, Pub. L. No. 106-404, § 10 (2000) (codified at 15 U.S.C. § 3710) contains technology transfer reporting requirements for certain federal agencies and the Department of Commerce. In support of these requirements, DOD and other agencies report on technology transfer activities.

head of the lab's Futures Division. Lab officials also noted they hold weekly and monthly meetings with different levels of personnel across functional research and operational areas and biannual branch chief meetings where information is shared and evaluated. Army Research Laboratory officials said that Open Campus has also undergone technical reviews within the Army and by the Defense Science Board to support oversight and ensure it is addressing relevant science and technology needs.

Innovation Days. The Army Rapid Capabilities and Critical Technologies Office's Board of Directors was responsible for oversight of the participant selection for the first Innovation Day and for subsequent project award decisions. Once the Rapid Capabilities and Critical Technologies Office partnered with the Army Applications Laboratory, the two organizations began collaborating on planning and oversight of the joint Innovation Day events, while maintaining distinct agendas based on their individual missions and interests. Officials from both organizations outlined the collective oversight measures used to manage planning and execution of the events. These officials also stated that measures include the vetting of white papers submitted during the proposal phase used to select companies for in-person presentations during the event. Additionally, the organizations oversee activities during the event and solicit feedback from Army and industry participants during and after the events.

xTechSearch prize competitions. The Assistant Secretary of the Army for Acquisition, Logistics, and Technology approves xTechSearch prize competitions prior to their execution and authorizes the funding and oversight for the competitions. Army Research Laboratory officials oversee the execution of xTechSearch competition activities. Unlike the other alternative approaches, xTechSearch competition requirements are framed by the statutory authorities shown in table 3.

Table 3: Key Statutory Authorities Supporting Army Prize Competitions for Technology Innovation

Authority title	Statute	Maximum total award value per competition	Selected requirements for use
Prize competitions	15 U.S.C. § 3719	$50 million[a,b]	Federal agencies may carry out a program to award prizes competitively to stimulate innovation that has the potential to advance their missions. Participating entities must be based in the U.S. and participating individuals must be U.S. citizens or permanent residents; federal employees are not eligible if acting within the scope of their employment.
Prizes for advanced technology achievements	10 U.S.C. § 2374a	$10 million[c]	Department of Defense prize programs using this authority must use a competitive process for award selection and include widely advertised solicitation of submissions.

Source: GAO analysis of federal statutes. | GAO-21-8

[a]Prize awards over $1 million require approval from the head of the federal agency.

[b]Prize awards in excess of $50 million require congressional notification followed by a 30-day waiting period.

[c]Prize awards over $1 million require approval from the Under Secretary of Defense for Research and Engineering.

Army officials said that xTechSearch has used the federal prize competitions authority that allows for larger awards more frequently but noted that DOD's prize competition authority for advanced technology allows for a process that can be used to quickly move into negotiations for other types of awards. In addition to the authorities cited above, Army policy states that all prize competitions must be approved by the Assistant Secretary of the Army for Acquisition, Logistics, and Technology prior to execution and must include specific details, such as the schedule for the competition, participant eligibility and requirements, winner selection criteria, and funding source. As part of the broader xTechSearch oversight, xTech program officials said they solicit feedback during each competition from the Army and industry participants, as well as conduct exit surveys. For example, we found that the program surveyed industry participants to receive feedback on the adequacy of support they received from the program in preparing for their presentations and how the competitions could be improved. Additionally, the xTech program officials send follow-up surveys and interviews to participants after events have ended to determine if participants have engaged with the Army for additional opportunities.

AFC Has Not Analyzed Alternative Agreement Use to Support Oversight and Inform Decision-Making but Has Demonstrated Oversight for Alternative Approaches

As the focal point for Army modernization, AFC evaluates science and technology projects each year to ensure progress and align decisions with Army modernization priorities. AFC officials acknowledged, however, that as a relatively new organization the command has not yet developed processes to track and analyze information on the use of alternative agreement types to inform science and technology portfolio decisions. The command has an abundance of information available about the types and use of alternative agreements through federal databases and reporting performed by AFC, ACC, and the Office of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology.

Comprehensive analysis of this alternative agreement information would be consistent with leading practices for portfolio management we and others have previously identified.[17] These leading practices emphasize that such analysis enables organizations to review, reprioritize, optimize, and reallocate resources for their portfolios to ensure ongoing alignment with their organizational goals and fulfill the information needs of current or future stakeholders. Comprehensive analysis would also be consistent with DOD policy, which directs organizations to use portfolio management to minimize risk in meeting capability needs in support of strategy.[18] Such analysis would allow AFC to analyze the distribution and trends in use for agreement types like technology investment agreements and CRADAs, which generally require limited or no government funding, and could help AFC identify opportunities for the Army to reduce its investments in particular areas where industry has demonstrated a willingness to share cost or leverage other Army resources to advance technologies.

Since AFC works with ACC and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology on projects that use alternative agreements, the analysis of these agreements could benefit from collaboration across these organizations. ACC has a direct role in the award of the agreements and facilitates the documentation and distribution of the data that can be used to analyze the use of alternative agreements. The Assistant Secretary of the Army for Acquisition, Logistics, and Technology is the Army's chief scientist and also has assigned responsibilities over Army weapon systems acquisition, which can be affected by decisions AFC makes for the science and technology portfolio. Collaborative analysis could help AFC develop a shared

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[17]GAO-15-466 and GAO-07-388. Project Management Institute, *The Standard for Portfolio Management*.

[18]DOD Directive 7045.20 (June 21, 2019).

understanding with the Assistant Secretary of the Army for Acquisition, Logistics, and Technology about other transactions for prototype projects because projects associated with this type of alternative agreement can straddle the line of responsibility between development and acquisition.

During our review, AFC officials initiated some individual efforts to obtain more information on the scope and use of certain agreement types. These efforts include:

- Plans to evaluate the existing CRADA portfolio to inform future planning and investments;

- Semi-annual data reporting from AFC organizations to the command's Office of Small Business Programs on awards to non-traditional defense contractors; and

- Analysis of how the use of other transactions for prototype projects overseen by the Assistant Secretary of the Army for Acquisition, Logistics, and Technology contributes to the pursuit of iterative capability development for Army modernization programs.

While these planned actions by AFC represent steps toward analysis of some alternative agreement use, they do not reflect comprehensive and consistent portfolio analysis of all agreement types that supports decisions for existing and future projects.

For alternative approaches, we found that AFC demonstrates oversight as senior leadership or as an active participant. As previously discussed, AFC oversees the Army Applications Laboratory activities, including participation in Innovation Days and review and endorsement of any applications lab projects. For the Army Research Laboratory's Open Campus efforts, AFC has a direct oversight responsibility for the lab. Army Research Laboratory officials stated the lab's Futures Division also has personnel co-located at AFC headquarters to support the alignment of the lab's activities with AFC's modernization priorities. Although AFC does not sponsor the xTechSearch competitions, it does have a role in overseeing the Army Research Laboratory's management of the competitions. Army officials also said that AFC communicates regularly with xTechSearch officials via bi-weekly meetings about coordination of efforts. All of these activities provide AFC with a firm understanding of how the alternative approaches support modernization within the command's overall portfolio.

Army Does Not Fully Demonstrate Leading Practices for Lessons Learned Related to Alternative Agreements and Approaches

Army organizations overseeing alternative agreements and approaches demonstrate elements of five leading practices for lessons learned but overall lack consistent, coordinated use of these practices. We found that Army organizations varied in their application of the five leading practices related to alternative agreement use. For alternative approaches, the Army organizations consistently demonstrated leading practices to collect, analyze, and validate lessons learned but did not fully meet the criteria for archiving and sharing them.

Army Organizations Do Not Demonstrate Consistent Use of Leading Practices for Lessons Learned on Alternative Agreements

ACC Headquarters and its contracting centers, as well as CCDC Headquarters, demonstrate some use of leading practices for collecting and sharing lessons learned related to alternative agreements. We based our assessment of these Army organizations on five criteria for lessons learned that we and others have previously identified.[19] For organizations using alternative agreements, we assessed whether their actions fully demonstrated, partially demonstrated, or did not demonstrate each leading practice. Demonstrating these practices is critical to ensure that lessons learned endure and that processes are improved. For the ACC contracting centers, we assessed the extent to which their practices collectively facilitate consistent, coordinated use of leading practices across all six centers. For CCDC, we assessed headquarters coordination with its subordinate organizations in support of leading practices. While we found variation among the organizations we assessed, coordinated practices can help ensure that collection and sharing of lessons learned is not confined to a subset of the centers or officials involved in decision-making for agreements.

Table 4 provides the results of our assessment of the lessons learned practices for alternative agreements demonstrated by Army organizations.

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[19]GAO-20-104, GAO-19-25, and GAO-12-901. Center for Army Lessons Learned, *Establishing a Lessons Learned Program*.

Table 4: Assessment of Army's Use of Lessons Learned Leading Practices for Alternative Agreements Supporting Army Modernization

Army organization	Collect information	Analyze information	Validate applicability of lessons	Archive lessons	Share lessons
Army Contracting Command (ACC) Headquarters	◑	●	●	◑	◑
ACC's six contracting centers	◑	◑	◑	◑	◑
Combat Capabilities Development Command Headquarters	◑	◑	○	○	◑

Legend: ● Criteria fully demonstrated ◑ Criteria partially demonstrated ○ Criteria not demonstrated

Source: GAO analysis of Army information. | GAO-21-8

Collect information. This leading practice involves capturing information about activities and results, which can be achieved through various methods. Our observations related to ACC Headquarters, the ACC contracting centers, and CCDC Headquarters demonstrating this leading practice are as follows:

- ACC Headquarters uses the procurement management and self-assessment reviews described above to collect lessons learned information, but the command's sampling practices for these reviews do not assure that all agreement types are included. Specifically, these reviews are designed to evaluate a sample of awards and do not require all agreement types to be included in the reviews. As a result, ACC Headquarters cannot ensure consistent collection of lessons learned information for all types of alternative agreements through these reviews.

- ACC's contracting centers lack a consistent, coordinated effort to collect comprehensive information on alternative agreements to support lessons learned across the centers. Instead, each contracting center predominately focuses on collecting information to develop and maintain various types of center-specific guidance for alternative agreements and uses different mechanisms to do so. For example, two contracting centers established their own integrated product teams to collect information related to alternative agreements, including information on procedures or documentation supporting awards that can be used to identify lessons learned.

- In general, information collection activities identified by CCDC officials focus more on collecting information to meet reporting requirements than supporting lessons learned, and lack coordination with

subordinate organizations. For example, the information collected includes the number of new CRADAs and whether the partners are from academia or small or large businesses. CCDC Headquarters officials stated they use ad-hoc data calls and Army workshops to collect CRADA information that can support lessons learned. CCDC officials stated that CRADA information is also collected through Army Laboratory Quality Enhancement Program meetings.

Based on our assessment, ACC Headquarters, ACC's contracting centers, and CCDC Headquarters partially demonstrate the leading practice to collect information on lessons learned. For ACC Headquarters, the use of sampling for its reviews is understandable given the considerable amount of alternative agreements and FAR-based contracts annually awarded by ACC, but the sampling methods limit the lessons that can be learned for all agreement types. This limitation emphasizes the need for the ACC contracting centers—which have direct insight into all of the agreements they award—to demonstrate consistent, coordinated collection of alternative agreements information. For CCDC Headquarters, coordination with its subordinate organizations to collect information on the processes used to develop and enter into the agreements could help provide consistent and more comprehensive information to support lessons learned.

Analyze information. The next leading practice is to analyze the information collected to determine root causes that led to positive or negative outcomes and to identify appropriate actions. Examples related to this leading practice include:

- ACC Headquarters conducts analysis of agreement information as part of its procurement management review process, including root-cause analysis to identify the reasons behind any deficiencies. For example, ACC's Procurement Management Review State of the Command Report for fiscal year 2019 stated that the majority of deficiencies found through the reviews related to missing award documentation. Additionally, ACC Headquarters' analysis of other transactions awarded in fiscal year 2019 found that some awards documentation indicated that they were competed but had minimal evidence of how they were competed. ACC Headquarters' analysis of the results from procurement management reviews also identifies Army organizations that are performing above expectations to highlight factors leading to positive outcomes.

- ACC's contracting centers analyze their center-specific alternative agreement activities but do not consistently coordinate with the other

centers to analyze lessons learned information. For instance, officials from multiple contracting centers stated they analyze information on their individual center's alternative agreement use to improve their center-specific templates for different agreement types as new information becomes available that support lessons learned.

- CCDC Headquarters officials stated the command does not currently analyze information on the different formats of CRADAs being used by the Army Research Laboratory and CCDC centers. They also stated, however, that the command analyzes information through informal discussions with these organizations, as well as through Army Laboratory Quality Enhancement Program forums. Further, they are considering including the capability to query for trend analysis and other items as they develop a new Army technology transfer database portal.

Based on our assessment, ACC Headquarters fully demonstrates the leading practice for analyzing information, and the ACC contracting centers and CCDC Headquarters partially demonstrate it. Coordinated analysis by ACC's contracting centers and by CCDC's organizations could improve lessons learned outcomes by facilitating the inclusion of more diverse perspectives in evaluating the information collected on how alternative agreements are used. According to the Center for Army Lessons Learned, moving from information collection to analysis and eventual identification of lessons learned requires a systematic process to examine information and understand what contributes to the need for improvement.[20]

Validate applicability of lessons. The next leading practice is to validate that the right lessons have been identified and to determine the scope of their applicability. Subject matter experts or other stakeholders may be involved in this step of the process. Our observations of the practices used by ACC Headquarters, ACC contracting centers, and CCDC Headquarters include the following:

- ACC Headquarters' procurement management review process includes activities that provide for validation through the exchange of information and advice on lessons learned, leading practices, and opportunities for continuous improvement. For example, ACC Headquarters' analysis of other transactions from fiscal year 2019 identified concerns with the ability of the Army's draft set of standard

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[20]Center for Army Lessons Learned, *Establishing a Lessons Learned Program*.

questions for procurement management reviews to provide for a comprehensive review. In response to these concerns, ACC Headquarters validated that a modified question set would provide a more refined assessment capability for reviewing these agreements. As outlined in ACC's Annual Summary Health Report for fiscal year 2019, ACC Headquarters officials also participate in an Army procurement management review advisory working group and configuration management board. This participation supports continuous process improvement and validation of lessons learned through actions that remove, rephrase, or combine questions used for procurement management reviews.

- ACC's contracting centers do not perform consistent validation practices across the centers, nor do they involve multiple centers and account for all types of agreements. The centers did, however, provide information on a range of center-specific activities used to validate lessons learned. These activities include working groups or round tables with agreements officers, agreement specialists, and contracting management that support analysis of existing agreement use and identification of opportunities to use lessons learned to make improvements.

- CCDC did not provide evidence of coordinated practices to validate CRADA lessons learned. CCDC Headquarters officials stated that, for cases where the relevance of a lesson learned is limited to one specific organization, they communicate the lesson directly with that organization and information with broader applicability can be considered for posting on a CCDC shared site. These actions support sharing of lessons learned but do not specifically validate the applicability of lessons learned.

Based on our assessment, ACC Headquarters fully demonstrated the leading practice to validate lessons learned for alternative agreements, the ACC contracting centers partially demonstrated it, and CCDC Headquarters did not demonstrate it. While most of ACC's six contracting centers individually validate lessons identified within their respective centers, the lack of coordination among the centers limits their ability to leverage knowledge for validating lessons learned for all agreement types. Information provided by CCDC Headquarters officials indicates the command lacks clear validation practices for lessons learned, limiting their ability to determine the lessons' applicability to support future decision-making activities.

Archive lessons. This leading practice involves the use of an archiving mechanism, such as an electronic database, through which lessons

learned information can be stored and shared. Archiving should remain an ongoing process to maintain relevance and preserve the history of lessons over time. Archiving should also provide a logical system for organizing information that can be easily retrieved and shared or accessed directly. Our observations on practices used to archive lessons learned for alternative agreements include:

- ACC Headquarters officials stated that the command does not have a central electronic archiving system for ACC Headquarters and the contracting centers to archive and share lessons learned for alternative agreements. ACC Headquarters officials stated they do archive information related to lessons learned for alternative agreements through annual, quarterly, and significant event reporting related to procurement management and self-assessment reviews. This reporting is archived for sharing within the command through a secure electronic site hosted by ACC Headquarters' Management Assessment Division. As outlined in ACC's Annual Summary Health Report for fiscal year 2019, the overall results of procurement management reviews led to a transformation of this archiving site to enhance sharing of ideas, tools, leading practices, and processes. ACC Headquarters has also developed a dedicated lessons learned section for other transactions on its community of practice sharing site but lacks similar archiving for other types of alternative agreement. Additionally, ACC plans to develop an initial version of an electronic database by the end of fiscal year 2020 for procurement management review information related to corrective actions. This database, which can include information on actions related to alternative agreements, is intended to help identify trends and share leading practices.

- ACC's contracting centers do not centrally archive lessons learned for alternative agreements. Some of ACC's contracting centers, however, locally archive guidance that reflects lessons learned over time in a manner that is accessible to others within their respective center. For example, an official from one contracting center stated that the center incorporates lessons learned into its acquisition guidance, which is archived for use by center personnel. This is not a consistent practice, however, as ACC officials from another contracting center said they have not established an archive but intend to dedicate a folder in their center's shared electronic site for lessons learned.

- CCDC Headquarters officials confirmed they do not archive lessons learned in a manner that is accessible to CCDC Headquarters and the Army Research Laboratory and CCDC centers to inform existing and future activities.

Based on our assessment, ACC Headquarters and the ACC contracting centers partially demonstrated the archiving leading practice for lessons learned, and CCDC Headquarters did not demonstrate the leading practice. ACC Headquarters officials stated that the command has not received direction to create a central archive for lessons learned related to alternative agreements. The contracting centers' archiving of lessons learned through updates to guidance can limit awareness and preservation of lessons learned, as it does not necessarily identify the lessons learned and how they contributed to new or changed guidance. When the individual contracting centers do archive to an electronic storage site, the information generally is not accessible across the contracting centers, which confines the reach and potential value of documented lessons for future use by decision makers. CCDC Headquarters officials said that, although they do not have an archive for CRADA lessons learned, they will consider placing this type of information on their shared archiving site for future use by the Army Research Laboratory and CCDC centers. Similar to ACC, an official from CCDC confirmed that the command has not received direction to archive lessons learned for CRADAs. For each of the organizations we reviewed, limitations with their archiving practices reduce their ability to preserve, access, and share lessons learned related to the processes used to enter into alternative agreements.

Share lessons. This leading practice ensures knowledge collected and validated is shared with those who can apply it. Agencies can share lessons in many ways, such as through reports, emails, websites, and training. Lessons can be "pushed," or automatically delivered to a user, or "pulled," where a user obtains them by accessing an archive. The leading practice to share lessons relies on effective archiving to ensure the lessons learned are readily obtainable for use. Examples of ACC Headquarters, ACC contracting centers, and CCDC Headquarters sharing practices include:

- ACC Headquarters issued its first "State of the Command" summary report for fiscal year 2019 procurement management review activities, which shares lessons learned based on the results of four reviews of selected awards that are conducted during the fiscal year.

- Officials from some ACC contracting centers stated they share lessons learned through their individual center's sharing sites, which are accessible to their own personnel. A contracting official at one center stated that the center does not currently have a specific

sharing mechanism in place but plans to create a group for agreements officers to share leading practices.

- CCDC Headquarters officials outlined different ways that they share lessons learned for CRADAs, such as through annual workshops. CCDC is also exploring more advanced reporting tools to implement additional features and capabilities for the CRADA database, which may support sharing lessons learned.

ACC Headquarters, the ACC contracting centers, and CCDC Headquarters all partially demonstrate this leading practice, primarily due to the absence of an archive to allow more effective sharing of lessons learned. While ACC Headquarters has archived, or plans to archive and share some lessons learned information, these efforts are not consistent across all agreement types or have yet to be fully demonstrated. Similarly, while some individual ACC contracting centers archive and share their lessons learned, the practices are not consistent and coordinated across all six centers to support effective access and communication of lessons learned. For CCDC, the command's existing practices that push information to users are limited and do not enable a potential user to pull information as well in order to take advantage of the lessons learned.

Army Demonstrates Some Leading Practices for Alternative Approaches but Lacks Coordinated Archiving and Sharing of Lessons Learned

The organizations managing the four Army alternative approaches in our review fully demonstrate leading practices for collection, analysis, and validation of lessons learned but only partially demonstrate the final two practices. Table 5 provides the results of our assessment.

Table 5: Assessment of Army's Use of Lessons Learned Leading Practices for Alternative Approaches Supporting Army Modernization

Alternative approach	Collect information	Analyze information	Validate applicability of lessons	Archive lessons	Share lessons
Army Applications Laboratory	●	●	●	◑	◑
Army Research Laboratory Open Campus	●	●	●	◑	◑
Expeditionary Technology Search (xTechSearch) prize competitions	●	●	●	◑	◑
Innovation Day events	●	●	●	◑	◑

Legend: ● Criteria fully demonstrated ◑ Criteria partially demonstrated ○ Criteria not demonstrated

Source: GAO analysis of Army information. | GAO-21-8

Collect information. The Army organizations managing alternative approaches provided several examples that demonstrate this leading practice:

- Army Applications Laboratory officials stated they collect information about the companies they engage with in the lab's electronic customer relationship management platform. The lab's officials also solicit feedback from Army and industry participants during and after events regarding what worked well and areas for improvement.

- Army Research Laboratory officials noted they collect Open Campus data on the number of external researchers they partner with and the extent to which Open Campus has helped increase the use of CRADAs to support partnerships. Officials said that Open Campus also collects information on partnership outcomes to learn how their alternative approach affects change and supports modernization. Open Campus regional sites also collect data on site-specific activities that are provided to the lab's leadership.

- The Army Rapid Capabilities and Critical Technologies Office and Army Applications Laboratory officials collaboratively collect data for Innovation Day events, such as the number and types of companies submitting proposals and participating in the events, including the size and technical area of participating companies. Collection of this information can help identify whether the event activities are eliciting interest from the types of companies the organizations are targeting.

- xTechSearch officials collect feedback from event participants during and after the competitions. This collection includes the use of electronic surveys. For example, one survey we reviewed asked the competition's judges to rate communication prior to the event, the

adequacy of time allotted for different activities during the event, and how the judging process could be improved.

These examples illustrate positive practices employed to collect information for lessons learned identification and support our assessment that this leading practice was fully demonstrated for all four alternative approaches.

Analyze information. Examples of this leading practice for alternative approaches include:

- Army Applications Laboratory officials stated they analyzed information about the number of non-traditional companies that advanced to the final phase of the February 2020 Innovation Day. Based on this analysis, they were reconsidering the evaluation criteria used for the white papers supporting the event to determine if they need to make changes to increase inclusion of non-traditional defense contractors.

- Army Research Laboratory officials indicated they hold weekly and monthly meetings where Open Campus information is analyzed to support lessons learned. Officials also stated Open Campus has undergone technical reviews to analyze how the Open Campus partnerships help address Army modernization needs.

- Rapid Capabilities and Critical Technologies Office officials said they analyzed the time it takes to award other transactions for prototype projects to companies that were approved for awards as part of the Innovation Day events, but they have not made enough awards to make any conclusions on the results. One official said their evaluation focused on finding the appropriate balance to ensure sufficient time is taken to refine concepts without losing credibility with the companies due to a time lag between Innovation Day events and project awards. Officials also said they remain engaged with each of the selected contractors as their office works to solidify relationships with the transition partners and identify funding sources.

- To improve their events, xTechSearch officials stated they analyzed information collected through surveys and conversations with event participants. For example, they analyzed negative feedback on the original electronic systems used to submit and evaluate white paper proposals for research and development projects and identified an alternative system that streamlined communication for companies and Army evaluators.

We assessed that the analysis practices used for the Army's four alternative approaches fully demonstrate the leading practice, which enables them to determine root causes that lead to positive or negative outcomes and identify appropriate actions.

Validate applicability of lessons. Examples of this leading practice include:

- Army Applications Laboratory officials stated that one barrier for companies interested in engaging with the Army was the need to create and submit a white paper for the project. The lab validated that this issue affected its potential partner companies and created a white paper generator tool that helps companies develop and submit a white paper on the lab's website.

- Army Research Laboratory officials said they validated the Open Campus model by piloting it at the lab's headquarters when the program began and carrying its lessons learned forward when creating Open Campus regional sites in recent years.

- Rapid Capabilities and Critical Technologies Office officials discussed how they validated a previously identified lesson learned regarding the need to ensure agreement on ground rules prior to going into Innovation Day events. Specifically, their previous experience emphasized the need to set ground rules about how to market and message the events ahead of time. They incorporated this lesson learned with the Army Applications Laboratory and other participants for the February 2020 event and the positive results validated the lesson.

- Following the first xTechSearch competition, xTech officials determined that they could improve the size and composition of their panel of judges for future competitions by including more Army subject matter experts. xTech officials said that subsequent action increased engagement from Army experts with a range of backgrounds and perspectives, which validated this lesson learned. The action also led to companies receiving better feedback on how their technologies could benefit the Army and what improvements could be made to make those technologies more appealing.

As with collection and analysis practices, we assessed that validation activities for the Army's four alternative approaches fully demonstrated the leading practice, which helps them confirm that the right lessons have been identified and determine the scope of their applicability.

Archive lessons. Our observations related to the Army organizations demonstrating this leading practice for alternative approaches include:

- The Army Applications Laboratory stores lessons learned information in an electronic database with access limited to the lab's personnel. The lab also uses an electronic management system to store information about the companies it engages with, which helps manage outreach and generate information that supports lessons learned.

- Army Research Laboratory officials said they store Open Campus information related to lessons learned—generally in the form of briefing materials—in an archive accessible only to the lab's personnel.

- For Innovation Days, Rapid Capabilities and Critical Technologies Office officials stated that they do not archive lessons learned in an online database but intend to do so in the future. Some of the office's lessons learned were documented through collaboration with the Army Applications Laboratory, but, as previously noted, access to the lab's archive is limited to its own personnel.

- xTechSearch officials said they do not archive lessons learned. They do, however, retain electronic documentation, such as meeting notes and briefing slides, which can include lessons learned.

The practices employed for the Army's four alternative approaches partially demonstrate the archiving leading practice. Our assessment is based on the limitations we identified related to the accessibility of archived information. In particular, the Army organizations managing alternative approaches do not provide a comprehensive, central archive to pool and benefit from the overall lessons learned. Army officials confirmed that, for the alternative approaches we reviewed, they had not received formal direction to archive lessons learned or been involved with Army lessons learned program activities. Such an archive would be consistent with the leading archiving practice we and others have identified, as it would provide an archive to preserve lessons learned information in a manner that makes it easily retrievable and available to any requestor.[21]

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[21]GAO-20-104, GAO-19-25, and GAO-12-901. Center for Army Lessons Learned, *Establishing a Lessons Learned Program.*

Share lessons. Examples of the sharing practices to push lessons learned information on alternative approaches to users or enable users to pull information for themselves from existing data sources include:

- Army Applications Laboratory officials stated they share lessons learned after major events and regularly through emails and executive summary documentation.

- Army Research Laboratory officials said they share Open Campus lessons learned within DOD and with other government officials through annual open house events. As part of these events, attendees speak directly with lab officials about Open Campus lessons learned. Officials stated they have also held workshops and other meetings as needed that support the sharing of Open Campus lessons learned.

- Rapid Capabilities and Critical Technologies Office officials shared lessons learned with Army Applications Laboratory officials from Innovation Day activities prior to their partnering for joint events.

- xTechSearch officials participate in bi-weekly synchronization calls with other related organizations, such as the Army Applications Laboratory, to share lessons learned. They also said they participate in federal roundtable events on a bi-weekly basis with other agencies that execute similar prize competitions to answer questions and share lessons learned.

Similar to archiving practices, we assessed that the four alternative approaches partially demonstrated the leading practice for sharing lessons learned. While the practices of the organizations involved clearly share information with others through specific events and interactions, the lack of a centralized archive for the organizations managing the different alternative approaches to share lessons learned restricts the ability of users to pull information and could result in the loss of new ideas and limit growth that supports Army modernization. Improved sharing of lessons learned across the alternative approaches can help the Army more effectively engage with new partners in support of its modernization goals.

Conclusions

The Army has made considerable organizational changes to focus on modernization. As part of the modernization efforts, the Army is leveraging existing authorities that support the use of alternative agreements for research and development, as well as creating and expanding avenues to engage industry and academia in partnerships that support modernization priorities. As the Army continues its use of

alternative agreements and approaches, the department could benefit from a broad and consistent understanding of how these agreements and approaches are used to achieve its goals and the lessons learned from their use.

AFC's current efforts to manage decisions for the Army science and technology portfolio align projects to modernization priorities, but overlook the opportunity to analyze the use of alternative agreement types to better inform the command's modernization investment decisions. AFC's analysis of the use of other transactions for prototype projects could help the command, as well as the Assistant Secretary of the Army for Acquisition, Logistics, and Technology and the Army's acquisition community, better identify how the use of this type of alternative agreement within the Army's research and development portfolio shapes expectations for project outcomes and future acquisition decisions. Further, AFC's analysis of the use of cooperative agreements, grants, research other transactions, technology investment agreements, partnership intermediary agreements, and CRADAS could help the command's decision-making by identifying opportunities to better distribute its limited funding.

The lack of consistent, coordinated lessons learned practices for alternative agreements inhibits the ability of ACC and CCDC to ensure that the array of lessons learned related to alternative agreements are acknowledged and reach stakeholders throughout their respective commands. In executing the range of alternative agreements and approaches employed to support Army modernization, improving practices for lessons learned could help the Army better ensure that future decisions are well-informed. In addition, the Army organizations that manage alternative approaches have an opportunity to centralize the archiving of lessons learned to ensure the information is readily available to share with others. Such action would promote continued learning to help the Army effectively engage with new partners in support of modernization.

Recommendations for Executive Action

We are making six recommendations to the Army:

The Secretary of the Army should direct the Army Futures Command, in collaboration with the Army Contracting Command and the Assistant Secretary of the Army for Acquisition, Logistics, and Technology, to regularly analyze information on the use of prototype other transactions for Army modernization. (Recommendation 1)

The Secretary of the Army should direct the Army Futures Command, in collaboration with the Army Contracting Command, to regularly analyze information on the use of grants, cooperative agreements, research other transactions, technology investment agreements, partnership intermediary agreements, and cooperative research and development agreements for Army modernization. (Recommendation 2)

The Secretary of the Army should ensure the Commanding General of the Army Contracting Command establishes consistent practices for its headquarters to collect, archive, and share lessons learned for research and prototype other transactions, grants, cooperative agreements, technology investment agreements, and partnership intermediary agreements. (Recommendation 3)

The Secretary of the Army should ensure the Commanding General of the Army Contracting Command has the command's contracting centers work with its headquarters to establish consistent, coordinated practices for the contracting centers to collect, analyze, validate, archive, and share lessons learned for research and prototype other transactions, grants, cooperative agreements, technology investment agreements, and partnership intermediary agreements. (Recommendation 4)

The Secretary of the Army should ensure the Commanding General of the Combat Capabilities Development Command establishes consistent, coordinated practices for the command to collect, analyze, validate, archive, and share lessons learned for cooperative research and development agreements. (Recommendation 5)

The Secretary of the Army should ensure an archive is established to store and share lessons learned information related to the Army's alternative approaches for engaging industry and academia. (Recommendation 6)

Agency Comments

We provided a draft of this product to the Department of the Army for comment. In its comments, reproduced in appendix III, the Department of the Army concurred with all six of our recommendations. The Department of the Army also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional requesters; the Secretary of Defense; and the Secretary of the Army. In addition, the report is available at no charge on the GAO Website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-4841 or LudwigsonJ@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 IV.

Jon Ludwigson
Director, Contracting and National Security Acquisitions

Appendix I: Objectives, Scope, and Methodology

The House Armed Services Committee, Tactical Air and Land Forces Subcommittee asked us to review the Army's use of alternative agreements and approaches for weapon systems modernization. This report (1) describes what is known about the Army's use of alternative agreements and approaches to develop new systems and technologies that support Army modernization; (2) assesses the Army's oversight and decision-making related to alternative agreements and approaches; and (3) evaluates the extent to which the Army is using leading practices to collect and share lessons learned for alternative agreements and approaches.

To determine what is known about the Army's use of alternative agreements, we analyzed data from two federal databases—Federal Procurement Data System-Next Generation and Financial Assistance Award Data Collection—for fiscal years 2017 through 2019. The Federal Procurement Data System-Next Generation contains data on other transactions for prototype projects. The Financial Assistance Award Data Collection system contains data on grants, cooperative agreements, technology investment agreements, partnership intermediary agreements, and research other transactions. Our analysis assessed the number of agreements awarded, the amount of funds obligated through these agreements, and the contracting centers executing these agreements. Cooperative research and development agreements (CRADA) are not tracked in either database. Instead, we obtained CRADA data from the Office of the Deputy Assistant Secretary of the Army for Research and Technology, which receives this data as part of annual mandated technology transfer reporting. We also interviewed officials from the Army Contracting Command (ACC) Headquarters and contracting centers; Army Futures Command (AFC), including the Combat Capabilities Development Command (CCDC); and the Army Rapid Capabilities and Critical Technologies Office to obtain information about the use of alternative agreements.

To assess the reliability of these data sources, we compared Army-provided data against the data we obtained from the federal databases. To mitigate limitations of funding agency information in Federal Procurement Data System-Next Generation data and identify modernization-specific information, we collected and analyzed data on other transactions for prototype projects from AFC and subordinate research and development organizations. We compared Army-provided

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data against congressionally mandated annual reporting.[1] We also
conducted interviews with officials from CCDC and ACC to validate
relevant excerpts of Army-provided data against the commands' internal
records. We determined that these data were sufficiently reliable for
reporting on the use of alternative agreements.

To determine what is known about the Army's alternative approaches, we
collected information and interviewed officials from the Army Rapid
Capabilities and Critical Technologies Office and AFC, which includes the
Army Applications Laboratory and Army Research Laboratory.

To assess the Army's oversight and decision-making for alternative
agreements and approaches, we reviewed statutes, regulations, policy,
and guidance governing their use. We also interviewed officials from
ACC; AFC; the Office of the Assistant Secretary of the Army for
Acquisition, Logistics, and Technology; and the Army Rapid Capabilities
and Critical Technologies Office to gain insight into applicable oversight
and decision-making activities. Additionally, we assessed alternative
agreement tracking and analysis activities performed by AFC against
criteria we previously established regarding portfolio management, as
well as criteria from the Project Management Institute.[2]

To determine the extent to which the Army uses leading practices we
previously identified for collecting and sharing lessons learned, we
compared the Army's activities against five leading practices identified in

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[1]Section 873 of the John S. McCain National Defense Authorization Act for Fiscal Year
2019 and the conference report accompanying the Department of Defense and Labor,
Health and Human Services, and Education Appropriations Act of 2019 and Continuing
Appropriations Act, 2019, required the Department of Defense (DOD) to collect data and
report on its use of prototype other transactions to Congress. This reporting includes
successes and challenges in using the other transaction authority and appropriation types
used to fund the other transactions.

[2]GAO, *Weapon System Acquisitions: Opportunities Exist to Improve the Department of
Defense's Portfolio Management,* GAO-15-466 (Washington, D.C.: Aug. 27, 2015); 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). Project Management Institute, Inc., *The Standard for Portfolio
Management*, Third Edition (Newtown Square, PA: 2013).

our prior work.[3] Specifically, we compared evidence gathered against these practices, which included reviewing instruction documents, agreement templates, and management review reports. We also provided our preliminary assessments to each organization for which we assessed lessons learned practices to solicit input on the completeness of the information used to support our assessments. We assessed whether the lessons learned practices related to alternative agreements and approaches that were performed by applicable Army organizations fully demonstrated, partially demonstrated, or did not demonstrate leading practices. To determine what practices the Army organizations use to collect and share lessons learned for alternative agreements, we interviewed contracting officials from ACC Headquarters located at Redstone Arsenal in Alabama and its six contracting centers, including:

- ACC-Aberdeen Proving Ground located in Maryland

- ACC-Detroit Arsenal located in Michigan

- ACC-New Jersey located at Picatinny Arsenal in New Jersey

- ACC-Orlando located in Florida

- ACC-Redstone Arsenal located in Alabama

- ACC-Rock Island located in Illinois

We also interviewed officials from CCDC—including its headquarters, the Army Research Laboratory, and research and development centers—about their practices related to CRADAs. To determine the practices used by Army organizations to support lessons learned for the alternative approaches, we interviewed officials from the Army Applications Laboratory, Army Research Laboratory, and Army Rapid Capabilities and Critical Technologies Office that manage the alternative approaches included in our review.

We conducted this performance audit from August 2019 to October 2020 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

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[3]GAO, *DOD Utilities Privatization: Improved Data Collection and Lessons Learned Archive Could Help Reduce Time to Award Contracts*, GAO-20-104 (Washington, D.C.; Apr. 2, 2020); *Project Management: DOE and NNSA Should Improve Their Lessons-Learned Process for Capital Asset Projects*, GAO-19-25 (Washington, D.C.: Dec. 21, 2018); and *Federal Real Property Security: Interagency Security Committee Should Implement a Lessons-Learned Process*, GAO-12-901 (Washington, D.C.: Sept. 10, 2012).

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: Army Contracting Command Guidance and Review Thresholds

Table 6: Supplemental Guidance Identified by Army Contracting Command (ACC) Organizations Related to Alternative Agreement Use

ACC organization	Guidance
Headquarters	• ACC Other Transaction Authority Toolkit • Memorandum for Establishment of Principal Assistants Responsible for Contracting Level Self-Assessments
Aberdeen Proving Ground contracting center	• ACC-Aberdeen Proving Ground Acquisition Instruction Supplement • Research General Terms and Conditions for Aberdeen Proving Ground-Research Triangle Park Division • Template for Conference Grant • Template for Non-Profit University Grant • Template for Cooperative Agreements
Detroit Arsenal contracting center	• Other Transaction Request Template for Prototype Proposal for Ground Vehicle Systems (GVS) • Determinations and Findings Template for Other Transaction Prototype • Other Transaction Statement of Work Template for GVS • Other Transaction Questionnaire Template for New Ad-Hoc Request for Proposal Request for GVS • Other Transaction Solicitation Process Guidance for GVS
New Jersey contracting center	• ACC-New Jersey Acquisition Instruction • Post Award Review Template • Non-Federal Acquisition Regulation Based Review Board Minutes Template • Contract Review Board Minutes Template • Management Review-Award Approving Official Form Template • Solicitation Review Board Minutes Template • Higher Level Review Request for Waiver Template
Orlando contracting center	• ACC-Orlando Other Transactions for Prototype Projects Execution Guide • Competitive Process Options Template • Prototype Acquisition Approach Template
Redstone Arsenal contracting center	• ACC-Redstone Arsenal Acquisition Instruction Supplement • Redstone Arsenal Aviation and Missile Technology Consortium (Consortium) Determinations and Findings Template for Other Transactions • Consortium Other Transaction Acquisition Approach Template • Consortium Other Transaction Selection Memorandum Template • Consortium Other Transaction Statement of Work Template • Consortium Other Transaction Award Process Standard Operating Procedures
Rock Island contracting center	• ACC-Rock Island Draft Other Transaction Prototype Awards Process Guidance • Self-Assessment and Procurement Management Review Program Plan

Source: GAO analysis of Army documentation. | GAO-21-8

Table 7: Army Contracting Command (ACC) Contracting Center Review Thresholds for Alternative Agreement Awards

ACC center acquisition guidance	Agreement type	Dollar value threshold	Reviewer
ACC-Aberdeen Proving Ground Acquisition Instruction Supplement	Grant, cooperative agreement, technology investment agreement	All dollar amounts	Chief of the contracting office and legal
	Other transaction for prototype project	Less than or equal to 100 million dollars	Senior contracting official and legal
ACC-New Jersey Acquisition Instruction	Grant, cooperative agreement, other transaction, and technology investment agreement	Greater than the simplified acquisition threshold[a]	Review board led by the senior contracting official
	Certain other transaction-related actions	Greater than simplified acquisition threshold but not to exceed 30 million dollars	Branch chief
		Greater than 30 million dollars but less than 50 million dollars	Division chief
		50 million dollars but less than 250 million dollars	Chief of the contracting office
		250 million dollars and above	Review board led by the senior contracting official
ACC-Orlando Other Transactions for Prototype Projects Execution Guide	Other transaction for prototype project (non-competitive and no follow-on award provision)	Less than or equal to 50 million dollars	Senior contracting official
		Greater than 50 million dollars but less than or equal to 100 million dollars	Head of the contracting activity
	Other transaction for prototype project awarded using competitive procedures and providing for a follow-on production contract or transaction	Less than or equal to 100 million dollars	Senior contracting official
		Greater than 100 million dollars but less than or equal to 500 million dollars	Head of the contracting activity (with written concurrence from the Deputy Assistant Secretary of the Army for Procurement)
ACC-Redstone Arsenal Acquisition Instruction Supplement	Grant, cooperative agreement, technology investment agreement, and other transaction	All dollar values	Chief of the contracting office
	Other transaction	Less than 50 million dollars	Senior contracting official
		Greater than 50 million dollars to 100 million dollars	Head of the contracting activity and legal
ACC-Rock Island Other Transaction Prototype Awards Process (draft)	Other transaction	Less than or equal to 50 million dollars	Branch chief, agreements officer, and legal

Source: GAO analysis of Army documentation. | GAO-21-8

[a]Effective August 31, 2020, the simplified acquisition threshold as established in the Federal Acquisition Regulation generally is $250,000.

Appendix III: Comments from the Department of the Army

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
ACQUISITION LOGISTICS AND TECHNOLOGY
103 ARMY PENTAGON
WASHINGTON DC 20310-0103

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MEMORANDUM FOR UNITED STATES GOVERNMENT ACCOUNTABILITY OFFICE, ATTN MR. JON LUDWIGSON, DIRECTOR, CONTRACTING AND NATIONAL SECURITY, 441 G STREET, N.W. WASHINGTON, D.C. 20548

SUBJECT: U.S. Government Accountability Office Draft Audit Report on "ARMY MODERNIZATION: Army Should Improve Use of Alternative Agreements and Approaches by Enhancing Oversight and Communication of Lessons Learned," received August 13, 2020 (GAO Code 103751)

1. On behalf of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), the Office of the Deputy Assistant Secretary of the Army (Procurement) reviewed the subject draft audit report and is providing the official Army position.

2. After reviewing the report, I concur with the recommendations. Enclosed are the detailed responses to the report. The point of contact is Mr. John T. Courtis, (703) 697-0888, or e-mail: john.t.courtis.civ@mail.mil.

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Date: 2020.08.31 08:15:36 -04'00'

Encl

Megan R. Dake
Executive Director, Services Acquisition

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Jon Ludwigson, (202) 512-4841 or LudwigsonJ@gao.gov.

Staff Acknowledgments

In addition to the contact named above, the following staff members made key contributions to this report: J. Kristopher Keener (Assistant Director), Sean Merrill (Analyst-in-Charge), Jessica Berkholtz, Matthew T. Crosby, Daniel Glickstein, Stephanie Gustafson, Julia Kennon, Robert Marek, Kevin O'Neill, Andrew N. Powell, Roxanna Sun, and Alyssa Weir.

Related GAO Products

Cost-Type Contracts: Procedures Needed for Sharing Information on Contract Choice Among Military Departments, GAO-20-352. Washington, D.C.: May 19, 2020.

DOD Utilities Privatization: Improved Data Collection and Lessons Learned Archive Could Help Reduce Time to Award Contracts, GAO-20-104. Washington, D.C.: Apr. 2, 2020.

Defense Acquisitions: DOD's Use of Other Transactions for Prototype Projects Has Increased, GAO-20-84. Washington, D.C.: Nov. 22, 2019.

Army Modernization: Army Futures Command Should Take Steps to Improve Small Business Engagement for Research and Development, GAO-19-511. Washington, D.C.: July 17, 2019.

Project Management: DOE and NNSA Should Improve Their Lessons-Learned Process for Capital Asset Projects, GAO-19-25. Washington, D.C.: Dec. 21, 2018.

Military Acquisitions: DOD Is Taking Steps to Address Challenges Faced by Certain Companies, GAO-17-644. Washington, D.C.: July 20, 2017.

Defense Contracting: DOD Needs Better Information on Incentive Outcomes, GAO-17-291. Washington, D.C.: July 11, 2017.

Weapon System Acquisitions: Opportunities Exist to Improve the Department of Defense's Portfolio Management, GAO-15-466. Washington, D.C.: Aug. 27, 2015.

Federal Real Property Security: Interagency Security Committee Should Implement a Lessons-Learned Process, GAO-12-901. Washington, D.C.: Sept. 10, 2012.

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.