United States Government Accountability Office

Report to Congressional Committees

September 2022

OTHER TRANSACTION AGREEMENTS

DOD Can Improve Planning for Consortia Awards

GAO-22-105357

GAO Highlights

Highlights of GAO-22-105357, a report to congressional committees

September 2022

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DOD Can Improve Planning for Consortia Awards

Why GAO Did This Study

In fiscal year 2020, DOD awarded OTAs valued at billions of dollars to companies that were members of consortia to respond to the pandemic. DOD has increased the use of consortia-based OTAs in recent years. GAO found in July 2021 that there was limited insight into who received these OTAs. GAO recommended that DOD track the contractors performing on consortia-based OTAs. DOD agreed with GAO's recommendation and implemented it in June 2022.

A conference report included a provision for GAO to review DOD's use of consortia-based OTAs. This report examines the extent to which DOD (1) used consortia-based OTAs from fiscal years 2019 through 2021, and (2) shared consortia-based OTA information with contracting personnel.

GAO analyzed DOD and federal procurement data; reviewed agency policies; interviewed agency and industry officials; and reviewed a nongeneralizable sample of 12 OTAs. GAO selected the sample based on high dollar amounts and a variety of consortia, among other criteria.

What GAO Recommends

GAO is making six recommendations to DOD, including to develop a systematic approach to track OTA award dollars each consortium receives and to collect, document, and share with its contracting personnel information to consider when planning for consortia-based OTA awards. DOD agreed with the recommendations.

View GAO-22-105357. For more information, contact Marie A. Mak at (202) 512-4841 or makm@gao.gov.

What GAO Found

The Department of Defense (DOD) has the authority to use a contracting mechanism known as an other transaction agreement, or OTA, which is not subject to certain federal acquisition laws and requirements. DOD can award OTAs to individual organizations or to consortia—a group of organizations focused on specific technology areas. The share of awards that DOD has made to consortia is significant. From fiscal years 2019 through 2021, DOD obligated over $24 billion on OTA awards to consortia for prototyping efforts, which included developing COVID-19 vaccines. These obligations represented nearly two-thirds of all DOD's prototype OTA dollars obligated. In addition, of the 28 consortia that received OTA awards in this 3-year period, most were established since 2014 and managed by one of four organizations.

DOD's 28 Consortia by Year Established and Consortium Management Organization

Source: GAO analysis of Department of Defense (DOD) and consortium management organization data. | GAO-22-105357

DOD has collected some data on consortia-based OTAs, but it does not have data on the obligations each consortium has received because it does not have a systematic approach for tracking which consortia receive awards. GAO analyzed other sources of OTA data, including from industry, and found that from fiscal years 2019 through 2021, the top three consortia—medical defense, armaments, and aviation and missiles—received obligations of $8.0 billion, $5.0 billion, and $2.6 billion, respectively, from DOD. By not systematically tracking this type of data, DOD does not provide decision makers insight into consortia and their technology areas.

GAO also found that DOD contracting personnel have limited information to help inform planning when considering whether and how to use consortia-based OTAs. In prior work, GAO found that collecting and sharing lessons learned from previous efforts provides organizations with a powerful method for improving work processes. However, DOD has collected, documented, and shared limited information with contracting personnel on considerations related to:

- benefits and challenges of different ways to structure OTAs,
- compensation for organizations that manage consortia, or
- whether to use an existing consortium or create a new one.

By sharing limited information, DOD is missing opportunities to leverage the knowledge of contracting personnel to better inform planning for future awards.

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Abbreviations

ATI	Advanced Technology International
CMG	Consortium Management Group, Inc.
CMO	consortium management organization
DARPA	Defense Advanced Research Projects Agency
DOD	Department of Defense
FAADC	Financial Assistance Award Data Collection
FAR	Federal Acquisition Regulation
FPDS	Federal Procurement Data System
NSTXL	National Security Technology Accelerator
OTA	other transaction agreement
SOSSEC	System of Systems Consortium, Inc.

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE
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Congressional Committees

In fiscal year 2020, the Department of Defense (DOD) awarded over $12 billion to companies that were members of consortia, in part to rapidly develop COVID-19 vaccines and respond to the pandemic. For these consortia-based awards, DOD used a contracting mechanism known as an other transaction agreement (OTA).[1] OTAs are not subject to certain federal laws and requirements. For example, OTAs are not required to include specific terms and conditions that are typically required when using procurement contracts, which are subject to the Federal Acquisition Regulation (FAR).

Congress gave DOD the authority to use OTAs. Among other benefits, the flexibilities of OTAs can help DOD to attract companies and other organizations that previously had not done business with DOD. DOD can award OTAs directly to these individual organizations or through a consortium, which is an association of organizations established to provide DOD with a pool of stakeholders to innovate in specific technology areas. A consortium can be composed of traditional defense contractors, nontraditional companies, nonprofit organizations, and academic institutions. Consortia generally specialize in one or more technology areas—which can include cutting-edge technologies, such as hypersonics, cyber, and the electromagnetic spectrum—to help deliver needed capabilities to warfighters.

Despite DOD's increased use of consortia-based OTAs in recent years, DOD and decision makers have limited insight into these OTAs, including who receives them. We and the DOD Inspector General previously recommended that DOD provide additional guidance and greater transparency and oversight to help manage the risks associated with

[1]OTAs are agreements other than procurement contracts, cooperative agreements, and grants. Cooperative agreements and grants are agreements with a principal purpose of transferring something of value (e.g., funding) to a recipient to carry out a public purpose rather than acquiring property or services for the DOD's direct benefit or use.

consortia-based OTAs.[2] For example, certain consortia-based OTAs include the performance of functions that may have an increased risk of inappropriate influence of contractors over government decisions. We discuss DOD's actions to address our prior recommendations later in this report. Congressional decision makers have also noted that information on DOD's use of consortia-based OTAs is limited. The National Defense Authorization Act for Fiscal Year 2021 required DOD to begin maintaining a publicly available list of consortia used by DOD.[3]

The conference report that accompanied the National Defense Authorization Act for Fiscal Year 2021 included a provision for GAO to review DOD's use of consortia-based OTAs.[4] This report examines the extent to which: (1) DOD used consortia-based OTAs in fiscal years 2019 through 2021, and (2) DOD shared consortia-based OTA information with contracting personnel.

To identify the extent to which DOD awarded consortia-based OTAs, we analyzed available fiscal years 2019 through 2021 data on all three types of DOD's OTAs:

- **Research.** We reviewed obligations data for research OTAs from the Financial Assistance Award Data Collection (FAADC) system, which contains data on assistance awards, including research OTAs, grants, and cooperative agreements. We determined the FAADC data were not sufficiently reliable for our purpose of describing DOD's use of consortia-based research OTAs.[5] Instead, we interviewed officials from DOD and consortium management organizations (CMO) and identified one active Navy consortia-based research OTA awarded as of September 30, 2021. We requested and analyzed OTA

[2]GAO, *COVID-19 Contracting: Actions Needed to Enhance Transparency and Oversight of Selected Awards,* GAO-21-501 (Washington, D.C.: July 26, 2021); and Department of Defense Inspector General, *Audit of Other Transactions Awarded Through Consortiums*, DODIG-2021-077 (Alexandria, VA: Apr. 21, 2021).

[3]William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021, Pub. L. No. 116-283 § 833 (2021).

[4]H.R. Conf. Rep. No. 116-617, at 1692 (2020).

[5]DOD reports its use of research OTAs, in addition to other assistance awards, in FAADC. However, because this database does not distinguish which awards are specifically research OTAs, we were unable to determine the total amount obligated on research OTAs.

documentation and data from the Navy, and determined that they were sufficiently reliable for our purposes.

- **Prototype.** We analyzed obligations data for prototype OTAs from the Federal Procurement Data System (FPDS).[6] For these OTAs, we also requested and analyzed data received directly from DOD and CMOs to identify which OTAs were consortia-based and the dollars obligated on OTAs awarded to each consortium. After we corrected the data for inaccuracies, we determined these data were sufficiently reliable for our purpose of describing DOD's use of consortia-based prototype OTAs. For 13 OTAs with $4 million in obligations, DOD did not identify whether they were consortium-based or not. The obligations represented 0.02 percent of the obligations on consortia-based OTAs from fiscal years 2019 through 2021 and are excluded from the analyses in our report.
- **Production.** We analyzed obligations data for production OTAs from FPDS, DOD, and CMOs to identify which OTAs were consortia-based and the dollars obligated on OTAs awarded to each consortium. However, DOD did not begin reporting its use of production OTAs in FPDS until June 29, 2019, so we were unable to determine the amount obligated on production OTAs from October 1, 2018, through June 28, 2019. After we corrected the data for inaccuracies, we determined that FPDS, DOD, and CMO data from June 29, 2019 through September 2021 were sufficiently reliable for our purpose of describing DOD's use of consortia-based production OTAs.

We determined that the information and communication component of internal controls was significant to this objective, along with the principle that management should externally communicate quality information to achieve objectives. We assessed DOD's efforts to provide quality data to congressional decision makers and the public on the OTA dollars awarded to each consortium.

To identify the extent to which DOD shared consortia-based OTA information with contracting personnel, we analyzed DOD's OTA policies, guidance, and training to determine the extent to which they contained information on awarding and administering consortia-based OTAs. We

[6]FPDS is a comprehensive, web-based tool for agencies to report procurement contract actions and is the authoritative source for procurement award data, including dollars obligated on contract actions. It also includes a module for reporting certain OTAs. DOD reports its use of prototype and production OTAs in the OTA module of FPDS. DOD does not report research OTAs in FPDS because they are considered assistance instruments.

also selected a nongeneralizable sample of 12 OTAs that DOD awarded between calendar year 2018 (year with the highest number of new consortia) and fiscal year 2021 (current data). We selected the sample based on high non-COVID-19 dollar obligations in fiscal years 2019 through 2021 and to reflect variation in OTA types, military departments, CMOs, and other criteria.[7] For each OTA we selected, we reviewed OTA documents and interviewed contracting personnel and program officials. While we selected a sample of 12 OTAs, several of our analyses exclude two of the OTAs—a research OTA and an OTA with a government-run consortium, either because the analysis was not applicable or information was unavailable. We analyzed publicly available data from consortium websites to identify other information that could be shared with DOD contracting personnel, such as the technology areas covered by consortia, membership dues, and numbers of members. We also interviewed officials from DOD's contracting policy offices, major CMOs, and selected consortia.

For additional information on our objectives, scope, and methodology, see appendix I.

We conducted this performance audit from August 2021 to September 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Congress provided DOD the authority to use OTAs in the late 1980s and has expanded the authority over several decades. Congress first provided the Defense Advanced Research Projects Agency (DARPA)—the agency responsible for DOD's research and development in breakthrough technologies for national security—with the authority to temporarily use OTAs for research projects in 1989.[8] Since then, Congress made the authority permanent, expanded the authority to the rest of the

[7]We did not include COVID-19 consortia-based OTAs in our case selections because we previously reported on these OTAs in July 2021. See GAO-21-501. We identified OTAs and their associated obligations as COVID-19-related if DOD entered "coronavirus" or "COVID-19" in the description of requirement data field in FPDS for that OTA.

[8]National Defense Authorization Act for Fiscal Years 1990 and 1991, Pub. L. No. 101-189, § 251 (1989).

department, and expanded the authority to prototype and production efforts.[9]

OTAs enable agencies and awardees to start with a "blank sheet of paper" to negotiate terms and conditions specific to the award. Such flexibility can facilitate DOD's ability to partner with universities and nonprofit organizations. The flexibility of OTAs can also address concerns from nontraditional contractors—entities that do not typically do business with the federal government—about requirements that apply to procurement contracts.[10] We previously reported that concerns related to intellectual property rights, the length of time it takes DOD to award a contract, and the need to establish a government-unique cost accounting system make DOD an unattractive customer for some companies.[11] Our prior work found that OTAs with nontraditional companies have been used for research, prototyping, and production of new technologies or products.[12] We found that they are more flexible because they are exempt from the FAR and related oversight mechanisms. We also found,

[9]National Defense Authorization Act for Fiscal Years 1992 and 1993, Pub. L. No. 102-190, § 826 (1991); National Defense Authorization Act for Fiscal Year 1994, Pub. L. No. 103-357, § 845 (1993); National Defense Authorization Act for Fiscal Year 1997, Pub. L. No. 104-201, § 804 (1996); and National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92, § 815 (2015).

[10]For the purposes of our report, we refer to contracts subject to the FAR as procurement contracts.

[11]GAO, *Defense Acquisitions: DOD's Use of Other Transactions for Prototype Projects Has Increased,* GAO-20-84 (Washington, D.C.: Nov. 22, 2019); and *Military Acquisitions: DOD Is Taking Steps to Address Challenges Faced by Certain Companies,* GAO-17-644 (Washington, D.C.: July 20, 2017).

[12]GAO, *Army Modernization: Army Should Improve Use of Alternative Agreements and Approaches by Enhancing Oversight and Communication of Lessons Learned*, GAO-21-8 (Washington, D.C.: Oct. 1, 2020); GAO-20-84; and *Federal Acquisitions: Use of 'Other Transaction' Agreements Limited and Mostly for Research and Development Activities*, GAO-16-209 (Washington, D.C.: Jan. 7, 2016).

however, that the use of OTAs carries the risk of reduced accountability and transparency.[13]

DOD generally has department-wide authority to award OTAs for research, prototyping, and production purposes. Specifically:

- **Research OTA.** DOD can use this type of OTA to carry out basic, applied, or advanced research. According to DOD's November 2018 OTA guide, this type of OTA is intended to spur research and development that would benefit both commercial companies and the government and leverage economies of scale without burdening companies with government regulations.[14] Traditional defense contractors were also encouraged to engage in research OTAs, especially in adopting commercial practices, diversifying into the commercial sector, or partnering with nontraditional contractors.

  The authority permitting DOD to award a research OTA notes that DOD can enter into such an OTA when it ensures two factors. First, to the maximum extent practicable, the OTA does not duplicate research being conducted under existing DOD programs. Second, to the extent that DOD determines practicable, the funds provided by the government under the OTA do not exceed the total amount provided by other parties to the OTA. In other words, there is a cost-sharing arrangement in which the government is responsible for no more than half the cost of the project, and nongovernment entities are responsible for the remainder.[15]

- **Prototype OTA.** DOD can use this type of OTA to carry out certain prototype projects, including those that are directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials that DOD is

[13]GAO, GAO-21-501; *COVID-19: Critical Vaccine Distribution, Supply Chain, Program Integrity, and Other Challenges Require Focused Federal Attention*, GAO-21-265 (Washington, D.C.: Jan. 28, 2021); *Transportation Security Administration: After Oversight Lapses, Compliance with Policy Governing Special Authority Has Been Strengthened*, GAO-18-172 (Washington, D.C.: Dec. 21, 2017); *Department of Homeland Security: Further Action Needed to Improve Management of Special Acquisition Authority*, GAO-12-557 (Washington, D.C.: May 8, 2012); and *Department of Homeland Security: Improvements Could Further Enhance Ability to Acquire Innovative Technologies Using Other Transaction Authority*, GAO-08-1088 (Washington, D.C.: Sept. 23, 2008).

[14]Department of Defense, Office of the Under Secretary of Defense for Acquisition and Sustainment, *Other Transactions Guide, Version 1.0* (November 2018).

[15]10 U.S.C. § 4021.

proposing to acquire or develop. Congress did not define a prototype project in statute. DOD's November 2018 OTA guide defined a prototype project as a project that addresses a proof of concept, model, and novel application of commercial technologies for defense purposes, among other things.

DOD may not enter into an OTA for a prototype project unless at least one of four conditions is met. The conditions are related to (1) participation by a nontraditional defense contractor or nonprofit research institution; (2) small business participation; (3) cost sharing between government and industry; or (4) senior procurement executive approval.[16]

- **Production OTA.** Upon successful completion of a prototype OTA, DOD can award follow-on production work without using competitive procedures to the participants of a competitively awarded prototype OTA.[17] DOD can award follow-on production work using an OTA or a procurement contract.[18]

DOD established policies requiring the reporting of prototype and production OTAs into FPDS to help address certain statutory reporting requirements.[19] DOD also requires the reporting of research OTAs into FAADC.

Overview of DOD's Consortia-Based OTAs

DOD can award OTAs directly to an organization, such as a nontraditional contractor, traditional defense contractor, or a university, which we refer to as stand-alone OTAs for the purposes of this report. Alternatively, DOD can award OTAs to members of a consortium—typically through a consortium management organization (CMO)—which we refer to as consortia-based OTAs (or a consortium-based OTA when

[16]Pub. L. No. 114-92, § 815 (2015), codified at 10 U.S.C. § 4022. For the purposes of section 4022, a nontraditional defense contractor is an entity that is not performing on any DOD contract or subcontract that is subject to full coverage under the cost accounting standards prescribed by certain statutes and regulations, and has not performed on such a contract or subcontract for at least 1 year before DOD's solicitation for the OTA. 10 U.S.C. § 3014.

[17]10 U.S.C. § 4022(f).

[18]We did not assess follow-on work that DOD conducted using procurement contracts in our review.

[19]The Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 required certain improvements to FPDS, including the collection of data on certain OTAs. Pub. L. No. 110-417, § 874 (2008).

discussing a single OTA) for the purposes of this report. Below is a list of key terms related to consortia-based OTAs and their definitions:

- **A consortium.** A group of members interested in a specific technology area or areas, which provides the government with a ready pool of stakeholders to innovate in that technology area. A consortium can be its own legal entity or not. While a consortium can refer to a group of entities that organically form a team to respond to a specific government proposal, for the purposes of this report, these consortia are not included.[20]
- **CMO.** An organization that manages the consortium and is typically a nonprofit organization. A CMO can also be a for-profit company or an academic institution. DOD also has one instance of a government-managed consortium in which the CMO is an Army office. In addition:
  - A consortium and a CMO can be the same entity,
  - A CMO can manage a single consortium or multiple consortia, and
  - When a consortium is not a legal entity, the CMO serves as the legal entity.

  A CMO can provide acquisition support and administrative services to the government, such as market research, releasing requests for proposals to consortium members on behalf of the government and recruiting consortium members. The government pays the CMOs for such services, which we refer to as CMO compensation for the purposes of this report.

  The CMO can also provide services to consortium members, such as training and ensuring members' proposals are compliant with the government's request for proposal requirements. Consortium membership dues help to cover the costs associated with member services.
- **Consortium members.** Consortium members are organizations, including traditional defense contractors, nontraditional contractors, academic institutions, and nonprofit organizations, that join a consortium. The members typically sign a consortium membership agreement (also referred to as articles of collaboration). The agreement can outline information such as the consortium's

[20]Officials from DARPA told us that they awarded OTAs to organically formed consortia in the 1990s but have not since. They explained that typically, the members of such a consortium signed memoranda of agreement with one another. This type of consortium also typically elected one member to sign the OTA with the government on behalf of the other members or all of the members signed an OTA directly with the agency.

governance structure, membership dues, rules for handling proprietary information within the consortium, principles for handling intellectual property, and other principles that the members agree to when joining the consortium.

For most consortia, members pay dues to join the consortium and gain exclusive access to government opportunities, such as requests for proposals for project awards, and other consortium-related benefits such as training and teaming opportunities. We refer to consortium members that receive OTA awards as consortium member awardees for the purposes of this report.

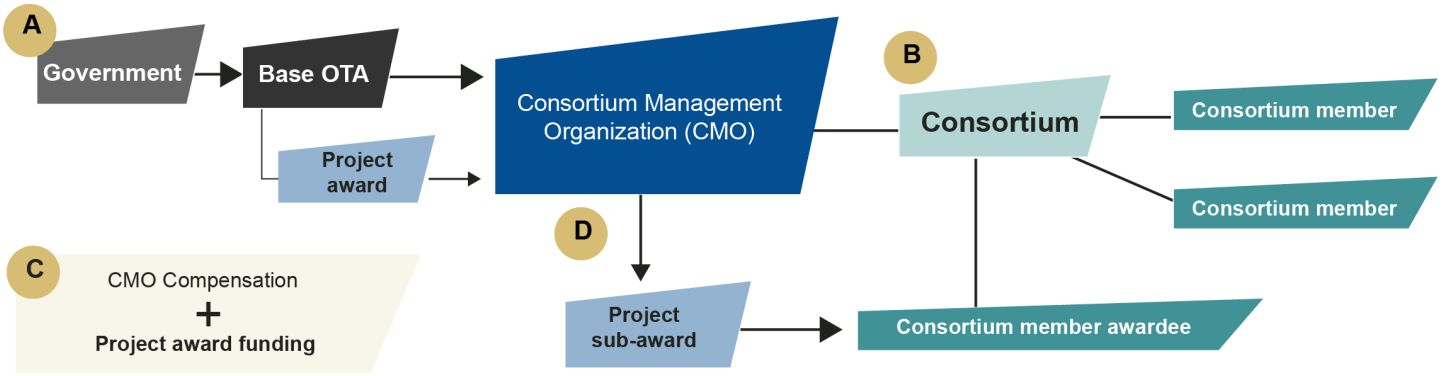
- **Base OTA.** DOD can award a base OTA that provides the terms and conditions that generally apply to all projects awarded and serves as a starting point for negotiations between DOD and consortium member awardees. DOD typically awards a base OTA to the CMO, which, on behalf of the consortium, negotiates the umbrella terms and conditions.

  DOD can award one or more base OTAs to a single consortium. For example, the Army awarded a base OTA to the armaments consortium for ordnance work. The Navy awarded a base OTA to the same consortium for naval energy work. DOD can also award a single base OTA to multiple consortia. For example, the Marine Corps awarded a base OTA to two consortia managed by the same CMO for work in (1) command, control, and communications, and in (2) energy, environment, and demilitarization.

- **Project award.** DOD can award a project that covers the research, prototype, or in some cases, production efforts. DOD selects the consortium member awardee and typically awards the project to the CMO. The CMO, in turn, issues a project sub-award—which executes the project—to the consortium member. In other cases, DOD can award the project directly to the consortium member awardee rather than via the CMO. The project award includes the terms and conditions, including statement of work, specific to the project.

DOD's consortia-based OTAs vary based on the relationships between the CMO, consortium, and consortium members as well as how projects are awarded. Figure 1 depicts a notional consortium-based OTA model for explanatory purposes.

Figure 1: Notional DOD Consortium-Based OTA Model



A. The government awards a base OTA, which provides terms and conditions that generally apply to all projects awarded and serves as a starting point for negotiations between the government, CMO, and consortium member awardees. In this notional model, the base OTA and projects are awarded to a consortium via the CMO. The project award includes the terms and conditions specific to the project.

B. Organizations join a consortium by signing a consortium membership agreement, and in some cases by paying membership dues. Once an organization is a consortium member, it is eligible to receive project awards.

C. The government obligates funding for both CMO compensation and the project awards. The funding can be obligated on the base OTA or project award, depending on the model. CMO compensation is used to pay the CMO for administrative and acquisition support that it provides to the government.

D. In this notional model, the CMO issues a project sub-award on behalf of the government to a consortium member, making it a consortium member awardee. A project sub-award executes the project.

OTA = other transaction agreement

Source: GAO analysis of Department of Defense information. | GAO-22-105357

Consortia Received Majority of OTA Obligations, but DOD Has Limited Insight into Which Consortia Receive Funding

DOD obligated over $24 billion on consortia-based OTAs from fiscal years 2019 through 2021, the vast majority of which were prototype OTAs. DOD obligated more than twice as much money on consortia-based prototype OTAs in fiscal year 2020 than it did in fiscal year 2019 due primarily to the COVID-19 response. Even when looking at only those OTAs unrelated to COVID-19, consortia-based prototype OTAs comprised the majority of OTA spending during these years. However, insight into which consortia receive DOD's OTA awards and spending in specific technology areas is limited.

Most of DOD's Obligations to Consortia Were Through Prototype OTAs

DOD obligated at least $24.3 billion on consortia-based research, prototype, and production OTAs from fiscal years 2019 through 2021.[21] Over this 3-year period, prototype OTAs comprised the overwhelming majority of DOD's reported consortia-based OTA obligations at over 99 percent (see table 1).

Table 1: Dollars Obligated on DOD's Consortia-Based OTAs by OTA Type, Fiscal Years 2019-2021 (in millions)

OTA type	2019	2020	2021	Total 2019-2021
Prototype	5,205.5	12,623.8	6,444.1	**24,273.4**
Research[a]	12.6	12.3	9.7	**34.6**
Production	0.4[b]	8.5	21.0	**29.9**
Total	**5,218.5**	**12,644.6**	**6,474.8**	**24,337.9**

DOD = Department of Defense

OTA = other transaction agreement

Source: GAO analysis of DOD, Federal Procurement Data System (FPDS), and industry data. | GAO-22-105357

Note: Obligation amounts were adjusted for inflation using the Fiscal Year 2021 Gross Domestic Product Price Index.

[a]All research OTA obligations are from one Navy OTA for shipbuilding research.

[b]Fiscal year 2019 obligations reported for production OTAs are from June 29, 2019 through September 30, 2019, because DOD did not begin collecting this data in FPDS until June 29, 2019.

Prototype OTAs

DOD's $24.3 billion in obligations on consortia-based prototype OTAs comprised 65 percent of the $37.3 billion in obligations on all prototype OTAs (consortia-based and stand-alone combined) awarded from fiscal years 2019 through 2021.

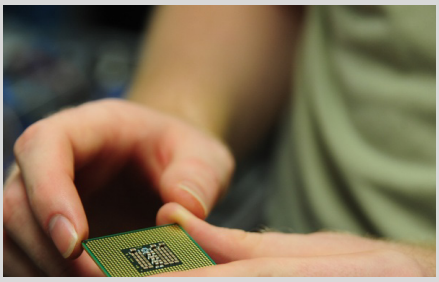
DOD contracting personnel and CMO officials cited several factors for why DOD used consortia-based OTAs for prototyping efforts:

- **Access to a ready pool of vendors.** A consortium helps attract new vendors, including nontraditional contractors. The CMO facilitates the formation of consortia and access to such contractors, for example, by acting as a liaison and providing support to vendors. This can include negotiating terms and conditions on the base OTA, such as provisions related to intellectual property rights or cybersecurity requirements.

[21]Fiscal year 2019 obligations reported for production OTAs are from June 29, 2019, through September 30, 2019, because DOD did not begin collecting these data in FPDS until June 29, 2019. As a result, the data do not reflect obligations from October 1, 2018, through June 28, 2019, for production OTAs.

The Air Force's Space Force contracting personnel explained that using a CMO helped them to avoid vendor lock, in which they repeatedly used the same vendor to meet its requirements. For example, contracting personnel stated that they received 20 proposals for one requirement instead of the usual seven vendors that previously submitted proposals. Officials noted that increased competition can lead to better prices for the government, and the inclusion of new vendors can result in more innovative proposals.

Consortium-Based Other Transaction Agreement (OTA) for Prototyping of Processors for Air Force Threat Simulators



In 2021, the Air Force awarded a $14.5 million project to a member of the System of Systems Consortium to prototype processors used in threat simulators. The Air Force uses these simulators to train aircrew in tactical operations in a variety of warfare environments. Due to obsolete parts and software compatibility requirements, the simulators' original processors had become difficult to maintain. Contracting personnel stated that the project process has been faster than expected. They also said that the consortium management organization's standard templates, such as requests for white papers, made the process more efficient.

Source: GAO analysis of Air Force information and U.S. Air Force photo by Staff Sgt. Nick Wilson. | GAO-22-105357

- **Collaboration between the government and vendors, and among vendors themselves.** Government and consortium members are more likely to collaborate when the planned award is an OTA rather than a procurement contract. Consortia officials told us that contracting personnel are more comfortable in pursuing pre-solicitation collaboration with industry on OTAs, in part due to concerns about bid protests with procurement contracts. The ongoing, iterative, and open communication in the OTA pre-award process facilitates the government's ability to conduct market research and obtain information on industry's capabilities.[22] According to officials, as a result, DOD can issue solicitations with requirements that are better suited to what the government needs and industry can provide.

  A consortium can also facilitate collaboration among members. For example, Army Contracting Command – Aberdeen Proving Ground contracting personnel stated that for their prototype project for low-light cameras, they required vendors to develop proposals that used common interfaces. Being in a consortium enabled the vendors to share information with each other about this common interface more easily than if the government had to negotiate with each of them separately.

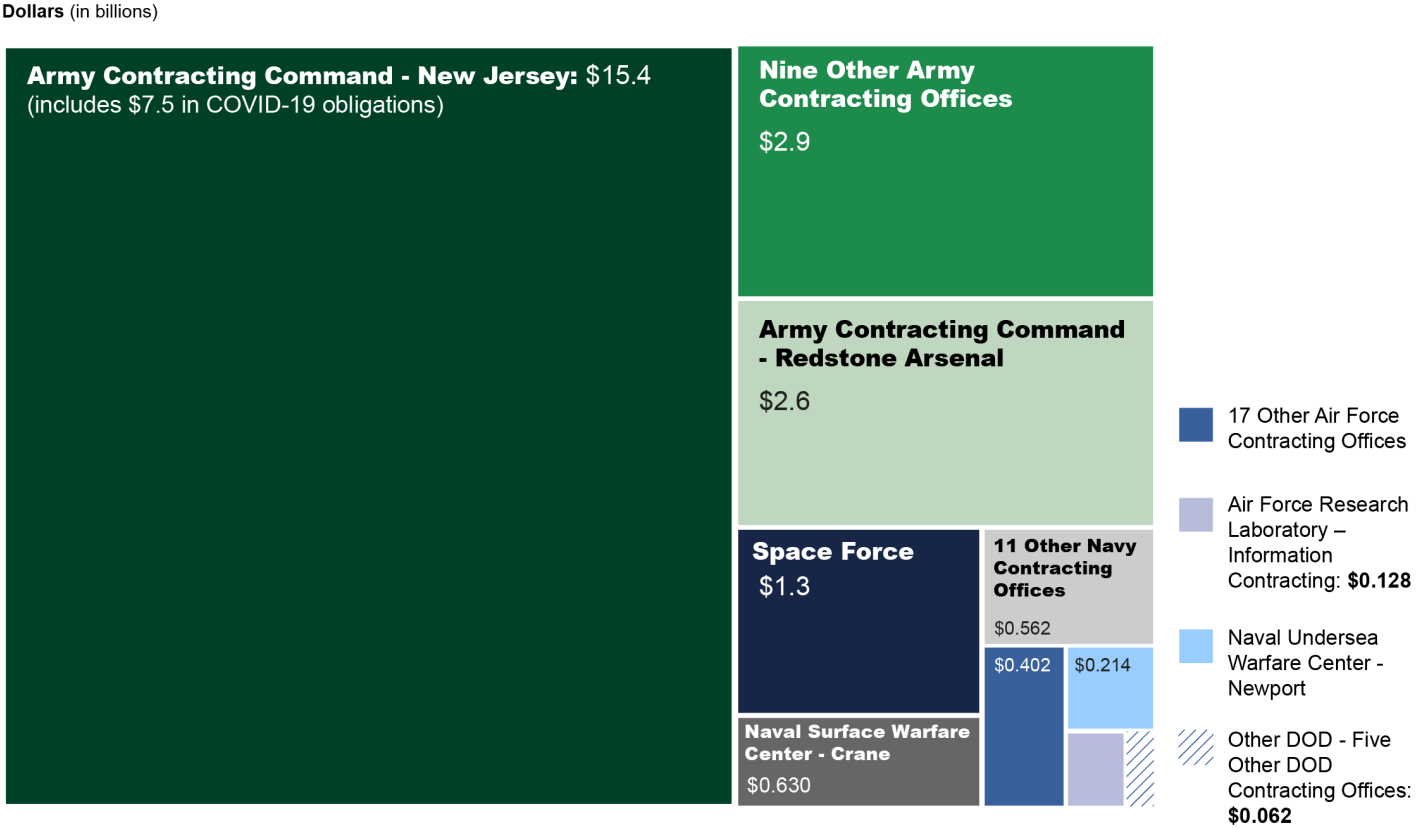
- **Efficient project awards due to CMO-provided acquisition support and administrative services.** The CMO is a single point of contact for the government, managing hundreds of consortium members and providing administrative services to both the government and vendors. Contracting personnel from the Air Force's Space Force told us that because of the consortia-based OTA model, they have been able to award dozens of competitive prototype projects over the last few years. The CMO's administrative services can include vetting members before they join the consortium,

[22]While both the FAR and certain statutes authorize interested parties to protest procurement contracts, including their solicitation, cancellation, and award, these regulations and statutes generally do not authorize similar protests regarding OTAs. See FAR Subpart 33.1; 28 U.S.C. 1491; *Spartan Medical*, B-419503, Feb. 26, 2021; and *Space Exploration Technologies Corp. vs. United States*, 144 Fed. Cl. 433 (2019).

collecting proposals and reviewing them for compliance with the solicitation, and performing cost analysis of proposals. Contracting personnel from the Navy's Naval Surface Warfare Center – Crane told us that they found the tools and dashboards used by the CMO to monitor vendor progress on projects to be helpful. According to officials, by delegating certain responsibilities to a CMO, contracting personnel can instead focus more on managing multiple concurrent acquisitions.

The Army was the military department with the majority of DOD's spending on consortia-based prototype OTAs. The Army obligated $21.0 billion or 87 percent of all consortia-based prototype OTA obligations. The Army was followed by the Air Force at about 7 percent and the Navy at nearly 6 percent (see fig. 2).

Figure 2: Obligations on DOD's Consortia-Based Prototype Other Transaction Agreements by DOD Military Department and Top Contracting Offices, Fiscal Years 2019-2021

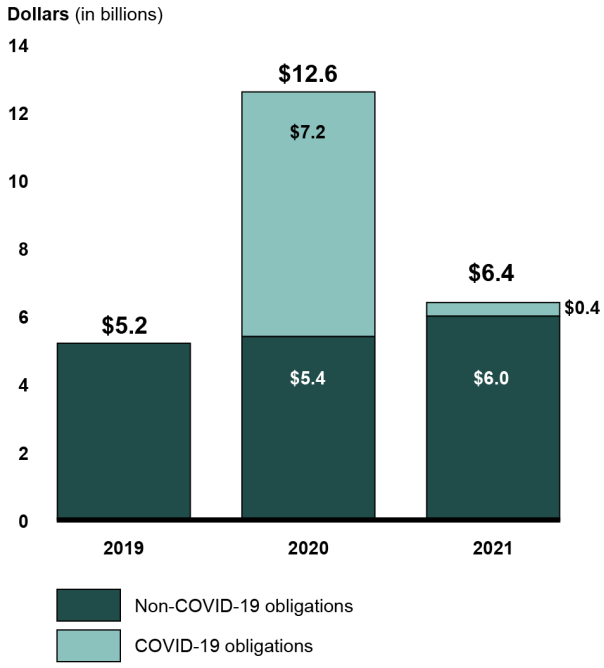


Source: GAO analysis of Federal Procurement Data System, Department of Defense (DOD) and industry data. | GAO-22-105357

Note: Obligation amounts were adjusted for inflation using the Fiscal Year 2021 Gross Domestic Product Price Index.

DOD's obligations on consortia-based prototype OTAs more than doubled from fiscal year 2019 to 2020, and then decreased in 2021. DOD's response to the COVID-19 pandemic was the primary driver in the spike in 2020 (see fig. 3).[23]

Figure 3: Dollars Obligated on DOD's Consortia-Based Prototype Other Transaction Agreements from Fiscal Years 2019-2021



Source: GAO analysis of Federal Procurement Data System, Department of Defense (DOD), and industry data. | GAO-22-105357

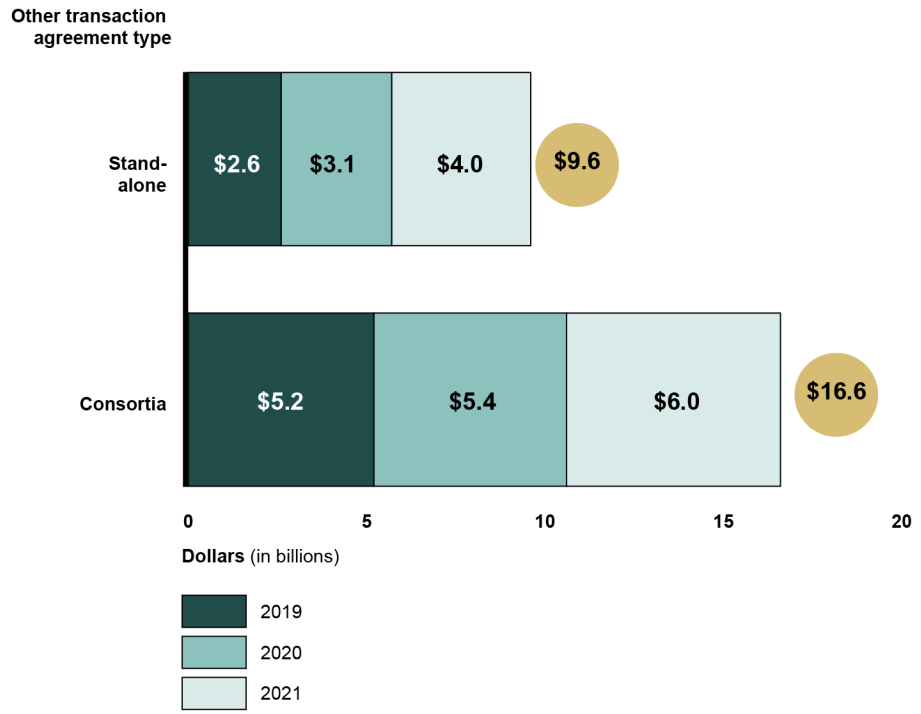
Note: Obligation amounts were adjusted for inflation using the Fiscal Year 2021 Gross Domestic Product Price Index.

While consortia-based prototype OTAs awarded in response to COVID-19 were significant, consortia-based prototype OTAs not related to

[23]In July 2021, we found that from March 2020 through March 2021, DOD obligated $7.2 billion on OTAs awarded to members of a medical defense consortium mostly for vaccine development and manufacturing. For more information on COVID-19 OTAs awarded to consortia, see GAO-21-501.

COVID-19 grew each year and collectively comprised 63 percent of non-COVID OTA obligations from fiscal years 2019 through 2021 (see fig. 4).

Figure 4: Obligations on DOD's Consortia-Based and Stand-alone Prototype Other Transaction Agreements Not Related to COVID-19, Fiscal Years 2019-2021



Source: GAO analysis of Federal Procurement Data System, Department of Defense (DOD) and industry data. | GAO-22-105357

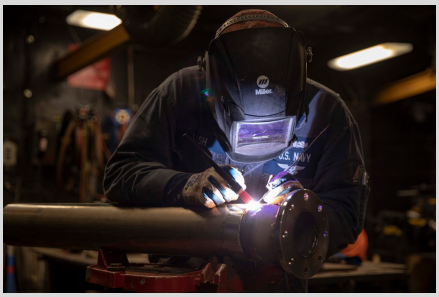
Note: Obligation amounts were adjusted for inflation using the Fiscal Year 2021 Gross Domestic Product Price Index. Numbers may not add due to rounding.

Research OTAs

From fiscal years 2019 through 2021, DOD made minimal use of research OTAs awarded to consortia, obligating $34.6 million on one OTA. DOD did not have data on the obligations on all of its research OTAs (consortia-based and stand-alone OTAs) for comparison. The data system that DOD uses to report research OTAs—FAADC—does not differentiate research OTAs from other types of financial assistance awards, and DOD does not systematically collect data on research

OTAs.[24] Officials from the Under Secretary of Defense for Research and Engineering—the office responsible for overseeing DOD's research OTAs and other assistance awards—said that to determine the amount obligated on research OTAs in the future, they may require adding the type of award in the award description in FAADC or explore longer-term system changes.

Consortium-Based Other Transaction Agreement (OTA) for Navy Shipbuilding Research



The Navy awarded a research OTA to a consortium for shipbuilding research, with $34.6 million in obligations from fiscal years 2019 through 2021. The effort is a collaboration between the consortium management organization and 11 major shipyards to reduce costs related to shipbuilding and ship repair. According to consortium management organization officials, the shipbuilding research consortium promotes high levels of collaboration among the Navy, shipyards, and vendors through hosted panel discussions of challenges and potential solutions. The consortium also shares results from research projects across the Navy and shipyards because the entire shipyard industry could benefit from the results.

Source: GAO analysis of Navy information and U.S. Navy photo by Petty Officer 2nd Class Casey Moore. | GAO-22-105357

Officials from DOD's Research and Engineering office and DARPA explained that DOD made minimal use of consortia-based research OTAs for several reasons:

- **DOD can find awardees without using a consortium.** Officials stated that some DOD research personnel can find innovative awardees for the work and do not need assistance identifying nontraditional contractors. For example, senior policy officials from DARPA stated that their agency has enough recognition and reputation to attract nontraditional contractors and academic institutions without the use of a consortium.
- **Teaming can occur without CMO assistance.** Officials stated that teaming among organizations happens more organically under research OTAs than under prototype OTAs. As a result, officials said that the government may not require a CMO to facilitate teaming arrangements among organizations.
- **Agency does not need to pay CMO compensation.** DARPA personnel said that they do not want to pay CMO compensation for administrative and acquisition support services because they have the internal capacity to perform these functions and they want to maximize their funding for the research efforts.
- **Other types of assistance instruments are available for research.** More broadly, research organizations can award other types of instruments aside from research OTAs for fundamental research, such as grants and cooperative agreements. For example, senior policy officials from DARPA explained that they ask offerors to indicate in their proposals their preferred instruments and universities tend to prefer cooperative agreements.

[24]As context, from fiscal years 2019 through 2021, DOD obligated about $1.6 billion on research OTAs and other assistance instruments that are not grants or cooperative agreements, including partnership intermediary agreements and procurements for experimental purposes. Research OTAs are a subset of the $1.6 billion, but FAADC does not provide information on the amount.

DARPA officials added that these same factors contributed to the agency's minimal use of consortia-based prototype OTAs.

For the one research OTA that DOD—specifically, the Navy—awarded to a consortium from fiscal years 2019 through 2021, Navy contracting personnel provided several reasons for why they used a consortium-based OTA. They cited that the consortium facilitates information-sharing between government and industry, and the CMO helps to reduce the workload burden on their acquisition staff.[25]

Production OTAs

DOD also made minimal use of consortia-based production OTAs, obligating $29.9 million on seven OTAs from June 2019 through September 2021. The obligations on these consortia-based production OTAs comprised 2 percent of the $1.5 billion obligations on all production OTAs (consortia-based and stand-alone combined) during the same time period.

[25]The Navy noted that after the 3-year period we reviewed, it awarded another consortium-based research OTA in November 2021. Navy officials stated that they chose to use a consortium-based research OTA because it can facilitate access to academic institutions and collaboration among such organizations. Navy officials also explained that because their research and prototype OTAs are awarded to the same consortium, this may help transition research into prototypes for existing Navy platforms and applications.

Consortium-Based Other Transaction Agreement (OTA) for Production of Navy Trailers

In 2021, the Navy noncompetitively awarded an $810,000 follow-on OTA to produce 14 trailers with communication capabilities for use by the National Guard in emergency response situations. According to Navy contracting personnel, they chose to award this OTA through the naval aviation consortium for the follow-on production effort because they wanted to build upon the terms and conditions of the work outlined in the base OTA and had a working relationship with the vendor and the consortium management organization.

Source: GAO analysis of Navy information and U.S. Army National Guard photo by Staff Sgt. Zane Craig. | GAO-22-105357

Contracting personnel provided a few reasons why DOD did not award many consortia-based production OTAs:

- **Contracting personnel have already identified the awardees.** Because the government has already identified the vendor with the successful prototype, the government can award directly to the vendor rather than through the consortium. Contracting personnel explained that by awarding a stand-alone OTA or FAR contract, they would not pay CMO compensation.
- **Some OTAs do not provide for follow-on production.** The consortia-based prototype OTAs can exclude the award of follow-on production work through the original OTAs, necessitating the award of follow-on work as a stand-alone OTA or FAR contract.
- **Time is needed before production is achievable.** As more prototypes progress, they may become eligible for follow-on production work in the future.

DOD's Data on Consortia-based OTAs Do Not Include Key Information

While DOD has collected some data on consortia-based OTAs, it does not have quality information on the OTA obligations each consortium has received or for specific technology areas. Since 2019, in response to legislation, DOD has submitted an annual report to Congress on its prototype OTAs that includes information on the extent to which it has used consortia-based OTAs.[26] Due to limitations with FPDS, DOD's Defense Pricing and Contracting office—which is responsible for overseeing and implementing initiatives related to DOD-wide contracting policies and strategies, including those related to prototype OTAs—manually collects data each year from contracting personnel on active

[26]The report is required by section 873 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232 (2018), as amended by section 819 of the National Defense Authorization Act for Fiscal Year 2020, Pub. L. No. 116-92 (2019).

prototype OTAs.[27] FPDS did not, for example, capture whether an OTA is consortium-based or not. As a result, the manual data collection asked contracting personnel to identify whether an OTA was awarded to a consortium or not.

In response to our prior recommendations, federal agencies made changes to collect better data on consortia-based OTAs. In July 2021, we found that FPDS did not provide information on which consortium members performed the work when an agency awards a consortium-based project.[28] Instead, FPDS generally tracked the CMOs that received the OTA awards. We recommended to DOD and other agencies responsible for implementing changes to FPDS to consider prioritizing the development and implementation of a systematic approach to track the consortium members performing work for each project award. DOD and the other agencies concurred with the recommendation. In June 2022, the agencies updated FPDS to track which consortium members are performing the work and whether OTAs are consortium-based or not.

Even with these FPDS updates, DOD, decision makers, and the public do not have quality information on the extent to which each consortium has received OTA awards. Each consortium generally covers discrete technology areas, so tracking how much each consortium receives in OTA dollars would also provide insight into the extent to which DOD is investing in various technology areas. Policy makers have also called for better insight into DOD's use of consortia-based OTAs. The National Defense Authorization Act for Fiscal Year 2022 required DOD to assess the merits of modifying its OTA authorities related to its ability to monitor and report on individual awards made under consortia-based OTAs, among other things.[29] Further, DOD's November 2018 OTA guide notes that one of the objectives of OTAs is to provide the government with access to state-of-the-art technology.[30] Federal internal control standards

[27]While DOD included data on production OTAs in its fiscal year 2021 annual report to Congress, it did not distinguish between prototype and production OTAs in its reporting.

[28]GAO-21-501.

[29]National Defense Authorization Act for Fiscal Year 2022, Pub. L. No. 117-81 § 824 (2021).

[30]Department of Defense, Office of the Under Secretary of Defense for Acquisition and Sustainment, *Other Transactions Guide, Version 1.0* (November 2018).

state that management should externally communicate the necessary quality information to achieve objectives.[31]

However, DOD does not have a systematic approach for tracking the obligated dollars each consortium has received through consortia-based OTAs. For example, while FPDS includes a data field for tracking OTA recipients, DOD personnel typically enter in the names of the CMOs. FPDS does not include a separate data field for systematically tracking the consortium. We previously found that implementing changes to FPDS can be challenging because updates to the system are resource-constrained. Updates to FPDS must be prioritized by a majority of the 24 agencies that vote on which updates to fund to be implemented.[32] As a result, manually collecting data—while not systematic—can serve as a stopgap measure until DOD implements a systematic approach.

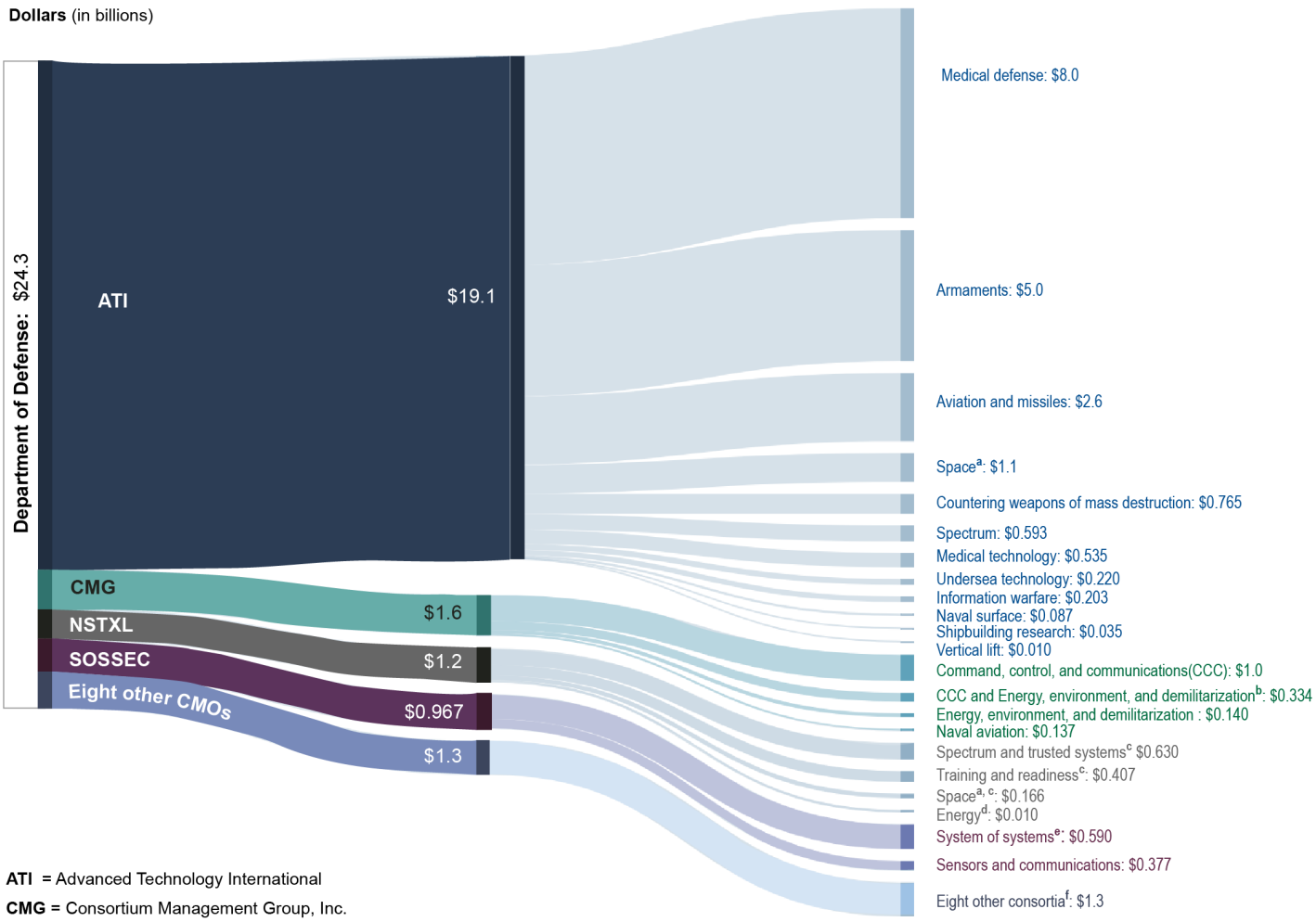
However, DOD does not manually report information on which consortia have received OTA awards. For example, contracting personnel could identify which consortium a base OTA or project is awarded to, either in the description of requirement field in FPDS or in DOD's annual OTA data collection. Nevertheless, DOD contracting personnel typically do not report such information, and DOD has not issued guidance requiring them to do so. As a result, compiling such data requires piecing together information from multiple sources.

We were able to compile data from FPDS, DOD, CMOs, and public sources for fiscal years 2019 through 2021 and found that DOD's obligations of $24.3 billion on all consortia-based OTAs were awarded to 12 CMOs representing 28 different consortia. Our analysis shows the dollars each consortium received, revealing DOD's top consortia awardees and associated technology investments when using consortia-based OTAs: $8.0 billion in medical defense (primarily for COVID-19 vaccine development); $5.0 billion in armaments; $2.6 billion in aviation and missiles; $1.3 billion in space; and $1.0 billion in command, control, and communications consortia (see fig. 5).

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

[32]The 24 voting members are from agencies identified in the Chief Financial Officer Act and include DOD. GAO-21-501.

Figure 5: Obligations on DOD's OTAs by CMO and Consortium from Fiscal Years 2019-2021



ATI = Advanced Technology International

CMG = Consortium Management Group, Inc.

CMO = consortium management organization

DOD = Department of Defense

NSTXL = National Security Technology Accelerator

OTA = other transaction agreement

SOSSEC = System of Systems Consortium, Inc.

Source: GAO analysis of data from the Federal Procurement Data System, DOD, and CMOs. | GAO-22-105357

Note: Obligation amounts were adjusted for inflation using the Fiscal Year 2021 Gross Domestic Product Price Index. For 13 OTAs with $8 million in obligations that DOD identified as consortia-based, we did not have enough information to determine the consortium or CMO. These obligations represented 0.03 percent of the obligations on consortia-based OTAs from fiscal years 2019 through 2021.

[a]The space consortium was managed by ATI from 2017 to 2021. The Air Force recompeted the requirement for a space consortium-based OTA, and NSTXL won the follow-on award as the CMO in 2021.

[b]This was an OTA awarded to two consortia—command, control, and communications consortium and energy, environment, and demilitarization consortium. We were also not able to distinguish the obligations each consortium received.

[c]NSTXL includes three consortia, each with its own OTA award. Any member of a NSTXL consortium has access to opportunities for all of NSTXL's other consortia.

[d]NSTXL officials explained that the period of performance for the OTA awarded to its energy consortium ended, and it is not accepting new work.

[e]SOSSEC's obligations include eight OTAs. Any member of SOSSEC has access to opportunities for all eight OTAs.

[f]The other eight CMOs are the Army; Applied Research Associates, Inc.; Battelle Memorial Institute; Defense Automotive Technology Consortium; MoveAmerica; National Advanced Mobility Consortium, Inc.; National Center for Manufacturing Sciences; and Texas A&M Engineering Experiment Station. In 2019, the Navy awarded a consortium-based OTA to an expeditionary warfare consortium via the CMO, Applied Research Associates. The OTA did not include any obligations. According to MoveAmerica officials, the consortium that it managed disbanded in July 2021 as a result of government budget constraints.

Appendix II provides a full list of consortia with active DOD OTAs from fiscal years 2019 through 2021, including the associated CMOs and the number of members per consortium.

Without a systematic or a manual approach for tracking which consortia are receiving OTA awards and associated obligations, DOD does not provide congressional decision makers and taxpayers with insight into one of the key players in consortia-based OTAs—the consortia—and the extent to which DOD is using consortia-based OTAs to invest in various technologies to help deliver capabilities to its warfighters.

DOD Has Shared Limited Information with Contracting Personnel to Improve Planning for Consortia-based OTAs

DOD contracting personnel have limited information to help inform their planning efforts on whether and how to use consortia-based OTAs, even though consortia-based OTAs comprise the majority of DOD's OTA obligations for prototypes from fiscal years 2019 through 2021. DOD's November 2018 OTA guide states that adequate advanced planning is essential for the success of OTA awards. Based on our review of DOD's OTA policies, guidance, and training, we identified four key areas related to planning for consortia-based OTAs that DOD generally does not collect, document, or share with its contracting personnel. These include considerations related to:

- Structuring consortia-based OTAs and the benefits and challenges with each approach,
- Structuring and negotiating CMO compensation,
- Using CMOs to conduct cost analysis, and
- Using an existing consortium or creating a new one.

In our prior work, we found that collecting and sharing lessons learned from previous efforts provides organizations with a powerful method for sharing ideas for improving work processes.[33] By sharing limited information on awarding and administering consortia-based OTAs, DOD is missing opportunities to better inform planning.

DOD Has Shared Limited Information on Various Ways to Structure Consortia-Based OTAs

DOD has shared limited information on various approaches contracting personnel can use to structure their OTAs and the potential benefits and challenges with each approach. Consortia-based OTA models can vary based on:

- How the projects are awarded from the base OTAs,
- Which entity receives the project awards (CMO or consortium member), and
- Whether the CMO is government-run or not.

However, OTA guidance issued by the Defense Pricing and Contracting office and Air Force do not address the benefits and drawbacks of different consortia-based OTA structures, limiting awareness among DOD contracting personnel of such considerations. Two DOD offices issued guidance or training that addressed aspects of consortia-based OTA structures.

- In September 2019, the Army issued a memorandum that addressed how the structure of the base OTAs and project awards affected transparency but rescinded it due to other concerns.
- In October 2021, the Naval Air Systems Command developed OTA training slides that covered the importance of how a consortium-based OTA is structured and identified some benefits and drawbacks of the structures.

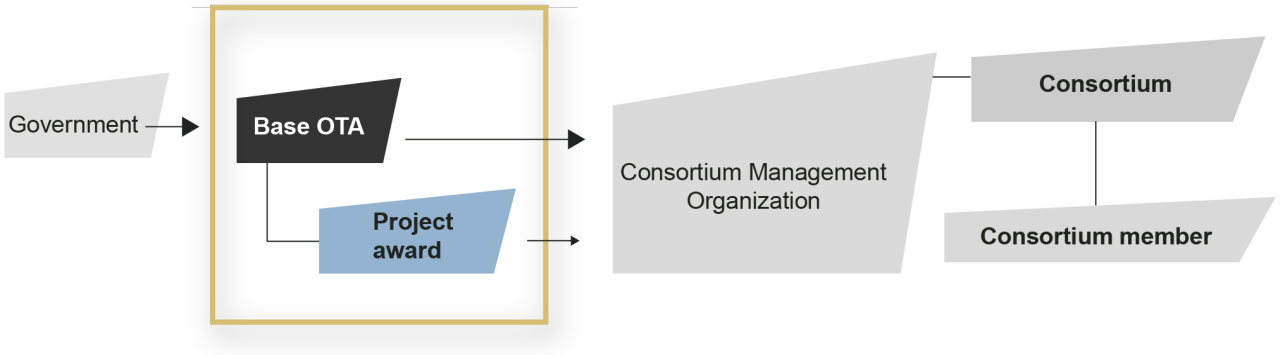
[33]GAO, *Grants Management: OMB Should Collect and Share Lessons Learned from Use of COVID-19-Related Grant Flexibilities*, GAO-21-318 (Washington, D.C.: Mar. 31, 2021); *DOD Utilities Privatization: Improved Data Collection and Lessons Learned Archive Could Help Reduce Time to Award Contracts*, GAO-20-104 (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).

Effects on Data Transparency Depending on How DOD Awards Projects from Base OTAs

DOD can award projects from a base OTA in various ways. Based on our analysis of 10 consortia-based OTAs in our review, we found that each base OTA and project award structure has its own benefits and drawbacks related to the transparency of obligations in FPDS.[34]

Specifically, for the 10 OTAs we reviewed, most contracting personnel awarded the projects from the base OTA in one of two ways: (1) base OTAs and project awards each have their own unique award numbers in FPDS or (2) projects awarded as modifications to the base OTA (see fig. 6 and fig. 7, respectively).

Figure 6: Notional Consortia-Based OTA Structure in Which Base OTA and Prototype Projects Each Have Unique Award Numbers in the Federal Procurement Data System



OTA = other transaction agreement

Source: GAO analysis of Department of Defense information. | GAO-22-105357

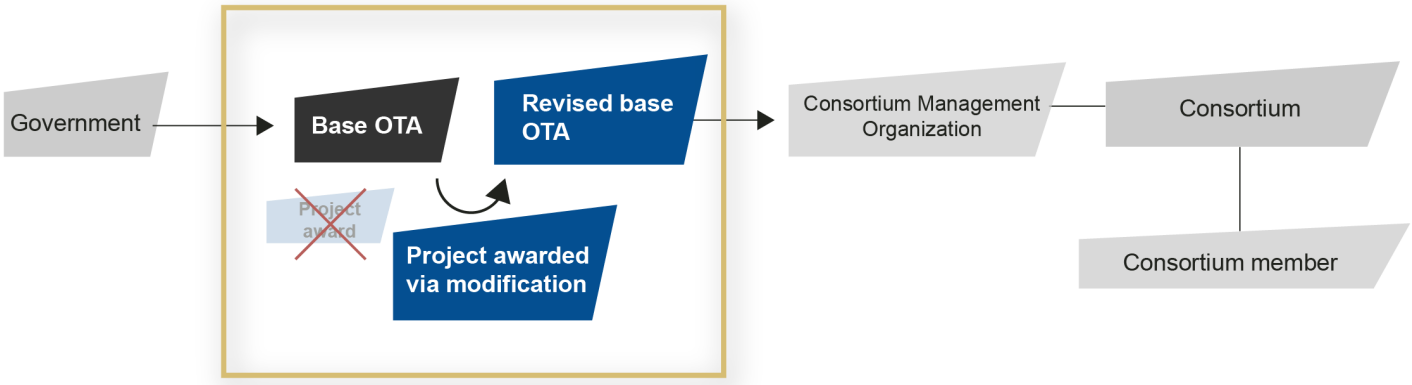
Note: In this notional model, the base OTA provides terms and conditions that generally apply to all project awards and serves as a starting point for negotiations between the government and consortium member awardees. The project award includes the terms and conditions specific to the project.

Under a structure in which the base OTA and project awards have their own unique award numbers, contracting personnel generally awarded a base OTA to a consortium via the CMO and subsequently awarded projects via the CMO as well.

[34]We reviewed a nongeneralizable sample of 12 OTAs. Of those, one was for research and one had a government-managed consortium. For the purposes of analyzing base OTA and project award structures, we excluded these two OTAs and focused on the remaining 10.

One benefit to this structure is that FPDS users—including DOD and decision makers—could identify each project's obligated dollars. However, one drawback to this structure is that to identify the total obligations awarded to the consortium, an FPDS user must identify the base OTA and all of the associated project awards. In instances in which the project award does not reference the base OTA's unique award number in FPDS, FPDS users would not have the information needed to identify the obligations by consortium. Additionally, as noted earlier, DOD does not identify the name of the consortium when entering base OTAs or project awards into FPDS—necessary information to identify obligations by consortium.

Figure 7: Notional Consortia-Based OTA Structure with Base OTA and Prototype Projects Awarded as Modifications to the Base



OTA = other transaction agreement

Source: GAO analysis of Department of Defense information. | GAO-22-105357

Note: In this notional model, the base OTA provides terms and conditions that generally apply to all project awards and serves as a starting point for negotiations between the government and consortium member awardees. The project award includes the terms and conditions specific to the project.

Under a structure in which the projects are awarded as modifications to a base OTA, contracting personnel awarded a base OTA to a consortium via the CMO and subsequently modified the base OTA to award projects. To identify the total obligations awarded to the consortium, FPDS users must identify the base OTA.

One benefit to this structure is that FPDS users can more easily track obligations by consortium than when projects are awarded with unique

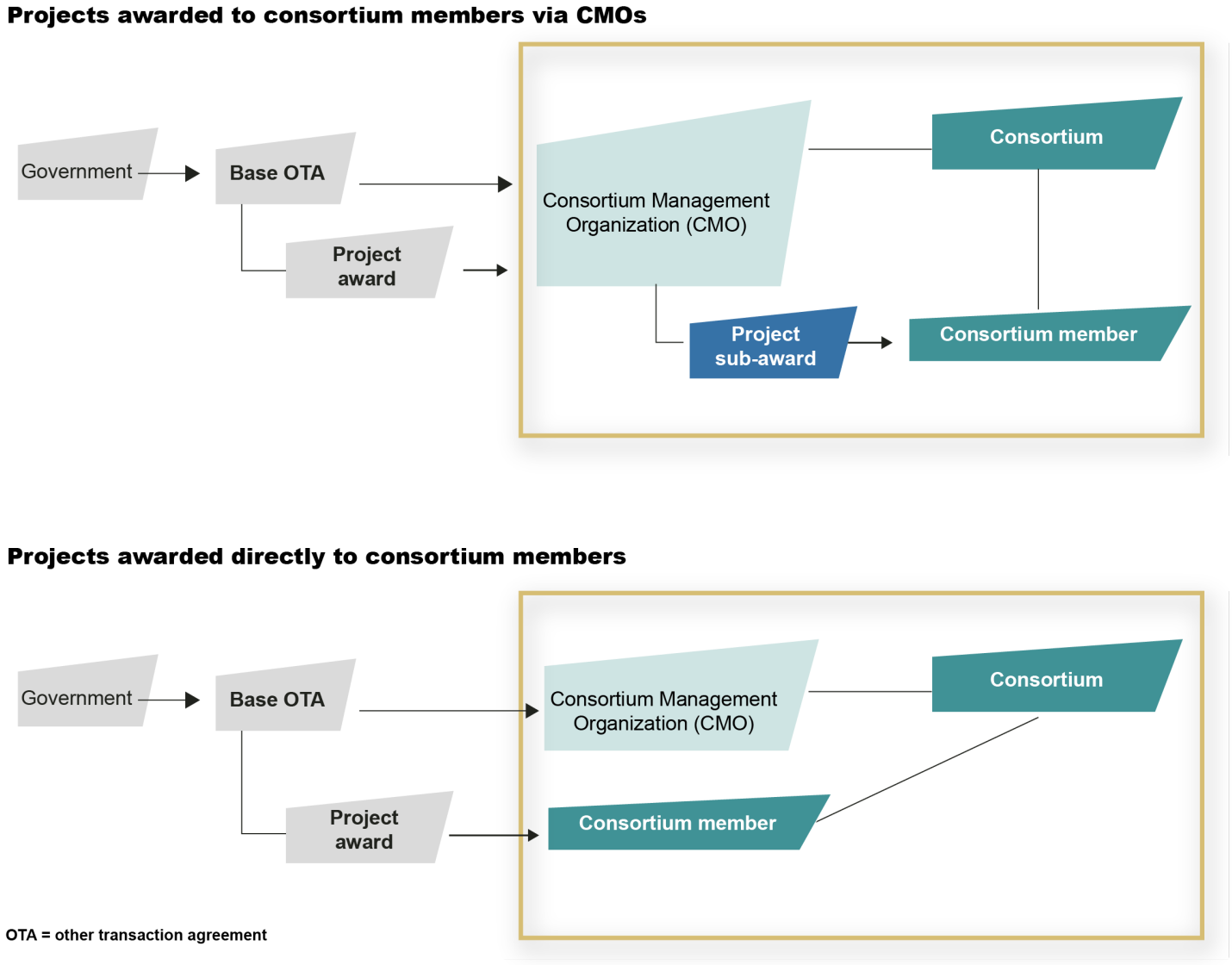
award numbers. However, one drawback to this structure is that it hinders the ability of FPDS users to identify obligations by project. To track obligations by project, the Army began manually collecting such data in January 2022.[35]

Considerations for Awarding Projects via CMOs or Directly to Consortium Members

For 10 consortia-based OTAs in our review, contracting personnel generally awarded prototype projects either (1) to the CMO, or (2) directly to the consortium members (see fig. 8).

[35]In September 2019, the Army issued a policy memorandum to address this transparency issue by requiring Army contracting personnel to award each project with a unique award number. However, some contracting personnel said the policy would hamper their ability to efficiently fund multiple projects at a time. These personnel explained that they can fund many projects under a single modification to the base OTA but requiring a unique award number for each project would preclude them from doing so. As a result, in January 2020, the Army's contracting policy office rescinded the memo.

Figure 8: Notional Consortia-Based OTA Structures that Vary Based on Recipient of Projects



OTA = other transaction agreement

Source: GAO analysis of Department of Defense information. | GAO-22-105357

Note: In these notional models, the base OTA provides terms and conditions that generally apply to all project awards and serves as a starting point for negotiations between the government and consortium member awardees. The project award includes the terms and conditions specific to the project. The project sub-award is between the CMO and consortium member and executes the project.

Based on our discussions with contracting personnel, we identified some benefits and drawbacks to both approaches.

- **Awarding projects to consortium members via CMOs.** According to Army contracting personnel, consortium members of the sensors and communications consortium preferred to have the CMO as a liaison between themselves and the government to minimize interacting directly with the government. In addition, government contracting personnel for the Army ordnance; Army aviation and missile; and Marine Corps command, control, and communications and energy, environment, and demilitarization OTAs noted that having a CMO as the main point of contact with multiple projects and hundreds of members helped to reduce their workload.

  Similarly, Navy contracting personnel told us they awarded a follow-on production OTA using the CMO because it involved less effort than a stand-alone OTA. For example, the base OTA's terms and conditions had already been established in the naval aviation consortia-based OTA and the Navy had an established relationship with the vendor that successfully completed the prototype and the CMO. DOD's OTA authority allows the Navy to award the follow-on production OTA directly to the successful prototype vendor.

  Contracting personnel stated that some drawbacks to awarding via the CMO included less visibility with the consortium members performing the work and an extra layer of communication. For example, contracting personnel for one OTA we reviewed noted that they experienced minor delays in negotiating and awarding prototype projects as a result of working through the additional layer of the CMO. Other contracting personnel noted that they can communicate directly with the members, if needed, and keep the CMO apprised of issues.

- **Awarding projects directly to consortium members.** Contracting personnel for the Navy's naval aviation OTA stated that they purposefully structured their OTA so that they awarded prototype projects directly to the consortium members rather than through the CMO. The contracting personnel explained that consortium members experienced challenges in securing private loans in the past because the CMO was the signatory on the prototype project award rather than the consortium member. Of the OTAs we reviewed, this Navy contracting office was one of two offices that awarded prototype projects to consortium members.

  Additionally, contracting personnel explained that for follow-on production work, once they know who the performer is, there is no need to go through the CMO and pay additional CMO compensation. In addition, contracting personnel for the Army's ordnance OTA stated that the program office's contracting office should manage the follow-

on production efforts and award directly to the awardee because that office would have more experience with the production efforts.

Benefits of DOD's Government-run Consortium

For DOD's defense industrial base consortium, the Army, rather than a nonprofit, for-profit, or academic organization, performs CMO responsibilities. In this government-run consortium—the only one within DOD—the Army Combat Capabilities Development Command and Army Contracting Command – Rock Island perform the acquisition support and administrative services that CMOs perform, which include recruiting members and issuing solicitations to members. Army contracting personnel explained that these services, in addition to legal review and the contracting functions, are almost entirely funded by fees charged to government customers. In addition, consortium members do not pay membership dues to join.

Army contracting personnel shared several benefits of their government-run consortium-based OTA model:

- Allows every CMO function to be performed by the government, thereby resolving any potential concerns with contractors performing functions that should be performed by the government,[36]
- Does not include costs associated with paying CMO compensation to a nonprofit, for-profit, or academic organization,
- Allows traceability and transparency at the project level because each project is awarded directly to consortium members, and
- Facilitates efficient and timely project awards.

DOD Has Generally Not Collected and Shared Considerations for CMO Compensation

DOD has generally not collected and shared information for contracting personnel to consider when structuring and negotiating CMO compensation—the amount that DOD pays CMOs for the administrative and acquisition-support services they provide as part of the terms and conditions of the base OTA. In April 2021, the DOD Inspector General recommended that DOD's Defense Pricing and Contracting office should implement guidelines or best practices for contracting personnel to

[36]Certain functions are so intimately related to the public interest that they are required to be performed by federal employees. These functions are referred to as inherently governmental functions.

consider when negotiating CMO compensation.[37] The Defense Pricing and Contracting office agreed with this recommendation but has not yet implemented it. However, the Army's November 2021 OTA guidance directed its contracting personnel to ensure CMO compensation is fair and reasonable and renegotiated, at a minimum, annually. Furthermore, in January 2022, the Army began collecting CMO compensation data for each OTA award. A senior Army contracting policy official told us that the Army was collecting these data to inform contracting strategies in the future.

Based on our analysis of available data from CMOs, we found that DOD obligated at least $332 million to CMO compensation from fiscal years 2019 through 2021 using a range of rates for CMO compensation.[38] In the consortia-based OTAs we reviewed, we calculated the percentage of the total obligated dollars that DOD obligated for CMO compensation. The remaining percentage of obligated dollars are paid to the consortium members for their work on research, prototype, or production efforts. For the purposes of our report, we define the percentage of total obligated dollars paid in CMO compensation as the CMO rate. Our analysis of the 12 consortia-based OTAs we reviewed found that the CMO rates ranged from 0.7 to 21.3 percent (see table 2).

Table 2: CMO Compensation Rates for Selected Consortium-Based Other Transaction Agreements (OTA)

Consortium-based OTA	CMO rate	Total obligations inclusive of CMO compensation
A	21.3%	Less than $250 million
B	19.5%	Less than $250 million
C	8.3%	Less than $250 million
D	4.8%	Less than $250 million
E	3.9%	$250 million or greater
F	3.6%	Less than $250 million
G	3.5%	$250 million or greater

[37]Department of Defense Inspector General, *Audit of Other Transactions Awarded Through Consortiums*, DODIG-2021-077 (Alexandria, VA: Apr. 21, 2021)

[38]We did not have complete data for all of the OTAs because DOD does not centrally collect CMO compensation data. We analyzed available data from CMOs, which did not necessarily include or segregate out the 3 years of data within the scope of our review. As a result, the CMO compensation obligation amount for fiscal years 2019 through 2021 is higher than what we reported.

Consortium-based OTA	CMO rate	Total obligations inclusive of CMO compensation
H	2.7%	$250 million or greater
I	2.1%	$250 million or greater
J	1.9%	Less than $250 million
K	1.5%	$250 million or greater
L	0.7%	$250 million or greater

Source: GAO analysis of information from consortium management organizations (CMO), the Department of Defense (DOD), and the Federal Procurement Data System. | GAO-22-105357

Note: CMO rate is the percentage of dollars obligated on the OTA used for CMO compensation. Specific information on the OTAs and CMOs were omitted because the information was deemed sensitive by DOD and the CMOs. CMO rates were determined based on dollars obligated on the OTAs from award date through September 30, 2021, and not adjusted for inflation. For OTAs with cost-sharing arrangements, obligations contributed by industry were excluded from the analysis. The CMO rates represent a snapshot in time and may vary over the life of the OTA. Additionally, in one instance, rates were determined using expenditures rather than obligations because obligations data were not available.

The variation in the compensation reflects the unique terms and conditions negotiated between the government and CMO. The terms and conditions are affected by a variety of factors, which can include:

- Total planned obligations on the consortia-based OTA,
- Level of CMO support and types of acquisition support and administrative services provided,
- Risk borne by the CMOs, such as when a project is not awarded or is cancelled,
- Compensation method, and
- Renegotiation frequency.

First, contracting personnel and CMO officials explained that, in general, the higher the estimated amount of total OTA obligations, the lower the CMO rate is negotiated on a base OTA. In these cases, the amount of obligations is high enough such that CMOs can lower their compensation rate and still cover their costs.

Second, contracting personnel and CMO officials stated that OTAs that require higher levels of CMO support, such as those with inexperienced government staff or more complex technical requirements, may charge a higher rate. The CMOs in our review provided a variety of services to the government, which can also affect the rate, including:

- Issuing solicitations to consortium members,

- Awarding project agreements to consortium member awardees,
- Reviewing consortium members' cost proposals,
- Establishing a consortium and recruiting new consortium members,
- Hosting collaboration events for government and consortium members,
- Collecting data on consortium membership, such as nontraditional contractor status,
- Preparing and submitting required programmatic and financial reports, and
- Providing training or mentorship to consortium members on doing business with the government.

Third, contracting personnel and CMO officials told us that CMOs bear varying degrees of cost risk depending on the terms and conditions of the OTA, including the compensation method. For example, if a CMO provides support services, such as hosting design meetings between the government and consortium members, but the negotiation does not result in a project award or a project is cancelled, the CMO is not paid for its work. As a result, the CMO rate may reflect this cost risk.

Fourth, contracting personnel can use one of a variety of methods to compensate CMOs for their services. For example, among the 12 OTAs we reviewed, contracting personnel used seven different methods to determine CMO compensation (see table 3).

Table 3: Methods DOD Used to Compensate CMOs for Selected Consortium-based OTAs

Compensation method	Description of method and notional examples to explain the method	Selected consortia-based OTAs that used the method (and their CMOs)
Cost reimbursable plus fees	The government reimburses the CMO for its costs incurred and pays a separate fee, such as a fixed fee that is based on the costs incurred. For funding purposes, the CMO provides an estimated rate, expressed as a percentage, of the total planned obligations on the OTA at the start of the year. Actual amounts due to the CMO are not known until all incurred costs are accounted for at the end of the year. For example, the government and CMO may negotiate a 2 percent obligation rate at the start of the year, which is applied to project awards and provides the CMO with funding throughout the year. At the end of the year, after all incurred costs and fees are reviewed and approved by the government, the actual CMO compensation is determined. If the actual CMO compensation amount due to the CMO is greater than what has already been paid to date, the government pays the additional amount, such as by increasing the CMO rate the following year. If the actual CMO compensation amount due to the CMO is less than what has already been paid to date, the CMO returns the excess amount to the government, such as by decreasing the CMO rate the following year.	• Army's ordinance (ATI) • Army's aviation and missile (ATI)
Fixed percentage of project obligations	The government pays the CMO a percentage of the total obligations, and the percentage does not vary as the total obligations increase. For example, if the government pays a 1 percent CMO rate and the total obligations on the OTA are $100 million, then the CMO compensation is $1 million.	• Army's advanced manufacturing (National Center for Manufacturing Sciences) • Marine Corps' command, control, and communications and energy, environment, and demilitarization (CMG)
Fixed price per OTA action	Government customers pay the government CMO (Army) a fixed price per action depending on the complexity of the action. The Army does not charge its internal customers for services, which include contracting and general counsel support. For example, in fiscal year 2022, the Army charged $80,000 for a new initiative, $60,000 for each subsequent multi-award initiative, $20,000 for a complex modification, and no fee for a simple modification.	• Army's defense industrial base (Army)
Fixed annual price	The government pays a fixed amount to the CMO each year that does not vary with the total costs incurred by the CMO or the total obligations on the OTA. For example, the government pays a CMO $1 million each year for services regardless of other factors.	• Washington Headquarters Services' university hypersonics (Texas A&M Engineering Experiment Station)

Compensation method	Description of method and notional examples to explain the method	Selected consortia-based OTAs that used the method (and their CMOs)
Tiered percentage of total obligations	The government pays the CMO a percentage of the total obligations, and the percentage decreases as the total obligations increase. For example, the government may pay a 1.5 percent CMO rate on the first $100 million obligated on the OTA. For obligations above $100 million but less than $200 million on the OTA, the government may pay a 1.25 percent CMO rate. For obligations above $200 million but less than $300 million on the OTA, the government may pay a 1 percent CMO rate.	• Air Force's Air Force Life Cycle Management Center (SOSSEC) • Army's sensors and communications (SOSSEC) • Navy's naval aviation (CMG) • Navy's spectrum and trusted systems (NSTXL)
Formula that decreased the rate as the total project award ceiling increased	The government uses a dynamic formula that adjusts the CMO compensation so the CMO rate decreases as the total project award ceiling increases. For example, under such a formula, the government may pay a 1.5 percent CMO rate for a $1 million project and a 0.8 percent CMO rate for a $500 million project.	• Air Force's space (NSTXL)
Cost share above a set ceiling	The government sets a ceiling amount, up to which the CMO is reimbursed for costs incurred. Costs above the ceiling are shared between the government and the consortium. For example, if the government sets the ceiling at $1 million and sets a 50/50 cost share with the consortium above the ceiling, and a CMO has $2 million in expenses, the government pays the CMO $1.5 million and the consortium pays the remaining $500,000.	• Navy's shipbuilding research (ATI)

ATI = Advanced Technology International

CMG = Consortium Management Group, Inc.

CMO = consortium management organization

DOD = Department of Defense

NSTXL = National Security Technology Accelerator

OTA = other transaction agreement

SOSSEC = System of Systems Consortium, Inc.

Source: GAO analysis of information from DOD and CMOs. | GAO-22-105357

Note: Apart from the fixed price per OTA action method, all of the other examples provided were notional and do not reflect actual CMO compensation amounts or rates. Over the life of an OTA, the terms and conditions of the OTA, including the compensation method, can change. For example, a rate agreed to at the time of award may not apply for the entire OTA term and can be subject to renegotiation. The compensation methods reflected in the table are current from October 2021 through January 2022.

Finally, the renegotiation frequency of CMO compensation can also vary. For the OTAs we reviewed, the frequency varied, with some never renegotiated, some renegotiated every 2 to 3 years, while others were

renegotiated annually.[39] Some renegotiations resulted in reduced CMO compensation. For example:

- **Renegotiations every 2 years.** The Navy's naval aviation base OTA states that the Navy and the CMO will renegotiate CMO compensation every 2 years after the initial period of performance. In April 2021, the two parties modified the OTA, resulting in a reduction in the percentage of obligations used for CMO compensation.
- **Renegotiations every 2 to 3 years.** The Navy's spectrum and trusted systems base OTA states that the Navy and the CMO will renegotiate CMO compensation every 2 to 3 years after the initial period of performance. Navy contracting personnel stated that the ability to renegotiate CMO compensation protects the government from being locked into a given compensation structure for the life of the base OTA. In April 2022, the two parties modified the OTA and agreed to a formula that adjusts the CMO compensation based on each project's award ceiling value. Navy contracting personnel told us that this new approach to calculating CMO compensation will result in significant savings.

In contrast, the Air Force's Life Cycle Management Center base OTA established the rates for CMO compensation for the entire life of the OTA when it was awarded in November 2018. As a result, the tiered percentage of obligations used by Air Force to calculate CMO compensation remained the same. Air Force contracting personnel told us the base OTA does not include a requirement to renegotiate the rates because the tasks the CMO performs remain consistent throughout the period of performance.

All 10 consortia-based OTAs we reviewed were awarded competitively, with the CMO compensation negotiated during the award process. DOD received multiple offers, ranging from two to 10, prior to awarding eight of these OTAs. On one consortia-based OTA, for instance, DOD evaluated offerors against several factors, including management approach, outreach and financial plans, project award process, experience, and price. Some contracting personnel also took other steps to assess the reasonableness of the compensation, such as conducting market

[39]We reviewed a nongeneralizable sample of 12 OTAs. Of those, one was for research and one had a government-managed consortium. For the purposes of analyzing CMO compensation renegotiation, we excluded these two OTAs and focused on the remaining 10.

research to identify the CMO compensation paid on other consortia-based OTAs.

Nonetheless, DOD contracting personnel we interviewed stated that it would be helpful for DOD to collect and share information on CMO compensation to help inform planning and negotiations. They told us they had to rely on ad hoc outreach to others or develop their own practices to identify key considerations when structuring and negotiating CMO compensation:

- According to Air Force contracting personnel, as the original space OTA was coming to the end of its period of performance, contracting personnel began gathering lessons learned. As part of the lessons learned, the Air Force learned of another contracting office that had used a dynamic rate formula for establishing the CMO rate. The Air Force decided to write the dynamic rate formula into its solicitation and required all offerors (CMOs) to use the dynamic rate formula to establish their CMO rates. The Air Force did not have a formal mechanism for sharing such information so personnel shared information through word-of-mouth and one-on-one outreach.
- Army contracting personnel conducted extensive market research on various CMOs and their CMO rates. Contracting personnel stated that they did not have experience in awarding consortia-based OTAs prior to awarding the aviation and missile OTA and had limited guidance or information to use. As a result, they told us they reached out to other contracting personnel who had experience and obtained data on CMO compensation from internal government sources.
- Navy contracting personnel stated that they found the various CMO rates proposed by offerors were not comparable when trying to award the naval aviation OTA. In some cases, the CMO rates were overly complex and difficult to follow. They said it would be helpful to have additional information on the CMO rates paid.

Further, contracting personnel for one OTA negotiated a lower CMO compensation rate in fiscal year 2022 as a result of information sharing. Specifically, these contracting personnel reached out to a different military department to learn about a CMO compensation method used for its consortium-based OTA. Contracting personnel found the military department's information was helpful in informing the negotiations.

CMOs Can Provide Cost Analysis Services but DOD Has Generally Not Shared Information on Related Considerations

DOD has generally not shared information with contracting personnel on what they should consider when using CMOs to analyze consortium members' cost proposals to inform fair and reasonable price determinations. In July 2021, we found that when CMOs provide such cost analysis services, the CMOs may closely support inherently governmental functions, which often require enhanced oversight.[40] According to the Office of Federal Procurement Policy's Policy Letter 11-01, these types of services can be performed by contractors but may require enhanced management attention because of the possibility that contractors may inappropriately influence the government's authority, control, and accountability for decisions.[41]

For 10 of the consortia-based OTAs we reviewed, six did not use cost analysis services provided by the CMO.[42] Contracting personnel cited various considerations for not using such services:

- **Closely supports inherently governmental functions.** Contracting personnel for one OTA removed cost analysis services from the CMO's statement of work because they wanted to avoid the optics of a contractor supporting inherently governmental functions.
- **Conflict of interest.** Contracting personnel for two OTAs stated that their CMO compensation was tied to the price of the project; therefore, the CMO did not have an incentive to "sharpen its pencil" and lower the cost.
- **Not thorough or robust.** Contracting personnel for one OTA stated that the CMO's analysis was not thorough enough and bottlenecked the award process. As a result, the contracting personnel stated that they began doing the analysis themselves and removed the responsibility from the CMO.
- **A skillset for contracting personnel to practice.** Contracting personnel for one OTA stated that performing a cost analysis is an

[40]GAO-21-501.

[41]Office of Management and Budget, Office of Federal Procurement Policy, *Performance of Inherently Governmental and Critical Functions*, Policy Letter 11-01, 76 Fed. Reg. 56,227 (Sept. 12, 2011).

[42]We reviewed a nongeneralizable sample of 12 OTAs. Of those, one was for research and one had a government-managed consortium. The government-managed consortium, for example, does not have a private sector CMO performing cost analysis services. For the purposes of analyzing CMOs performing cost analysis services, we excluded these two OTAs and focused on the remaining 10.

integral skill for contracting personnel and having them perform these tasks provides workforce development opportunities.

Contracting personnel for four OTAs in our review used the cost analysis services provided by the CMO. Contracting personnel emphasized that the cost analysis was just "one data point." Contracting personnel used a football analogy, stating that the CMO's cost analysis brought them to the "10-yard line" but the government made the fair and reasonable price determination for the "touchdown." One CMO official noted that CMOs can help nontraditional contractors provide the information necessary to support the government's price determination.

Apart from the Defense Contract Management Agency, DOD has not shared the type of information contracting personnel could consider when contemplating the use of a CMO for cost analysis services. In November 2020, the Defense Contract Management Agency, which provides contract administration services for DOD offices, issued an informational tip sheet for OTAs. The tip sheet noted that a CMO's analysis can be a data point in a price analysis but that the government is required to determine price reasonableness. The tip sheet also noted that consideration should be given when a nongovernment entity is supporting an inherently governmental function. In July 2021, we recommended that DOD should update its November 2018 OTA guide to include what contracting personnel should consider when planning to use a CMO, such as what enhanced oversight activities are appropriate. DOD concurred with the recommendation but has not yet implemented it.[43] DOD officials stated they are planning to update the guide in December 2022.

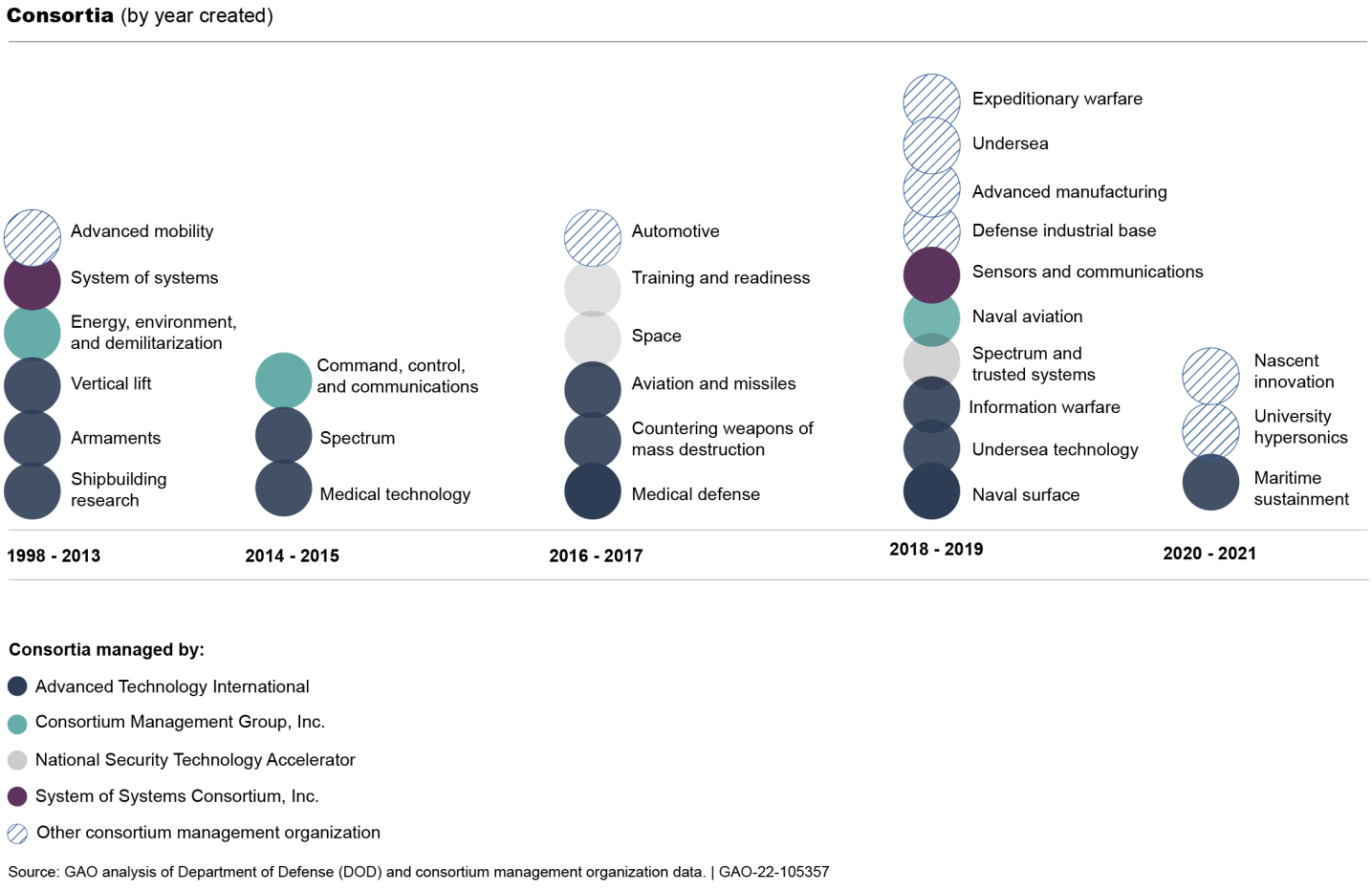
DOD Has Generally Not Shared Information and Considerations for Using Existing Consortia

DOD has generally not collected and shared information with contracting personnel to help navigate the growth in the number of consortia. Apart from the Army, DOD does not have guidance about the factors contracting personnel should consider when deciding whether to award an OTA to an existing consortium or award an OTA to create a new consortium. The Army's October 2018 OTA guidance directed its contracting personnel to use existing consortia to the maximum extent practicable but did not provide considerations for why. A senior Army contracting policy official said that reviewing and leveraging existing vehicles is a normal step in establishing a contract strategy and that the same consideration should apply before establishing a new consortium.

[43]GAO-21-501.

The majority of DOD's consortia have been created in recent years. Of the 28 consortia with active OTA awards, 22 were created since 2014 (see fig. 9).

Figure 9: The Majority of DOD's Consortia with OTA Awards Were Created Since 2014



Source: GAO analysis of Department of Defense (DOD) and consortium management organization data. | GAO-22-105357

As the number of consortia covering similar technology areas has grown, DOD contracting personnel have had to increasingly consider whether to use an existing consortium to meet their needs or create a new one. Some of the OTAs we reviewed included as part of the CMO's scope of work the establishment of a new consortium while other OTAs were awarded to existing consortia.

We identified various factors that could affect DOD's decision to create a new consortium:

Start-up costs. Establishing a new consortium can involve start-up costs, such as those related to member recruitment. For example, in October 2020, Washington Headquarters Services, on behalf of the Office of the Under Secretary of Defense for Research and Engineering, awarded a base OTA to Texas A&M Engineering Experiment Station—a state-run academic institution—to establish and manage a university consortium for hypersonics prototyping and research projects. As part of the statement of work, the Texas A&M Engineering Experiment Station was required to provide logistical support for the formation of the consortium, which included creating a consortium membership agreement, facilitating industry days and other membership recruitment events, and ensuring that members had appropriate clearances. Washington Headquarters Services contracting personnel stated that as of May 2022, the university hypersonics consortium included 87 universities, 94 affiliate companies, 14 laboratories, and eight affiliate universities. DOD provided funding to the CMO to establish a new consortium for some of the consortia-based prototype OTAs we reviewed, while in other cases, CMOs used their own funding to establish new consortia.

Similar technology areas. Establishing a new consortium can result in multiple consortia covering similar technology areas. Our analysis of the technology areas for selected DOD consortia identified multiple ones that focus on cybersecurity, munitions, and hypersonics (see table 4).

Table 4: Selected Department of Defense Consortia and Associated Technology Areas

Consortia	Cybersecurity	Munitions	Hypersonics
System of systems	•	•	
Command, control, and communications	•		
Defense industrial base	•	•	
Spectrum	•		
Sensors and communications	•		
Information warfare	•		
Maritime sustainment	•		
Naval surface	•	•	•
Aviation and missiles		•	•

Consortia	Cybersecurity	Munitions	Hypersonics
Armaments		•	
Naval aviation		•	
Undersea technology		•	
University hypersonics			•
Spectrum and trusted systems			•

Source: GAO analysis of Department of Defense and consortium management organization data. | GAO-22-105357

Contracting personnel for the selected OTAs we reviewed also cited examples of consortia covering similar technology areas. For example, Washington Headquarters Services contracting personnel told us they were aware of the Navy's hypersonics consortium when they awarded an OTA to establish the university hypersonics consortium. They expressed concerns about consortia that cover similar technology areas, such as hypersonics, because it divides the market and organizations that wanted to join the consortia would have to enter into multiple membership agreements and pay multiple membership dues. However, they said their government customer directed them to award the OTA to a new consortium because the existing hypersonics consortium had a regional focus rather than a national one. In another example, Army contracting personnel responsible for the ordnance consortium-based OTA told us that six other consortia-based OTAs focused on similar technology areas as their OTA, such as rockets, missiles, bombs, and ammunition.

Even with the growth in the number of consortia covering similar technology areas, DOD has not collected and shared information on existing consortia that DOD contracting personnel could use during planning for the award of a new OTA. Specifically, we found that DOD does not have a comprehensive list of consortia to which it has awarded OTAs, including the names of the consortia and CMOs, the consortia's technology focus areas, unique award numbers of the base OTAs, and contracting and program offices' contact information. Contracting personnel we spoke with thought it would be helpful if DOD kept an updated list of the current consortia and related information to increase awareness. Navy contracting personnel explained that the military departments are each creating their own consortia and not consistently communicating with one another before or after creating them. DOD officials told us they were aware of a list of consortia maintained by the MITRE Corporation, a not-for-profit organization responsible for operating federally funded research and development centers. However, we found this list was not comprehensive, as it did not include some consortia.

Barriers to entry for nontraditional contractors. DOD contracting personnel told us that the growth in the number of consortia that focus on similar technology areas may make it more challenging for small nontraditional contractors to break into the consortia-based OTA market. While the annual membership dues for the majority of the 12 consortia-based OTAs we reviewed were $500 or less, the total dues paid could add up as contractors join multiple consortia to gain access to all of the opportunities in a given technology area. For example, officials from one company told us their firm has joined 20 different consortia and pays about $30,000 a year in membership dues. These officials said they felt pressure to join multiple consortia to identify potential opportunities. One senior contracting policy official from DARPA stated that membership dues may exclude innovative companies from doing business with the government, countering one of the main benefits of OTAs.

However, other contracting personnel we interviewed stated that they did not hear concerns from vendors regarding membership dues. Some consortia offer discounts on membership dues. For example, some consortia offer free trial periods or charge lower or no membership dues for companies with less revenues or organizations with a nonprofit or academic status. In addition, some consortia offer reciprocal memberships so members pay annual dues to one consortium and gain access to OTA opportunities with multiple consortia.

Competition. Some CMO officials stated that the growth in the number of consortia bolsters competition among consortia and provides contracting offices with options. One CMO official also added that competition among consortia can lead to lower CMO compensation rates. Furthermore, existing consortia may not meet specific requirements of different government customers. For example, contracting personnel stated that their government customers wanted to find contractors that were subject matter experts for their specific requirements rather than using an existing consortium.

DOD's November 2018 OTA guide states that contracting personnel must exercise business acumen and judgment to operate in the relatively unstructured environment of OTAs, and that adequate advanced planning is essential for the success of an OTA. In prior work, we found that the collecting and sharing of lessons learned from previous programs or projects provides organizations with a powerful method for sharing ideas

for improving work processes.[44] Furthermore, organizations that identify and apply lessons learned can ensure they factor beneficial information into planning for future efforts and limit the recurrence of challenges that can be anticipated in advance.

However, our analysis of DOD guidance and training documentation found that DOD has collected, documented, and shared limited information with contracting personnel on (1) structuring consortia-based OTAs and the benefits and challenges with each approach, (2) structuring and negotiating CMO compensation, (3) using CMOs to conduct cost analysis, and (4) considerations for whether to use an existing consortium or create a new one. By sharing limited information, DOD is missing opportunities to better inform planning for awards of consortia-based OTAs.

Conclusions

In the past few years, obligations on consortia-based OTAs have grown to make up the vast majority of DOD's overall spending on OTAs. The number of DOD consortia has also proliferated, with some covering similar technology areas. DOD has taken steps to increase the transparency of OTA spending in response to our prior work, but congressional decision makers and taxpayers continue to have limited insight into which consortia have received awards and the extent to which DOD is investing in various technology areas using consortia-based OTAs. Such insight is instrumental in determining whether consortia-based OTAs are accessing cutting-edge technologies to help DOD deliver capabilities to its warfighters.

In addition, DOD's increased investment in consortia-based OTAs has not been accompanied by increases in knowledge-sharing about this tool. In particular, the lack of centralized information-sharing puts the onus on contracting personnel to develop their own practices or rely on ad hoc outreach to others to identify key considerations for planning prior to the award of consortia-based OTAs. DOD is missing an opportunity to leverage the knowledge, experience, and lessons learned of its contracting personnel who have awarded consortia-based OTAs to better inform future awards, including considerations for structuring consortia-based OTAs, negotiating CMO compensation, and whether to use an existing consortium or not. Sharing such information across the department will better position DOD's contracting workforce to use its

[44]GAO-21-318; GAO-20-104; GAO-19-25; and GAO-12-901.

OTA tools more purposefully and effectively, resulting in better use of taxpayer dollars and increased capabilities delivered to the warfighter.

Recommendations for Executive Action

We are making six recommendations to the Department of Defense:

The Secretary of Defense should develop and implement a systematic approach to track the obligated dollars each consortium has received from consortia-based other transaction agreements. (Recommendation 1)

Until a systematic approach to track obligations each consortium has received from consortia-based other transaction agreements is implemented, the Secretary of Defense should direct the Director of Defense Pricing and Contracting to provide information to the public and congressional decision makers on the dollars awarded to consortia using consortia-based other transaction agreements, such as by updating Department of Defense guidance to require contracting personnel to manually report this information. (Recommendation 2)

The Secretary of Defense should direct the Director of Defense Pricing and Contracting to collect, document, and share information on ways to structure consortia-based other transaction agreements and the related benefits and risks for contracting personnel to consider when planning to award consortia-based other transaction agreements. (Recommendation 3)

The Secretary of Defense should direct the Director of Defense Pricing and Contracting to collect, document, and share information on negotiating consortium management organization compensation for contracting personnel to consider when planning to award consortia-based other transaction agreements, such as methods for determining the compensation and frequency of renegotiation. (Recommendation 4)

The Secretary of Defense should direct the Director of Defense Pricing and Contracting to collect, document, and share information on creating new consortia and using existing consortia for contracting personnel to consider when planning to award consortia-based other transaction agreements. (Recommendation 5)

The Secretary of Defense should direct the Director of Defense Pricing and Contracting to maintain and share a list of current consortia that have DOD other transaction agreements with contracting personnel, and include information on associated consortium management organizations, consortia technology focus areas, other transaction agreement unique

award numbers, and contracting and program offices' contact information. (Recommendation 6)

Agency Comments

We provided a draft of this report to DOD and the CMOs for review and comment. In its written comments (reproduced in appendix III), DOD concurred with all six of our recommendations and described its plans to address them. The CMOs provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees and the Secretary of Defense. 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 makm@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.

Marie A. Mak
Director, Contracting and National Security Acquisitions

List of Committees

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

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

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

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

Appendix I: Objectives, Scope, and Methodology

The conference report that accompanied the National Defense Authorization Act for Fiscal Year 2021 included a provision for GAO to review the Department of Defense's (DOD) use of consortia-based other transaction agreements (OTA).[1] This report examines the extent to which: (1) DOD used consortia-based OTAs in fiscal years 2019 through 2021, and (2) DOD shared consortia-based OTA information with contracting personnel.

To identify the extent to which DOD awarded consortia-based OTAs, we analyzed available fiscal years 2019 through 2021 data on all three types of DOD's OTAs: (1) research, (2) prototype, and (3) production.

For research OTAs, we reviewed obligations data from the Financial Assistance Award Data Collection (FAADC) system and determined the data were not sufficiently reliable for our purpose of reporting on the extent DOD used consortia-based research OTAs by dollars obligated. DOD reports its use of research OTAs, in addition to other assistance awards, in FAADC. However, we found that because this database does not distinguish which awards are research OTAs, we were unable to determine the total amount obligated on research OTAs.[2] As context, from fiscal years 2019 through 2021, DOD obligated about $1.6 billion on research OTAs and other assistance instruments that are not grants or cooperative agreements, including partnership intermediary agreements and procurements for experimental purposes. Research OTAs are a subset of the $1.6 billion, but FAADC does not provide information on the amount. In addition, this database does not identify which awards are consortia-based. Further, the FAADC data overreported the dollars obligated on research OTAs we identified due to data entry errors.

Due to the FAADC data limitations, we collected data directly from DOD to determine the extent it used consortia-based research OTAs. First, we interviewed officials from the Under Secretary of Defense for Research and Engineering—the office responsible for overseeing DOD's research OTAs and other research instruments—as well as officials from major consortium management organizations (CMO). Based on those interviews and our review of FAADC data, we identified one active DOD consortia-based research OTA as of September 30, 2021, which was

[1]H.R. Conf. Rep. No. 116-617, at 1692 (2020).

[2]Officials from DOD's Research and Engineering office said that to determine the amount obligated on research OTAs in the future, they may require adding the type of award in the award description in FAADC or explore longer-term system changes.

awarded by the Navy. Then, we requested and analyzed data from the Navy for this OTA. We compared these data with data provided by CMOs as well as OTA documents. We determined the consortia-based research OTA data provided by the Navy were sufficiently reliable for our purposes of reporting on the extent to which DOD used consortia-based research OTAs by dollars obligated.

For prototype and production OTAs, we analyzed obligations data from the Federal Procurement Data System (FPDS).[3] We retrieved prototype OTA data with actions signed from October 1, 2018, through September 30, 2021, and production OTA data with actions signed from June 29, 2019, through September 30, 2021, from FPDS on May 20, 2022. DOD began reporting its use of production OTAs in FPDS as of June 29, 2019, so we were unable to determine the amount obligated on production OTAs from October 1, 2018, through June 28, 2019.

For our 3-year period of data, FPDS did not identify which OTAs were consortia-based. To identify which OTAs were consortia-based, we requested and analyzed data received directly from DOD and CMOs. Based on our analysis of these data and OTA documentation, we identified a number of data inaccuracies in FPDS, including underreporting and overreporting of obligations. We also identified a number of data inaccuracies in the identification of consortia-based OTAs in DOD-provided data. We also identified instances in which data provided by DOD or CMOs included consortia-based OTAs that were not reported in FPDS. We also assessed the reliability of the FPDS data by reviewing existing information about the FPDS system and the data it collects, such as the data dictionary and data validation rules; and performing electronic testing.

After we corrected the FPDS data for inaccuracies based on DOD and CMO data for both prototype and production OTAs, we determined the FPDS prototype data were sufficiently reliable for our purpose of reporting on the extent DOD used consortia-based prototype OTAs by dollars obligated from fiscal years 2019 through 2021. We determined the production OTA data were sufficiently reliable for our purpose of reporting on the extent DOD used consortia-based production OTAs by dollars

[3]FPDS is a comprehensive, web-based tool for agencies to report procurement contract actions and is the authoritative source for procurement award data, including dollars obligated on contract actions. It also includes a module for reporting certain OTAs. DOD reports its use of prototype and production OTAs in the OTA module of FPDS.

obligated from June 29, 2019, through September 30, 2021.[4] We excluded data on consortia-based OTAs awarded by the National Geospatial-Intelligence Agency, which were deemed sensitive. For 13 OTAs with $4 million in obligations, DOD did not identify whether they were consortium-based or not. The obligations represented 0.02 percent of the obligations on consortia-based OTAs from fiscal years 2019 through 2021 and are excluded from the analyses in our report.

For each of the base OTAs and project awards we selected, we reviewed OTA documents and interviewed contracting personnel to identify the factors that contributed to the use of consortia-based research, prototype, or production OTAs. See below for how we selected those OTAs.

To determine the dollars obligated from fiscal years 2019 through 2021 that each consortium received on consortia-based OTAs, in addition to the steps above, we identified all base OTAs and project awards that each consortium received. We analyzed the obligations data from FPDS, DOD, and CMOs for each base OTA and project award and identified the corresponding CMO and consortium. For some OTAs, the dollars were obligated entirely on the base OTA. For other OTAs, the dollars were obligated entirely on the project awards. Some other OTAs had obligations on both base OTAs and project awards. In addition, some consortia received multiple OTA awards. In those instances, we summed the obligations for all associated OTAs.

We determined that the information and communication component of internal controls was significant to this objective, along with the principle that management should externally communicate quality information to achieve objectives. We assessed DOD's efforts to provide quality data to congressional decision makers and the public on the OTA dollars awarded to each consortium.

To identify the extent to which DOD shared consortia-based OTA information with contracting personnel, we analyzed DOD's statutory authorities to use OTAs and DOD's OTA policies, guidance, and training to determine the extent to which these documents discussed strategies

[4]Upon successful completion of a prototype OTA, DOD can award follow-on production work without using competitive procedures to the participants of a competitively awarded prototype OTA. DOD can award follow-on production work using a procurement contract—a contract subject to the Federal Acquisition Regulation—or an OTA. Procurement contracts were not included in the scope of this review, and we did not analyze data on follow-on production procurement contracts resulting from successful prototype OTAs.

for awarding and administering consortia-based OTAs. Specifically, we reviewed policies and guidance from the Under Secretary of Defense for Research and Engineering; the Under Secretary of Defense for Acquisition and Sustainment, Defense Pricing and Contracting office, the office responsible for overseeing and implementing initiatives related to DOD-wide contracting policies and strategies, including those related to prototype and production OTAs; Assistant Secretary of the Army for Acquisition, Logistics and Technology, Deputy Assistant Secretary of the Army for Procurement; Assistant Secretary of the Navy for Research, Development, and Acquisition, Deputy Assistant Secretary of the Navy for Procurement; and Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics, Deputy Assistant Secretary for Contracting. We also reviewed OTA training from the Defense Advanced Research Projects Agency (DARPA); Defense Acquisition University; Naval Air Systems Command; and Army Contracting Command—New Jersey.

We also selected and analyzed a nongeneralizable sample of 12 consortia-based base OTAs that DOD awarded between January 2018 and September 2021. Our timeframe for selection started in January 2018 because calendar year 2018 was the year with the highest number of new consortia. Our timeframe for selection ended in September 2021 because this was the most current data available. We then selected based on the following criteria:

- High non-COVID-19 dollar obligations in fiscal years 2019 through 2021,[5]
- Representation of all three OTA types,
- Representation of all three military departments,
- Representation of various CMOs, or
- Representation of various consortia.

See table 5 for details on the base OTAs we selected.

[5]We did not include COVID-19 consortia-based OTAs in our case selections because we previously reported on these OTAs in July 2021. See GAO, *COVID-19 Contracting: Actions Needed to Enhance Transparency and Oversight of Selected Awards*, GAO-21-501 (Washington, D.C.: July 26, 2021). We identified OTAs and their associated obligations as COVID-19-related if DOD entered “coronavirus” or “COVID-19” in the description of requirement data field in FPDS for that OTA.

Table 5: Selected Consortia-Based Base OTAs

Contracting office (and associated CMO)	Award date of base OTA	Base OTA number	Consortium technology focus
Air Force Life Cycle Management Center (SOSSEC)	November 9, 2018	FA86041994050	System of systems
Air Force Space Force (NSTXL)	January 15, 2021	FA88142190001	Space
Army Contracting Command – Aberdeen Proving Ground (National Center for Manufacturing Sciences)	May 25, 2018	W911NF1890003	Advanced manufacturing
Army Contracting Command – Aberdeen Proving Ground (SOSSEC)	February 20, 2018	W909MY1890001	Sensors and communications
Army Contracting Command – New Jersey (ATI)	April 11, 2018	W15QKN1891008	Armaments
Army Contracting Command – Redstone Arsenal (ATI)	March 12, 2019	W9124P1990001	Aviation and missile
Army Contracting Command – Rock Island (Army Combat Capabilities Development Command)	No base OTA	No base OTA	Defense industrial base
Naval Sea Systems Command (ATI)	March 2, 2018	N000241832231	Shipbuilding research
Naval Surface Warfare Center – Crane (NSTXL)	February 22, 2019	N001641990001	Spectrum and trusted systems
Naval Air Warfare Center Aircraft Division (CMG)	June 6, 2019	N004211990001	Naval aviation
Marine Corps Systems Command (CMG)	September 27, 2018	M678541899000	Command, control, and communications; energy, environment, and demilitarization
Washington Headquarters Services (Texas A&M Engineering Experiment Station)	October 26, 2020	HQ00342190007	University hypersonics

ATI = Advanced Technology International

CMG = Consortium Management Group, Inc.

CMO = consortium management organization

DOD = Department of Defense

NSTXL = National Security Technology Accelerator

OTA = other transaction agreement

SOSSEC = System of Systems Consortium, Inc.

Source: GAO analysis of information from DOD and CMOs. | GAO-22-105357

For each of the 12 base OTAs we selected, we also selected and analyzed one corresponding project award based on the following criteria:

- High non-COVID-19 dollar obligations in fiscal years 2019 through 2021 and
- Identified by DOD or CMOs as being successful or having challenges.

See table 6 for details on the project awards we selected.

Table 6: Selected Consortia-Based OTA Projects

Contracting office (and associated CMO; project awardee)	Project award number	Project description
Air Force Life Cycle Management Center (SOSSEC; Southwest Research Institute)	FA82172190001	Prototyping of processors for threat simulators
Air Force Space Force (NSTXL; Raytheon)	FA88142190001 / Modification 2	Prototyping of medium earth orbit missile tracking
Army Contracting Command – Aberdeen Proving Ground (National Center for Manufacturing Sciences; Desktop Metal, Inc.)	W911NF2090006	Prototyping of industrial-scale production for cemented tungsten carbide parts
Army Contracting Command – Aberdeen Proving Ground (SOSSEC; SRI International)	W909MY199A012	Prototyping of low-light-level cameras
Army Contracting Command – New Jersey (ATI; Corvid Technologies)	W15QKN1891008 / Modification 2	Prototyping of ballistic missile defense system that assesses interceptions and a related database
Army Contracting Command – Redstone Arsenal (ATI; Dynetics Technical Solutions, Inc.)	W9124P1990001 / Modification 6	Prototyping of components for hypersonic missile systems
Army Contracting Command – Rock Island (Army Combat Capabilities Development Command; SkyWater Technology Foundry, Inc.)	W52P1J1993015	Prototyping of radiation-hardened electronics for use in space
Naval Sea Systems Command (ATI; Hepburn and Sons, LLC)	No separate project number	Research for a type of insulated pipe to be used in destroyer ships
Naval Surface Warfare Center – Crane (NSTXL; Qorvo Texas, LLC)[a]	N00164199G007	Prototyping of enhanced assembly and packaging for microcircuit systems
Naval Air Warfare Center Aircraft Division (CMG; Becker Trailers, LLC)	N004212090016 – Modification 1	Production of enclosed trailers for emergency response

Contracting office (and associated CMO; project awardee)	Project award number	Project description
Marine Corps Systems Command (CMG; Enlighten IT Consulting, LLC)	M678542197700	Production work following a successful prototype of a big data platform intended to enhance the Marine Corps' defensive cyber operations capability
Washington Headquarters Services (Texas A&M Engineering Experiment Station; Georgia Tech Research Corporation)	HQ0034219CA01	Prototyping of machine learning framework for determining manufacturing defects in hypersonic vehicles

ATI = Advanced Technology International

CMG = Consortium Management Group, Inc.

CMO = consortium management organization

DOD = Department of Defense

NSTXL = National Security Technology Accelerator

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SOSSEC = System of Systems Consortium, Inc.

Source: GAO analysis of information from DOD and CMOs. | GAO-22-105357

[a]Project award N00164199G007 included multiple projects and awardees. For the purposes of our review, we only analyzed the Qorvo Texas, LLC project.

We analyzed DOD's OTA policies, guidance, and training, as well as documentation related to the consortia-based base OTAs and project awards we selected for review. Based on this analysis, we identified four key areas related to consortia-based OTAs where DOD collected, documented, and shared limited information with contracting personnel. These include considerations related to:

- Structuring consortia-based OTAs and the benefits and challenges with each approach,
- Structuring and negotiating CMO compensation,
- Using CMOs to conduct cost analysis, and
- Using an existing consortium or creating a new one.

For each of the base OTAs and project awards we selected, we reviewed OTA documents and data and interviewed contracting personnel. We also interviewed program officials in some cases. We discussed the four key areas we identified, including the CMO compensation method, compensation amount and rate, and renegotiation frequency. While we selected a sample of 12 OTAs, several of our analyses (consortia-based OTA structures, renegotiation frequency, and CMOs conducting cost analysis) exclude two of the OTAs—a research OTA and an OTA with a

government-run consortium, either because the analysis was not applicable or information was unavailable.

To determine the CMO compensation amount for each selected OTA, we generally reviewed data on dollars obligated on the consortium-based OTA (base OTA and project awards) from the award date of the OTA through September 30, 2021, provided by DOD and the CMOs, as well as OTA documents.[6] To determine the CMO rate, we divided the CMO compensation amount by the total dollars obligated on the OTA from the award date of the OTA through September 30, 2021. We also analyzed publicly available data from consortium websites to identify other information that could be shared with DOD contracting personnel, such as the technology areas covered by consortia, membership dues, and numbers of members.

For both objectives, we also interviewed officials from the Under Secretary of Defense for Research and Engineering; Under Secretary of Defense for Acquisition and Sustainment, Defense Pricing and Contracting office; Assistant Secretary of the Army for Acquisition, Logistics and Technology, Deputy Assistant Secretary of the Army for Procurement; Assistant Secretary of the Navy for Research, Development, and Acquisition, Deputy Assistant Secretary of the Navy for Procurement; Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics, Deputy Assistant Secretary for Contracting; DARPA; major CMOs; and selected consortia.

We conducted this performance audit from August 2021 to September 2022 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.

[6]For one consortium-based OTA, we analyzed expenditures data rather than obligations data because obligations data were not readily available.

Appendix II: List of Consortia that Received Department of Defense Other Transaction Agreement Awards

Table 7 provides the list of 28 consortia that received other transaction agreement awards from the Department of Defense from fiscal years 2019 through 2021.

Table 7: List of Consortia that Received DOD OTA Awards, Fiscal Years 2019-2021

Full consortium name	Short consortium name	CMO (and type)	Year consortium created	Number of consortium members[a]	Contracting military department or DOD office
Advanced Manufacturing, Materials, and Processes	Advanced manufacturing	National Center for Manufacturing Sciences (nonprofit)	2018	44	Army
Aviation & Missile Technology Consortium[b]	Aviation and missiles	ATI (nonprofit)	2017	1,100	Army
Consortium for Command, Control, and Communications in Cyberspace	Command, control, and communications	CMG (nonprofit)	2014	1,185	Army and Marine Corps
Consortium for Energy, Environment, and Demilitarization	Energy, environment, and demilitarization	CMG (nonprofit)	2010	402	Army and Marine Corps
Cornerstone Consortium	Defense industrial base	Army (government)	2018	691	Army
Countering Weapons of Mass Destruction Consortium	Countering weapons of mass destruction	ATI (nonprofit)	2017	398	Army
Defense Automotive Technologies Consortium	Automotive	Defense Automotive Technologies Consortium (nonprofit)	2016	188	Army
Expeditionary Warfare Consortium	Expeditionary warfare	Applied Research Associates, Inc. (for-profit)	2019	50	Navy
Information Warfare Research Project Consortium	Information warfare	ATI (nonprofit)	2018	772	Navy
Innovative Undersea Prototype Development Consortium	Undersea	Battelle Memorial Institute (nonprofit)	2018	41	Navy
Institute for Nascent Innovation Consortium	Nascent innovation	MoveAmerica (nonprofit)	2021	N/A[c]	Washington Headquarters Services
Maritime Sustainment Technology and Innovation Consortium	Maritime sustainment	ATI (nonprofit)	2021	282	Navy
Medical CBRN Defense Consortium	Medical defense	ATI (nonprofit)	2016	307	Army
Medical Technology Enterprise Consortium	Medical technology	ATI (nonprofit)	2015	539	Army

Full consortium name	Short consortium name	CMO (and type)	Year consortium created	Number of consortium members[a]	Contracting military department or DOD office
National Advanced Mobility Consortium, Inc.[d]	Advanced mobility	National Advanced Mobility Consortium, Inc. (nonprofit)	2008	507	Army
National Armaments Consortium	Armaments	ATI (nonprofit)	1999	983	Army and Navy
National Shipbuilding Research Program	Shipbuilding research	ATI (nonprofit)	1998	11	Navy
National Spectrum Consortium	Spectrum	ATI (nonprofit)	2015	409	Army
Naval Aviation Systems Consortium	Naval aviation	CMG (nonprofit)	2019	638	Navy
Naval Surface Technology and Innovation Consortium	Naval surface	ATI (nonprofit)	2019	881	Navy
Sensors, Communications, and Electronics Consortium	Sensors and communications	SOSSEC, Inc. (for-profit)	2018	304	Army
Space Enterprise Consortium	Space	NSTXL (nonprofit)	2017	581[e, f]	Air Force
Strategic & Spectrum Missions Advanced Resilient Trusted Systems	Spectrum and trusted systems	NSTXL (nonprofit)	2019	818[e]	Navy
SOSSEC, Inc.	System of systems	SOSSEC, Inc. (for-profit)	2009	765	Army and Air Force
Training and Readiness Accelerator Consortium	Training and readiness	NSTXL (nonprofit)	2017	818[e]	Army
Undersea Technology Innovation Consortium	Undersea technology	ATI (nonprofit)	2018	276	Navy
University Consortium for Applied Hypersonics	University hypersonics	Texas A&M Engineering Experiment Station (academic)	2020	203	Washington Headquarters Services
Vertical Lift Consortium	Vertical lift	ATI (nonprofit)	2009	260	Army

ATI = Advanced Technology International

CMG = Consortium Management Group, Inc.

CMO = consortium management organization

DOD = Department of Defense

NSTXL = National Security Technology Accelerator

OTA = other transaction agreement

SOSSEC = System of Systems Consortium, Inc.

Source: GAO analysis of information from CMOs, DOD, and the Federal Procurement Data System. | GAO-22-105357

[a]The number of consortium members, which can change over time, is as-of anywhere from February 2022 through June 2022.

[b]The Aviation and Missile Technology Consortium is comprised of two existing consortia: the National Armaments Consortium and the Vertical Lift Consortium.

[c]According to MoveAmerica officials, the consortium disbanded in July 2021 as a result of government budget constraints.

[d]The Robotics Technology Consortium, created in 2008, changed its name to National Advanced Mobility Consortium, Inc. in 2014.

[e]NSTXL includes three consortia, each with its own OTA award. Any member of an NSTXL consortium has access to opportunities for all of NSTXL's other consortia. According to NSTXL, the space consortium has fewer members than the other two NSTXL consortia because the government places additional requirements on the membership.

[f]The space consortium was managed by ATI from 2017 to 2021. The Air Force recompeted the requirement for a space consortium-based OTA, and NSTXL won the follow-on award as the CMO in 2021.

Appendix III: Comments from the Department of Defense

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION
AND SUSTAINMENT

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

Dear Ms. Mak,

This is the Department of Defense (DoD) response to Government Accountability Office (GAO) Draft Report GAO-22-105357, "OTHER TRANSACTION AGREEMENTS: DoD Can Improve Planning for Consortia Awards," dated July 21, 2022 (GAO Code 105357). Detailed responses to the draft report recommendations are enclosed.

Sincerely,
TENAGLIA.JOHN.M.1154945926
Digitally signed by TENAGLIA.JOHN.M.1154945926
Date: 2022.08.26 13:44:41 -04'00'

John M. Tenaglia
Principal Director,
Defense Pricing and Contracting

Enclosure:
As stated

Enclosure

GAO Draft Report Dated July 21, 2022
GAO-22-105357 (GAO Code 105357)

"OTHER TRANSACTION AGREEMENTS: DOD Can Improve Planning for Consortia Awards"

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATION

RECOMMENDATION 1: The GAO recommends the Secretary of Defense develop and implement a systematic approach to track the obligated dollars each consortium has received from consortia-based other transaction agreements.

DoD RESPONSE: Concur. Defense Pricing and Contracting (DPC) will coordinate with the Components and Other Transaction (OT) Community of Practice to develop a systematic approach for tracking dollars obligated to each consortium, and include relevant information in the DoD OT Guide update scheduled for completion this calendar year.

RECOMMENDATION 2: The GAO recommends, until a systematic approach to track obligations each consortium has received from consortia-based other transaction agreements is implemented, the Secretary of Defense should direct the Principal Director, DPC to provide information to the public and congressional decision makers on the dollars awarded to consortia using consortia-based OTAs, such as by updating DoD guidance to require contracting personnel to manually report this information.

DoD RESPONSE: Concur. DPC will add an element in the annual report to Congress for OTs requiring Components to manually report dollars awarded to consortia using consortia-based OT Agreements (OTAs) in the next report for FY 2022 actions and obligations. Note the Federal Procurement Data System was updated on June 25, 2022, to collect data on OTs for prototypes or production to indicate when the action was awarded directly to a consortia. Additionally, on July 7, 2022, DPC issued a memorandum providing a list of required and recommended eBusiness tools for use with OTAs.

RECOMMENDATION 3: The GAO recommends the Secretary of Defense direct the Principal Director, DPC to collect, document, and share information on ways to structure consortia-based other transaction agreements and the related benefits and risks for contracting personnel to consider when planning to award consortia-based other transaction agreements.

DoD RESPONSE: Concur. DPC will collect, document, and share information that Agreements Officers may take into consodieration on ways to structure consortia-based OTAs to address how the projects are awarded, whether the consortium management organization (CMO) or consortium member receives the award, whether the CMO is government-run or not, and benefits/drawbacks to the different structures. DPC will include the information in the updated DoD OT Guide to be completed this calender year.

Enclosure

RECOMMENDATION 4: The GAO recommends the Secretary of Defense direct the Principal Director, DPC to collect, document, and share information on negotiating consortium management organization compensation for contracting personnel to consider when planning to award consortia-based OTAs, such as methods for determining the compensation and frequency of renegotiation.

DoD RESPONSE: Concur. DPC will collect, document and share information with DoD contracting personnel on guidelines, strategy and other factors to consider when negotiating CMO compensation that is fair and reasonable given the risk taken by the CMO. The information will be included in the DoD OT Guide update scheduled to be completed this calendar year.

RECOMMENDATION 5: The GAO recommends the Secretary of Defense direct the Principal Director, DPC to collect, document, and share information on creating new consortia and using existing consortia for contracting personnel to consider when planning to award consortia-based other transaction agreements.

DoD RESPONSE: Concur. DPC will collect, document and share information with DoD contracting personnel on guidelines, strategy and other factors to consider when deciding to use an existing consortium or create a new one to better inform planning for consortia-based OTA awards.

RECOMMENDATION 6: The GAO recommends the Secretary of Defense direct the Principal Director, DPC to maintain and share a list of current consortia that have DoD OTAs with contracting personnel, and include information on associated consortium management organizations, consortia technology focus areas, other transaction agreement unique award numbers, and contracting and program offices' contact information.

DoD RESPONSE: Concur. DPC will develop and maintain a current list of consortia with DoD OTAs, and share with contracting personnel on the DAU OT Community of Practice website.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Marie A. Mak, (202) 512-4841 or makm@gao.gov

Staff Acknowledgments

In addition to the contact named above, the following staff members made key contributions to this report: Penny Berrier (Assistant Director), Claire Li (Analyst-in-Charge), Lorraine Ettaro, Suellen Foth, Laura Greifner, Kurt Gurka, Jeff Hartnett, Julia Kennon, Sandra Mansour, Ramneek Sanghera, and Robin Wilson.

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