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Department of Defense Use of Other Transaction Authority: Background, Analysis, and Issues for Congress

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SUMMARY

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Department of Defense Use of Other Transaction Authority: Background, Analysis, and Issues for Congress

The Department of Defense (DOD) obligates more than $300 billion annually to buy goods and services, and to support research and development. Most of these acquisitions are governed by procurement statutes and regulations found in Title 10 (and parts of other select titles) of the United States Code, the Federal Acquisition Regulation (FAR), and the Defense Federal Acquisition Regulation Supplement.

Under certain circumstances, DOD can enter into an Other Transaction (OT) agreement instead of a traditional contract. OT agreements are generally exempt from federal procurement laws and regulations. These exemptions grant government officials the flexibility to include, amend, or exclude contract clauses and requirements that are mandatory in traditional procurements (e.g., termination clauses, cost accounting standards, payments, audit requirements, intellectual property, and contract disputes). OT authorities also grant more flexibility to structure agreements in numerous ways, including joint ventures; partnerships; consortia; or multiple agencies joining together to fund an agreement encompassing multiple providers.

Other Transaction agreements are legally binding contracts; they are referred to as agreements to distinguish them from the traditional procurement contracts governed by the FAR and procurements laws. Other Transaction authorities are set forth in two sections of law:

- *10 U.S.C. 2371* – granting authority to use OTs for basic, applied, and advanced research projects.
- *10 U.S.C. 2371b* – granting authority to use OTs for prototype projects and follow-on production. Under this authority, a prototype project can only be conducted if at least one nontraditional defense contractor significantly participates in the project; all significant participants are small businesses or nontraditional defense contractors; at least one-third of the total cost of the prototype project is provided by nongovernment participants; or the senior procurement acquisition official provides a written justification for using an OT. Follow-on production can only be conducted when the underlying prototype OT was competitively awarded, and the prototype project was successfully completed.

OTs have the potential to provide significant benefits to DOD, including:

- attracting nontraditional contractors with promising technological capabilities to work with DOD,
- establishing a mechanism to pool resources with other entities to facilitate development of, and obtain, state-of-the-art dual-use technologies, and
- offering a unique mechanism for DOD to invest in, and influence the direction of, technology development.

A number of analysts warn that along with the potential benefits come significant risks, including potentially diminished oversight and exemption from laws and regulations designed to protect government and taxpayer interests.

In FY2017, DOD obligated $2.1 billion on prototype OT agreements, representing less than 1% of contract obligations for the year. However, the use of OTs is expected to grow at a rapid pace, due in part to recent statutory changes expanding Other Transaction authorities.

A number of analysts and officials have raised concerns that if DOD uses OTs in ways not intended by Congress—or is perceived to abuse the authority—Congress could clamp down on the authority. Generally, DOD lacks authoritative data that can be used to measure and evaluate the use of Other Transaction authorities.

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Introduction

The Department of Defense (DOD) obligates more than $300 billion annually to pay for goods and services (including research and development). Most of these acquisitions are governed by numerous statutes and regulations found in Title 10 of the United States Code, the Federal Acquisition Regulation (FAR), and the Defense Federal Acquisition Regulation Supplement (DFARS). DOD can also enter into certain transactions without triggering most of the standard acquisition statutes and regulations by using Other Transaction (OT) authorities. In recent years, Congress has expanded these authorities and DOD is increasingly using OTs for research, prototyping, and production.

This report examines (1) how OTs work, (2) why they were established, (3) potential benefits and risks of using OTs, and (4) whether there is data available against which to measure their effectiveness. **Appendix A** provides a legislative history of DOD's Other Transaction authorities.

Background

On October 4, 1957, the Soviet Union triggered a space race with the United States when it successfully launched Sputnik I into orbit, becoming the first nation to send a man-made satellite into space.[1] Congress, concerned that the United States was falling behind in space, held a series of hearings on an "emergency" effort to respond to the Soviet launch of Sputnik.[2] At the same time, a bill was introduced in the Senate to create an agency with the means to quickly and efficiently develop a national space program.[3] These efforts led to passage of the National Aeronautics and Space Act of 1958 (Space Act, P.L. 85-568) in July 1958, which established the National Aeronautics and Space Administration (NASA).[4]

In an effort to give the new agency "the necessary freedom to carry on research, development, and exploration… to insure the full development of these peaceful and defense uses without unnecessary delay,"[5] the Space Act granted NASA broad authority to "enter into and perform such contracts, leases, cooperative agreements, or *other transactions* as may be necessary" to accomplish its mission of research and exploration (emphasis added).[6]

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[1] NASA website, at https://history.nasa.gov/sputnik/.

[2] U.S. Congress, House Select Committee on Astronautics and Space Exploration, *Hearings Before the House Select Committee on Astronautics and Space Exploration*, 85th Congress, 2nd sess. (Washington, GPO, 1958), p. 2.

[3] *Congressional Record*, June 16, 1958 p. S11295. The bill was introduced by Senators Lyndon Johnson and Styles Bridges.

[4] That same year, Secretary of Defense Neil McElroy established the Advanced Research Projects Agency (later renamed the Defense Advanced Research Project Agency, DARPA) to conduct advanced research and development projects, with an initial focus on space technology, ballistic missile defense, and solid propellants. See; Secretary of Defense Neil McElroy, *Department of Defense Advanced Research Projects Agenc*y, Department of Defense, Directive 5105.15, February 7, 1958; DARPA website, https://www.darpa.mil/about-us/timeline/dod-establishes-arpa., accessed October 19, 2018.

[5] U.S. Congress, House Committee of Conference, *National Aeronautics and Space Act of 1958*, Conference Report to accompany H.RE. 12575, 85th Cong., 2nd sess., July 15, 1968, Report No. 2166 (Washington: GPO, 1958), p. 16.

[6] Section 203(5). The legislation was intended to provide "appropriate machinery [and] necessary power ... essential to the most expeditious national effort in aeronautical and space activities." *Congressional Record*, June 16, 1958 p. S11294. See also Aaron Boyd, "The Scary New Contracting Model That Isn't Scary or New," *Nextgov*, March 26, 2018.

Congress extended different variations of OT authorities to other select agencies, granting the authority to DOD in the FY1990 & 1991 National Defense Authorization Act (NDAA, P.L. 101-189). For an analysis of which non-DOD agencies can use OTs and how the authorities differ by agency, see **Appendix B**.

What Are Other Transaction Authorities?

Other Transactions are legally binding contracts that are generally exempt from federal procurement laws and regulations such as the Competition in Contracting Act and the Federal Acquisition Regulation.[7] In contrast, traditional procurement contracts must adhere to the procurement rules set forth in statute and regulation.

Generally, DOD can use other transaction authorities for three purposes:

1. conduct research,
2. develop prototypes, or
3. contract for follow-on production of a successful prototype project.

DOD's Other Transaction authorities are found in two sections of law:

10 U.S.C. 2371 grants DOD the authority to use other transactions to carry out basic, applied, and advanced research projects.[8] DOD regulations treat these projects as financial assistance instruments, not as contracts.

10 U.S.C. 2371b permits the use of other transactions to conduct prototype projects and follow-on production.

OTs can only be used for prototypes if one of the following apply:

- At least one nontraditional defense contractor significantly participating in the project;
- All significant participants are small businesses or nontraditional defense contractors;
- At least one-third of the total cost of the prototype project is provided by nongovernment participants; or
- The senior procurement acquisition official provides in writing an explanation of the

[7] Office of the Under Secretary of Defense for Acquisition and Sustainment, *Other Transaction Guide, Version 1.0,* November, 2018, p. 38; Kenneth Patton, "GAO Says Oracle Protest Did Not Make Policy; Criticizes Greenwalt Op-ed," *Breaking Defense*, July 9, 2018, https://breakingdefense.com/2018/07/gao-says-oracle-protest-did-not-make-policy-criticizes-greenwalt-op-ed/; Richard L. Dunn, "Other Transaction Agreements: What Applies?," *The Nash & Cibinic Report*, vol. 32, no. 5 (May 2018), p. 69.

[8] *Basic research* is conducted to gain more comprehensive knowledge or understanding of the subject under study without specific applications in mind. *Applied research* is conducted to gain knowledge or understanding to meet a specific, recognized need. *Advanced research* includes efforts that have moved into the development and integration of hardware for field experiments and tests.

exceptional circumstances justifying an OT.

Follow-on production can only be conducted when:

- The underlying prototype OT was competitively awarded, and
- The prototype project was successfully completed.

10 U.S.C. 2373, while generally not considered an *Other Transaction authority*, allows DOD to buy certain items and designs for experimental or test purposes without having to adhere to the procurement laws set forth in Chapter 137 of Title 10.[9]

Key Definitions

Agreements Officer— a government official authorized to negotiate, enter into, and administer an OT Agreement (akin to the role of a contracting officer for traditional contracts). Agreements officers do not have to be contracting officers. (source: *Other Transactions Guide,* p. 29).

Prototype— the term prototype is not defined in statute. DOD generally describes a prototype as a physical, virtual, or theoretical model used to evaluate the technical or manufacturing feasibility, or effectiveness, of what is intended to come later. It need not be a physical model; prototypes can involve designs, novel applications of commercial technologies, demonstrations of operational utility, and proofs of concept (source: *Other Transactions Guide,* p. 31).

Nontraditional Defense Contractor— an entity that for the past year has not worked on a DOD contract or subcontract that is subject to full cost accounting standards coverage (10 U.S.C. 2302).

The Bayh-Dole Act— formally known as the Patent and Trademark Law Amendments Act, governs intellectual property rights for inventions made with federal government support (Title 35, Chapter 18 (Sec. 200 et seq.)). Under the act, the federal government retains certain rights in inventions produced with its financial assistance.

How Do Other Transactions Work?

OT authorities grant government officials the flexibility to include, amend, or exclude contract clauses and requirements that are mandatory in traditional procurements (e.g., termination clauses, payments, audit requirements, intellectual property, and contract disputes).[10]

OTs can be structured in numerous ways, including a direct relationship between a single government agency and a single provider; joint ventures; partnerships; multiple agencies joining together to fund an agreement encompassing multiple providers; or through a consortium.[11]

[9] Statutes found in Chapter 137 include the simplified acquisition threshold, competition requirements, cost or pricing data, and contract audits.

[10] *Other Transaction Guide*, p. 4-5; Thomas C. Modeszto, "The Department of Defense's Section 845 Authority: An Exception for Prototypes or a Prototype for a Revised Government Procurement System?," *Public Contract Law Journal*, vol. 34, no. 2 (Winter 2005), p. 229.

[11] *Other Transactions Guide*, p. 39. Another avenue for OTs is to use a Commercial Solutions Opening, a mechanism first established by Defense Innovation Unit (DIU), designed to proactively solicit "solutions to problems that our warfighters are facing." For more information on CSOs, see the DIU guide, at https://diux.mil/download/datasets/740/CSOhowtoguide.pdf.

Consortia

One common application of OTs is to forge an agreement with a consortium. A consortium is an organized group— it can consist of nonprofits, academic institutions, or contractors— focusing on a specific technology area. Generally, a lead entity coordinates and directs a consortium's activities. Consortia have consisted of a handful to as many as 1,000 members.[12]

Consortia can act to facilitate multiparty agreements whereby each member is akin to its own co-prime contractor with the government.[13] In such a case, the government articulates the need or problem it is trying to solve, and the various members of the consortium can submit white papers for consideration. In this scenario, OTs can serve as an efficient way for all members to send unsolicited technology suggestions and solutions to solve a defined challenge.[14]

Consortia can also be used to develop an ecosystem of entities working together on a project, whereby members of a consortium pool resources and collaborate with DOD. A number of analysts argue that using consortia in this way gives the federal government a unique ability to leverage and pool the technological expertise and innovation of multiple entities in a particular sector, thereby strengthening and advancing a sector of the industrial base that may have defense applications.[15] Seen like this, OTs can be considered a mechanism to promote defense technology and the defense industrial base, with the potential added benefit of advancing the domestic commercial technology base.[16] Some analysts, however, have argued that many of today's consortia do not operate as collaborative organizations, but function more like managed multiple award task order contracts.[17] These analysts argue that DOD should seek to foster more collaboration in consortia.

Some analysts have argued that consortia reduce competition, since only members of the consortium under contract can participate in the project or submit white papers for consideration and funding. Others counter that even when an OT is signed with a single consortium, competition could be increased, since all members of the consortium are notified of the opportunity (expanding the pool of potential competitors aware of the opportunity), and the OT will foster internal competition among consortium members.[18]

What Laws and Regulations Apply to OT?

OTs are not procurement contracts and thus are exempt from numerous procurement statutes and regulations, including the statutes in Chapter 137 of Title 10 (*Procurement Generally*).[19] They are, however, bound by standard contract and other select laws and regulations.

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[12] Aaron Boyd, "The Gatekeepers of the Government's Other Transaction Deals," *Nextgov*, April 18, 2018.

[13] Richard N. Kuyath, "The Untapped Potential of the Department of Defense's 'Other Transaction Authority," *Public Contract Law Journal*, vol. 24, no. 4 (Summer 1995), p. 527.

[14] Based on CRS conversations with industry officials, August 2, 2018.

[15] Richard N. Kuyath, "The Untapped Potential of the Department of Defense's 'Other Transaction; Authority," *Public Contract Law Journal*, vol. 24, no. 4 (Summer 1995), p. 573.

[16] Thomas C. Modeszto, "The Department of Defense's Section 845 Authority: An Exception for Prototypes or a Prototype for a Revised Government Procurement System?," *Public Contract Law Journal*, vol. 34, no. 2 (Winter 2005), p. 220.

[17] Richard Dunn, *Consortia: The Lost Vision*, Strategic Institute, March 5, 2018, Website Post, http://www.strategicinstitute.org/other-transactions/consortia-lost-vision/.

[18] Aaron Boyd, "The Gatekeepers of the Government's Other Transaction Deals," *Nextgov*, April 18, 2018.

[19] See Diane M. Sidebottom, *Other Transactions Basics*, Defense Acquisition University, Powerpoint Presentation;

Examples of laws that do not apply include the Truth in Negotiations Act,[20] Competition in Contracting Act,[21] Cost Accounting Standards,[22] Contract Disputes Act,[23] and select intellectual property statutes such as the Bayh-Dole Act.[24] A number of these laws are aimed at oversight and protecting the interests of taxpayers.

While the Competition in Contracting Act does not apply, 10 U.S.C. 2371b requires that research and prototype projects be competed "to the maximum extent practicable." DOD policy mirrors the statutory language, stating "[C]ompetition is a good thing. It helps keep prices low, quality high, and gives the government leverage in negotiations."[25] To the extent that OTs induce nontraditional contractors to work with DOD, OTs can be viewed as promoting competition among (and within) entities that would not normally compete for DOD contracts.[26] However, the lack of explicitly defined competition requirements could result in less competition for certain OTs.

OTs are not free from all legislative and regulatory requirements. Generally, statutes and regulations that are not procurement-specific apply, including the Trade Secrets Act, (18 U.S.C. 1905); the Economic Espionage Act (18 U.S.C. 1831-39); elements of the Freedom of Information Act (5 U.S.C. 552); and fiscal and property laws, such as the Anti-deficiency Act (31 U.S.C. 1341); and the Tucker Act (28 U.S.C. 1491).[27] As can be seen by these citations, many of these statutes are not located in the procurement titles of Title 10 or Title 41.

Protests and GAO Audits

The Government Accountability Office (GAO) has held that OTs are not procurement contracts, and therefore it will not review protests of such an award or solicitation.[28] However, GAO will review "a timely protest that an agency is improperly using its other transaction authority."[29] OT contracts can be protested to the Court of Federal Claims, although there is debate as to the extent of the court's jurisdiction.[30]

Other Transactions Guide, pp. 38-39; Susan B. Cassidy, Jennifer Plitsch, and Stephanie H. Barclay, "Another Option in a Tightening Budget: A Primer on Department of Defense 'Other Transactions' Agreements," *The Procurement Lawyer*, vol. 48, no. 3 (Spring 2013), p. 5; Richard L. Dunn, "Other Transaction Agreements: What Applies?," *The Nash & Cibinic Report*, vol. 32, no. 5 (May 2018), p. 70.

[20] 10 U.S.C. 2306a.

[21] CICA was originally enacted as part of the Deficit Reduction Act of 1984, P.L. 98-369, §§ 2701-2753, 98 Stat. 494, 1175-1203 (1984) (codified as amended in scattered sections throughout the U.S.C.; see, in particular, 10 U.S.C. 2304 and 41 U.S.C. 3301). See: 32 C.F.R. 3.7.

[22] 41 U.S.C. Chapter 15.

[23] 41 U.S.C. 7101-7109.

[24] 35 U.S.C. 201-204 and 10 U.S.C. 2320-2321.

[25] *Other Transaction Guide*, p. 38.

[26] Thomas C. Modeszto, "The Department of Defense's Section 845 Authority: An Exception for Prototypes or a Prototype for a Revised Government Procurement System?" *Public Contract Law Journal*, vol. 34, no. 2 (Winter 2005), p. 229. Even mainstream companies are sometimes unwilling to work with DOD because of the rules and regulations.

[27] The Tucker Act grants jurisdiction to the Court of Federal Claims over certain claims against the United States.

[28] See 31 U.S.C. 3551-3556; see also Rocketplane Kistler, B-310741, Jan. 28, 2008, 2008 CPD ¶ 22 at 3; see also MorphoTrust USA, LLC, B-412711, May 16, 2016, 2016 CPD ¶ 133 at 7-8.

[29] Oracle America, Inc., B-416061, May 31, 2018, p. 11.

[30] *Other Transactions Guide*, p. 38. See also Stuart W. Turner and Nathaniel Castellano, "Other Transactions Authority (OTA): Protests and Disputes," Arnold & Porter Advisory, June 28, 2018,

The limited protest jurisdiction of GAO is appealing to many government procurement officials.[31] One senior Air Force official reportedly stated that OTs are "just so much faster and so much more attuned to getting something that we want today and not have to spend a couple of years going through a protest, going through this huge process to get something we wanted two years ago.[32]" It generally does not take that long to go through a GAO protest. By statute, GAO must issue an opinion on a protest within 100 days of the protest being filed, and 70 percent of cases are resolved in less than 60 days.[33]

While exempt from GAO bid protests, OTs are not exempt from GAO audits. Generally, OTs that include government payments exceeding $5 million are required to include a clause granting GAO the right to examine the records of any related party.[34] However, this requirement has a number of limitations.[35]

Potential Benefits and Risks of Using OTs

Used properly, OTs can provide significant benefits to DOD. Along with the potential benefits come certain risks.

Potential Benefits

Some of the potential benefits to OTs highlighted by analysts and officials include:

- providing a mechanism to pool R&D resources with industry to facilitate development of, and obtain "the latest state-of-the-art, dual use technologies;"[36]
- attracting nontraditional contractors with promising technological capabilities to work with DOD;[37]

https://www.arnoldporter.com/en/perspectives/publications/2018/06/other-transactions-authority-ota-protests.

[31] Richard Beutel, "The case for innovation: Let's broaden Other Transaction Authority," *Federal News Network*, March 1, 2018, p. 9:52 a.m. https://federalnewsradio.com/commentary/2018/03/the-case-for-innovation-lets-broaden-other-transaction-authority/.

[32] Scott Maucione, "OTA contracts are the new cool thing in DoD acquisition," *federalnewsradio.com*, October 19, 2017. By statute, GAO must resolve bid protests within 100 days. According to GAO, the statutory deadline has never been breached.

[33] For more information on bid protests, see: CRS Report R45080, *Government Contract Bid Protests: Analysis of Legal Processes and Recent Developments*, by David H. Carpenter and Moshe Schwartz. See also Mark V. Arena, Brian Persons, and Irv Blickstein, et al., Assessing Bid Protests of U.S. Department of Defense Procurements, RAND Corporation, Identifying Issues, Trends, and Drivers, 2018.

[34] 10 U.S.C. 2371b(c); see also 32 C.F.R. § 3.7.

[35] Ibid.

[36] Richard N. Kuyath, "The Untapped Potential of the Department of Defense's 'Other Transaction; Authority," *Public Contract Law Hournal*, vol. 24, no. 4 (Summer 1995), p. 524; *Other Transactions Guide*, p. 5.

[37] "Govcon Mythbusters: "Other Transactions" in Fedgov," *The Pulse*, June 24, 2018, https://medium.com/@thepulsegovcon/govcon-mythbusters-other-transactions-in-fedgov-7cb1ccf41a7; *Other Transactions Guide*, p. 5.

- lowering costs by eliminating requirements associated with the Federal Acquisition Regulations (i.e., costs associated with required reporting and administrative activities) or sharing costs with industry;[38] and
- "Speeding up" the acquisition process.[39]

A number of experts argue that OTs provide a unique mechanism for DOD to invest in, and influence the direction of, technology development even when the end-result is not directly tied to a military capability.[40] As one observer noted, the real benefit to DOD may be that

> [t]he R&D has been accomplished and is available to the technical and scientific communities. As a result, a subsequent phase of research can begin or a particular approach can be demonstrated to be of no value.[41]

Some argue that OTs have particular import today. Drawing parallels to the space race, these analysts argue that DOD is engaged in a defense technology race. According to the 809 Panel:

> DoD is now in a period during which the time a particular technology is a dominant force on the battlefield is getting increasingly shorter, disruptive technologies are emerging at a faster pace, and these technologies are more widely dispersed…In a world with rapidly changing technology, time is a valuable resource that must not be taken for granted. It is difficult to predict what capabilities DoD will need 5 to 10 years from now—biotechnology, nanotechnology, artificial intelligence, robotics, or a new technology area not even known today. It also is unclear on what plane the military will conduct warfare—traditional battlefields, space, cyberspace, or some other domain. The current acquisition system lacks the agility needed to adapt to new paradigms.[42]

These analysts argue that OTs and similar rapid acquisition authorities are critical for DOD to compete in such a fast-paced global environment where technology and innovation are no longer driven by DOD, but by industry and foreign competitors. In 1960, the United States accounted for 69% of global R&D, with U.S. defense-related R&D alone accounting for more than one-third of global R&D. The federal government funded approximately twice as much R&D as U.S. business. However, from 1960 to 2016, the U.S. share of global R&D fell to 28%, and the federal government's share of total U.S. R&D fell from 65% to 24%, while business's share more than doubled from 33% to 67%. As a result of these global, national, and federal trends, federal defense R&D's share of total global R&D fell to 3.7% in 2016.[43]

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[38] Major Gregory J. Fike, "Measuring 'Other Transaction: Authority Performance Versus Traditional Contracting Performance: A Missing Link to Further Acquisition Reform," *The Army Lawyer*, July 2009, p. 37; Richard N. Kuyath, "The Untapped Potential of the Department of Defense's 'Other Transaction; Authority," *Public Contract Law Journal*, vol. 24, no. 4 (Summer 1995), p. 573: *Other Transactions Guide*, pp. 6, 16.

[39] Stan Soloway, "Will the empire Strike back? OTA and the future of acquisition," *DefenseNews*, April 28, 2018; see also *Other Transactions Guide*, p. 5.

[40] Based on CRS discussions with DOD officials.

[41] Richard N. Kuyath, "The Untapped Potential of the Department of Defense's Other Transaction Authority," *Public Contract Law Journal*, vol. 24, no. 2 (Summer 1995), p. 527.

[42] Advisory Panel on Streamlining and Codifying Acquisition Regulations, *Section 809 Panel Interim Report*, May 2017, pp. 7-8.

[43] For an analysis of trends in global research and development, see CRS Report R45403, *The Global Research and*

Given the shift in the global R&D landscape, and the diminishing influence of DOD as a market mover, analysts suggest that the current procurement system is overburdened by regulations and bureaucratic processes that slow the system, increase costs, and dissuade companies from doing business with DOD. In contrast, OTs are viewed as faster, attracting companies that would otherwise forgo working with DOD, and promoting broader investment in critical defense capabilities.[44] As one analyst wrote:

> OTAs are currently the only way to remove the barriers necessary to get these nontraditional sources of innovation to do business with the military. Properly constructed, OTAs help speed up the process, respect a company's IP through negotiation rather than regulatory fiat, and result in contracting under commercial terms and conditions.[45]

Congress also appears to have shifted its view on appropriate use of other transactions. In the FY1999 conference report, Congress stated that:

> [OT] authority should only be used in the exceptional cases where it can be clearly demonstrated that a normal contract or grant will not allow sufficient access to affordable technologies.[46]

By comparison, in the FY2018 NDAA, Congress expanded OT authorities and stated:

> In the execution of science and technology and prototyping programs, the Secretary of Defense shall establish a preference, to be applied in circumstances determined appropriate by the Secretary, for using transactions other than contracts, cooperative agreements, and grants.[47]

Potential Risks

Along with the potential benefits come potential risks, including that of diminished oversight and exemption from laws and regulations designed to protect government and taxpayer interests. Some analysts, while acknowledging the important role of OTs, raise concerns over transparency and how these agreements are being employed. As one industry official stated, OTs are a contracting method, not a substitute for good acquisition practices.[48] Discussing a particular OT for cloud services that was protested and ultimately cancelled by DOD, one observer argued:

> The cloud contract provides a teachable moment for procurement reform-minded officials in the Pentagon and Capitol Hill. The problem was not with the OTA mechanism, which remains an essential element of reforming Pentagon procurement. Rather, the problem was with a lack of transparency with how the mechanism was employed.[49]

Development Landscape and Implications for the Department of Defense, by John F. Sargent Jr., Marcy E. Gallo, and Moshe Schwartz.

[44] Thomas C. Modeszto, "The Department of Defense's Section 845 Authority: An Exception for Prototypes or a Prototype for a Revised Government Procurement System?" *Public Contract Law Journal*, vol. 34, no. 2 (Winter 2005), p. 229. Even mainstream companies are sometimes unwilling to work with DOD because of the rules and regulations.

[45] Bill Greenwalt, "GAO Decision Threatens US Military Dominance; Reject It," *Breaking Defense*, June 27, 2018.

[46] U.S. Congress, House Committee on National Security, *Strom Thurmond National Defense Authorization Act for Fiscal Year 1999*, conference report to accompany H.R. 3616, 105th Cong., 2nd sess., H.Rept. 105-736 (Washington: GPO, 1998), p. 590.

[47] Section 867 of the FY2018 NDAA.

[48] Email to CRS from industry official.

[49] Tim Greef, "How the US can put its OTA procurement process to best use," *FederalTimes*, March 23, 2018, https://www.federaltimes.com/acquisition/2018/03/23/how-the-us-can-put-its-ota-procurement-process-to-best-use/.

Scott Amey, General Counsel of the Project on Government Oversight, cautioned:

> We have to seriously consider how we are using [OTs]; whether we are using them as intended, whether we are getting the goods and services that we really want and need, whether we are getting them at the best cost and process, and we are using this procurement vehicle as a way to just circumvent the rules and have contractors not have the administration and oversight they need to hold them accountable. I'm just afraid this is going to result in a lot of waste, fraud, and abuse in the future."[50]

Congress has expressed repeated concerns that OTs could be used to circumvent congressional intent. In the FY1999 NDAA, the committees emphasized that the authority should only be used in a limited manner. The conference report stated:

> The conferees are especially concerned that such authority not be used to circumvent the appropriate management controls in the standard acquisition and budgeting process.[51]

Congress echoed a similar concern in the FY2019 NDAA. According to the House report:

> The committee also urges the Department to reiterate through established guidelines that OTA is not a means for circumventing appropriate use of the Federal Acquisition Regulations, and that full and open competition should be used to the maximum extent possible to maintain a sense of integrity, fairness, and credibility in the Federal Procurement process.[52]

Other transactions are also exempt from many of the socioeconomic policies put in place by Congress to promote public policies, including some Buy America requirements.[53] Some analysts have raised concerns that OTs are a way to circumvent many of the public policies enshrined in the acquisition process.

A number of analysts and officials have raised concerns that if DOD uses OTs in ways not intended by Congress—or is perceived to abuse the authority—Congress could clamp down on the authority. Under Secretary of the Army Ryan McCarthy reportedly stated that the military department is "trying to be very judicious about this authority so we don't lose it.[54]"

[50] Scott Maucione, "Peering into the black box of OTA awards," *Federal News Network*, July 24, 2018, p. 5:34 pm, https://federalnewsnetwork.com/contracting/2018/07/peering-into-the-black-box-of-ota-awards/.

[51] U.S. Congress, House Committee on National Security, *Strom Thurmond National Defense Authorization Act for Fiscal Year 1999*, conference report to accompany H.R. 3616, 105th Cong., 2nd sess., H.Rept. 105-736 (Washington: GPO, 1998), p. 590.

[52] U.S. Congress, House Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2019*, on H.R. 5515, 115th Cong., May 15, 2018, H.Rept. 115-676 (Washington: GPO, 2018), pp. 75-76.

[53] Diane M. Sidebottom, *Other Transactions Basics*, Defense Acquisition University, PowerPoint presentation, p. 25.

[54] Lauren C. Williams, "Why the Army is Wary of Other Transaction Authority," *FCW*, March 28, 2018.

Case Study – Congressional Concern Over Using OTs to Avoid Regulations

The Future Combat System (FCS) was a multibillion dollar U.S. Army program that was intended to create a modernized system of numerous manned and unmanned systems and vehicles tied together by a communications and information network. FCS was envisioned as replacing systems such as the M-1 Abrams tank and the M-2 Bradley infantry fighting vehicle. In March 2002, the Army chose Boeing and Science Applications International Corporation (SAIC) to oversee certain aspects of FCS development. In August 2004, Boeing and SAIC awarded contracts to 21 companies to design and build the FCS' various platforms, hardware, and software.

The debate over the proper use of OTs became the subject of a congressional hearing exploring the Army's plan to award an OT for follow-on production with Boeing for the FCS program. Senator John McCain and FCS program manager Claude Bolton discussed whether an OT agreement was appropriate, since the participating contractors were perceived as traditional defense contractors. Criticizing what was viewed as a decision to use an OT for the primary reason of avoiding procurement laws, Senator McCain stated:

> Now, what you're saying is we don't need those laws. You can do the job yourself better than enforcing laws that were passed by the Congress of the United States to preserve the integrity of the taxpayer.... My point is, if you want to come back and say, change the procurement laws, Congress, so that I can do a better job...then I would be certainly open to it. I know this committee would be, and so would all of Congress.... But just to make a decision on your own that laws that were enacted because of previous scandals...are being exempted from a huge hundred and some billion dollar contract, you're going to have to give me a better reason than the fact that you've got great judgement. (p. 11)

A 2004 report by the Institute for Defense Analyses found that the FCS OT was well crafted and appropriately safeguarded taxpayer interests by including contract clauses, many of which mirrored clauses found in the FAR. However, the report added:

> ...the Army's conservative use of OTA in establishing the current FCS OTA agreement will make it difficult for the Army to present a business case to Congress for expanding the current OT authority beyond the prototype development threshold. (IDA Review of FCS Management Volume I: Main Text, August 2004, p. 16).

In response to the Army's intent to use an OT agreement, Congress enacted legislation barring the use of an OT for the FCS and incorporating certification and notification requirements (see Appendix A).

For additional background information on FCS, which was ultimately canceled in 2009, see CRS Report RL32888, *Army Future Combat System (FCS) "Spin-Outs" and Ground Combat Vehicle (GCV): Background and Issues for Congress*.

Some analysts argue that Congress is already clamping down on the use of OTs. These analysts point to language in the FY2019 NDAA and FY2019 appropriations legislation (P.L. 115-245) requiring additional reporting and notification (see **Appendix A**). Such notification and reporting requirements, however, are not new; when Congress expanded OT authorities in the past, reporting and notification requirements were commonly included. The reporting requirements may also be a result of congressional frustration with a lack of transparency and data on how DOD uses OTs.

DOD Currently Lacks Sufficient Data to Measure and Evaluate the Use of Other Transaction Authority

DOD lacks authoritative data that can be used to assess OT effectiveness and better understand broader trends associated with these agreements.[55] The most frequently cited source for such data is the Federal Procurement Data System – Next Generation (FPDS-NG), which is the primary source for tracking data on contract obligations, including other transactions for prototypes and

[55] Based on CRS review of reports and literature. Some analysts and officials have also observed this. See for example Major Gregory J. Fike, "Measuring Other Transaction: Authority Performance Versus Traditional Contracting Performance: A Missing Link to Further Acquisition Reform," *The Army Lawyer*, July 2009, p. 34.

follow-on production.[56] FPDS-NG is configured to track data on cost-sharing, other transaction award type, and prevalence of nontraditional contractors. Obligations connected to OTs for research are tracked by the Defense Assistance Awards Data System, which is primarily used to track grants and cooperative agreements.[57] This bifurcation of how OT data is tracked makes it more difficult to get a consolidated view of OT data. According to DOD, all OT data will be reported through FPDS-NG starting in late 2019.[58]

The procurement data in FPDS-NG is not fully reliable. There are quality issues relating to accuracy, completeness, and timeliness of data.[59] CRS reviewed FPDS-NG data for prototype OT agreements signed or modified between FY2015 and FY2017 and found similar data inconsistencies. DOD officials acknowledge that they do not have sufficiently reliable data upon which to conduct analysis on the use of OTs and are taking steps to try to improve the data.[60] The analyses below reflect CRS' effort to analyze DOD's use of other transaction authority based on the best available data.

How often are OTs used?

According to FPDS-NG, in FY2017, DOD obligated $2.1 billion—and received $360 million in cost-share contributions—on prototype Other Transaction agreements, representing less than 1% of DOD's total FY2017 contract obligations (approximately $320 billion).[61]

Despite the small percentage of obligations, OTs are growing quickly and are expected to continue to grow at a rapid pace. From FY2013 to FY2017, the number of new prototype agreements increased from 12 to 94, an increase of over 650% (see **Table 1**). DOD's Defense Innovation Unit (DIU, formerly known as the Defense Innovation Unit Experimental, or DIUx) was involved with approximately half of the prototype agreements executed in 2017.[62] DOD officials have stated their intent to further increase the department's use of OTs. Officials say that this increase is due to Congress expanding the statutory authority.[63]

Table 1. Annual New DOD Prototype Agreements, FY2013-FY2017

depicted by funding agency

	2013	2014	2015	2016	2017
DARPA	1	—	—	—	—
Dept. of Defense	—	—	2	9	27

[56] OT data is required to be included in the Federal Procurement Data System. See *Other Transactions Guide*, p. 22.

[57] *Other Transactions Guide*, p. 22.

[58] DOD email to CRS, January 24, 2019.

[59] For more information on FPDS-NG data quality issues, see "Appendix A. FPDS Background, Accuracy Issues, and Future Plans" to CRS Report R44010, *Defense Acquisitions: How and Where DOD Spends Its Contracting Dollars*, by Moshe Schwartz, John F. Sargent Jr., and Christopher T. Mann.

[60] For example, according to officials, DOD has submitted a change request to the Federal Change Control Board for FPDS to add 'Production' as a choice under the type of OT.

[61] This data does not include OTs for basic, applied, or advanced research which are tracked as grants.

[62] Defense Innovation Unit Experimental, *Annual Report 2017*, p. 10, at https://diux.mil/library. The DIUx became DIU in August 2018. The analysis of DIU data is a rough approximation: the DIU data in the annual report are based on a calendar year whereas the table data is based on fiscal years.

[63] CRS discussions with DOD officials.

	2013	2014	2015	2016	2017
Dept. of the Air Force	—	—	—	5	16
Dept. of the Army	1	3	—	7	14
Dept. of the Navy	3	5	2	—	2
NSA/CSS	—	—	—	—	1
U.S. Special Operations Command	1	1	1	—	—
U.S. Transportation Command	—	—	—	—	1
Washington Headquarters Services	—	—	—	—	2
Not Indicated	6	7	14	14	31
Total	**12**	**16**	**19**	**35**	**94**

Source: CRS analysis of Federal Procurement Data System-Next Generation data, December 2018.

Notes: Agreements with a funding agency of "not indicated" listed the Department the Army and DARPA as the contracting activity.

The Army executed more than 66% of the prototype OT agreements between FY2013 and FY2017, often on behalf of other military departments and components (see **Table 2**). Army Contracting Command-New Jersey at Picatinny Arsenal executes many of these agreements. DIU currently uses Picatinny Arsenal to execute all of its other transaction agreements.[64]

Table 2. Annual New DOD Prototype Agreements, FY2013-FY2017

depicted by contracting agency

	2013	2014	2015	2016	2017
DARPA	6	6	13	12	23
Dept. of the Air Force	—	—	—	5	5
Dept. of the Army	4	7	5	18	66
Dept. of the Navy	1	1	—	—	—
U.S. Special Operations Command	1	2	1	—	—
Total	**12**	**16**	**19**	**35**	**94**

Source: CRS analysis of Federal Procurement Data System-Next Generation data, December 2018.

[64] Defense Innovation Unit Experimental, *Annual Report 2017*, p. 10, at https://diux.mil/library.

Are OTs Attracting Nontraditional Defense Contractors and Entities?

A number of private sector companies do not pursue federal government contracts because they are unwilling to forfeit intellectual property rights or adhere to some of the procurement regulations.[65] One of the goals of OTs is to expand the defense marketplace by creating a mechanism for access to technologies and services of companies that would not otherwise work with DOD, particularly startups and companies developing innovative technology.[66] As one industry representative stated:

> Because they are "outside" the FAR, OT agreements do not require such cumbersome oversight and audit requirements such as those imposed by the Truth in Negotiations Act, cost and pricing data or an expensive Cost Accounting System (CAS) qualified financial system. CAS compliant financial systems can cost a company millions of dollars to implement and maintain — and are therefore a significant, if not potentially fatal, barrier to government market entry for startups and small, innovative companies. These requirements tend to reinforce the "legacy advantage" of large traditional contractors, who can afford to hire and staff these requirements with large staffs of accountants and lawyers.[67]

A number of nontraditional companies told CRS that they are more likely to work with DOD because of the department's other transaction authorities.

Despite these claims, some observers question whether OTs are effectively bringing nontraditional contractors into the defense marketplace. A DOD Inspector General report examining other transactions from FY1994-FY2001 found that OTs did not attracted significant numbers of nontraditional defense contractors to do business with DOD. The report found that of the 209 prototype agreements examined, traditional defense contractors received 95 percent of the $5.7 billion in funds awarded.[68]

A recent analysis of FPDS-NG data by Federal News Network had similar findings. According to the report, from FY2015-2017, while nontraditional defense contractors were awarded most of the new OTs (66% vs. 33% for traditional defense contractors) the dollar-value of the OTs favored traditional contractors ($20.8 billion vs. $7.4 billion for nontraditional contractors).[69]

Some observers have questioned the accuracy of the data published by Federal News Network.[70] According to Charlie McBride, President of Consortium Management Group (which manages two consortia working with DOD through OTs), 88% of the total dollar value of awards to CMG

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[65] Surya Gablin Gunasekara, "'Other Transactions' Authority: NASA's Dynamic Acquisition Instrument for the Commercialization of Manned Spaceflight or Cold War Relic?" *Public Contract Law Journal*, vol. 40, no. 4 (Summer 2011), p. 898.

[66] Susan B. Cassidy, Jennifer Plitsch, and Stephanie H. Barclay, "Another Option in a Tightening Budget: A Primer on Department of Defense 'Other Transactions' Agreements," *The Procurement Lawyer*, vol. 48, no. 3 (Spring 2013), p. 3.

[67] Richard Beutel, "The case for innovation: Let's broaden Other Transaction Authority," *Federal News Network*, March 1, 2018, p. 9:52 a.m. https://federalnewsradio.com/commentary/2018/03/the-case-for-innovation-lets-broaden-other-transaction-authority/.

[68] Department of Defense Office of the Inspector General, *Statement for the Record, Robert J. Lieberman, Deputy Inspector General, Department of Defense, to the Subcommittee on Technology and Procurement Policy House Committee on Government Reform on The Services Acquisition Reform Act (SARA) of 2002*, p. 11, D-2002-064, March 12, 2002, http://www.dodig.mil/reports.html/Article/1116572/statement-for-the-record-robert-j-lieberman-deputy-inspector-general-department/.

[69] Scott Maucione, "As OTAs grow, traditional contractors are reaping the benefits," *Federal News Network*, July 17, 2018.

[70] Based on CRS emails and conversations with DOD officials and analysts.

Group have gone to nontraditional prime contractors, and nontraditional entities have participated in the remaining 12%."[71]

This debate highlights the lack of authoritative data on OTs. The currently available data may not accurately reflect the extent to which nontraditional contractors are engaged in OT agreements. FPDS-NG does not collect data regarding subcontractors or consortia composition, making it difficult to determine the nature and extent to which nontraditional defense contractors and entities may be working under OT agreements with DOD directly or as subcontractors.

Are OTs Fostering Collaborative Research and Sharing of Resources between DOD and the Private Sector?

When Congress extended OT authority to DOD, it authorized inserting a clause requiring a person or entity to make payments to DOD as a condition of receiving support under the agreement. Such funds were to be merged into an account dedicated to support DARPA advanced research projects. The intent of this provision was to permit DARPA to "recoup the fruits of such arrangements, when there is a 'dual use' potential for commercial application" and reinvest the funds to develop other technologies.[72] In addition to the recoupment authority, DOD can share costs with other parties under an OT. Using this approach, the amount of each party's share is negotiated and incorporated into the agreement.

Congress believed that OTs and cooperative agreements were ideal vehicles for promoting DOD-industry collaboration in developing dual-use technologies.[73] For example, the FY1992 & 1993 NDAA (P.L. 102-190) authorized DOD to enter into cooperative and other transaction agreements to develop critical dual-use technologies as set forth in the *Defense Critical Technologies Plan.*[74] According to the Senate report:

> …the United States tends to underinvest in dual-use technologies. National security requirements alone often do not justify major DOD support, and market prospects alone often appear to be too long-term or high risk to justify US industry carrying the entire development burden…. The committee encourages use of cooperative agreements and other transactions in lieu of grants or contracts…. The provision would require that at least 50 percent of funding over the life of a partnership derive from non-federal sources but would allow for a smaller industry share at the start…"[75]

In the 1990s, some DARPA OTs required participants to share costs because the types of work completed generally involved R&D that was mutually beneficial to government needs and industry commercial goals.[76] In certain instances, present-day OTs have cost-sharing requirements that foster collaborative research. Some analysts believe that DOD is not always

[71] Charlie McBride, "Letter to the Editor: Correcting the record about OTAs," *Federal News Network*, July 31, 2018, at 11:37 am, https://federalnewsnetwork.com/commentary/2018/07/letter-to-the-editor-correcting-the-record-about-otas/.

[72] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Years 1990 and 1991*, to accompany S. 1352, 101st Cong., 1st sess., July 19, 1989, S. Rept. 101-81, p. 127.

[73] Based on analysis of legislative history, **Appendix A**. See also, Strategic Institute, *Guide to Other Transactions Authority*, 2018, p. 17.

[74] Section 821 established Chapter 150 of Title 10, entitled *Development of Dual-Use Critical Technologies*.

[75] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Years 1992 and 1993*, Report to accompany S. 1507, 102nd Cong., 1st sess., July 19, 1991, S. Rept. 102-113 (Washington: GPO, 1991), pp. 233-234.

[76] Richard N. Kuyath, "The Untapped Potential of the Department of Defense's 'Other Transaction; Authority," *Public Contract Law Journal*, vol. 24, no. 4 (Summer 1995), pp. 530-533.

realizing all the benefits that OTs have to offer, such as sufficiently leveraging private capital or forming true consortia of multiple parties pooling resources.[77] Some of these analysts believe that DOD does not sufficiently use consortia to leverage private investment through the pursuit of collaborative, mutually beneficial, dual-use technologies.

Some observers argue that as the legislation on OTs has evolved, the cost-sharing provision for prototype projects has come to create an unfair playing field biased against traditional defense contractors. For prototype projects, traditional contractors generally are required to assume one-third of costs whereas nontraditional defense contractors and small businesses generally do not have to cost share. From a fairness perspective, these observers argue that traditional contractors should not have a mandatory cost share. These observers also point out that some nontraditional defense contractors are companies with billions of dollars of revenue that should not be granted a competitive cost advantage. Putting traditional defense contractors at a competitive disadvantage could deny DOD access to those companies with the most experience working on defense products, potentially depriving the military access to leading defense-related research and technology.

Other observers argue that the cost share as currently structured is appropriate: traditional defense contractors hold a significant competitive edge in their understanding of, and have the systems in place to manage, traditional contracts. In contrast, nontraditional and small businesses, which generally cannot compete with the traditional defense contractors, need the exemption from the cost-share requirement to be able to work with DOD. These observers also argue that traditional contractors are awarded the majority of dollars obligated to OTs, proving how difficult it is for nontraditional suppliers to break into the defense marketplace.[78] Additionally, traditional contractors could avoid the cost-sharing requirement by teaming with a nontraditional contractor.

DOD has not effectively tracked data on cost sharing. A 2017 report to Congress indicated that in FY2016 DOD obligated $1 billion for prototype agreements and received $68 million in cost-share contributions.[79] A CRS review found numerous concerns with the data underlying the report, and with DOD's analytical conclusions. See **Appendix C** for further discussion.

Are OTs Being Competed?

A number of analysts and industry officials have raised concerns that DOD could use OTs to avoid competitions, as OTs are exempt from the Competition in Contracting Act.[80] According to statute, follow-on production using other transaction authority can only be awarded if the

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[77] According to Richard Dunn, former General Counsel for DARPA (1987-2000),

> Many of the early OT projects were multi-party arrangements where companies cooperated on proposing and executing the project often co-funding the project with the government. The DARPA led Technology Reinvestment Project (TRP) during the course of two fiscal years in the early 1990's funded 194 dual-use projects involving multiple parties... with $760M which leveraged approximately $1B in private resources.

Richard Dunn, *Consortia: The Lost Vision*, Strategic Institute, March 5, 2018, Website Post, http://www.strategicinstitute.org/other-transactions/consortia-lost-vision/.

[78] While DOD contracts with thousands of companies for all kinds of goods and services, its contract activities are dominated by five companies: Lockheed Martin, Boeing, Raytheon, General Dynamics, and Northrop Grumman. In FY2017, these companies together received approximately 33% of all DOD contract obligations.

[79] Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, *An Assessment of Cost-Sharing in Other Transactions Agreements for Prototype Projects*, Report to Congress, March, 2017.

[80] Tom Temin, "DoD says 'OTA', industry says 'Oy'," *Federal News Radio*, October 30, 2018, p. 10:30 am.

underlying R&D agreement was competed. In addition, 10 U.S.C. 2371b states that "to the maximum extent practicable" OTs must be competed.[81]

Determining whether OTs are being used to circumvent competition requires a two-step analysis:

1. Are OTs competed less often that traditional contracts?
2. Is there a benefit to these OTs being competed?

Available FPDS-NG data suggests that DOD is broadly complying with 10 U.S.C. 2371b's competition mandate. Between FY2013 and FY2017, approximately 89% of all new OT prototype agreements were competed in some fashion.

Are OTs Faster?

Many observers and analysts believe that OT agreements can be executed substantially faster, sometimes in a matter of weeks, compared to the months or years it typically takes to execute traditional contracts.[82] Based in part on this belief, some officials and analysts are touting OTs as a new model for conducting acquisitions and the answer to many of the problems in defense acquisition. These analysts argue that in a world of increasingly fast technology development, DOD acquisitions must go faster or risk being left behind.

Many acquisition professionals argue that OT contracts are not inherently faster than traditional contracting; instead, they are executed faster because they are not encumbered by the reviews, protests, and bureaucratic layers that have been overlaid on traditional contracting. According to these officials, OTs take just as long as traditional contracts if the same execution and oversight processes are applied.[83] And because all terms are negotiable, complex negotiations could make OTs longer to execute than traditional contracts that have required, nonnegotiable, conditions. The *Other Transactions Guide* states

> The OT award process will not always be faster than the traditional procurement processes and sometimes can be as long or longer. The speed of award is tied to many factors, many of which are internal to the organization.[84]

DOD has not tracked data on the relative time it takes to execute OTs vs. traditional contracts, making it impossible to objectively assess these claims.[85]

What is the Role of the Workforce in Executing OTs?

Analysts and officials generally agree that the workforce plays a critical role in determining the success or failure of an acquisition.[86] Because there are fewer predefined requirements, OTs can be more difficult to negotiate than traditional contracts, putting DOD at greater risk of not getting what it wants at a reasonable price. The complexity and difficulty of negotiations is particularly

[81] 10 U.S.C. 2371b(b)(2).

[82] Surya Gablin Gunasekara, "'Other Transactions' Authority: NASA's Dynamic Acquisition Instrument For the Commercialization of Manned Spaceflight or Cold War Relic?," *Public Contract Law Journal*, vol. 40, no. 4 (Summer 2011), p. 897.

[83] Based on CRS discussions with DOD acquisition officials.

[84] *Other Transactions Guide*, p. 39.

[85] Based on CRS discussions with DOD officials.

[86] CRS Report R44578, *The Department of Defense Acquisition Workforce: Background, Analysis, and Questions for Congress*, by Moshe Schwartz, Kathryn A. Francis, and Charles V. O'Connor; CRS Report R43566, *Defense Acquisition Reform: Background, Analysis, and Issues for Congress*, by Moshe Schwartz.

high when there are intellectual property/patent rights issues, as is the case with most OTs.[87] Given these challenges, OTs often require more experienced and capable government representatives to ensure implementation of agreements that are in the government's best interest.[88]

Some analysts question the extent to which the workforce is sufficiently trained and equipped to negotiate OTs. In response to this concern, in the FY2018 NDAA, Congress required workforce education and training for OTs, and required DOD to establish a cadre of intellectual property experts to advise, assist, and provide resources to program offices that are developing intellectual property strategies for contracts and agreements (see **Appendix A**). DOD officials acknowledge that more training and education is required.[89]

Given the complexity of OTs and the limited extent to which they are used, some analysts and industry officials suggested that there may be a benefit to establishing a centralized office within DOD responsible for executing or overseeing all other transaction agreements. Such a structure could help ensure that those members of the acquisition workforce engaged in other transactions are sufficiently experienced, trained, and qualified.[90]

DOD Efforts to Improve the Use of OTs

A number of analysts have argued that DOD should take steps to improve its use of OTs. Many of these analysts have suggested that

- data is not consistently and accurately tracked,[91]
- regulations and guidance on when and how to use OTs are vague or insufficient,[92] and
- the workforce is not sufficiently prepared to effectively use OTs.

A number of officials have acknowledged these shortcomings and DOD is reportedly taking steps to address them. For example, in December 2018, DOD issued an updated *Other Transactions Guide*, a comprehensive guide containing best practices, case studies, and a clarification of myths related to other transaction authorities. In addition, Defense Acquisition University developed new course materials addressing OTs and is working to expand its offerings of relevant training and classes. However, numerous acquisition officials question whether it is possible, or even desirable, to try to quickly implement training aimed at preparing the thousands of DOD acquisition officials to execute OTs.[93] Some of these officials have suggested it might be appropriate to only allow a limited and vetted number of acquisition professionals to be OT agreements officers.

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[87] Scott Maucione, "Peering into the black box of OTA awards," *Federal News Radio*, July 24, 2018.

[88] See: Defense Procurement and Acquisition Policy, *Other Transactions Guide*, p. 9; Thomas C. Modeszto, "The Department of Defense's Section 845 Authority: An Exception for Prototypes or a Prototype for a Revised Government Procurement System?" *Public Contract Law Journal*, vol. 34, no. 2 (Winter 2005), p. 241-242; 253.

[89] Based on CRS conversations with DOD officials. See also, David Thornton, "DoD acquisition office saw workforce reduction, job changes despite assurances," *Federal News Network*, November 6, 2018, p. 7:49am.

[90] Based on CRS discussions with industry officials.

[91] "Govcon Mythbusters: 'Other Transactions" in Fedgov,' *The Pulse*, June 24, 2018, https://medium.com/@thepulsegovcon/govcon-mythbusters-other-transactions-in-fedgov-7cb1ccf41a7.

[92] "Govcon Mythbusters: 'Other Transactions" in Fedgov,' *The Pulse*, June 24, 2018, https://medium.com/@thepulsegovcon/govcon-mythbusters-other-transactions-in-fedgov-7cb1ccf41a7.

[93] Based on CRS discussions with numerous DOD officials.

Issues for Congress

How Far Should OT Authority Extend?

Some argue that OTs are just one "tool in the tool box," appropriate for only specific types of contracts, and should not be used to avoid the statutory and regulatory framework or to try to accelerate the process just for the sake of speed. Others have suggested that OTs should be used to cut through bureaucracy, speed up the acquisition process, avoid regulations and bid protests, and perhaps eventually supplant the regular FAR-based contracting process. Given the benefits and risks associated with OTs, questions for Congress include:

1. To what extent and in what circumstances do the potential benefits of OTs in terms of cost, schedule, and added capabilities outweigh concerns over potential fraud, waste, abuse, diminished oversight, and other public policy objectives?
2. Should OT authorities be extended further, curtailed, or maintained?

What Data May be Beneficial to Congress in Evaluating OTs?

The FY2019 NDAA required DOD to submit a report annually through 2021, summarizing DOD's use of OTs, including organizations involved; number of transactions; amounts of payments; and purpose, description, and status of projects. The NDAA also required Defense Innovation Unit to submit a report to Congress, to include the number of traditional and nontraditional defense contractors with DOD contracts or other transactions resulting directly from the Unit's initiatives.

The conference report for the FY2019 defense appropriations bill included language expressing the conferees' "[concern] with the lack of transparency surrounding the employment of OTA, particularly for follow-on production." The conferees directed DOD to provide quarterly reports to the House and Senate Appropriations committees listing each active OT, and to include additional information for each agreement. The conferees also directed GAO to review DOD's use of OTs to determine whether the "employment of this authority conforms to applicable statutes and guidelines, to include the identification of any potential conflicts." GAO was also required to report on the extent to which OTs have been used since FY2016.

The multitude of reporting requirements, and the questionable reliability of the available data, raise a number of questions that Congress may wish to explore, such as:

1. To what extent, if any, should the current reporting requirements be consolidated to create a more streamlined and consistent flow of information to Congress?
2. What specific data does Congress need in these reports to effectively conduct oversight? For example, what percentage of research OTs result in prototype projects and follow-on production?
3. To what extent is the data sufficiently reliable, and will such data be easily retrievable in the future, to allow Congress to conduct effective, timely, and ongoing oversight? If the data is not sufficiently reliable or accessible in the future, what other data collection and tracking methods could Congress mandate to ensure ongoing access to reliable data?
4. How are OTs being used?
    a. Where and when in the acquisition lifecycle is the authority being used?

b. To what extent is the requirements process being circumvented when DOD awards an OT follow-on production contract for a major system?

Should DOD Establish an Acquisition Innovation Lab or Center of Excellence to Manage and Execute OTs?

One analyst suggested that "no efficiency is lost if only the most able personnel are authorized to procure and administer" OT agreements and further argued that expanding the use of OTs would increase the training costs by expanding the number of people who can "weave complex agreements in a relatively unstructured environment."[94] Congress may consider whether DOD should establish an acquisition innovation lab or center of excellence responsible for overseeing, executing, and approving all OTs across the Department. Such a lab or center could be staffed and supported by a cadre of professionals with experience across the acquisition lifecycle who have a willingness and ability to embrace new ideas and rethink existing practices. Alternatively, such labs or centers could be established in the military departments. Having centers in each organization could allow for consideration of the different missions and business approaches of the departments and help educate the workforce on a more systematic basis.

Proponents argue that such an office would help ensure that only experienced and capable officials, with the appropriate training, use OT authorities. Such an office could also help protect against layering internal DOD policies and bureaucracies onto OTs by placing OTs outside of the traditional bureaucratic acquisition process. Proponents could further argue that such an office could better propagate best practices and ensure that OTs are used appropriately and consistent with guidance and legislation. Having a single office responsible for executing or approving all OTs could also help ensure more timely and accurate information, giving Congress more visibility into DOD's use of other transaction authorities.

To the extent that a single, high-level official is responsible for managing and overseeing all OTs, Congress might wish to consider repealing or modifying existing statutory approval requirements. If such an office was able to provide timely and accurate information, Congress might also consider some of the current reporting requirements unnecessary, and may choose to repeal some of the reporting requirements.

Opponents of such a proposal argue that centralizing OTs would have the opposite effect, increasing bureaucracy by adding yet another office within DOD. Opponents also argue that such an office could make it time more time-consuming to get a project underway and may discourage program offices from attempting or suggesting OTs. Some also argue that a single office may not have the resources to timely execute and approve agreements, and would inhibit spreading expertise on how to execute OT agreements more broadly across the acquisition workforce.

Alternative options for establishing such an office

Even proponents who might in theory support establishing such an office could raise significant concerns regarding how such an office would function in practice. A number of alternative options could be pursued to address concerns raised by opponents of establishing a centralized office. Some of these alternative options include:

[94] Thomas C. Modesto, "An Exception for Prototypes or a Prototype for a Revised Government Procurement System?," *Public Contract Law Journal*, vol. 34, no. 2 (Winter 2005), p. 241-242; 253.

- Granting such an office primary, but not exclusive, authority to execute OTs. For example, agreement officers specifically authorized to do so could execute OTs, with the centralized office conducting a peer review. Under this construct, the office could also be charged with providing information and expertise/consulting services on the use of OTs to program offices contemplating using the authorities.
- Establishing centers within each military department, with a designated office in OSD serving a coordinating function (with non-delegable approval authority residing in the military department office designated for OTs).
- Creating the office as a pilot program for three years, to help DOD manage OTs until such time as the workforce becomes more experienced and proficient in using these agreements.

Appendix A. Legislative History

Other Transaction authority first appeared in the National Aeronautics and Space Act of 1958. Since then, Congress has extended OT authorities to 11 federal agencies and a number of other federal offices (see **Appendix B** for information on other federal entities with similar authorities).

This appendix traces the legislative history of OT authorities and select related statutes applicable to DOD. To read the full text of the three statutory provisions related to OTs (10 U.S.C. 2371, 2371b, and 2373), see **Appendix D**.

National Aeronautics and Space Act of 1958 (P.L. 85-568)

Creation of Other Transaction authority

On July 29, 1958 President Dwight D. Eisenhower signed into law the National Aeronautics and Space Act (P.L. 85-568), which established the National Aeronautics and Space Administration (NASA). The purpose of the Act included the

- expansion of human knowledge,
- preservation of the role of the U.S. as a leader in space science and technology, and
- pursuing the most effective utilization of the scientific and engineering resources of the U.S.[95]

Section 203(b)(5) of the Space Act provided NASA the authority (emphasis added) to:

> enter into and perform such contracts, leases, cooperative agreements, or **other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate,** with any instrumentality of the United States…or with any person, firm, association, corporation, or educational institution. To the maximum extent practicable and consistent with the accomplishments of the purpose of this Act, such contracts, leases, agreements, and other transactions shall be allocated by the Administrator in a manner which will enable small-business concerns to participate equitably and proportionately in the conduct of the work of the Administration.

Intellectual Property Rights

The Space Act specifically addressed NASA's "property rights in inventions." Section 305 stated that any invention made in the performance of any work under any contract is the exclusive property of the U.S. "unless the Administrator waives all or any part of the rights…." This was true even when the person who created the invention "was not employed or assigned to perform research, development, or exploratory work, but the invention is nevertheless related to the contract" and was made during working hours, or with a contribution of the government.

The Act granted the Administrator wide latitude to "waive all or any part of the rights of the United States under this section" if doing so was deemed to be in the best interests of the U.S." When such rights were waived, NASA retained an irrevocable, nonexclusive, nontransferable royalty-free license by or on behalf of the U.S.[96]

[95] Sec. 102(c).

[96] Subsection (f). The statute stated that "each such waiver made with respect to any invention shall be subject to the

National Defense Authorization Act for FY1990 & 1991 (P.L. 101-189)

The FY1990 & 1991 NDAA granted DARPA temporary authority to enter into "cooperative agreements and other transactions" for the purpose of conducting advanced research projects.[97] The statute clarified that OTs should only be used when "the use of standard contracts or grants is not feasible or appropriate."

Congress restricted funding for OTs and Cooperative Agreements to $25 million of appropriated funds for FY1990 and FY1991, and set the authority to expire on September 30, 1991.

Cost Sharing

The FY1990 & 1991 NDAA permitted OTs (or cooperative agreement) to include a clause requiring a person or entity to make payments to DOD as a condition of receiving support under the agreement. Such funds were to be merged into an account dedicated to supporting DARPA advanced research projects using cooperative agreements and other transactions. The act required, to the extent practicable, that funds provided by the government not exceed the total amount provided by the other parties to the project.

According to the Senate report, one of the intents of the cost-sharing provision was to permit DARPA to "recoup the fruits of such arrangements, when there is a 'dual use' potential for commercial application" and to reinvest the funds to develop other technologies.[98]

Reporting Requirements

The FY1990 & 1991 NDAA required DOD to submit an annual report on the use of OTs and cooperative agreements, to include

- A description of each agreement and the technologies involved,
- The potential military and commercial utility of the technology,
- The reasons a contract or grant was not feasible to support the research, and
- The amount of payments, if any, received by the federal government under the agreement.

National Defense Authorization Act for FY1991 (P.L. 101-510)

Section 244 increased the funds authorized for cooperative agreements and OTs from $25 million to $50 million. However, no such funding was appropriated.[99]

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reservation by the Administrator of an irrevocable, nonexclusive, nontransferable royalty-free license by or on behalf of the U.S."

[97] Sec. 251(a). DARPA was established in 1958, the same year that the Space Act was enacted.

[98] U.S. Congress, Senate Committee on Armed Services , *National Defense Authorization Act for Fiscal Years 1990 and 1991*, to accompany S. 1352, 101st Cong., 1st sess., July 19, 1989, S. Rept. 101-81, p. 127.

[99] Section 8073 of the Senate FY1991 defense appropriations bill (S. 3189) would have authorized the Secretary of Defense to transfer no more than $50 million in unobligated balances available in the National Defense Stockpile Transaction Fund during FY1991 to the defense agencies' Research, Development, Test, and Evaluation (RDT&E) account for precompetitive technology development cooperative projects between DARPA and other entities undertaken pursuant to 10 U.S.C. 2371. This section was not retained during conference negotiations between the

Reporting and Notification Requirements

The conference report required DOD to submit to Congress a report listing the cooperative agreements and consortia intended to be used in FY1991-92. The conference report also required DOD to provide the armed services and appropriations committees 30 days' notice prior to DOD signing a cooperative agreement or agreement with a consortia under OT authority.[100]

The Senate report focused on consortia as a method to pool resources, share research among numerous participants, and promote critical dual-use technology.[101]

Department of Defense Appropriations Act, 1992 (P.L. 102-172)

Limitations on the Use of OTs

Section 8113A of P.L. 102-172 placed temporary limitations on the use of agreements undertaken pursuant to 10 U.S.C. 2371: Section 8113A limited the use of OTs and cooperative agreements exclusively to DARPA (to the exclusion of the rest of DOD) for FY1992.[102] Section 8113A limited DARPA to obligating or expending no more than $37.5 million in FY1992 for cooperative agreements or OTs undertaken pursuant to 10 U.S.C. 2371.

Section 8113A further established that no more than $75 million could be obligated or expended by DARPA in FY1992 for DOD dual-use critical technology partnerships.

House and Senate; thus, the $50 million in funding for precompetitive technology development cooperative projects authorized by the FY1991 NDAA was not included in the enacted FY1991 defense appropriations bill. See House of Representatives, *Making Appropriations for the Department of Defense*, report to accompany H.R. 5803, 101st Cong., 2nd sess., October 24, 1990, H.Rept. 101-938, p. 135.

The National Defense Stockpile Transaction Fund (see 50 U.S.C. §98 et seq.) is a revolving fund intended to provide for the acquisition and retention of stocks of certain strategic and critical materials. A revolving fund is sometimes also referred to as a working capital fund, or WCF. WCFs are typically provided an initial lump sum appropriation and are generally expected to be self-financing from that point forward. WCF authority generally includes legal authority to enter into certain contracts and incur certain obligations before budgetary resources are available. This enables the WCF to purchase goods and contract for services that are then "sold" to customers (such as the military services). In turn, the receipts from the sales pay for the purchase (good or service) and the associated WCF operating costs and overhead (e.g., wages, utilities, and/or warehousing). See also Senate Committee on Appropriations, *Department of Defense Appropriation Bill*, 1991, report to accompany S. 3189, 101st Cong., 2nd sess., October 11, 1990, S.Rept. 101-521, p. 264.

[100] U.S. Congress, House Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 1991*, Conference Report to Accompany H.R. 4739, 101st Cong., 2nd sess., October 23, 1990, H. Rept. 101-923, p. 562.

[101] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 1991*, Report to accompany S. 2884., 101st Cong., 2nd sess., July 20, 1990, S. Rept. 101-384 (Washington: GPO, 1990), pp. 133-134.

[102] See Section 8113A, P.L. 102-172.

National Defense Authorization Act for FY1992 & 1993 (P.L. 102-190)

Expanded Authority

Section 826 extended other transaction authority to the military departments, and established separate fund accounts in each department for cost sharing. Section 826 also repealed the sunset for cooperative agreements and OTs, making the authorities permanent.

Section 821 authorized DOD to enter into cooperative and other transaction agreements to develop critical dual-use technologies as set forth in the *Defense Critical Technologies Plan.*[103] According to the Senate report

> …the United States tends to underinvest in dual-use technologies. National security requirements alone often do not justify major DOD support, and market prospects alone often appear to be too long-term or high risk to justify US industry carrying the entire development burden…. The committee encourages use of cooperative agreements and other transactions in lieu of grants or contracts…. The provision would require that at least 50 percent of funding over the life of a partnership derive from non-federal sources but would allow for a smaller industry share at the start….”[104]

The conference report stated that the partnerships should focus on programs that fit into the security needs within DARPA. The conference report also stated that OTs are appropriate for those cases where the “regulations applicable to the allocation of patent and data rights under the procurement statutes may not be appropriate to partnership arrangements in certain cases.”[105]

National Defense Authorization Act for FY1993 (P.L. 102-484)

Cost Sharing

Section 4221 established 10 U.S.C. 2511, which required DOD to establish cooperative arrangements with industry, educational institutions, federal labs, and other entities, to pursue research, development, and application of dual-use technologies. The section authorized DOD to use grants, contracts, cooperative agreements, or OTs to create these partnerships, and that the Federal government should not contribute more than 50% of the costs related to projects under this authority.

National Defense Authorization Act for FY1994 (P.L. 103-160)

Expanded Authority

Section 827 established 10 U.S.C. 2358, which gave the Secretary of Defense and the Secretaries of the military departments the authority to conduct basic, advanced, and applied research

[103] Section 821 established C150 of Title 10, entitled *Development of Dual-Use Critical Technologies*.

[104] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Years 1992 and 1993*, Report to accompany S. 1507, 102nd Cong., 1st sess., July 19, 1991, S. Rept. 102-113 (Washington: GPO, 1991), pp. 233-234.

[105] U.S. Congress, House Committee on Armed Services, *National Defense Authorization Act for Fiscal Years 1992 and 1993*, Conference Report to accompany H.R. 2100, 102nd Cong., 1st sess., November 13, 1991, H. Rept. 102-311 (Washington: GPO, 1991), p. 576.

through the use of contracts, cooperative agreements, grants, and OTs. Previously, OTs were only authorized for advanced research.

Prototype Authorities

Section 845 granted DARPA the authority to use OTs for prototype projects directly related to weapons or weapon systems proposed to be acquired by DOD. Section 845 required that "to the maximum extent practicable," prototypes be competitively awarded. This authority was set to terminate after three years.

Section 845 remained as a note to 10 U.S.C. 2371 until separately codified as 10 U.S.C. 2371b in the FY2016 NDAA (P.L. 114-92).

Federal Acquisition Streamlining Act of 1994 (P.L. 103-355)

Section 1301 redesignated the language in 10 U.S.C. 2358 (granting the authority to use OTs) to 10 U.S.C. 2371.

Reporting Requirements

Section 1301 also required DOD to submit an annual report to the armed services committees, to include:

- a general description of the other transactions, including the technologies involved in the research,
- the potential military and, if any, commercial utility of such technologies,
- the reasons for not using a contract or grant to provide support for such research, and
- the amount of payments, if any, received during the fiscal year pursuant to a clause in the other transactions and to what accounts such payments were credited.

National Defense Authorization Act for FY1997 (P.L. 104-201)

Section 203 required that a senior DOD official be designated in OSD, and that the officials' sole responsibility be developing policy related to, and ensuring implementation of, DOD's dual-use technology program. This section authorized DOD to use OTs (as well as contracts, cooperative agreements, and grants) for dual-use projects only if the project "is entered into through the use of competitive procedures."[106]

Section 743 granted DOD the authority to use OTs to conduct research on Gulf War Syndrome, to determine its relationship to possible exposures of members of the armed forces to chemical warfare agents and hazardous materials, and the use of inoculations and new drugs.

Expanded Prototype Authorities

Section 804 amended Section 845 of the FY1994 NDAA by extending to the military departments and officials designated by the Secretary of Defense, the authority to use OTs for certain

[106] Section 203 (d).

prototype projects.[107] This authority, originally granted solely to DARPA and set to expire after three years, was given a new termination date of September 30, 1999.

Reporting Requirements

Section 267 modified elements of the annual report to the armed services committees.

National Defense Authorization Act for FY1998 (P.L. 105-85)

Section 832 amended 10 U.S.C. 2371 by clarifying that certain information submitted to DOD (i.e. a proposal, business plan, technical information) be protected from disclosure pursuant to 5 U.S.C. 552 for a period of five years.

Strom Thurmond National Defense Authorization Act for FY1999 (P.L. 105-261)

Section 241 extended the sunset day for the authority to use OTs for prototypes from September 30, 1999, to September 30, 2001.

Section 817 amended Section 2371 of Title 10, United States Code, clarifying that information submitted by outside parties in cooperative agreements for basic, applied, and advanced research are protected from disclosure under Section 552 of Title 5, United States Code.

Department of Defense Appropriations Act, 1999 (P.L. 105-262)

While the enacted FY1999 defense appropriations bill (P.L. 105-262) did not include legislative language addressing OTs, H.Rept. 105-591, which accompanied the House-reported version of H.R. 4103, included language expressing the House Appropriations Committee's "serious reservations" regarding the Air Force's then-proposed use of an OT agreement—instead of a contract— to develop the Evolved Expendable Launch Vehicle (EELV) program.[108]

The committee noted that "under [OTs] traditional safeguards which protect the government's interest in large acquisition programs are largely absent," and required the Under Secretary of Defense for Acquisition, Technology, and Logistics (now the Under Secretary of Defense for Acquisition and Sustainment) and the DOD Inspector General to certify to the congressional defense committees that the use of an OT was appropriate for the EELV program, and that "adequate safeguards exist[ed] to protect the government's interest and monitor program performance."[109]

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[107] Section 845 of the FY1994 NDAA.

[108] U.S. Congress, House Committee on Appropriations, *Report of the Committee on Appropriations*, report to accompany H.R. 4103, 105th Cong., 2nd sess., June 22, 1998, H.Rept. 105-591, p. 222-223.

[109] The U.S. Air Force indicates that it:

> "…employed a co-investment acquisition strategy to share development costs for new evolved expendable launch vehicles. The U.S. Government provided a fixed non-recurring investment and U.S. commercial launch providers funded the remaining costs required to develop new launch systems that could meet National Security Space requirements. The Air Force used [OTA] to execute this co-investment by awarding [OT] Agreements to two launch providers…Congruent to the OT Agreements, the Air Force conducted a competition to split award firm-fixed price launch services to the two launch providers, The Boeing Company using its Delta IV launch vehicle and Lockheed Martin using its Atlas V launch vehicle."

See Air Force Space Command, "Fact Sheet: Evolved Expendable Launch Vehicle," available at https://www.afspc.af.mil/About-Us/Fact-Sheets/Article/249026/evolved-expendable-launch-vehicle/

National Defense Authorization Act for FY2000 (P.L. 106-65)

Section 801 required that for prototypes using OT authorities, DOD ensure that GAO, under its audit authority, have access to records relating to other transaction prototype agreements exceeding $5 million.[110] Section 801 allowed for a waiver to GAO access and exempted entities that over the last year have not entered into an agreement with DOD that provided for audit access by a government entity. According to the Senate report:

> Senior DOD officials have sought legislation to extend other transaction authority to production contracts. Under current authority, there is some debate about whether GAO has audit access to other transactions. As the size, costs, and complexity of programs being funded using other transactions increases, the committee wants to ensure that the GAO has audit access in relation to the higher levels of spending and added risks.[111]

Reporting Requirements

The Senate report also addressed reporting requirements and Congressional intent to review the use of OTs. The report stated:

> The committee is assessing the utility of other transaction prototype authority. The statement of managers accompanying the Strom Thurmond National Defense Authorization Act of 1999 directed the Secretary of Defense to report on the use of this authority to the congressional defense committees, no later than March 1, 1999. In addition, both the Department of Defense Inspector General and the General Accounting Office are reviewing the use of other transaction prototype authority and will report to Congress in the coming year. The committee is interested in the extent that new commercial firms are entering the DOD marketplace through the use of other transaction authority, as well as the degree of cost sharing between the government and non-federal government parties. The committee is also interested in any lessons learned from the broad exemptions to federal law provided by other transaction authority.
>
> For example, other transactions are exempt from the Competition in Contracting Act, Truth in Negotiations Act, Contract Disputes Act, Antikickback Act of 1986, Procurement Integrity Act, Service Contract Act, Buy American Act, and chapter 137 of title 10, United States Code. Questions have been raised about whether the government's interest is adequately protected in the absence of the applicability of these statutes. Conversely, advocates of the view that the government should take advantage of the flexibility of other transactions have championed proposals to extend other transaction authority to production.
>
> The committee directs the Secretary of Defense to provide a new report that updates information in the March 1999 report on the use of other transaction prototype authority to the congressional defense committees by February 1, 2000.[112]

National Defense Authorization Act for FY2001 (P.L. 106-398)

Limitations on the Use of OTs

Section 803 limited the use of OTs for prototype projects to only those circumstances when:

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[110] Amending Section 845 of the FY1994 NDAA (as amended).

[111] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2000*, report to accompany S. 1059, 106th Cong., 1st sess., May 17, 1999, S.Rept. 106-50 (Washington: GPO, 1999), p. 335.

[112] Ibid.

- at least one nontraditional defense contractor significantly participates in the project,
- one-third of the total cost of the project is paid out of funds provided by parties to the transaction other than the federal government, or
- the senior procurement executive determines is writing that exceptional circumstances justify use of an OT.

Nontraditional defense contractor was defined as an entity that for a period of one year has not entered into or performed

- "any contract that is subject to full coverage under the cost accounting standards" or
- "any other contract in excess of $500,000 to carry out prototype projects or to perform basic, applied, or advanced research projects for a Federal agency, that is subject to the Federal Acquisition Regulation."

Section 803 also extended the authority to use OTs for prototypes from September 30 2001 to September 30, 2004.

According to the Senate Report, the intent of using OTs for prototypes is:

> to attract companies that typically do not do business with the Department of Defense and encourage cost sharing and experimentation in potentially more efficient ways of doing business with traditional defense contractors. Other transaction authority is an important acquisition tool that can facilitate the incorporation of commercial technology into military weapon systems. In an environment where, in many areas, commercial technology is now more advanced than defense technology, it is imperative that the Department continue to have the flexibility to use innovative contractual instruments that provide access to this technology. There are, however, improvements that can be made in managing and overseeing these contractual arrangements.[113]

Section 804 clarified the extent of GAO's access to records in instances where the party in question has only done business with the government in the preceding year through an OT or cooperative agreement.

National Defense Authorization Act for FY2002 (P.L. 107-107)

[113] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2001*, report to accompany S. 2549, 106th Cong., 2nd sess., May 11, 2000, S.Rept. 106-292 S.Rept. 106-292 (Washington: GPO, 2000), p. 324.

Expanded Authority – Follow-on Production

Section 822 of the FY2002 NDAA granted DOD the authority to award a follow-on production contract for prototype projects when at least one third of the total cost of the prototype project is to be paid out of funds provided by non-federal government sources. Under this authority, such follow-on contract could be awarded without competition if

- the prototype project was successfully completed,
- the number of units in the production contract does not exceed the number of units specified in the underlying prototype agreement, and
- the price for each unit does not exceed the price specified in the underlying transaction.

Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (P.L. 107-117)

Establishment of Army Venture Capital Initiative (AVCI)

Section 8150 designated $25 million of the FY2002 funds made available for Army Research, Development, Test, and Evaluation (RDT&E) to be made available to the Secretary of the Army for the purpose of funding a venture capital investment corporation established pursuant to 10 U.S.C. 2371.[114]

A 2014 RAND report stated that OT authorities were used only to form the AVCI, and was not used to acquire products or services: "While OT authorities were used to form [AVCI] itself, any volume of the Army's purchase of products and services from [AVCI] companies is conducted under the FAR."[115]

National Defense Authorization Act for FY2004 (P.L. 108-136)

Expanded Authority

Section 847 of the FY2004 NDAA extended the authority to use an OT for developing prototypes to improve weapons or weapon systems currently in use by the armed forces. Previously, such authority was restricted to prototypes "directly relevant to weapons or weapon systems proposed to be acquired or developed" by DOD.

Section 847 also established a pilot program for transitioning prototypes to follow-on contracts for production for nontraditional defense contractors. Under the pilot program, such a follow on contract could be treated as a commercial item or an item developed with both federal and private sector funds (for purposes of negotiating intellectual property rights). The pilot program was restricted to contracts

[114] Such funding was to be derived by making *pro rata* reductions from FY2002 Army RDT&E funds for basic research and applied research, except for amounts for research projects designated as congressional special interest items and amounts available to the Army for RDT&E relating to the Future Combat System.

[115] Tim Webb et al., *Venture Capital and Strategic Investment for Developing Government Mission Capabilities*, [Santa Monica, CA: RAND, 2014]. For more information on the Army Venture Capital Initiative, see http://armyvci.org/.

- with nontraditional defense contractors,
- where the value of the contract does not exceed $50 million (approximately $70 million in FY2018 dollars), and
- that are firm-fixed price or fixed price with economic adjustment.

The pilot program was set to sunset September 30, 2008.

Section 1441 authorized any agency that engages in basic, applied, or advanced research and development projects that facilitated defense against or recovery from terrorism or nuclear, biological, chemical, or radiological attack to exercise the same general authority given to DOD as found in 10 U.S.C. 2371 (including for prototype projects).

Reporting Requirements

Section 1031 sunset the annual reporting requirement for OT after the report covering FY2006 was submitted.

National Defense Authorization Act for FY2006 (P.L. 109-163)

Restricted Authority and Notification Requirements

Section 212 of the FY2006 NDAA directed the Army to procure the Future Combat System using contract procedures set forth in part 15 of the Federal Acquisition Regulation, in lieu of an OT.

Section 823 extended ethics requirements to OT prototype authority and required the congressional defense committees be notified in writing at least 30 days before such authority is exercised.[116]

Certification Requirements

Section 823 also amended Section 845 of the FY1994 NDAA, requiring a written determination by a senior procurement executive for other transaction prototype projects estimated between $20 and $100 million, and for a written determination by the Under Secretary of Defense for Acquisition, Technology, and Logistics for prototype projects that exceed $100 million.

According to the Senate report:

> Section 845 was intended to be used for limited prototype projects, particularly those in which the Department seeks to engage nontraditional defense contractors that may be averse to the requirements imposed by a standard Department procurement contract. For this reason, the statement of managers accompanying the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105–261) states:
>
> > The conferees continue to believe that the section 845 authority should only be used in the exceptional cases where it can be clearly demonstrated that a normal contract or grant will not allow sufficient access to affordable technologies. The conferees are especially concerned that such authority not be used to circumvent the appropriate management controls in the standard acquisition and budgeting process.
>
> …. The committee does not believe that the $20.9 billion agreement entered between the Army and the Lead Systems Integrator for the FCS program is consistent with the language and intent of section 845 authority. Section 845 authority is intended to be used for limited

[116] Then section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 7101-7109).

> prototype projects, particularly those in which the Department of Defense seeks to engage nontraditional defense contractors that may be averse to the requirements imposed by a standard Department contract.[117]

Department of Defense Appropriations Act, 2007 (H.R. 5631)

Reporting Requirement

The FY2007 defense appropriations bill (P.L. 109-289) did not include language addressing OTs. The conference report (H.Rept. 109-676) included language expressing the conferees' "[concern] with the continued use of OTA contracts by the Missile Defense Agency, as such contracts "lack the customary safeguards found under FAR-based contracts for organizational conflict of interest, truth in negotiations and submission of cost and pricing data."

The conferees "strongly encourage[d]" the Missile Defense Agency to convert "large development and procurement contracts using OTA to FAR-based contracts," and directed the Missile Defense Agency to submit a report to the congressional defense committees on the use of OTs, to include the number, value, and justification for the use of such agreements.[118]

National Defense Authorization Act for FY2008 (P.L. 110-181)

Section 823 extended the authority for prototype projects for five more years, from September 30, 2008 to September 30, 2013.

National Defense Authorization Act for FY2009 (P.L. 110-417)

Section 822 required DOD to issue guidance on rights in technical data under non-FAR agreements, including OTs. Section 822 also required that appropriate provisions relating to rights in technical data be included in non-FAR agreements, consistent with policy guidance. This requirements is in statute at 10 U.S.C. 2320 note.

Section 824 expanded the scope of the pilot program for transition to follow-on contracts for certain prototype projects to include research projects carried out under 10 U.S.C. 2371. Authority to use the pilot program, set to expire September 30, 2008, was extended to September 30, 2010.

Section 874 required OT data be included in the Federal Procurement Data System.

National Defense Authorization Act for FY2011 (P.L. 111-383)

Section 866 changed the definition of nontraditional defense contractor, conforming the definition to that found in 10 U.S.C. 2302(9).

National Defense Authorization Act for FY2013 (P.L. 112-239)

Section 863 extended the authority for using OTs for prototype projects from September 30, 2013 to September 30, 2018.

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[117] U.S. Congress, Senate Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2006*, Report to accompany 1042, 109th Cong., 1st sess., May 17, 2005, S.Rept. 109-69 (Washington: GPO, 2005), p. 116.

[118] U.S. Congress, House Committee on Appropriations, Subcommittee on Defense, *Making Appropriations for the Department of Defense for the Fiscal Year Ending September 30, 2007, and for Other Purposes*, To accompany H.R. 5631, 109th Cong., 2nd sess., September 25, 2006, H.Rept. 109-676 (Washington: GPO, 2006), pp. 342-343.

Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for FY2015 (P.L. 113-291)

Expanded Authority

Section 812 expanded the authority to use OT for prototypes, to include those "directly related to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the Department of Defense, or to improvement of platforms, systems, components, or materials in use by the Armed Forces." Prior to the FY2015 NDAA, OTs could only be used for prototypes relating to weapons or weapon systems proposed to be developed, or for the improvement of weapons or weapon systems currently in use.

Reporting Requirements

Section 1071 repealed the reporting requirement language found in 10 U.S.C. 2371, relating to OTs for research projects.

National Defense Authorization Act for FY2016 (P.L. 114-92)

Until the FY2016 NDAA, the prototyping and follow-on production authority established in Section 845 of the FY1994 NDAA (as amended) was found in 10 U.S.C. 2371 note. Section 815 of the FY2016 NDAA simultaneously repealed Section 845 of the FY1994 NDAA and put the repealed language into the newly created 10 U.S.C. 2371b. The FY2016 NDAA also modified 2371b by making the authority permanent.

Expanded Authority and Small Business

The authorities in Section 2371b were expanded to allow their use when "all significant participants in the transaction other than the Federal government are small businesses or nontraditional contractors" and when the agency determines that using an OT would expand the defense supply base in a manner that could not be accomplished through a contract.

Section 815 eased the restriction on follow-on production contracts or transactions.

Section 815 amended the definition of a *nontraditional defense contractor* found in 10 U.S.C. 2302 to be an entity that is not currently performing, and for one year prior to an OT has not performed on any contract or subcontract that is subject to full coverage under the cost accounting standards pursuant to Section 1502 of Title 41, U.S.C. Section 815 also required DOD to update its guidance to reflect changes in the statute.

The conference report stated that Congress believed OTs are an attractive option for firms and organizations that do not usually participate in government contracting due to typical overhead burdens and the "one size fits all" rules governing defense acquisition. The report also stated that OTs could support DOD's effort to access new sources of technological innovation, specifically with Silicon Valley startup firms and small commercial firms.[119]

[119] U.S. Congress, House Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2016*, Legislative Text and Joint Explanatory Statement to Accompany S. 1356 P.L. 114-92, 114th Cong., 2nd sess., November 2015, 97-637 (Washington: GPO, 2015), pp. 700-701.

National Defense Authorization Act for FY2018 (P.L. 115-91)

Expanded Authority

Section 216 of the FY2018 NDAA authorized nonprofit research institutions to enter into OTs with DOD for prototype projects.

Section 862 amended 10 U.S.C. 2358, granting the Secretary of Defense and the military departments the authority to pursue basic research, applied research, advanced research, and development projects under the OT authorities granted in Sections 2371 and 2371b of Title 10.

Workforce

Section 802 required DOD to establish a cadre of intellectual property experts to advise, assist, and provide resources to program offices who are developing intellectual property strategies for contracts and agreements. Section 863 required training and education for personnel involved in OTs and other innovative contracting methods.

Certification Requirements and Small Business

Section 864 adjusted the language of the statute to state that the dollar threshold relates to the specific transaction for a prototype project and not for the value of the entire project. Section 864 defined a *transaction* for follow-on production to include "all individual prototype sub-projects awarded under the transaction to a consortium of United States industry and academic institutions."

Section 864 also increased the dollar thresholds for required approvals and defined the term *small business* to include small businesses under Section 9 of the Small Business Act[120] to ensure that companies participating in the Small Business Innovation Research and Small Business Technology Transfer programs were considered small businesses for the purposes of the cost sharing requirements.[121]

Miscellaneous

Section 867 required the Secretary of Defense to establish a preference for OTs in the "execution of science and technology and prototyping programs".

Section 1711 required DOD to carry out a pilot program to "assess the feasibility and advisability of increasing the manufacturing capability of the defense industrial base." Pursuant to the pilot, Section 1711 authorized DOD to use OTs to support production capabilities in small and medium-sized manufacturers.

John S. McCain National Defense Authorization Act for FY2019 (P.L. 115-232)

Section 211 of the FY2019 NDAA clarified that follow-on production of a prototype or subproject within a consortium may occur if the individual prototype or subproject is complete;

[120] 15 U.S.C. 638, P.L. 85-536.

[121] See U.S. Congress, House Committee on Armed Services, *National Defense Authorization Act for Fiscal Year 2018*, Conference Report to accompany H.R. 2810, 115th Cong., 1st sess., 2017, H. Ret. 115-404 (Washington: GPO, 2017), p. 883.

all projects associated with the consortium do not need to be completed before follow-on production of a specific prototype.

Expanded Authority

The FY2019 NDAA authorized the use of OTs to develop enhanced personal protective equipment (Section 226) and to carry out research under the Explosive Ordnance Disposal Defense Program (Section 311).

Reporting Requirements

Section 244 required the Defense Innovation Unit to submit a report to Congress, to include the number of traditional and nontraditional defense contractors with DOD contracts or other transactions resulting directly from the unit's initiatives.

Section 873 required DOD to submit an annual report through 2021, summarizing DOD's use of OTs, including organizations involved; number of transactions; amounts of payments; and purpose, description, and status of projects.

Department of Defense Appropriations Act, 2019 (P.L. 115-245)

Reporting Requirements

While the enacted FY2019 defense appropriations bill did not include legislative language addressing OTs, the conference report[122] included language expressing the conferees' "[concern] with the lack of transparency surrounding the employment of OTA, particularly for follow-on production." The conferees directed DOD to provide quarterly reports to the House and Senate Appropriations committees listing each active OT, and to include the following information on each agreement:

- Funding military service or DOD component;
- Major command (if applicable);
- Contracting activity;
- Appropriation title;
- Budget line item;
- Minimum and maximum award value;
- Vendor;
- Obligations and expenditures to date;
- Product service code;
- Period of performance; and
- Indication if the OT agreement included an option for follow-on production (with a description of the scope of anticipated follow-on production.)

[122] U.S. Congress, House Committee on Appropriations, Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, *Department of Defense for the Fiscal Year Ending September 30, 2019, And for Other Purposes*, Conference Report to Accompany H.R. 6157, 115th Cong., 2nd sess., September 13, 2018, H.Rept. 115-952 (Washington: GPO, 2018), p. 153.

The conferees also directed GAO to review DOD's use of OTs to determine whether the "employment of this authority conforms to applicable statutes and guidelines, to include the identification of any potential conflicts...." GAO was also required to report on the extent to which OTs have been used since FY2016.

Notification Requirements

The House Report to accompany H.R. 6157 acknowledged OTs as an "important tool to provide flexibility and agility for cutting-edge research and development projects and prototypes."[123] However, the report stated its concern "with the lack of transparency on the use of OTA authority for follow-on production procurements," and directed that no funds could be obligated or expended for a follow-on production contract or a transaction carried out under 10 U.S.C. 2371b, until 30 days after the Secretary of Defense provides the congressional defense committees with a notification of the proposed contract or transaction, to include a justification of why an OT is being used for production.

[123] U.S. Congress, House Committee on Appropriations, *Department of Defense Appropriations Bill, 2019*, To accompany H.R. 6157, 115th Cong., 2nd sess., June 20, 2018, H.Rept. 115-769, p. 10.

Appendix B. Non-DOD Federal Agencies with Agency-Wide OT or Related Authorities

A number of agencies have varying other transaction or similar authorities, as reflected in **Table B-1**. The table below is not a comprehensive or definitive listing of every federal government entities with OT or related authorities.

In some instances, offices, agencies, commissions, and other federal government entities have OT or related authorities that are only associated with certain programs or projects, such as the National Institutes of Health (which has OT authority for such specific activities such as the National Heart, Blood Vessel, Lung, and Blood Diseases and Blood Resources Program (42 U.S.C. §285b-3) and the Cures Acceleration Network (42 U.S.C. §287a)).

Table B-1. Selected Non-DOD Federal Agencies with OT or Related Authorities

Agency	R&D Authority	Prototype Authority	Permanent Authority	Temporary Authority	OT Authority as Currently Enacted
Advanced Research Project Agency – Energy (ARPA-E)	√(	X	√(		42 U.S.C. §16538
Department of Energy (DOE)	√(	X		√(Sunset Sept. 30, 2020)	42 U.S.C. §7256
Department of Health and Human Services (HHS)	√(	X	√(		42 U.S.C. §247d-7e
Department of Homeland Security (DHS)	√(	√(		√((Sunset Sept. 30, 2018)	6 U.S.C. §391 and §538, Division F, P.L. 115-141
Department of Transportation (DOT)	√(	X	√(		49 U.S.C. §5312
Domestic Nuclear Detection Office (DNDO)	√(	√(	√(		6 U.S.C. §596
Federal Aviation Administration (FAA)	√(	X	√(		49 U.S.C. §106(l)
National Aeronautics and Space Administration (NASA)	√(	√(	√(		51 U.S.C. §20113(e)
Transportation Security Administration (TSA)	√(	X	√(		49 U.S.C. §114(m)

Source: CRS review of the *United States Code* and Congress.gov.

Notes: The authorities listed may be restricted to specific agency or department programs.

Appendix C. Reliability of Data on Other Transactions

All data has imperfections and limitations. FPDS-NG data can be used to identify broad trends and produce rough estimates, or to gather information about specific contracts. Some observers say that despite its shortcomings, FPDS-NG data is substantially more comprehensive than what is available in most other countries in the world. Understanding the limitations of government procurement data—including knowing when, how, and to what extent to rely on data—can help policymakers incorporate FPDS-NG data more effectively into their decisionmaking process.

FPDS-NG OT Data Quality and Accuracy Issues

Decision-makers should be cautious when using data from FPDS-NG to develop policy or otherwise draw conclusions, especially with respect to OTs. In some cases, the data itself may not be reliable. In other instances, a query for particular data may return differing results, depending on the parameters and timing of the analysis. In particular, all DOD data entered into FPDS-NG is subject to a 90-day delay, and updates to "data, including new actions, modifications, and corrections are made on a regular basis," which could result in changes to "data … for current and/or prior fiscal years."[124]

Inconsistencies in FPDS-NG Data

Within FPDS-NG, two primary collections of obligation data exist: one associated with standard government procurement contracts or modifications to such contracts, and the other associated with prototype OT agreements or modifications to such agreements. FPDS-NG's collection of prototype OT data allows for the input of additional data elements—such as nongovernment dollars associated with cost-share prototype OT agreements—not included in FPDS-NG's collection of standard government procurement contract data.

More consequently, FPDS-NG's prototype OT data include two similar data elements that allow users to identify the fiscal year a prototype OT agreement was signed or modified. One, labeled in the database as "Fiscal Year," appears to allow users entering data into the system to manually assign a fiscal year to a transaction.[125] FPDS-NG users entering data into the system appear to have interpreted this data element in various, conflicting ways. For example, a Department of the Air Force OT agreement was signed in February 2016 for the development of rocket propulsion system prototypes under the Evolved Expendable Launch Vehicle (EELV) program. FPDS-NG records an obligation of $115 million in FY2020 for this agreement. Fiscal law bars DOD from obligating money now for future fiscal years that have not yet occurred.

The second, labeled "Contract Fiscal Year," appears to be based on the date the prototype OT agreement was signed or modified.

[124] General Services Administration, "DOD Data Availability," available at https://www.fpds.gov/common/html/dodDataAvailability.html. See also Appendix A to the CRS Report R44010, *Defense Acquisitions: How and Where DOD Spends Its Contracting Dollars*, by Moshe Schwartz, John F. Sargent Jr., and Christopher T. Mann.

[125] "Enter data in the Dates section… e) Fiscal Year (yyyy) – For DOD the entry cannot be earlier than 1978. For DHS the entry cannot be earlier than 2002. For both DOD and DHS the entry cannot be later than 100 years from the Fiscal Year of the Date Signed." See General Services Administration, "FPDS Help: Create an Other Transaction (OT) Agreement," available at https://www.fpds.gov/help/Create_an_OTAgreement.htm.

See **Table C-1** for a comparison of the "Fiscal Year" and "Contract Fiscal Year" elements for selected new prototype OT agreements signed between FY2013 and FY2017.

Table C-1. Selected Comparisons of *Contract Year* vs. *Fiscal Year* in FPDS-NG DOD Prototype OT Agreement Data

Total contract value depicted in nominal dollars, rounded to the nearest million

Date Signed	Contract Fiscal Year	Fiscal Year	Funding Agency	PIID	Total Contract Value
11/26/2014	2014	2015	Dept. of the Navy	W15QKN1591002	$5.0
6/12/2015	2015	2014	DARPA	HR00111590009	$1.5
1/13/2016	2016	2019	Dept. of the Air Force	FA88111690002	$33.7
2/29/2016	2016	2020	Dept. of the Air Force	FA88111690003	$115.0
1/10/2017	2017	2019	Dept. of Defense	W15QKN1791005	$0.8

Source: CRS analysis of Federal Procurement Data System-Next Generation data, December 2018.

Notes: *Total contract value* includes the total estimated contract value, including the base contract value of the referenced OT, and the total value of all potential options—if any—for the prototype OT agreement whether they have been exercised or not.

If a user selects the *Fiscal Year* data element when attempting to review high-level data on recent trends in the use of prototype OT agreements within the DOD—such as the total amount obligated for prototype OT agreements on an annual basis—that user will obtain a substantially different result than if he or she selects the *Contract Fiscal Year* data element for a similar analysis.

See **Table C-2** for a comparison of action obligations and nongovernment contributions using the *Fiscal Year* and *Contract Fiscal Year* data elements for new prototype OT agreements signed between FY2013 and FY2017.

Table C-2. Comparison of *Contract Fiscal Year* vs. *Fiscal Year* in FPDS-NG for New DOD Prototype OT Agreements (FY2013-FY2017)

DOD obligations and private sector contributions in nominal dollars (in millions)

Year	DOD	Private Sector	Year	DOD	Private Sector	Difference, DOD	Difference, Private Sector
Contract Fiscal Year (CFY)			**Fiscal Year (FY)**				
2013	$5.2	$3.0	2013	$8.7	$11.1	**+$3.6**	**+$8.2**
2014	$11.5	$22.7	2014	$10.4	$14.7	**-$1.1**	**-$8.0**
2015	$18.4	$10.2	2015	$17.4	$14.2	**+$1.0**	**+$4.0**
2016	$399.5	$542.1	2016	$179.7	$338.1	**-$220.0**	**-$204.0**
2017	$137.7	$204.4	2017	$132.2	$204.4	**-$5.5**	**—**

Source: CRS analysis of Federal Procurement Data System-Next Generation data, December 2018.

Notes: Numbers may not add due to rounding.

DOD OT Data Analysis Methodological Issues in Congressional Reports

A March 2017 report to Congress entitled "An Assessment of Cost-Sharing in Other Transaction Agreements for Prototype Projects," completed by the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics indicated that:

> In FY2016, DOD obligated (Note: Two outliers in 2016 excluded) $1 billion in section 2371b awards and received $68 million in cost-share contributions after excluding two significant trend outliers. [126]

DOD cited FPDS-NG as the source for its analysis, and defined the "significant trend outliers" excluded as "two $40 million OTAs with total cost-share of $270 million," likely referring to two DARPA prototype OT agreements conducted on a cost-share basis initiated in FY2016.[127] However, a CRS analysis of the same FPDS-NG data identified numerous inconsistencies in DOD's methodological approach.

Recreation of DOD Methodology

Specifically, DOD appears to have conducted its analysis using the "Fiscal Year" data element referenced in this report's discussion of FPDS-NG OT data quality and accuracy issues, which would attribute some prototype OT activities to the wrong fiscal year for the purposes of comparative trend analysis. DOD also compared two disparate transaction types: the reported "$1 billion in Section 2371b awards" includes *all* action obligations associated with ongoing prototype OT activities in FY2016, including transactions associated with prototype OT indefinite delivery contracts, while the "$68 million in cost-share contributions" includes *only* cost-share contributions associated with new prototype OT agreements.

If DOD used the "Contract Fiscal Year" data element, excluded the identified "trend outliers," and focused on *all* action obligations and cost-share contributions associated with ongoing prototype OT activities, it would have found instead that the department obligated $1.4 billion for prototype OT agreements in FY2016, with an additional $313.5 million in cost-share contributions from the private sector. On the other hand, if DOD used the "Contract Fiscal Year" data element, excluded the identified "trend outliers," and focused on *only* action obligations and cost-share contributions associated with new prototype OT agreements, it would have found instead that the department obligated $400 million for prototype OT agreements in FY2016, with an additional $272.1 million in cost-share contributions from the private sector.

[126] Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, "An Assessment of Cost Sharing in Other Transaction Agreements for Prototype Projects," March 2017 report to Congress, page 9

[127] HR00111690005, with $40 million in DOD obligations and $99 million in cost-sharing contributions from Boeing, and HR00111690007, with $40 million in DOD obligations and $171 million in cost-sharing contributions from the Lockheed Martin Corporation. See Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, "An Assessment of Cost Sharing in Other Transaction Agreements for Prototype Projects," March 2017 report to Congress, page 9.

Appendix D. Other Transaction Authority Statutes

10 U.S.C. §2371. Research projects: transactions other than contracts and grants

(a) ADDITIONAL FORMS OF TRANSACTIONS AUTHORIZED.—

The Secretary of Defense and the Secretary of each military department may enter into transactions (other than contracts, cooperative agreements, and grants) under the authority of this subsection in carrying out basic, applied, and advanced research projects. The authority under this subsection is in addition to the authority provided in Section 2358 of this title to use contracts, cooperative agreements, and grants in carrying out such projects.

(b) EXERCISE OF AUTHORITY BY SECRETARY OF DEFENSE.—

In any exercise of the authority in subsection (a), the Secretary of Defense shall act through the Defense Advanced Research Projects Agency or any other element of the Department of Defense that the Secretary may designate.

(c) ADVANCE PAYMENTS.—

The authority provided under subsection (a) may be exercised without regard to Section 3324 of Title 31.

(d) RECOVERY OF FUNDS.—

(1) A cooperative agreement for performance of basic, applied, or advanced research authorized by Section 2358 of this title and a transaction authorized by subsection (a) may include a clause that requires a person or other entity to make payments to the Department of Defense or any other department or agency of the Federal Government as a condition for receiving support under the agreement or other transaction.

(2) The amount of any payment received by the Federal Government pursuant to a requirement imposed under paragraph (1) may be credited, to the extent authorized by the Secretary of Defense, to the appropriate account established under subsection (f). Amounts so credited shall be merged with other funds in the account and shall be available for the same purposes and the same period for which other funds in such account are available.

(e) CONDITIONS.—

(1) The Secretary of Defense shall ensure that-

(A) to the maximum extent practicable, no cooperative agreement containing a clause under subsection (d) and no transaction entered into under subsection (a) provides for research that duplicates research being conducted under existing programs carried out by the Department of Defense; and

(B) to the extent that the Secretary determines practicable, the funds provided by the Government under a cooperative agreement containing a clause under subsection (d) or a transaction

authorized by subsection (a) do not exceed the total amount provided by other parties to the cooperative agreement or other transaction.

(2) A cooperative agreement containing a clause under subsection (d) or a transaction authorized by subsection (a) may be used for a research project when the use of a standard contract, grant, or cooperative agreement for such project is not feasible or appropriate.

(f) SUPPORT ACCOUNTS.—

There is hereby established on the books of the Treasury separate accounts for each of the military departments and the Defense Advanced Research Projects Agency for support of research projects and development projects provided for in cooperative agreements containing a clause under subsection (d) and research projects provided for in transactions entered into under subsection (a). Funds in those accounts shall be available for the payment of such support.

(g) EDUCATION AND TRAINING.—The Secretary of Defense shall—

(1) ensure that management, technical, and contracting personnel of the Department of Defense involved in the award or administration of transactions under this section or other innovative forms of contracting are afforded opportunities for adequate education and training; and

(2) establish minimum levels and requirements for continuous and experiential learning for such personnel, including levels and requirements for acquisition certification programs.

(h) REGULATIONS.—

The Secretary of Defense shall prescribe regulations to carry out this section.

(i) Protection of Certain Information From Disclosure.-(1) Disclosure of information described in paragraph (2) is not required, and may not be compelled, under Section 552 of Title 5 for five years after the date on which the information is received by the Department of Defense.

(2)(A) Paragraph (1) applies to information described in subparagraph (B) that is in the records of the Department of Defense if the information was submitted to the Department in a competitive or noncompetitive process having the potential for resulting in an award, to the party submitting the information, of a cooperative agreement for performance of basic, applied, or advanced research authorized by Section 2358 of this title or another transaction authorized by subsection (a).

(B) The information referred to in subparagraph (A) is the following:

(i) A proposal, proposal abstract, and supporting documents.

(ii) A business plan submitted on a confidential basis.

(iii) Technical information submitted on a confidential basis.

10 U.S.C. §2371b. Authority of the Department of Defense to carry out certain prototype projects

(a) AUTHORITY.—

(1) Subject to paragraph (2), the Director of the Defense Advanced Research Projects Agency, the Secretary of a military department, or any other official designated by the Secretary of Defense may, under the authority of Section 2371 of this title, carry out prototype projects that are directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the Department of Defense, or to improvement of platforms, systems, components, or materials in use by the armed forces.

(2) The authority of this section-

(A) may be exercised for a transaction (for a prototype project) that is expected to cost the Department of Defense in excess of $100,000,000 but not in excess of $500,000,000 (including all options) only upon a written determination by the senior procurement executive for the agency as designated for the purpose of Section 1702(c) of Title 41, or, for the Defense Advanced Research Projects Agency or the Missile Defense Agency, the director of the agency that-

(i) the requirements of subsection (d) will be met; and

(ii) the use of the authority of this section is essential to promoting the success of the prototype project; and

(B) may be exercised for a transaction (for a prototype project) that is expected to cost the Department of Defense in excess of $500,000,000 (including all options) only if-

(i) the Under Secretary of Defense for Acquisition, Technology, and Logistics determines in writing that-

(I) the requirements of subsection (d) will be met; and

(II) the use of the authority of this section is essential to meet critical national security objectives; and

(ii) the congressional defense committees are notified in writing at least 30 days before such authority is exercised.

(3) The authority of a senior procurement executive or director of the Defense Advanced Research Projects Agency or Missile Defense Agency under paragraph (2)(A), and the authority of the Under Secretary of Defense for Acquisition, Technology, and Logistics under paragraph (2)(B), may not be delegated.

(b) EXERCISE OF AUTHORITY.—

(1) Subsections (e)(1)(B) and (e)(2) of such Section 2371 shall not apply to projects carried out under subsection (a).

(2) To the maximum extent practicable, competitive procedures shall be used when entering into agreements to carry out projects under subsection (a).

(c) COMPTROLLER GENERAL ACCESS TO INFORMATION.—

(1) Each agreement entered into by an official referred to in subsection (a) to carry out a project under that subsection that provides for payments in a total amount in excess of $5,000,000 shall include a clause that provides for the Comptroller General, in the discretion of the Comptroller General, to examine the records of any party to the agreement or any entity that participates in the performance of the agreement.

(2) The requirement in paragraph (1) shall not apply with respect to a party or entity, or a subordinate element of a party or entity, that has not entered into any other agreement that provides for audit access by a Government entity in the year prior to the date of the agreement.

(3)

(A) The right provided to the Comptroller General in a clause of an agreement under paragraph (1) is limited as provided in subparagraph (B) in the case of a party to the agreement, an entity that participates in the performance of the agreement, or a subordinate element of that party or entity if the only agreements or other transactions that the party, entity, or subordinate element entered into with Government entities in the year prior to the date of that agreement are cooperative agreements or transactions that were entered into under this section or Section 2371 of this title.

(B) The only records of a party, other entity, or subordinate element referred to in subparagraph (A) that the Comptroller General may examine in the exercise of the right referred to in that subparagraph are records of the same type as the records that the Government has had the right to examine under the audit access clauses of the previous agreements or transactions referred to in such subparagraph that were entered into by that particular party, entity, or subordinate element.

(4) The head of the contracting activity that is carrying out the agreement may waive the applicability of the requirement in paragraph (1) to the agreement if the head of the contracting activity determines that it would not be in the public interest to apply the requirement to the agreement. The waiver shall be effective with respect to the agreement only if the head of the contracting activity transmits a notification of the waiver to Congress and the Comptroller General before entering into the agreement. The notification shall include the rationale for the determination.

(5) The Comptroller General may not examine records pursuant to a clause included in an agreement under paragraph (1) more than three years after the final payment is made by the United States under the agreement.

(d) APPROPRIATE USE OF AUTHORITY.—

(1) The Secretary of Defense shall ensure that no official of an agency enters into a transaction (other than a contract, grant, or cooperative agreement) for a prototype project under the authority of this section unless one of the following conditions is met:

(A) There is at least one nontraditional defense contractor or nonprofit research institution participating to a significant extent in the prototype project.

(B) All significant participants in the transaction other than the Federal Government are small businesses (including small businesses participating in a program described under Section 9 of the Small Business Act (15 U.S.C. 638)) or nontraditional defense contractors.

(C) At least one third of the total cost of the prototype project is to be paid out of funds provided by sources other than other than the Federal Government.

(D) The senior procurement executive for the agency determines in writing that exceptional circumstances justify the use of a transaction that provides for innovative business arrangements or structures that would not be feasible or appropriate under a contract, or would provide an opportunity to expand the defense supply base in a manner that would not be practical or feasible under a contract.

(2)

(A) Except as provided in subparagraph (B), the amounts counted for the purposes of this subsection as being provided, or to be provided, by a party to a transaction with respect to a prototype project that is entered into under this section other than the Federal Government do not include costs that were incurred before the date on which the transaction becomes effective.

(B) Costs that were incurred for a prototype project by a party after the beginning of negotiations resulting in a transaction (other than a contract, grant, or cooperative agreement) with respect to the project before the date on which the transaction becomes effective may be counted for purposes of this subsection as being provided, or to be provided, by the party to the transaction if and to the extent that the official responsible for entering into the transaction determines in writing that-

(i) the party incurred the costs in anticipation of entering into the transaction; and

(ii) it was appropriate for the party to incur the costs before the transaction became effective in order to ensure the successful implementation of the transaction.

(e) Definitions.—In this section:

(1) The term "nontraditional defense contractor" has the meaning given the term under Section 2302(9) of this title.

(2) The term "small business" means a small business concern as defined under Section 3 of the Small Business Act (15 U.S.C. 632).

(f) FOLLOW-ON PRODUCTION CONTRACTS OR TRANSACTIONS.—

(1) A transaction entered into under this section for a prototype project may provide for the award of a follow-on production contract or transaction to the participants in the transaction. A transaction includes all individual prototype subprojects awarded under the transaction to a consortium of United States industry and academic institutions.

(2) A follow-on production contract or transaction provided for in a transaction under paragraph (1) may be awarded to the participants in the transaction without the use of competitive procedures, notwithstanding the requirements of Section 2304 of this title, if-

(A) competitive procedures were used for the selection of parties for participation in the transaction; and

(B) the participants in the transaction successfully completed the prototype project provided for in the transaction.

(3) Contracts and transactions entered into pursuant to this subsection may be awarded using the authority in subsection (a), under the authority of Chapter 137 of this title, or under such procedures, terms, and conditions as the Secretary of Defense may establish by regulation.

(g) AUTHORITY TO PROVIDE PROTOTYPES AND FOLLOW-ON PRODUCTION ITEMS AS GOVERNMENT-FURNISHED EQUIPMENT.—

An agreement entered into pursuant to the authority of subsection (a) or a follow-on contract or transaction entered into pursuant to the authority of subsection (f) may provide for prototypes or follow-on production items to be provided to another contractor as Government-furnished equipment.

(h) APPLICABILITY OF PROCUREMENT ETHICS REQUIREMENTS.—

An agreement entered into under the authority of this section shall be treated as a Federal agency procurement for the purposes of Chapter 21 of Title 41.

10 U.S.C. §2373. Procurement for experimental purposes

(a) AUTHORITY.—

The Secretary of Defense and the Secretaries of the military departments may each buy ordnance, signal, chemical activity, transportation, energy, medical, space-flight, and aeronautical supplies, including parts and accessories, and designs thereof, that the Secretary of Defense or the Secretary concerned considers necessary for experimental or test purposes in the development of the best supplies that are needed for the national defense.

(b) PROCEDURES.—

Purchases under this section may be made inside or outside the United States and by contract or otherwise. Chapter 137 of this title applies only when such purchases are made in quantities greater than necessary for experimentation, technical evaluation, assessment of operational utility, or safety or to provide a residual operational capability.

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