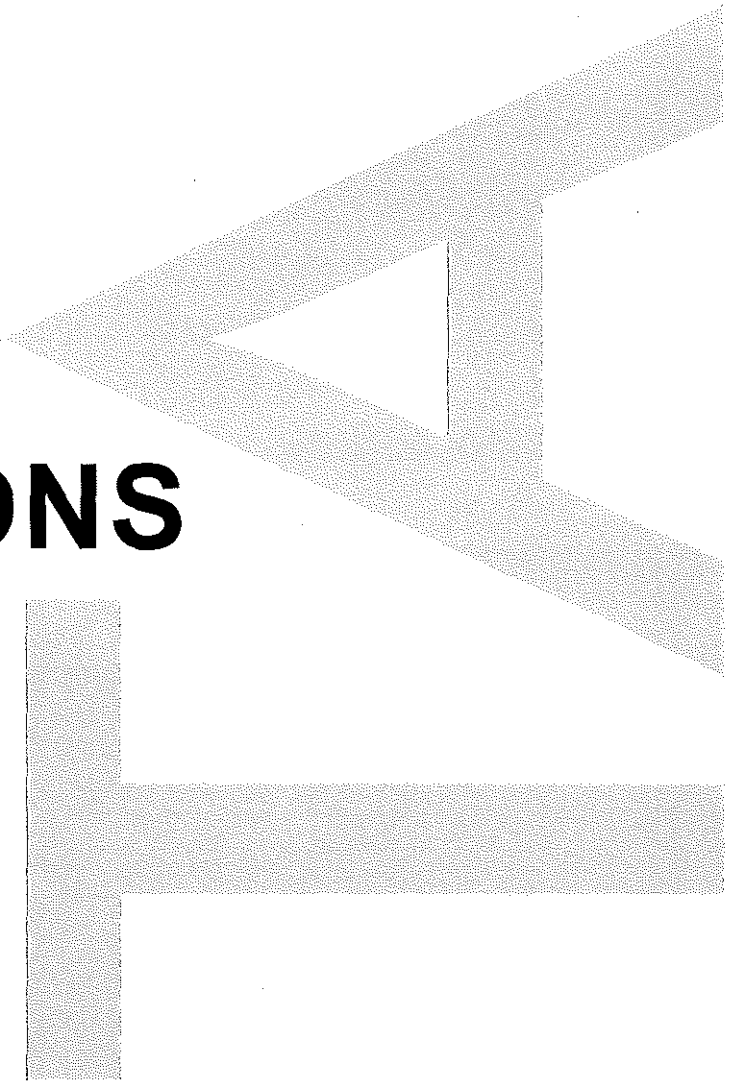
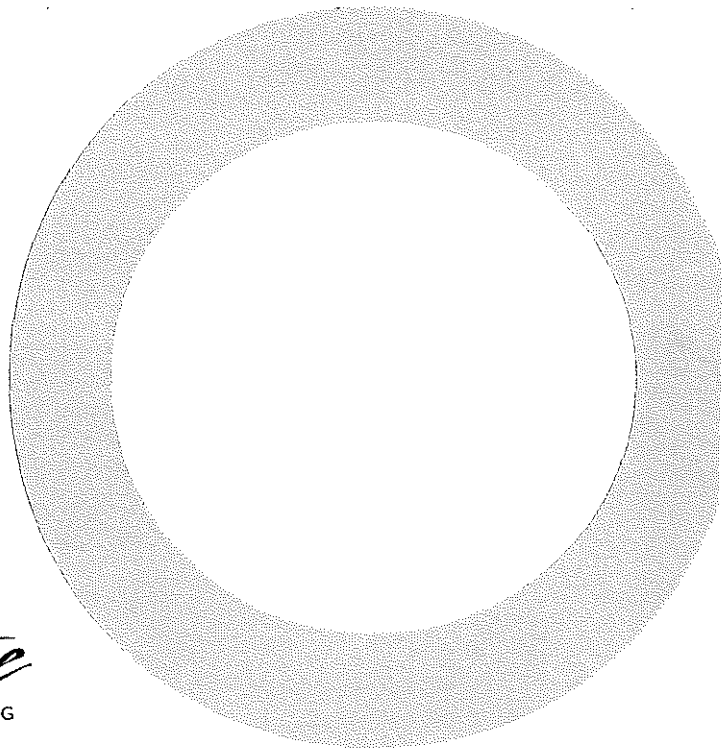
GUIDE TO **OTHER TRANSACTIONS AUTHORITY**

Third Edition





Strategic Institute
INNOVATION IN GOVERNMENT CONTRACTING

GUIDE
TO
OTHER TRANSACTIONS AUTHORITY

Third Edition

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OTHER TRANSACTIONS: New Ways of Thinking

Welcome to freedom of contracting, the freedom to think! Other Transactions (OTs) are more than niche authorities, they constitute the core of an alternative acquisition approach. They can be challenging but are far more flexible and interesting than the traditional acquisition system. These authorities will intrigue or terrify you with the possibilities. OTs remove the barriers, but also the perceived comfort and safety of highly regulated processes, in favor of prioritizing mission goals, to deliver needed new advanced capabilities to the force and fleet faster and more affordably.

OTs are fundamentally different from the traditional acquisition system. Unlike the traditional system, that does not begin until requirements are established (devised prior and separately), OTs start by parsing and analyzing the problem as a team. Understanding the problem and clearly articulating it is critical. Solutions are found not by dictating to industry or other partners, but through collaboration and shared goals. OTs make you think, but they do not make individuals smart, so make sure your team is.

Disclaimer: When I teach OT courses, there are students that are so steeped in the procurement system they cannot "hear" what I am saying. Everything is filtered through prior learning. There is a conceptual box for almost every concept. These mental "boxes" inhibit learning and exploring new thoughts. OTs are so counter-cultural that a smattering of learning can do more harm than good. A case of previous learning distorting and crowding out new information. OT's can include, but transcend, the buyer/seller relationship of the procurement system.

This Guide provides information and delves into innovative business arrangements powered by flexible contracting authorities. Knowledge of the statutory authorities is important, but so is the *'spirit'* of OTs: to honor the freedom of contract approach and seek win-win solutions between parties. Without this mindset, the inertia of bureaucracy can take hold. Process can be elevated above overarching imperatives - providing critical capabilities to those that need them in an affordable and timely manner. Develop that mindset as you use these materials to increase your knowledge of OTs.

Lastly, remember...***OTs are FAR out!***

Richard L. Dunn
Founder
Strategic Institute for Innovation in Government Contracting

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Chapter 1:
A Brief Overview of Government Contracting

Looking back in time can be refreshing and illuminating in regard to contracting and acquisition. It is well to remember that our country began with a war (Revolutionary War) and with an army that required logistical support. The primary focus of this discussion is the military, but most of the concepts discussed apply to civilian agencies as well. There were no contracting laws nor even a hint of an acquisition system. The Continental Army muddled along getting its supplies where it could, often from donations from individual states. Finally, Robert Morris was appointed to supply the army. An experienced merchant, he used his knowledge and connections to create the first contracted logistics system and get the job done. A merchant knew what was required to acquire goods and services and needed no specialized procurement statutes to guide or control him.

In the early years after the Constitution was established, the government continued to contract without procedural statutes. Congress enacted appropriation laws and created positions responsible for certain aspects of procurement activities but did not immediately regulate the area of procurement. In 1831, a Supreme Court decision authoritatively established the principle that authority to contract was coextensive with an agency's statutory responsibility (U.S. v Tingey). Gradually, however, Congress began to enact procurement statutes, with early emphasis on Post Office contracting followed by military contracting. Most early statutes embodied the principles of Robert Morris, requiring only public notice and contracting with trusted parties (contractor "responsibility").

Two trends began to develop that can still be seen today. First, Congress would react to scandal, real or perceived, by enacting legislation. Appropriations Acts tended to be very specific in detailing what could be purchased with the public funds. Second, the preferred method of contracting, by formal advertising, eventually became the sole method of government contracting. This method emphasized fairness but required the government to provide detailed specifications and base its selection decision on price alone. This was just too rigid for many wartime situations, and in wartime from the Civil War onward Congress would enact more flexible rules, only to revert to formal advertising once peace returned.

As innovation became an increasingly critical portion of the American domestic and wartime economy, it was discovered that formal advertising did not always work well for purchasing experimental items. A major change came about with the 1926 Air Corps Act which is credited with spurring key developments in both military and civil aviation, due to the flexibility of its purchasing authority. The law is alive today (10 U.S.C. 4023) but seldom used.

During the Great Depression, many new procurement statutes were passed in attempt to revive the economy through large government procurements. Although well intended, many of the statutes had mixed results and, in some cases, may have hurt more than helped. Many are still with us. The strategy of using the procurement system to drive socio-economic policies is also still with us. Most socio-economic policies administered through the procurement system are redundant with policies generally applicable to all businesses in interstate commerce.

The inflexibility of the formal advertising method for the support of Research and Development (R&D) gradually led to the creation of an entirely separate system of R&D funding. The traditions of this system were found in both early government "assistance" transactions (Land Grant Colleges) and the activities of private foundations in giving gifts to sponsor worthwhile activities, including R&D (Guggenheim Foundation). Lawyers tended to justify this system as an exception to the contracting statutes on the basis that funding was a gift rather than a purchase, and as such recipients were usually restricted to universities and non-profit organizations. This system was formalized by the Grant Statute in 1958.

With the enactment of Armed Services Procurement Act there was an era in the late '40s and '50s when R&D contracting was conducted in a relatively flexible manner. However, the hint of a few procurement scandals (e.g., Aerospace Corp.) soon led to more restrictive regulation and more laws (TINA and others) that slowly reduced the flexibility of R&D contracting.

Some federal agencies made extensive use of grants to support R&D. In the late '70s the Federal Grant and Cooperative Agreement Act (FGCA) tried to rationalize this dichotomy. Then in the early '80s the Competition in Contracting Act (CICA) threatened to hamstring R&D contracting but was amended to include the general or "broad agency announcement" procedure. Although these statutes were a Congressional attempt to clarify a confused situation, their initial impact was to add to the confusion.

The rationale behind FGCA began to break down with the rise of research joint ventures and the realization that R&D funding often had multiple effects (e.g., mission support and tech transfer). Research joint ventures (SEMATECH) stretched the impact of R&D dollars. Companies discovered they could collaborate with competitors to their mutual advantage on certain difficult problems.

The National Aeronautics Space Act (1958) authorized very flexible contracting authority and soon harnessed private investment in support of government goals (TELSTAR I). Part of the authority for these flexible Space Act agreements was based on the term "Other Transactions" in Sec. 203 of the Act.

The System

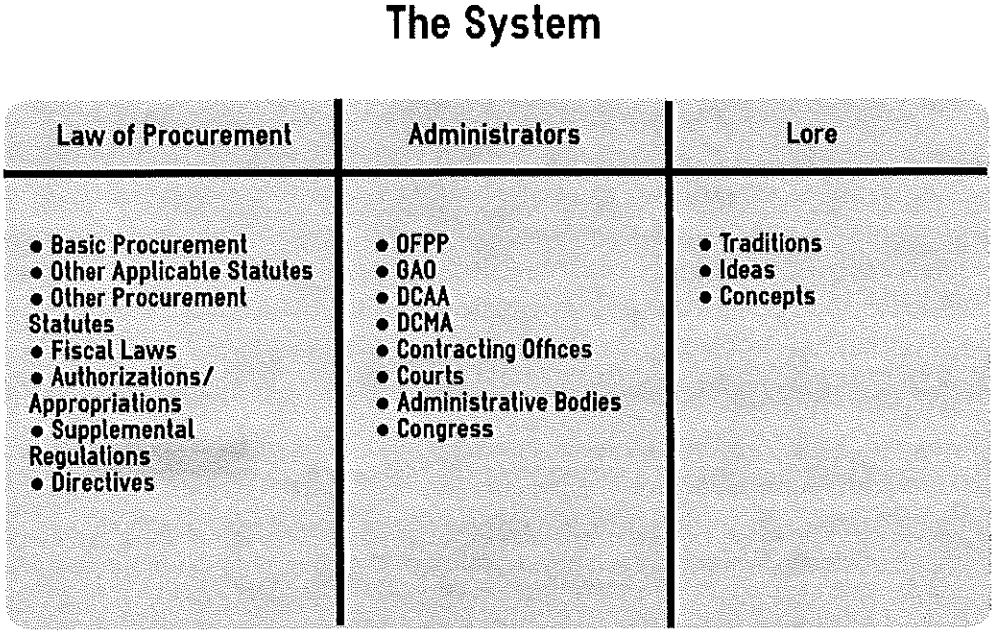
In the 1970's, AT&T's advertising touted "the system is the solution." The telephone system worked reliably, AT&T conducted R&D, and invested in the system. Many wondered why anyone would try to break up AT&T when the "system" seemed to work well. Only a few visionaries foresaw the explosion in telecommunications technology and lower telephone rates that followed the AT&T breakup. We are all beneficiaries of the termination of that "system." Many government procurement practitioners seem to accept the existing procurement system as good (it works doesn't it?) without really defining what the system is, where it came from and what it actually costs (in terms of both dollars and opportunities) to maintain. Before getting deeply involved in what to do and how to do it in the procurement system, it is probably worthwhile to take a moment to try to put things in perspective so that the strengths and (significant) weaknesses of the procurement system are evident. Government program managers are charged not just with sponsoring the development of successful technology but with laying the foundation for moving that technology into actual use to further the defense capabilities of the United States. Thinking about the procurement system and its effect on the defense industry may help in figuring out how to avoid a technology success that becomes a transition failure – no useful and affordable products or services to enhance U.S. national security.

James Nagle's "A History of Government Contracting" provides deep background on the system for those that may be interested. The current system has many of its roots in the 40's, 50's and 60's. The basic statute was the Armed Services Procurement Act (ASPA) implemented by the Armed Services Procurement Regulation (ASPR). In the 40's and 50's there was no single civilian agency procurement regulation. ASPR evolved into the Defense Acquisition Regulation (DAR). The Federal Property and Administrative Services Act (FPASA) governed civilian agency procurement. NASA was created as a civilian agency operating under the ASPA. In addition to basic procurement statutes, there were large numbers of statutes dealing with particular aspects of procurement as well as socio-economic policies

(some dating from the Depression era or earlier). In the 60's broadly applicable statutes such as the Truth In Negotiations Act (TINA) were added.

The Commission on Government Procurement (COGP, 1969-1972) found a "mass and maze" of procurement regulations. This eventually brought about changes in the 70's and 80's, including the OFPP Act, Contract Disputes Act, CICA, and the issuance of the FAR (1984). OFPP, the FAR Council, and agency supplements were created. NOTE WELL – the changes of the 80's and 90's were supposed to improve the system and reduce the "mass and maze" of procurement regulations. There were commissions before the COGP and there have been many since (Packard, Sec. 800 etc.). There have been many changes in law as well (Procurement Integrity, FARA etc.). The "system" has changed incrementally in fits and starts without any real study of the "costs" of operating it. According to Nagle: "Compare their findings [various modern commissions] with the Dockery Commission of the 1890's...although items have become more expensive and complicated, the procurement system itself – with all its successes and scandals – has remained remarkably the same." Nagle also says no rational person or committee asked to come up with a procurement system would recommend what exists today. Recent testimony of key members of the Section 809 Panel asserted that the defense acquisition system has continued to get worse, not improve, in recent years

Figure 1-A: The System – partial list



Law of procurement: Includes the basic procurement statutes (ASPA, FPASA), other statutes of broad applicability (TINA), and various other procurement statutes as well as fiscal laws and authorization/appropriations acts. Some regulations have the effect of law (parts of FAR and some other regulations). There are also lower level and supplementary regulations and directives that are often followed as if they were law.

Bureaucracy, or, more accurately, bureaucracies: Many agencies and organizations administer parts of the system – OFPP, GAO, DCAA, DCMA, agency contracting offices, courts and various administrative bodies. These bodies issue decisions, guidance, and directives and exercise varying degrees of control over operations of the system. Then there is Congress, its oversight committees, and individual Members of Congress that sponsor laws or report language and attempt to influence acquisition decisions.

Lore: Not to be underestimated are the many traditions, ideas and concepts that have gained wide acceptance (almost to the extent of being accepted as law) and color the way the Government contracting business is done. Some of the lore is system-wide; some is felt more strongly in the traditions of particular agencies or industry sectors.

The "system" creates incentives for incurring costs. Cost-reimbursement contracting does exactly that. Having encouraged or demanded the cost-reimbursement system, the government then created a large oversight mechanism to try to review and control contractor costs! Although some may argue the cost-reimbursement system does not necessarily create an incentive to incur costs, this notion is easily dispelled by pointing out another disturbing feature of government procurement. It is hard to know what we are talking about and to speak in a consistent language. One illustration is the contrast between fee and "profit" in government procurement. Some "experts" in government contracting fall into the trap of equating fee with profit. If such basic concepts are hard to understand, it is difficult to have a meaningful discussion. Under Part 31 of the FAR, some items identified as allowable "costs" (IR&D is an example) are typically expended from gross profit in commercial firms. It is also noteworthy that the greatly restricted fees ("profits"?) on government cost reimbursement contracts are not reflected in the return on investment (ROI) of major defense contractors. Many defense contractors have very high ROI.

Implications of a Regulated Industry

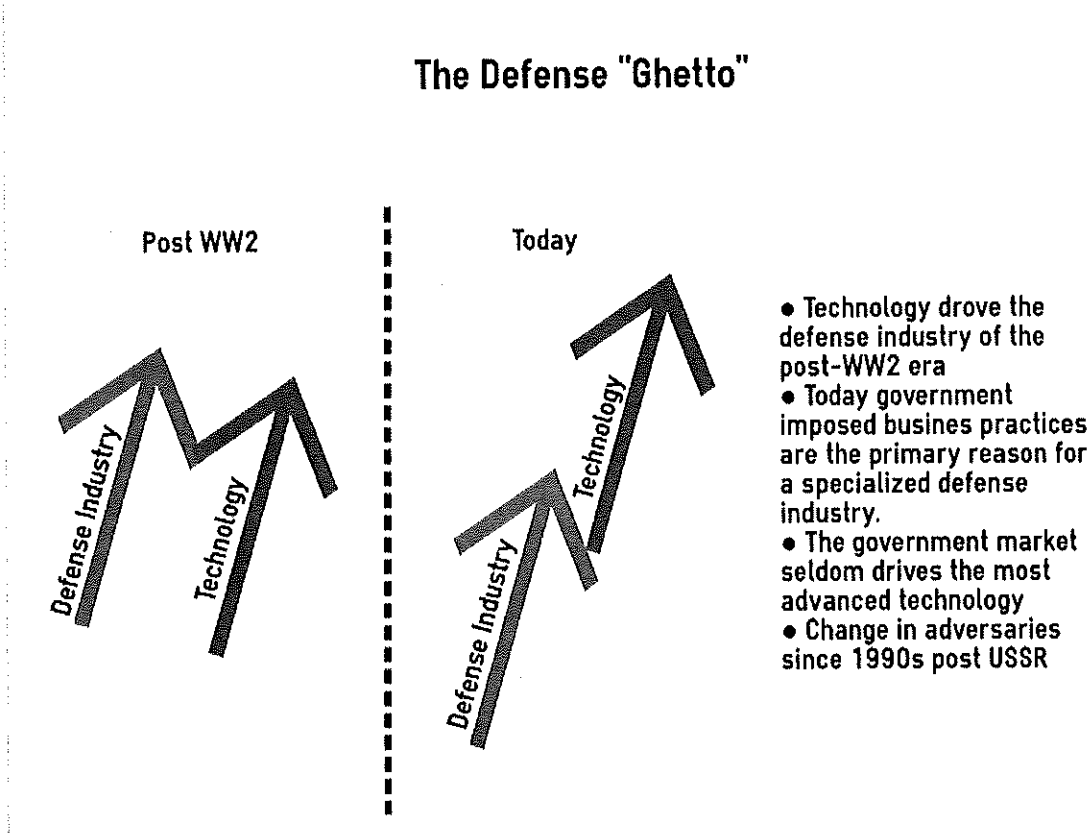
There are a limited number of ways for companies to organize themselves for any major industry. At first glance the Defense/Aerospace industry does not look like a regulated utility. Some may argue that it is a competitive industry and driven by market forces. However, the small number of competitors at the major system level and the monolithic "market" (in the economics jargon, called a "monopsony") make that position highly suspect if not untenable.

The defense industry today is primarily a regulated industry. Unlike more visibly "regulated" industries, it is not regulated in structure, price and profit, or by a single expert regulatory body. Instead, it is regulated – highly inefficiently – at the micro-level by procurement regulations, specifications, inspection details, and other government requirements that impose government-unique requirements on accounting systems, business practices, and a variety of matters that separate the defense/aerospace industry from other sectors of private industry. There is no single regulatory body. The industry is regulated by the bureaucracies already described.

In the aftermath of WW2, the most advanced technologies such as jet engines, microelectronics and microwaves, nuclear energy and others, were nearly a monopoly of the military and its supporting defense industry. In a second wave of advanced technologies, solid state devices and computers found their first market in the military and space program. In the 60's, Government (mainly DOD) was a powerhouse in national R&D providing nearly half of total national R&D expenditures. In recent decades

there has been a dramatic shift in the both the source of the most advanced technologies and the market for them. DOD funds a very small share of national R&D.

Figure 1-B: The Defense Ghetto



With the downsizing of the defense budget following the end of the Cold War and the decline of the space program, one might expect defense and aero-space contractors to diversify. That did not happen. Handicapped by their ties to the government, system defense contractors found themselves poorly equipped to compete in a broader marketplace. With the government's encouragement, defense contractors consolidated, became more inbred and specialized. Most defense contractors chose to try to become "the best defense contractor they could be" – rather than the best technology company – and survive in a declining market.

If we think of the unique regulations and specialized business practices with which defense contractors are burdened, we can see why they are trapped in a sort of "ghetto". However, the same wall of government standards, law, and regulation that trap them is also a barrier to entry to new comers who want to participate in defense business. Thus, while major defense contractors routinely gripe about certain aspects of the system, they are in fact generally happy with their position. Many government leaders fail to see that they have a "captive" industrial base or are quite content that they can control things.

Cost and Time Inhibitors that Add Zero Value

Most research and development that leads to major production programs is done on a cost reimbursement basis. Any potential competitor in this arena is forced to become a full blown "government contractor" with all the required business systems and government-unique administrative expertise. This effectively limits competition in this market to the existing cadre of contractors (the "usual suspects"). This means there will be few new entrants into the government marketplace. Competition is limited to the existing major contractors or some sub-set of them. The approaches and ideas this limited group of contractors brings to the government market will be limited to their own inbred expertise and by their ability to entice new ideas from sub-tier contractors. Unfortunately, it may be as much in their financial interest to suppress new ideas and technologies as it is to implement them! In bidding on major programs systems, integrators often line up a team or partnership of subs that enter into a work share agreement for the program. If the government identifies a new player able to make an outstanding contribution to the system under development, the partners already in the program will resist any reduction in their share of the work. The government is often faced with the prospect of passing on the new capability or coming up with additional funding. This is contrary to the policy on a Modular Open Systems Approach (MOSA).

The defense industry is isolated. Even in a corporation that has both defense and non-defense divisions, there is often little sharing of innovative technologies and business practices. Some companies that deal in advanced technologies have little if any visibility into the defense market. Others explore the market and find it unattractive. Given the relative growth of high technology research going on in the non-defense sector, this trend is unfortunate both for DOD and the economy as a whole. The defense-civil divide also prevents economies of scale that would be possible with industrial integration.

Conclusion

There seems to broad agreement that a government contracting system should be open, fair, transparent, and efficient. Transparency in this context means transparency of process (not necessarily looking into the contractor's books). These types of issues can be addressed in a very few pages of law and regulation. Most of FAR deals with other issues. A requirement for fairness and transparency may cause a government contracting system to be somewhat different than commercial contracting but probably not in fundamental ways. Efficiency is certainly not a government monopoly. These basic principles can undoubtedly be implemented in a way consistent with commercial practice.

The real challenge is not with fundamental principles but with everything else that the government system regulates. In fact, regulation is itself the problem.

In literally millions of commercial transactions covered by Article II of the Uniform Commercial Code (UCC), a different approach is taken. The purpose of the UCC is to facilitate commercial transactions, not to regulate them. While the UCC cannot be directly adapted to the government system, it provides an excellent example of a non-regulatory system of contracting that could be adapted to government contracting. With few exceptions, the UCC does not dictate the terms of a contract. The parties can agree to a lengthy contract covering every eventuality in minute detail. They can also write a contract for millions of dollars on the back of an envelope. In the latter case, the UCC "fills the gaps" that parties did not actually agree to with pre-determined "commercially reasonable" terms.

Chapter 2:
Other Transactions Authority

CASE STUDY: JOINT UNMANNED COMBAT AIR SYSTEMS (J-UCAS) AT DARPA

PROGRAM DESCRIPTION:

DARPA, the Air Force, and Navy combined to develop a system of highly capable unmanned combat air vehicles networked through a common operating system. The vehicles were designed to penetrate deep into high threat environments, be survivable, and constitute a persistent combat capability. The program involved major defense companies, Boeing and Northrop (airframes), as well as significant roles for nontraditional contractors. Each airframe company had a separate platform OT agreement but collaborated on the common operating system in an OT with Johns Hopkins Applied Physics Lab.

OUTCOMES:

- **Program costs were reduced.**
  - Both major contractors organized their efforts as IR&D projects (allowed under OT's; government payments off-set IR&D balances), eliminating general and administrative expenses.
  - The streamlined management and change order processes adopted were estimated to reduce schedule by more than a year.
- **The flexibility of the OT helped attract nontraditional companies to the project.**
  - The differing nature of the participants and highly innovative nature of the project operating at close to the state of the art, resulted in adjustments in industry's position on intellectual property matters.
- **The project was financed through payable milestones which both improved cash flow and focused the project on key technical accomplishments.**
  - Milestone payments incentivized contractors to achieve observable results at less than estimated cost and milestones were modified in the light of experience.
- **A need for training and culture change was noted, in this case by both government and industry personnel.**
  - Government personnel tried to regulate in a "business as usual" mode rather than collaborate consistent with the vision of the program's leadership.
- **The program successfully transitioned from the DARPA joint program office to air force leadership.**
  - As a result of the NDAA 2000 amendment, new section 845 prototype agreements would require either 1/3 cost sharing or an upfront determination that nontraditional contractors (defined in an exceedingly narrow fashion) would be "significantly" involved in the program. Since cost sharing was unlikely and an a *priori* determination of significant nontraditional involvement could not be made for the next phase of the program, DARPA planned to award a traditional procurement contract for that phase.
- **The unmanned aircraft resulting from the project, the X-45 and X-47B (collier trophy, 2013) established a series of aviation "firsts" during their test programs.**

Other Transactions (OTs) are true contracts in that they are based on the mutual agreement of the parties and are intended to create win/win relationships. While it is common to follow a model in negotiating an OT, they permit a clean sheet of paper approach. Start with a clear understanding of the *goals* the OT agreement is to accomplish, the interests and contributions of each party involved (vision statement), and the clean sheet of paper approach will become much less daunting than it appears at first. Craft the agreement around the project and its vision; do not try to force the project into a pre-conceived contract model.

This discussion focuses primarily on Department of Defense (DOD) OTs but it makes references to the use of OTs in other agencies and much of the discussion is generally applicable to other agencies with OT authority. Whenever the discussion seems to become murky, remember these aphorisms: "OTs are FAR out" and "They are just contracts."

Where OTs Come From

In 1958, Paul Dembling, General Counsel of the old NACA (predecessor of NASA) and primary author of the National Aeronautics and Space Act (Space Act), wrote "Other Transactions" language into the statute and pioneered early reimbursable Space Act Agreements (SAA). Telstar I, the world's first active communications satellite, was developed and produced with AT&T funding, management, and ownership. It was launched under a reimbursable "Other Transaction" (SAA/launch services agreement). NASA has used SAAs for a wide variety of agreements and relationships.

In implementation of the Federal Grant and Cooperative Agreement Act (1977), OMB agreed with NASA that there were relationships that fit in neither procurement nor assistance categories. One problem NASA faced (or created) was concern that SAAs could provide goods and services to a partner but not funding (wouldn't that be a procurement?). That reticence was eventually overcome when DARPA began using funded OTs under Section 4021 (1989).

Originally, the Department of Defense's Other Transactions Authorities were neatly divided into science and technology authority (10 U.S.C. 4021) that was oriented primarily toward dual-use (government and commercial applications) technologies, and a prototype authority (section 845 P.L. 103-160, now 10 U.S.C. 4022) that was primarily oriented toward weapons systems and defense contractors. The two authorities were meant to overlap and complement one another. They were to constitute a place where dual-use technologies could interface with specific defense needs. They also established a path to implement a congressionally mandated civil-military integration policy for our national technology and industrial base (10 U.S.C. 4811). Such a policy encourages traditional defense contractors to diversify in the civil/commercial sector and would avoid the convulsive shrinking of the defense industrial base, which can occur at times like the end of the Cold War. Traditional defense contractors and innovative non-traditional contractors were welcome under either authority.

These authorities were once widely used within DOD for science and technology projects, prototype projects, ranging from small single company transactions to research joint ventures and consortia, to the development of major air, ground, naval and space systems. Global Hawk, Evolved Expendable Launch Vehicle, Advanced Short Take-off and Vertical Landing (ASTOVL) programs were conducted under these authorities, as was the Joint Unmanned Combat Air Systems (J-UCAS), which later won the Collier Trophy.

Despite numerous successes and demonstration of better, faster, and cheaper approaches to Defense acquisition, use of these authorities dropped off dramatically for over ten years. Only recently has DOD's need for speed and innovation in fielding new capabilities spurred a partial resurgence in their use. Congress has repeatedly called for more innovation in defense acquisition and the previous Secretary of Defense created Defense Innovation Unit Experimental (DIUx), no longer *experimental,* to try to bridge the gap between innovative private sector companies and needed defense capabilities.

The OT statutes have evolved since they were first enacted, and the current statutory language is provided in a separate section below. Today there are three separate OT authorities – 10 USC 4021, 4022, and 4023 – which can be applied in different scenarios, depending on the Government's needs. The dual-use science and technology authority is unfortunately little used. A statutory change requiring "guidance" rather than "regulations" mean the arcane Technology Investment Agreement (TIA) regulations need not be applied. This should rejuvenate use of science and technology agreements. Prototype Authority is currently used for many dual-use projects involving non-traditional contractors as well for some defense specific projects. Defense contractors that actually produce weapons systems and defense specific components are rarely awarded or participate in OTAs of either kind. The regulatory burden on defense contractors imposed by the traditional system makes them non-competitive in the commercial marketplace and encumbers their defense products with non-value-added expense.

What are OTs?

"Other Transactions" refer to contractual instruments that are not standard procurement contracts or standard assistance instruments (grants or cooperative agreements). They may be used to support projects which are not strictly procurement or assistance; in lieu of standard assistance instruments; and, in the case of section 4022 or equivalent authority, for the acquisition of goods and services.

OT's are generally defined by what they are NOT:

- An OTA is not a Procurement Contract
- An OTA is not a Cooperative Agreement
- An OTA is not a Grant
- An OTA is not a Cooperative Research and Development Agreement

OTs can be used for purposes for which the instruments listed above have typically been used but allow agencies and their contracting partners to enter into flexible arrangements tailored to the particular project and needs of the participants. OT's present the parties with a blank page from which to begin negotiations. OT agreements may be fully funded, partially funded (shared funding), unfunded, and funds may be paid to the agency and its appropriations reimbursed for further use. As a general matter, agencies must possess express statutory authority to use OT's.

The purpose of Other Transactions:

- To contract in a flexible, goal-oriented manner
- To encourage commercial companies to engage in dual-use projects
- To continue the broadening of the technology and industrial base available to DOD
- To foster new relationships and business practices that support national security involving traditional and non-traditional companies

The three types of Other Transactions:

- **Research OTs**
  - Sometimes called "original" or science and technology (S&T) OTs
  - Used to fund basic, applied, and advanced research projects
  - TIAs (32 CFR Part 37) are only a small subset
- **Prototype OTs**
  - Sometimes called "4022" or "prototype project" OTs (formerly section 845 OTs)
- **Production OTs**
  - Production effort after a successful prototype OT (4022(f))

Key Elements of an OT

- Few legal requirements
  - Audit clause for prototype OTs: $5M+
  - Procurement Integrity – prototype OTs
- Specific terms and conditions are negotiable
- Agency practice will provide for including certain provisions in all OTs -- represents "default" position, i.e., management of the project, disputes, foreign access to technology
- The agreements team is responsible to ensure that the OT incorporates good business sense and appropriate safeguards to protect the Government's interest

Outside the basic constraints of the OT statute itself, federal fiscal law, and laws of general applicability (such as Title VI of Civil Rights Act, criminal law) there are few constraints on "freedom of contract" with OTs. **Business sense and good judgment are essential.**

In general, OT contracting avoids using cost-reimbursement approaches. Instead, creation of realistic, objective, payable milestones is an important technique. This is primarily the responsibility of the government technical program manager.

Challenges to crafting an effective OT (always keep win-win in mind):

- Fair negotiation of allocation of rights in intellectual property.
- Speed and ease of modifications.
- Provide a balance of risk on high-risk prototypes.
- Provide for efficient dispute resolution.
- Provide adequate oversight without excessive bureaucracy.

Figure 2-A: A comparison of Research and Prototype OTs

Research OTA		Prototype OTA
	Applicability:	
• Basic, applied, and advanced research		• Prototype Project • Directly relevant to enhancing mission effectiveness of military personnel, supporting platform, systems, components or materials to be acquired by DoD or improvements thereto
	Conditions for Use:	
• No duplications of research to maximum extent practicable (generally non-issue) • 50/50 cost contribution to the extent practicable		• At least one non-traditional defense contractor or non-profit research institution must participate to a significant extent in the prototype project; or • All participants small or non-traditional; or • At least 1/3 of total costs must be paid by sources other than the Government; or • Senior procurement executive for the Agency determines, in writing, that exceptional circumstances justifies the use of an OT. • Cost share not required (if non-traditional contractor participates); fee/profit permitted • Competitive procedures to maximum extent practicable.

Note: "practicable" and "maximum extent practicable." If resource sharing aids in pushing the project forward it is practicable. If it proves an obstacle, it is not.

The Statutes

10 U.S.C. 4021 - Research and Development Other Transactions *(previously 10. U.S.C. 2371)*

(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 4001 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 4001 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.—

The Secretary of Defense shall ensure that—

(1) 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

(2) 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.

(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 and 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 requirement for acquisition certification programs.

(h) REGULATIONS.—
The Secretary of Defense shall issue guidance 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 4001 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.

4021 in a nutshell:

Applicability:

- Basic, applied, and advanced research projects

Conditions for Use:

- No duplications of research to maximum extent practicable (generally non-issue)
- Funds provided by Government generally do not exceed total amount provided by other parties

Summary: The intent behind the enactment of section 4021 was to spur dual-use research and development. The idea was to create an attractive way for companies to do business with DOD while retaining the characteristics of innovative commercial companies; gaining DOD access to cutting edge technology, taking advantage of economies of scale without burdening the companies with government regulatory overhead which would make them non-competitive in the commercial (non-defense) sector. Defense firms were also encouraged to engage in section 4021 arrangements especially if they sought to adopt commercial practices or standards, diversify into the commercial sector or partner with commercial firms. Given the emphasis on dual-use, joint funding of projects was base-lined if *practicable* but not mandated. Competition is not mandated but is typically used in awarding agreements. The mode of competition can be adapted to whatever technology domain or industry segment is most relevant to a project.

10 U.S.C. 4022 - Prototype Other Transactions *(previously 10. U.S.C. 2371b)*

(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 4021 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, and any follow-on production contract or transaction that is awarded pursuant to subsection (f); 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, and any follow-on production contract or transaction that is awarded pursuant to subsection (f), 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 Research and Engineering or the Under Secretary of Defense for Acquisition and Sustainment 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 Secretaries of Defense under paragraph (2)(B), may not be delegated.

(b)EXERCISE OF AUTHORITY.—

(1)Subsection (e)(2) of such section 4021 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 the prototype 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 4021 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 non-profit 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 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 a 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)A follow-on production contract or transaction may be awarded, pursuant to this subsection, when the Department determines that an individual prototype or prototype subproject as part of a consortium is successfully completed by the participants.

(4) Award of a follow-on production contract or transaction pursuant to the terms under this subsection is not contingent upon the successful completion of all activities within a consortium as a condition for an award for follow-on production of a successfully completed prototype or prototype subproject within that consortium.

(5) 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.

4022 in a nut-shell:

Applicability:

- Prototype Project
- Enhancing mission effectiveness of military personnel and supporting platform, systems, components, or materials to be acquired by DoD or improvements thereto

Conditions for Use:

- All participants small or non-traditional; or
- At least one non-traditional defense contractor or non-profit research institution must participate to a significant extent in the prototype project; or
- At least 1/3 of total costs must be paid by parties to the OT other than the Government; or
- Senior procurement executive for the Agency determines, in writing, that exceptional circumstances justify the use of an OT.
- Cost share not required (if non-traditional contractor participates); fee/profit negotiable.
- Competitive procedures to maximum extent practicable; required for non-competitive follow-on production.

Summary: Section 4022 is closely related to section 4021. The statute states it is "under the authority of" section 4021. As originally enacted, section 4022 ("845, then 2371b") was exempted from the cost sharing feature of 4021. This was because, unlike section 4021, it was aimed specifically at defense contractors burdened by cost accounting standards and with little revenue available for joint funding. The term "directly relevant" was particularly meaningful in the context of Section 845's term "weapons or weapons systems." Both dual-use and defense specific projects are encouraged under current section 4022.

Defense firms can utilize this authority to streamline acquisition processes in a variety of ways including milestone payments based on technical achievements. They can execute projects with unique business arrangements subject to the approval of an agency's senior procurement executive (SPE) these include agreements structured with payable milestones or reimbursable arrangements under independent research and development (IR&D) rules rather than charging fully burdened rates. They can create business segments without defense acquisition overhead to pursue prototype projects or recruit innovative commercial firms as sub-contractors without imposing regulatory overhead through the flow down of otherwise mandatory contract clauses. They can also ignore practices and lore (not to be under-estimated) which, while associated with the regulatory system, are not mandated by either law or binding regulation. The current definition of non-traditional includes any company that has not had a contract requiring *full* cost accounting standards (CAS) compliance in the year before award period.

Related Statutes

10 U.S.C. 4023 – Procurement for Experimental Purposes *(previously 10. U.S.C. 2373)*

(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, telecommunications, 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.

4023 in a nutshell:

Applicability:

- Expressly addresses specific technology areas
- And...software, robotics, A.I. (things inherent across domains)
- Purchases may be from within or outside U.S.
- By 'contract or otherwise'; **procurement statutes/FAR do not apply**
- Quantities limited but includes "residual operational capability"

Summary: As discussed above, the origins of section 4023 date back to the Air Corps Act of 1926. The Army Air Corps and Navy were authorized to purchase experimental and research aircraft without competition either domestically or from foreign sources. In the 1930's additional domains – such as signals and ordnance – were granted authority under the provision. An update of procurement statutes in the early 1990's gave the authority its current section 4023 designation. Important changes came with the National Defense Authorization Act of 2016. Additional domains were added. With that amendment it became clear that the domains are not organizational stove pipes but technology areas. Moreover, some technologies were not expressly included since they potentially apply to any of the specified domains. These include software, robotics and artificial intelligence, for example. Also added with NDAA 2016 were additional purposes including maintaining a residual operational capability of the tested items or technologies. Section 4023 can be used for developmental purposes but also to test existing technologies; for example, evaluating off-the-shelf commercial products for their military utility. Chapter 137 mentioned in subsection (b) is the Armed Services Procurement Act. Basic procurement laws and the Federal Acquisition Regulation (FAR) do not apply to section 4023 purchases.

10 U.S.C. 4025 – Prize Authority *(previously 10. U.S.C. 2374a)*

(a) Authority.—
The Secretary of Defense, acting through the Under Secretary of Defense for Research and Engineering, the Under Secretary of Defense for Acquisition and Sustainment, and the service acquisition executive for each military department, may carry out programs to award cash prizes and other types of prizes including procurement contracts and other agreements, that the Secretary determines are appropriate to recognize outstanding achievements in basic, advanced, and applied research, technology development, and prototype development that have the potential for application to the performance of the military missions of the Department of Defense.

(b) Competition Requirements.—
Each program under subsection (a) shall use a competitive process for the selection of recipients of cash prizes and for the selection of recipients of procurement contracts and other agreements. The process shall include the widely-advertised solicitation of submissions of research results, technology developments, and prototypes.

(c) Limitations.—
(1) No prize competition may result in the award of a prize with a fair market value of more than $10,000,000 without the approval of the Undersecretary of Defense for Research and Engineering.
(2) No prize competition may result in the award of more than $1,000,000 in cash prizes without the approval of the Under Secretary of Defense for Research and Engineering.
(3) No prize competition may result in the award of a solely nonmonetary prize with a fair market value of more than $10,000 without the approval of the Under Secretary of Defense for Research and Engineering.
(d) Relationship to Other Authority.—
A program under subsection (a) may be carried out in conjunction with or in addition to the exercise of any other authority of an official referred to in that subsection to acquire, support, or stimulate basic, advanced and applied research, technology development, or prototype projects.

(e) Acceptance of Funds.—
In addition to such sums as may be appropriated or otherwise made available to the Secretary to award prizes under this section, the Secretary may accept funds or nonmonetary items from other departments and agencies of the Federal Government, from State and local governments, and from the private sector, to award prizes under this section. The Secretary may not give any special consideration to any private sector entity in return for a donation.

(f) Use of Prize Authority.—
Use of prize authority under this section shall be considered the use of competitive procedures for the purposes of section 2304 of this title.

(g) Congressional Notice.—
(1) IN GENERAL.—Not later than 15 days after a procurement contract or other agreement that exceeds a fair market value of $10,000,000 is awarded under the authority under a program under subsection (a), the Secretary of Defense shall submit to the congressional defense committees written notice of such award.
(2) CONTENTS.—Each notice submitted under paragraph (1) shall include—

(A) the value of the relevant procurement contract or other agreement, as applicable, including all options; (B) a brief description of the research result, technology development, or prototype for which such procurement contract or other agreement, as applicable, was awarded; and (C) an explanation of the benefit to the performance of the military mission of the Department of Defense resulting from the award.

4025 in a nutshell:

Applicability:

- To recognize outstanding achievements in basic, advanced, and applied research, technology development, and prototype development that have the potential for application to the performance of the military missions of the Department of Defense (n.b. despite the language prizes are not for recognition of past achievements, but for achievements produced in response to the prize competition).
- A program may be carried out in conjunction with or in addition to the exercise of any other authority to acquire, support, or stimulate basic, advanced and applied research, technology development, or prototype projects.

Conditions for Use:

- Each program shall use a competitive process for the selection of recipients of cash prizes.
- No prize competition may result in the award of a prize with a fair market value of more than $10,000,000.
- No prize competition may result in the award of more than $1,000,000 in cash prizes without the approval of the Under Secretary of Defense for Research and Engineering.
- No prize competition may result in the award of a solely nonmonetary prize with a fair market value of more than $10,000 without the approval of the Under Secretary of Defense for Research and Engineering.
- Prizes may include the award of a procurement contract or other agreement.

Summary:

In selecting the right approach or right instrument to pursue innovation and find the pathway to a fielded capability, prize competitions under 10 U.S.C. 4025 are an under-utilized resource. Section 4025 is found in Chapter 139 of Title 10 of the U.S. Code, the same Chapter that contains sections 4021, 4022 and 4023. Combining these authorities, or stacking, can create an effective pathway to fielding new capabilities.

Prize competitions address certain kinds of problems well. They can help us understand the art of the possible. They can direct the interest of industry and academia to problems they might not otherwise have addressed, and interest segments of industry not otherwise interested in defense issues.

Several DOD organizations have conducted prize competitions, often called challenges. What has been missing is exploitation of key provisions, namely subsections (d) and (e). Because of subsection (d) DOD's prize competitions can potentially be more powerful than other versions of prize competitions. A prize competition can be structured so that in addition to a cash prize or prizes competitors are eligible for

award of a prototype project under section 4022. This would further develop its entry in the prize competition. A successful prototype project can in turn lead to non-competitive follow-on production award. A prize competition is a competitive procedure for purposes of section 4022. It even rates as competition for purposes of a FAR-based procurement contract. Additionally, prize competitions can be conducted collaboratively with other government organizations or private entities. Both provisos are potentially powerful.

Figure 2-B: Selected Agencies that have authority to use Other Transactions (per 2020 CRS):

Agency	R&D OT Authority	Prototype OT Authority
Advanced Research Project Agency - Energy (ARPA-E)	✓	
Department of Defense (DOD)	✓	✓
Department of Energy (DOE)	✓	
Department of Health and Human Services (HHS)	✓	
Department of Homeland Security (DHS)	✓	✓
Department of Transportation (DOT)	✓	
Domestic Nuclear Detection Agency (DNDA)	✓	✓
Federal Aviation Administration (FAA)	✓	
National Aeronautics and Space Administration (NASA)	✓	✓
National Institutes of Health (NIH)	✓	
Transportation Security Administration (TSA)	✓	

What are the implications of Other Transactions?

- **For program managers:** The great flexibility inherent in OTs is particularly useful in research and development (R&D). The Federal Acquisition Regulation (FAR) notes that R&D contracts are unlike contracts for supplies and services (FAR 35.002). OT's may be less burdened by the overhead of numerous government regulations that can make government contracting unattractive to many commercial firms. They permit flexibility in crafting intellectual property (IP) provisions because those provisions can be negotiated and can differ from the language typically called for in procurement contracts or grants.

- **For legal**: OTs are generally not subject to laws and regulations specific to procurement and assistance relationships. They are, however, subject to fiscal, criminal, and other laws of general applicability. Some agencies have promulgated regulations governing the use of OT's while others have issued guidance or relied entirely on fundamental statutory authority.

- **For offerors**: The flexibility of OT's can make them attractive to firms and organizations that do not usually participate in government contracting due to the overhead burden and "one size fits all" rules. Traditional government contractors may also find exploring new ways of doing business attractive. OT's can also be used to promote cooperative relationships among traditional and non-traditional contractors.

What are the benefits of Other Transactions?

Surveys of participants in OT's have characterized their benefits as including streamlining and flexibility. Foremost among these have been the speed and ease of making changes, particularly important in R&D where unexpected results may suggest approaches not foreseen at the initiation of a project. Less time devoted to auditing, flexibility in IP rights and accounting systems are other examples. Other benefits include:

- **Performance improvements** include a positive influence on team building among participants; team focus on technical aspects of the program; and simplified management and control.

- **Schedule reductions** have been noted in many projects. These have occurred both before the award and in project execution – aided by a minimization of administrative burden and the flexibility to restructure programs in mid-course resulting in an efficient work environment. The absence of flow-down provisions can accelerate the performance of commercial firms.

- **Cost reductions** compared to traditional R&D performance have been noted in OT's. Part of this is attributable to the timelier performance noted in the preceding paragraph. Tradeoffs allowing better use of funds, fewer non-value-added activities, reduced administration and overhead burden and other reasons have also been cited. Cost reductions have been cited for both current performance cost and the cost of future acquisition of the developed product. Studies commissioned by the government have indicated that in DOD acquisition, for example, transaction costs related to mandates unique to the government can add an 18 to 20 percent cost premium. Most, if not all, of this added cost of doing business can potentially be avoided with OT's.

- OT's have also facilitated the **inclusion of non-traditional performers** in government programs, either on their own or in combination with traditional contractors. Non-traditional firms need not adopt the typical costly government-mandated business and accounting systems and can negotiate IP provisions. In dealing with companies that have established separate divisions for government and commercial work, OT's may allow the government access to the firm's full technical capabilities and not just those of its government division

Other Transactions and 10. U.S.C. 4811 *(previously 10. U.S.C. 2501)*

Other Transactions can play a key role in effectuating Congressional policy concerning the national security strategy for the national technology and industrial base. Section 4811 of title 10, U.S. Code addresses key policies. OTs can help effectuate the Civil-Military Integration Policy of section 4811. OTs can constitute a way non-traditional companies can do business with DOD in a manner similar to their commercial contracts. They can provide a bridge for traditional defense contractors to move away from business practices mandated by the traditional DOD acquisition system that make them non-competitive in the commercial marketplace but continue to do business with DOD.

10 U.S.C. 4811

(a) National Security Strategy for National Technology and Industrial Base.-The Secretary of Defense shall develop a national security strategy for the national technology and industrial base [the remaining parts of subsection (a) go into considerable detail on elements that should be considered in the strategy].

(b) Civil-Military Integration Policy.-The Secretary of Defense shall ensure that the United States attains the national technology and industrial base objectives set forth in subsection (a) through acquisition policy reforms that have the following objectives:

(1) Relying, to the maximum extent practicable, upon the commercial national technology and industrial base that is required to meet the national security needs of the United States.

(2) Reducing the reliance of the Department of Defense on technology and industrial base sectors that are economically dependent on Department of Defense business.

(3) Reducing Federal Government barriers to the use of commercial products, processes, and standards.

The Future of Other Transactions:

The real value of understanding how OTs are being used and have been used is to open thinking as to how they might be used in the future. Attracting third-party financing to government projects can both accelerate them and improve efficiencies. Multi-party relationships structured in non-traditional ways may prove optimum for exploring new technical and management approaches. Congressional endorsement of OTs, such as making prototype authority permanent law, creating a stream-lined transition from prototype to production, and encouraging OT education, should inspire departmental leaders to challenge their R&D and acquisition establishments to innovate and explore new ways of doing business. OTs are not a niche authority but can be the core of an alternative acquisition system.

CASE STUDY: Advanced Short Take-off Vertical Landing (ASTOVL)

PROGRAM DESCRIPTION:

ASTOVL was the lead-in to the F-35 program and was an example of competitive prototyping as well as a multi-phase program.

EXECUTION:

The program originally involved five teams each headed by an airframe manufacturer and proceeded through a series of phases and down-selects. At each phase, OT agreements were modified to deal with issues unique to that phase and establish a schedule of technical milestones and payments. An interesting feature of ASTOVL was that at one down-select point, one of the non-selected teams requested to continue into the next phase without government funding. That contractor was subsequently rolled into the winning team of the successor program, the Joint Advanced Strike Technology (JAST) program.

OUTCOMES:

- **An unfunded OT was negotiated with the unfunded competitor which was treated on the same basis as funded competitors with respect to government oversight, information.**

Chapter 3:
Acquisition Planning for Other Transactions

CASE STUDY: Maritime Fire Support Demonstrator (MFSD aka Arsenal Ship)

PROGRAM DESCRIPTION:

Originally called Arsenal Ship, the MFSD program was a joint DARPA/Navy section 845 prototype project to demonstrate massive precision fire support (up to 500 vertical launch cells; these could fire several types of missiles) as well as a variety of acquisition reform techniques. The demonstrator ship was to be capable of being converted to a fully operational fleet asset and become the lead ship for fleet of up to five additional ships. Technically, the ship was to have on board or off-board control via Cooperative Engagement Capability, was to demonstrate new approaches to damage control, reduce cost of ownership through innovative maintenance and operating procedures and an exceedingly small crew size.

EXECUTION:

A Unit Sailaway Price ($550M for the production vessels) was established and all technical decisions had to be made in the context of both the established acquisition cost and projected life cycle cost. As an Advanced Concept Technology Demonstration conducted outside the procurement system under an OT, Arsenal Ship was a non-ACAT program. Starting from award of five concept development phase agreements in July 1996, the program was on track to have the test article in the water ready for testing in October 2000. Unfortunately, leadership change made the project vulnerable. A relatively small shortfall in one year of Arsenal Ship's funding profile became the occasion for opponents within the Navy to terminate the program in 1997.

OUTCOMES:

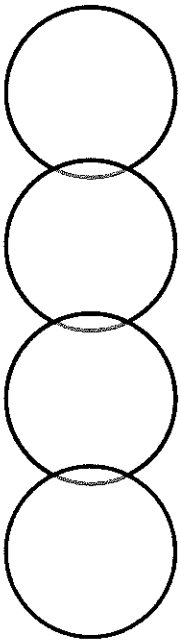
- According to the Arsenal Ship lessons learned report the "**process being followed by Arsenal Ship demonstrated a 50% reduction in acquisition time for the design portion of the ship compared to the traditional approach...**"
- The "price as established" trade off technique spurred innovation and drove down acquisition cost, albeit at some added risk.
- Summarized findings from the lessons learned report include **that an industry led design competition could be more meaningful than a government analysis of alternatives. Industry proved to be fully capable of designing a complex Navy ship.**
- **Minimum government direction was a key factor in success.**
- When unique industry teaming arrangements are encouraged, adequate time is needed for industry team formation and growth.
- In the wake of the cancellation of Arsenal Ship, Navy's Program Executive Officer, Ships, RAdm. Charles S. Hamilton, stated at the Naval Postgraduate School's annual acquisition research conference in 2006 that **"the Arsenal Ship experience revolutionized the way the Navy thinks about warship design and development... despite its cancellation, Arsenal Ship proved to be an excellent value for the Navy."**
- The Arsenal Ship program led to many other legacies, including a more affordable and more capable follow on to the Mark 41 Vertical Launch System.
- Both acquisition approaches pioneered with Arsenal Ship and a large amount of technology developed under the program found their way into subsequent Navy ship building efforts.

Creating the OT Team

The optimum way to execute agreements powered by Other Transactions is with a team of knowledgeable professionals. Before starting on execution, an organization new to OT contracting should assemble a larger cross-functional group that includes the core execution team and other supporting disciplines to make sure the OT 'spirit' or vision takes hold and grows within the organization. Part of that spirit is avoiding delays in execution, unnecessary process, and developing a win-win approach to negotiations. Team implies people working together, not dividing a project into bailiwicks and operating on separate parts independently.

A core execution team typically consists of a program manager (or equivalent), contracting support, and a legal specialist. All need to be imbued with a "can do" spirit and prepared to cast "business as usual" concepts aside. Experience shows that there is a tendency to inject FAR-based concepts. Team members need to constantly remind each other that they are operating in a "freedom of contract" mode with relatively few legal or regulatory constraints. **Goals rather than rules are the primary guide for a project.**

Figure 3-A: The Government OT Team



Program Manager

Has a mission to accomplish and budget to support it. Usually the team leader or primary negotiation spokesperson, if designated AO, and may sign/execute the agreement on behalf of the government.

Contracting Support

The exact role the contracting office plays in OT contracting will depend in large measure on the degree to which the 'spirit' of OTs is embraced. Many contracting offices unneccessarily limit the AO role to a warranted CO.

Legal Specialist

Lawyers need to engage in intellectual heavy lifting to explore the possibilities of OT contracting in order to be real contributors to the team. Well-equipped lawyers can play a powerful role in OT contracting.

Other

Financial management personnel can play an important role in exploring non-traditional methods of financing and deal with issues like funds coming to the government. The testing community can potentially play a constructive role.

The team leader is typically a technical or program manager, the individual that has a mission to accomplish and budget to support it. The team leader may, but need not necessarily, be primary negotiation spokesperson and sign or execute the agreement on behalf of the government. This depends on local practice and delegation of authority. The agreement will typically designate the team leader (often styled as agreement officer's representative) as key decision maker for various approvals and modifications to the agreement. In agreements with technical milestones as payable events the team leader will play the primary role in negotiating and structuring the payable events and their associated payments. This should be done in the light of a systems engineering view of project events generally on the critical path to successful conclusion. Payments associated with deliverable reports and events not on the critical path should generally be avoided.

AGREEMENTS OFFICER: A WARRANTED INDIVIDUAL WITH AUTHORITY TO ENTER INTO, ADMINISTER, OR TERMINATE OTs. TO BE APPOINTED AS AN AO, THE INDIVIDUAL MUST POSSESS A LEVEL OF RESPONSIBILITY, BUSINESS ACUMEN, AND JUDGMENT THAT ENABLES THEM TO OPERATE IN THE RELATIVELY UNSTRUCTURED ENVIRONMENT OF OTS. **AOs NEED NOT BE CONTRACTING OFFICERS, UNLESS REQUIRED BY THE COMPONENT'S APPOINTMENT PROCESS.**

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The role of the contracting specialist whether styled as "agreements officer" is fundamentally different from the role of a FAR contracting officer (see e.g., FAR 1.602-1(b)). Research and development, including prototype projects, are as FAR 35.002 states "unlike contracts for supplies and services." The fundamental role of the contracting officer in FAR contracting simply does not exist in OT contracting. One reason OT contracting went into decline for several years was due to the dominance of FAR-schooled contracting executives overseeing OT policies. The parameters and restrictions of the OT statutes must be adhered to, but the statutes are primarily enabling statutes. **The exact role the contracting specialist plays in OT contracting will depend in large measure on the degree to which the 'spirit' of OTs is embraced.**

Some lawyers assigned to an OT execution team will need an attitude adjustment compared to their role in procurement contract review. Just saying "no" will often be the wrong answer in OT contracting. Lawyers need to engage in intellectual heavy lifting to explore the possibilities of OT contracting in order to be real contributors to the team. Constructs of intellectual property, contract financing, contract oversight and other matters familiar in procurement contracting are often an impediment to optimum solutions in OT contracting. Government lawyers need to get beyond their comfort zone and become familiar with contracting practices in other contexts, such as commercial contracting. **Well-equipped lawyers can play a powerful role in OT contracting.**

Key Team Attributes

- An **open mind** and **natural curiosity**
- **Enthusiasm to learn** new concepts
- A **"can-do" spirit**
- Prepared to **cast aside "business as usual" concepts**
- **Courage to try new approaches**
- **Willingness to "fail early"** and reorganize as needed

Team building does not end with formation of the OT execution team. In some cases, it will become apparent one or more team members just cannot get the spirit of OTs or vision of the project. Interpersonal relations among the team are important as is the right team attitude. It is best to identify and replace a team member who constantly reverts to "business as usual" attitudes as early as possible. **The team must continually be aware of the ultimate goal of any project – getting needed capabilities to the force or fleet in a timely and affordable manner.** Focus is on the ultimate state of the project without undue distraction from near-term organizational issues.

The kinds of issues the team will confront are many and varied. When the bureaucracy challenges the team with a "no," the team needs to respond by insisting on a reasoned explanation. The team should be ready to clearly articulate the vision and strategy for the program or project (see pg. 49 for creating a vision statement). If the team has done their job, it is reasonable to expect an explanation from the opposing opinion. Part of a team's mission is to create enthusiasm for exploring something new.

Team Challenges

- Reverting back to "business as usual" & FAR think
- Real-time decision making
- Determining appropriate OT funding
- Problem vs. Requirement
- Overcoming top-down beauracracy

Defining the Problem to be Solved

Other Transactions are a different approach to acquisition, or more broadly *contracting*, not just a simple buyer/seller relationship. Whereas the Federal Acquisition Regulations (FAR) focus on requirements; **OTs beg their users to spend time parsing and analyzing the problem(s), thinking critically.** The solution, in part, is found by minimizing illogical business processes and increasing strategic collaboration with outside partners. High performing OTs will front-load greater critical thinking and analysis to lay the foundation for heightened creativity to develop new, and likely better, capabilities with less wasted effort. Additional benefits are increased speed and greater affordability. A little more strategy and thought early pays off big in the medium and long term. In fact, **the most important part in developing an OT is a sophisticated understanding of the problem and clearly defining it.** Simply put, **OTs shop problems; the FAR shops requirements.**

Once a problem is well defined, OTs allow for greater strategic collaboration between government and industry, including non-profits and academia, which can greatly increase the brain power applied, add needed perspective, and offer the possibility for unexpected favorable results. This permits for something often devoid in the current acquisition process, creativity! Inventiveness does not come about through heavy burdens of systemic rules, requirements, and processes; in part, it comes from the freedom to think, which OTs allow.

"You can't solve a problem with the same thinking that created it." – Albert Einstein

Problem solving is less about coming up with a pre-conceived solution, and more about the ability to frame the problem so that goals can be made clear. We are bombarded with overly hyped solutions that can make us faster, better, stronger, smarter. These so called "solutions" abound, but critical analysis of any given problem is in short supply. The result is many solutions tend to be half-baked, unnecessary, poor performers, or even dangerous. Understanding the problem is paramount.

THE MOST IMPORTANT PART OF THE TEAM'S PLANNING ACTIVITIES IS DEFINING THE PROBLEM, AREA OF NEED, OR CAPABILITY GAP. THIS IS CRITICAL IN DETERMINING THE CORRECT ACQUISITION PATHWAY AND THE CORRECT PROCUREMENT VEHICLE TO UTILIZE IN THE ACQUISITION STRATEGY...**THE TEAM IS RESPONSIBLE FOR UNDERSTANDING AND CLEARLY ARTICULATING TO OFFERORS THE PROBLEM, AREA OF NEED, OR CAPABILITY GAP TO ALLOW FOR INNOVATIVE TRADE SPACE FOR A WIDE-RANGE OF SOLUTIONS.**

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Identifying Appropriate Funding

One of the first challenges organizations confront is the false assertion that the organization cannot execute OTs because it does not have RDT&E appropriations. It is true that RDT&E funding is most common in OT contracting. As with other myths associated with OTs, it is not true that only RDT&E funding can be used. Instead, a basic fiscal law analysis is applied. First, what is the purpose of the project? Second, what are the purpose limitations of the appropriations to be applied? Defense Production Act funded projects have been executed using OTs. Operation and Maintenance (O&M) funds and Procurement funds are also potential candidates. O&M funds can be used for upgrades of existing systems. Upgrades often involve non-recurring engineering efforts and testing as part of the upgrade. These type activities fit within the purview of OTs. Here is where the broader group mentioned in "The OT Team," including comptroller input, can be useful.

"THE DETERMINATION OF APPROPRIATENESS OF AVAILABLE FUNDING AND FUND TYPE ARE INDEPENDENT OF THE CHOICE OF THE AWARD INSTRUMENT; **THE AGENCY DECISION TO USE AN OT DOES NOT EXPAND, NOR RESTRICT AVAILABLE APPROPRIATIONS. TO DETERMINE THE APPROPRIATE FUNDING TYPE, THE INTENT AND STAGE OF DEVELOPMENT OF THE EFFORT SHOULD BE CONSIDERED AND THE GOVERNMENT TEAM SHOULD CONSULT WITH FISCAL MANAGERS, AGENCY LEGAL COUNSEL AND COMPTROLLERS.** MULTIPLE FUNDING TYPES MAY BE APPROPRIATE DEPENDING ON THE INTENT AND STAGE OF THE EFFORT. FOR EXAMPLE, IF THE INTENT OF THE EFFORT IS DEVELOPING SOMETHING NEW, THEN RDT&E FUNDS WOULD BE APPROPRIATE; HOWEVER, IF THAT DEVELOPMENT IS COMPLEMENTARY TO OTHER COMMERCIAL OFF THE SHELF COMPONENTS (E.G. SOFTWARE LICENSES, OR BASIC COMMODITIES), THEN OPERATION AND MAINTENANCE (O&M) FUNDING MAY BE APPROPRIATE, OR A COMBINATION OF FUNDING TYPES.

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Using SBIR Funding to Award Other Transactions Agreements

The Small Business Innovation Research (SBIR) program was established in the 1980's. Authorizing legislation is 15 U.S.C. 638. The SBIR program taxes Federal agencies with large R&D outlays, a small percentage of their extramural R&D budget for funding. The purpose is to promote commercialization of innovative technologies by small businesses. The SBIR statute policy and goals point to small businesses as playing key roles in economic development and job creation. The program aims to enhance small

businesses innovation through access to federal R&D funding and other assistance. For some agencies, commercialization is taken literally, aimed at enhancing the national economy and well-being through development of innovative products. Some mission-oriented agencies, like the military departments and defense agencies, use SBIR programs to support commercialization of items that are of potential interest to the agency which will become the primary market for the developed product. The statute recognizes this as a legitimate approach.

A company participating in the SBIR program must be:

- A small business with 500 or fewer employees
- Independently owned and operated and organized for profit
- Must have its principal place of business in the United States
- At least 51% owned by U.S. citizens or lawfully admitted permanent resident aliens
- Work must be performed in the United States
- The Principal Investigator must spend more than one-half of the time employed by the proposing firm
- A minimum of two-thirds of the research work must be performed by the proposing firm in Phase I and one-half in Phase II.

The SBIR program is divided into three phases. The initial award results from an SBIR competitive call for proposals. Phase I awards are for what might be called concept definition to assess scientific and technical merit and feasibility for commercialization. Phase II awards result from a down-select among companies that executed Phase I awards. Scientific and technical merit based on phase I results and feasibility for commercialization are used as the selection criteria. In Phase II the concept is further developed and typically takes on demonstrable form as in a prototype. Phase III involves further development leading to full product development. Phase III is to be conducted with commercial funding or non-SBIR government program funding.

The SBIR statute defines a "funding agreement" as "any contract, grant or cooperative agreement. It does not use the term "procurement contract" (the term used in the Federal Grant and Cooperative Agreement Act, FG&CA, 31 U.S.C. 6301-6306) and in at least one instance uses the term contract rather than funding agreement. There is no express prohibition or inclusion of OT's as a funding instrument. DARPA has used OT's selectively in its SBIR program. Some agencies, including DOD, primarily use procurement contracts. Others such as National Science Foundation use grants. Yet others (National Institutes of Health) use a mix of procurement contracts and grants.

OTs are "contracts," they *are not procurement* contracts. The SBIR statute does not prohibit their use. The primary purpose for using a procurement contract is to acquire goods and services for the direct benefit and use of the government. That is not the primary purpose of the SBIR program. The SBIR program statute's second section is titled Assistance to Small-Business Concerns. The program's purpose is to assist in the commercialization of federally funded R&D. The government may end up benefiting by

being able to purchase a successfully commercialized product. That purchase takes place once an SBIR project is successful typically during or after phase III in which there is no SBIR funding.

OTs under 10 U.S.C. 4021 (4022 OTs are carried out under the authority of 4021) are "additional forms of transactions authorized" and may be used "in addition to contracts, grants or cooperative agreements..." Thus, for DOD, at least, OTs may be used in addition to expressly authorized SBIR "funding agreements" – contracts, grants, or cooperative agreements. This point was reinforced in the National Defense Authorization Act of 2018 when Congress amended 10 U.S.C. 4022 to add the proviso "(including small businesses participating in a program described under section 9 of the Small Business Act (15 U.S.C. 638)" in subsection (d)(1)(B).

OTs are well suited for the SBIR program, especially as implemented by DOD where the program emphasizes commercialization but also desires a potential payoff. Use of a procurement contract seems inconsistent with the primary purpose definition in the Federal Grant and Agreement Act (31 U.S. Code 6303) and Federal Acquisition Regulation Part 35 (FAR 35.002/003) as well as the characterization of the SBIR program as assistance rather than acquisition.

Private Sector Investment and Other Transactions

If private investment in innovative companies is important to national defense; if innovative companies that can contribute to national defense need capital, why is there not a link between private investment and government funding for such companies? Mutual interests are involved. Why not promote them? The U.S. economy and national security will be enhanced.

OTs permit coordination of government and private investment. An objection to this might be – unlawful augmentation of appropriations. However, the Federal Acquisition Regulation (FAR) recognizes cost shared contracts (FAR 16.303) but requires any company engaging in a cost-shared contract to become a traditional defense contractor; giving up its low overhead, agile nature as an innovative company (see FAR 16.301-3 requirements). FAR establishes the cost sharing principle but also conditions that mean it will not work for a non-traditional contractor.

Injecting private funding into other transactions (OTs) is not unlawful. The original dual-use OT authority (10 U.S. Code 4021) says "to the extent practicable...the funds provided by the government...do not exceed the total amount provided by other parties..." Coordination of government funding and private funding is encouraged to the extent practicable. The OT prototype authority (10 U.S. Code 4022) is conducted under the authority of section 4021. Private sector funding is not mandated except in one case, section 4022 (d)(1)(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 the Federal government.* Private investment along with participant cost-sharing is encouraged. Note: OT cost-sharing, is not cost-sharing under Part 16 of FAR. FAR rules do not apply. The terminology cost-sharing does not literally appear in the OT statutes (joint funding might be a better term).

In addition to dual-use science and technology projects, joint funding can take place in the context of major programs. NASA's Commercial Orbital Transportation System (COTS) program resulted in the development of the Falcon9 space launch vehicle. NASA payments to SpaceX were based on a series of milestone accomplishments. Some milestones were technical or programmatic in nature; others were financial in nature. NASA payments were conditioned on SpaceX injecting third-party investment into

the program. In DARPA's Joint Unmanned Combat Air System (J-UCAS) program, both major defense contractors involved invested private capital into the program. The X-47B resulting from that program won the Collier Trophy in 2013. The past is prologue in this case. It can be done. It needs to be done. The future of private funding coordinated with government programs waits to be invented. The flexibility of OTs can be a major contributing factor as they were in the examples mentioned.

Market*ing* Research

With your team formed and committed to new innovative acquisition/business approaches, this opens opportunities for new ways of thinking. A part of this is attracting and being attractive to potential partners.

Market Intelligence

Market intelligence is strategic information gathering. Do not allow *market research*, familiar in the FAR/business-as-usual context, to limit your thinking. This is not solely the responsibility of the contracting specialist or technical program manager. In some organizations, PM's are very familiar with the relevant domains including industry, academia, and other sources. Other organizations have a collaborative arrangement with a partnership intermediary (PIA) that can engage in a tech scan or has wide- visibility into relevant technology sectors and domains. Leverage existing relationships or create new ones if needed.

This research and outreach can be done in a variety of ways, much of it online. Smart web searches will find most companies actively producing products in a specific technology focus area. There are paid subscription services that can make this even easier. LinkedIn is also a terrific resource to make connections with individuals, research companies and joining communities of practice groups. Clever manipulation of keywords produces the best results for finding targets. Subscribing to trade publications or browsing online will also add to market knowledge. Face-to-face time at trade shows, conventions, technology demonstrations and the like can provide additional insights and networking opportunities. Hosting a technology demonstration or utilizing the assistance of a DoD tech scouting programs, technology consortia, procurement technical assistance centers may make sense depending on the skill set and expertise of the team. Creating a robust, up-to-date database with contact information and notes should be a goal, which will play a significant part in marketing efforts.

As the repository of information grows, it is important to be mindful of ancillary and related technologies and businesses. Opportunities to connect companies with funding or integrate other products to better serve or enhance mission goals are ever-present possibilities. Also, there may be opportunity to partner with other Federal Agencies or Service Branches with an identical or similar focus. This is truly a different way of thinking.

Branding

While the American military is much revered by the public, its reputation for being a good business partner is the opposite. If your team wants to distinguish itself from business as usual, some effort should be made to differentiate your team from crowd, brand and market the team. In the age of social media, brand and perception is significant. Your team will want to project an image that is attractive to potential partners with ability to back it up. It may be helpful to think of your team as its own entity or business within a larger one. For some, this type of thinking comes naturally, is fun, and barely feels like work. Again, we live in the age of online communications, and the tools to help and craft a brand are

inexpensive and ubiquitous i.e., create a logo, take to social media, create a website, create content for videos, articles, podcasts, news updates, speaking engagements etc. The point is to project and be the team people want to do business with.

Marketing

Keep in mind that potential resources, smart people in the private sector, may not know that their companies or technologies are relevant to DOD or what part of DOD might be interested. They may be total neophytes to government contracting. In order to engage in effective communication, they must be spoken to in their own language, not bombarded with government acronyms and jargon. DUNS numbers and CAGE codes may not only be meaningless but a complete turn-off. Keep in mind: (1) only a few hundred companies do R&D business with DOD that matures to systems capabilities but (2) there are millions of high-tech companies in the United States.

If the desire is to attract innovative companies that do not currently do business with the federal government, then it stands to reason that marketing outside of the standard channels is essential. This is an opportunity to shine. The team's regularly maintained database, connections, social media reach, website and subscription services can be organized into intelligent, high impact marketing. Industry specific websites, subject matter experts and trade organizations can all be leveraged for additional contacts and marketing channels. Some people are more marketing minded than others. Make sure the person on your team who leads the charge has excellent research and communication skills. Once your team gets into this mindset it will begin to expand as different channels become known.

While the above activities sound like a lot of work, the reality is that after an initial concerted effort, they are not. After a period, these efforts will begin to pay off in multiple ways. Some of this work can be done by junior level staff and possibly even interns, if applicable, savvy with social media and on-line resources. However, credibility is essential and a knowledgeable program manager that can speak in the relevant language of the target technology and industry segment cannot be understated.

Using Partnership Intermediaries as an outreach mechanism for Other Transactions

A Federal Laboratory may enter a Partnership Intermediary Agreement (PIA) pursuant to title 15, U.S. Code. The term laboratory does not imply a dedicated bricks and mortar establishment. For example, Special Operations Command has entered a PIA with a non-profit through a virtual laboratory which it established. Other agencies such as the Defense Logistics Agency have established similar laboratories in order to engage in Cooperative Research and Development Agreements. The partnership intermediary is typically a non-profit organization chartered by a state but may be an educational institution or state agency.

The virtue of the PIA relationship is that agency project or program managers may be limited in the time they can devote to outreach and market intelligence. In other cases, program managers, while experts in the needs of their agency, may not be well connected with the talent pools that can address those needs. PIAs can constitute the eyes and ears of the program manager, do the leg work to find potential contributors, and provide streamlined means of engagement. PIAs can rapidly hire subject matter experts if needed to augment agency talent.

The PIA can tailor its tech scan, talent search, or other technique to the targeted industry segment and needs of its sponsoring agency. It can do the preliminary steps in what constitutes competitive procedures for purposes of 10 U.S.C 4022. Sections 4021 and 4023 do not have competition requirements but can benefit equally from PIA outreach activities. Being able to harness the talents of a PIA and integrate its activities into OT outreach activities is an example of the flexibility of OTs.

Shopping the Problem

OTs not only offer freedom of contract, but also freedom of solicitation (see figure below). Business-as-usual does not apply and you can freely solicit as long as the solicitation strategy is fair and transparent. But first, there are a few things you should consider before going public:

- **Will there be an opportunity for follow-on production after a successful prototype (4022)?**

  If you answered yes to this question, it is in the project's best interest to be up-front and forthcoming in the solicitation about the potential for follow-on activities. This will help to lower the risk to potential protests.

- **Is there a need to process a determination request (4022)?**

  10 USC 4022(d)(1)(D) states:
  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.

  If a determination request is necessary, the Government team should process the request as early as practicable. Acquisition organizations should remove barriers to team access to the Senior Procurement Executive.

- **Has the team acquired the proper statutory approvals to proceed with an OT solicitation?**

  Certain dollar thresholds require additional approvals for prototype and production OTs:

Dollar Threshold	Approval Needed
$100,000,000 > $500,000,000	Senior procurement executive for the agency
<$500,000,000	Under Secretary of Defense for Research and Engineering -or- the Under Secretary of Defense for Acquisition and Sustainment determines

After proper planning and approvals are established, it is time to release your problem statement out into the world and solicit potential solutions. This is where all your market research and marketing come into play. **DO NOT,** repeat, **DO NOT just post your solicitation on beta.sam.gov and expect non-traditional companies to come to you. YOU ARE BETTER THAN THIS!** You have been actively engaging in your area of need and creating a comprehensive database/network of potential partners, and they do not care about beta.sam.gov (see note below). They are innovative companies that do not do business with the federal government (yet). **If you want to attract new and innovative solutions, reach out to this network through multiple channels and shop your problem.**

Note: beta.sam.gov may be an approved system, but relatively few high-tech companies review it. Our adversaries do. It is an operational security risk.

Evaluating and Selection

Evaluation of proposals can vary from simple to complex, depending on the scope of the effort. Small single-party OTs can be evaluated by a single qualified technical official both with respect to their technical content and their pricing. In such cases, the government's cost estimate may be based on little more than the technical officer's knowledge of the likely amount of science/engineering effort involved and the industry standard for a fully burdened technical effort per year (or other period of time). This, plus estimated material costs, provide a rough order of magnitude estimate which, with information in the performer's proposal, provides an adequate basis to enter negotiations. Technical risks need to be explored. With an estimate of cost, input from the performer, and an assessment of technical risk and value of a successfully completed project, a savvy technical official has the information to agree to technical content and pricing. As in other instances, a team effort can enhance the evaluation process. Larger efforts may require a more rigorous process.

More complex projects with multiple stages or multiple performers will typically require greater sophistication. Subject matter experts in different aspects of the proposed effort may be required. A preliminary assessment by individual experts with a consolidated decision by a review board or other techniques can be utilized when warranted. A multi-stage review process may be used in which the initial review takes place based on a summary proposal or white paper. Then follows a second or third stage, each with increasing discipline and granularity. Technical demonstrations in the field, by video, or otherwise may be utilized. **Fit the evaluation process to the needs of the project.** Avoid models common in the procurement process which are designed to cover any FAR-based possibility of protest. OT evaluations should be purposeful and fair, not clones of FAR processes. Make full use of OT flexibility. A rigorous outreach process will aid in determining the right approach to evaluation.

It is important to be and appear fair in your solicitation/evaluation period and manage your potential partners' expectations throughout the process. Timely communication during the selection process will help foster goodwill, avoid loss of confidence, and help to move the project forward efficiently.

Chapter 4:
Negotiating Common Terms and Conditions and Managing the Agreement

Case Study: Global Hawk

Global Hawk was a 1994 Defense Advanced Research Projects Agency program for a high-altitude endurance unmanned aerial vehicle (UAV) and was DoD's first implementation of a Prototype OT. DARPA issued a two-page description of desired performance capabilities. In lieu of detailed Specifications or an extensive Statement of Work, DARPA's requirement definition was for a UAV that could reach an altitude of 60,000 feet and remain aloft for 24 hours with a strict limitation on the price tag of the production aircraft of $10 million. DARPA allowed industry to propose their own solution sets for achieving the requirement.

Implementation and Execution:

In 1994, DARPA initially selected five contractors in Phase I through a competitive solicitation. While the original program plan was to down-select to two competing performers in Phase II in 1995, budget constraints restricted selection to only one performer in this phase. Phase III spanned 1997 through 1999 and produced eight UAV prototypes. In the final Phase IV years of 2000- 2001, the specifications were finalized for full production and transition to the United States Air Force. This overall timeline of approximately seven years was deemed a success as traditional aerial vehicle development programs typically spanned two decades or more. The funding over seven years was approximately $372 million.

Outcomes and Lessons Learned:

1. **Allow Industry to be Innovative:** DARPA's use of Prototype OTs allowed industry innovation through creative flexibility in UAV development while remaining within budget and meeting DARPA's performance goals. The contractor was given wide latitude to select and defend tradeoffs of performance parameters as long as the "flyaway" price tag of $10 million was achieved.
2. **Acquisition Strategies should balance Innovation and Budget:** "Design-to-price" was a distinct departure from traditional acquisition programs, which typically focus on achieving the highest possible performance, which can result in cost increases.
3. **Collaboration:** Giving the Contractor freedom to design and run the program was also a departure from the normal process of extensive government control. DARPA allowed Government and Industry to collaboratively and successfully test the limits of technology within the constraint of a price point of $10 million.

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Creating the Vision Statement

A "vision statement" is a narrative that memorializes the mutual goals of the project. It might be viewed like the preliminary recitals that were once common in contracts. What is particularly important is the discussion that precedes reducing the mutual vision of the project to writing. The purpose of the discussion is to assure that the goals of the parties (whether bilateral or multi-lateral) are at least congruent if not identical. If fundamental disconnects are discovered in the preliminary discussion, there is no reason to waste time negotiating detailed terms and conditions – the project is a non-starter.

In addition to discovering show stopping disconnects, the discussion preceding the writing of the vision statement outlines the important issues that can effectuate or frustrate the parties reaching their goals. This includes the intent of the parties with respect to subjects such as exploring new technology, production, commercialization and, fielding and supporting the results of the project. It begins the exploration of critical issues such as allocation of intellectual property rights, timing of key events, resources, or capabilities the parties will bring to the project.

The vision statement becomes the key document in the negotiating history of the project. It is a statement of the intent of the parties and aids in the future interpretation of the agreement**. It guides the parties as an outline of the content of specific terms and conditions to be included in the project agreement.** For example, one party may offer a canned, pre-written position on intellectual property rights that is inconsistent with project goals as memorialized in the vision statement. This will lead to a discussion of whether goals previously agreed, or the detailed terms of the proffered language represent the fully thought-out position of the party. The party offering the inconsistent language will need to review its position and explain the inconsistency in detail.

A vision statement need not be a lengthy document so long as it captures the key elements of the preliminary discussion. It should serve the purposes outlined above. Negotiators need to keep in mind the parties are in the project to accomplish mutually supporting goals and the agreement is aimed at a win/win result with a minimum of administrative burden and bureaucracy.

The vision statement is usually incorporated into the agreement. It is typically the first clause titled Scope of the Agreement or something similar. Negotiating the vision statement should set the stage for mutual respect for the interests of the parties throughout subsequent negotiation of terms and conditions and administration of the executed agreement.

The following section makes use of a DARPA Sample Agreement to demonstrate how selected terms and conditions can be negotiated between parties. Note well – this is just an example, not a recommendation. Summary comments provide perspective and critique. Follow the provisions of a model only if they make sense in light of a preliminary discussion concerning goals and subsequent negotiations.

If model or agreement template is provided before the initial discussion of goals, make sure it is understood that it merely outlines issues to be included in the agreement to be negotiated.

Term and Termination

A few items to note:

- The agreement should generally state a fixed term, however, the possibility of extending the term if funding and research opportunities warrant should be included
- Early termination should generally be through mutual consent
- Unilateral termination by one or by either party is a matter of negotiation
  a) The government may want to assert the right to unilateral termination based on failure to achieve a milestone event due to inadequate partner performance
  b) In high risk ventures the partner may want a "walk away" termination provision
- A process for wrap up in the event of early termination should be agreed upon

A. Term of this Agreement
The Program commences upon the date of the last signature hereon and continues for (INSERT NUMBER) months. Provisions of this Agreement, which, by their express terms or by necessary implication, apply for periods of time other than specified herein, shall be given effect, notwithstanding this Article.

B. Termination Provisions
The Government may terminate this Agreement by written notice to the Performer, provided that such written notice is preceded by consultation between the Parties. The Performer may request Agreement termination by giving the Government sixty (60) days written notification of their intent to do so. If the Performer decides to request termination of this Agreement, the Government may, at its discretion, agree to terminate. The Government and the Performer should negotiate in good faith a reasonable and timely adjustment of all outstanding issues between the Parties as a result of termination, which may include non-cancelable commitments. In the event of a termination of the Agreement, the Government shall have paid-up rights in Data as described in Article VIII, Data Rights. Failure of the Parties to agree to an equitable adjustment shall be resolved pursuant to Article VI, Disputes.

C. Extending the Term
The Parties may extend, by mutual written agreement, the term of this Agreement if research opportunities from the vision statement set forth in Article I reasonably warrant. Any extension shall be formalized through modification of the Agreement by the Agreements Officer ("AO") and the Performer Administrator.

Summary: The term of this agreement is stated as a specific number of months but as A and C indicate, is flexible if research opportunities and funding are available. Paragraph B provides each party with an option for unilateral termination after consultation and preferably on a mutually agreed basis as to wrap up details. If the Performer terminates after consultation without an agreed close out agreement, either voluntarily or as the resolution of a dispute, it has no claim for effort expended beyond the last paid milestone. The government obtains certain rights in data in the event of early termination.

Management, Administration, and Contract Modifications

A few items to note:

- Management provisions of an agreement will vary considerably based on the structure, scope, and complexity of the project
- In simple projects it may be sufficient merely to designate which officials from each party have cognizance over (1) technical and (2) administrative matters and how changes in those matters are to be made
- Large or multi-party arrangements may call for a management committee, program operating plan, periodic program planning process, or other techniques
- A simple process for effecting modifications is essential; avoid all opportunity for delay in this process (note: with OTs there are no in scope/out of scope modifications; just modifications)

A. Management and Program Structure

The Performer shall be responsible for the overall technical and program management of the Program, and technical planning and execution shall remain with the Performer. The DARPA Agreements Officer's Representative (AOR), in consultation with the DARPA Program Manager (PM), shall provide recommendations to Program developments and technical collaboration and be responsible for the review and verification of the milestones.

B. Program Management Planning Process

Program planning will consist of an Annual Program Plan prepared by the performers, with input and review by the Government, containing the detailed schedule of research activities and milestones. The Annual Program Plan will consolidate adjustments in the research schedule, including modification to prospective payable milestones. The Performer will submit periodic technical status and business status reports, in accordance with Attachment 2 in order to update DARPA on Performer's performance under the Agreement.

1. Initial Program Plan: The Performer will follow the initial program plan that is contained in the Task Description Document (Attachment 1), and the Schedule of Milestones and Payments (Attachment 3).

2. Overall Program Plan Annual Review
   (a) The Performer, with Government input and review, will prepare an overall Annual Program Plan in the first quarter of each Agreement year. (For this purpose, each consecutive twelve-month period from, and including, the month of execution of this Agreement during which this Agreement shall remain in effect shall be considered an Agreement Year.) The Annual Program Plan will be presented and reviewed, and at the discretion of the DARPA PM, an annual site review which will be attended by the Performer and Government Personnel.
   (b) The Annual Program Plan provides a detailed schedule of research activities, committing the Performer to use its best efforts to meet specific performance objectives and describes the milestones. The Annual Program Plan will consolidate all prior adjustments in the research schedule, including

modifications to prospective milestones, in accordance with the provisions of Article III, paragraph C.

C. Modifications

1. As a result of meetings, annual reviews, or at any time during the term of the Agreement, research progress or results may indicate that a change in the TDD and/or the Schedule of Milestones and Payments would be beneficial to program objectives. Recommendations for modifications, including justifications to support any changes to the TDD and/or the Schedule of Milestones and Payments will be documented in writing and submitted by the Performer to the DARPA AOR with a copy to the DARPA AO. This documentation will detail the technical, chronological, and financial impact of the proposed modification to the research program. The DARPA AO and the Performer shall approve any Agreement modification. The Government is not obligated to pay for additional or revised future milestones until the Schedule of Milestones and Payments (Attachment 3) is formally revised by the DARPA AO and made part of this Agreement.

2. The DARPA AOR shall be responsible for the review and verification of any recommendations to revise or otherwise modify the TDD, prospective milestones, or other proposed changes to the terms and conditions of this Agreement.

3. For minor or administrative Agreement modifications (e.g. changes in the paying office or appropriation data, changes to Government or the Performer's personnel identified in the Agreement, etc.) no signature is required by the Performer.
4. The DARPA AO will be responsible for instituting all modifications to this Agreement.

Summary: This approach to program management and modification can be adapted to multi-party agreements or single Performer agreements. The exact role of various officials and their authority can be spelled out in the agreement. It is not established by regulation.

The government program manager has relatively continuous interaction with the Performer but is not managing a private organization. Interaction is to gain insight and make suggestions on the conduct of the program. Certain actions require a government decision. The program manager, rather than the government agreement (contract) administrator, is the key government decision maker.

Key points of project management available to the government program manager are a review of the annual operating plan and verification of payable milestones.

Methods of Payment

A few items to note:

- The agreement should specify how payments will be made
- Advance payments are permitted but typically "soft" milestones (e.g., an initial project meeting) are used to start the infusion of revenue into the project
- Beyond initial soft milestones, apply discipline to crafting milestones based on a systems engineering or critical path methodology
- Use milestones as a key management tool (fail early, revise as needed)
- Individual milestone payments may, but need not, correspond to expected expenses and certainly not beyond a ROM
- Define milestones clearly

A. Obligation

1. The Government's liability to make payments to the Performer is limited to only those funds obligated under the Agreement or by modification to the Agreement. DARPA may obligate funds to the Agreement incrementally.
2. If modification becomes necessary in performance of this Agreement, pursuant to Article III, Paragraph B, the DARPA AO and the Performer Administrator shall execute a revised Schedule of Milestones and Payment for prospective milestones consistent with Attachment 3.

B. Payments

1. The Parties agree that fixed payments will be made for the completion of milestones. These payments reflect value received by the Government toward the accomplishment of the research goals of this Agreement.
2. The Performer shall document the accomplishments of each milestone by submitting or otherwise providing the Milestones Report required by Attachment 2, Part D. The Performer shall submit an original and one (1) copy of all invoices to the AO for payment approval. After written verification of the accomplishment of the milestone by the DARPA AOR, and approval by the AO, the Performer will submit their invoice through Wide Area Work Flow (WAWF), as detailed in paragraph B.4. of this Article.
3. Limitation of Funds: In no case shall the Government's financial liability exceed the amount obligated under this Agreement.
4. Payments will be made by the Defense Finance and Accounting Services office, as indicated below, within thirty (30) calendar days of an accepted invoice in WAWF. WAWF is a secure web-based system for electronic invoicing, receipt and acceptance. The WAWF application enables electronic form submission of invoices, government inspection, and acceptance documents in order to support DoD's goal of moving to a paperless acquisition process. Authorized DoD users are notified of pending actions by e-mail and are presented with a collection of documents required to process the contracting or financial action. It uses Public Key Infrastructure (PKI) to electronically bind the digital signature to provide non-

reputable proof that the user electronically signed the document with the contents. Benefits include online access and full spectrum view of document status, minimized re-keying and improving data accuracy, eliminating unmatched disbursements and making all documentation required for payment easily accessible.

5. The Performer is required to utilize the WAWF system when processing invoices and receiving reports under this Agreement. The Performer shall (i) ensure an Electronic Business Point of Contact is designated in System for Award Management (SAM) at http://www.sam.gov and (ii) register to use WAWF–RA at the https://wawf.eb.mil site, within ten (10) calendar days after award of this Agreement. Step-by-step procedures to register are available at the https://wawf.eb.mil site. The Performer is directed to use the 2-in-1 format when processing invoices. The Performer should submit a copy of the AOR approval of the milestone, as well as a copy of the milestone report, with each invoice.

   a. For the Issue By DoDAAC, enter HR0011, Extension (INSERT AO'S EXTENSION).
   b. For the Admin DoDAAC, enter HR0011.
   c. For the Service Acceptor AOR fields, enter the Service Acceptor AOR DoDAAC.
   d. Leave the Inspect by DoDAAC, Ship From Code DoDAAC, Service Approver, and LPO DoDAAC fields blank unless otherwise directed by the Agreements Officer.
   e. The following guidance is provided for invoicing processed under this Agreement through WAWF:

   - The AOR identified in Article IV, "Agreement Administration" shall continue to formally inspect and accept the deliverables/ milestones. To the maximum extent practicable, the AOR shall review the deliverable(s)/ milestone report(s) and either: 1) provide a written notice of rejection to the Performer which includes feedback regarding deficiencies requiring correction, or 2) written notice of acceptance to the DARPA PM and Agreements Officer.
   - Acceptance within the WAWF system shall be performed by the AOR upon receipt of a confirmation email, or other form of transmittal, from the AOR.
   - The Performer shall send an email notice to the AOR and upload the AOR approval as an attachment upon submission of an invoice in WAWF (this can be done from within WAWF).
   - Payments shall be made by DFAS-(INSERT APPROPRIATE DFAS OFFICE NAME AND DODAAC).
   - The Performer agrees, when entering invoices entered in WAWF to utilize the contracting line item number (CLIN) and accounting classification reference number (ACRN) associated with each milestone as delineated at Attachment 2. The description of the CLIN shall include reference to the associated milestone number along with other necessary descriptive information. The Performer agrees that the Government may reject invoices not submitted in accordance with this provision.

Note for DFAS: The Agreement shall be entered into the DFAS system by CLIN – Milestone association (MS)/ACRN as delineated at Attachment 3. The Agreement is to be paid out by CLIN (MS)/ACRN. Payments shall be made using the CLIN (MS)/ACRN association as delineated at Attachment 3.

f. Payee Information: As identified at SAM.
   - Cage Code:
   - DUNS:
   - TIN:

6. Payments shall be made in the amounts set forth in Attachment 3, provided the DARPA AOR has verified the accomplishment of the milestones.
7. Financial Records and Reports:

   a. The Performer shall maintain adequate records to account for all funding under this Agreement. Upon completion or termination of this Agreement, whichever occurs earlier, the Performer shall furnish to the AO a copy of the Final Report to the AO required by Attachment 2, Part E. The Performer's relevant financial records are subject to examination or audit on behalf of DARPA by the Government for a period not to exceed three (3) years after expiration of the term of this Agreement. The AO or designee shall have direct access to sufficient records and information of the Performer, to ensure full accountability for all funding under this Agreement. Such audit, examination, or access shall be performed during business hours on business days upon prior written notice and shall be subject to the security requirements of the audited party.
   b. To the extent that the total government payments under the Agreement exceed $5,000,000, the Comptroller General of the United States, in its discretion, shall have access to and the right to examine records of any party to the Agreement or any entity that participates in the performance of this Agreement that directly pertain, to and involve transactions relating to, the Agreement for a period of three (3) years after final payment is made. This requirement shall not apply with respect to any party to this Agreement or any entity that participates in the performance of the Agreement, or any subordinate element of such party or entity, that, in the year prior to the date of the Agreement, has not entered into any other contract, grant, cooperative agreement, or other transaction agreement that provides for audit access to its records by a government entity in the year prior to the date of this Agreement. This paragraph only applies to any record that is created or maintained in the ordinary course of business or pursuant to a provision of law. The terms of this paragraph shall be included in all sub-agreements/contracts to the Agreement.

Summary: As the above section suggests, milestone payments can be accomplished in a simple and straightforward manner. Avoidance of cost reimbursement contracting greatly streamlines the contracting process and gives the government little excuse for bureaucratic delays. In simple

agreements simplified methods of payment outside the normal bureaucracy can be used. Registration in SAM should be required only if it makes sense. Provisions common in procurement contracts, such as payment through Wide Area Workflow (WAWF), a Bayh-Doyle Patent clause, or standard technical data clause, are not required. If the contracting agency has a collaborative relationship with a partnership intermediary (PIA - 15 U.S.C. 3715) consider rolling the PIA into the OT and simplify payment via a commercial purchase order from the PIA to Performer. Provide for simple reporting and record keeping. See section 4022 (e) for audit requirements and variations in agreements with payments over $5 million.

Intellectual Property

A few items to note:

- Intellectual property rights are fully negotiable under all OTs
- If using the Bayh-Dole Act (patents) and 10 U.S.C. §2320-21 (technical data) as a baseline, be prepared to negotiate variations.
- Variations from Bayh-Dole may include:
    - Permitting the contractor to keep the patentable invention as a trade secret.
    - Narrowing the Government-purpose license so that (1) it applies to only one agency (versus the entire Government), or (2) it can be used only to make weapon systems.
    - Eliminating march-in rights or placing further limitations on their exercise than currently apply under existing laws and regulations.
    - Eliminating the "or first actually reduced to practice" provision in the definition of "subject invention."
- OR write a completely different patent regime

A. Allocation of Principal Rights

1. Unless the Performer shall have notified DARPA, in accordance with subparagraph B.2 below, that the Performer does not intend to retain title, the Performer shall retain the entire right, title, and interest throughout the world to each Subject Invention consistent with the provisions of this Article.
2. With respect to any Subject Invention in which the Performer retains title, DARPA shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced on behalf of the United States the Subject Invention throughout the world.

The primary Allocation of Rights under the Bayh-Dole Act is fundamentally fair. However, the lengthy additional language of the Act tends to undermine this fundamental fairness. Moreover, the detail and length of the additional language can be inimical to the interest of commercial firms.

Subjects covered by a Bayh-Dole clause include:

- Invention Disclosure, Election of Title, and Filing of Patent Application
- Conditions When the Government May Obtain Title
- Minimum Rights to the Performer and Protection of the Performer's Right to File
- Action to Protect the Government's Interest
- Lower Tier Agreements
- Reporting on the Utilization of Subject Inventions
- Preference for American Industry
- March-in Rights

Summary: A patent clause that tracks the standard Bayh-Dole clause is found in most government R&D contracts and agreements. DARPA put in place a system to track, verify and if necessary, task the Performer with respect to reporting, election, and other aspects under the clause. If your agency is not organized to do so, it makes little sense to lay out all the rights and responsibilities of the clause. Many strictly commercial firms or small business will find the clause objectionable or simply ignore its application. Be prepared to negotiate patent rights. In many cases the government will have little need for such rights.

Disputes

A few items to note:

- Craft an "all disputes" clause; both remedies available under the agreement and breach of agreement claims are required to exhaust administrative remedies under the clause
- Craft a clause that emphasizes early identification, frank discussion and mutual resolution of disputes
- Consider elevation to very senior officials of both parties
- Consider unilateral government final decision especially in multi-party agreements
- Contract Disputes Act does not apply
- Arbitration may not be the right answer

A. General
The Parties shall communicate with one another in good faith and in a timely and cooperative manner when raising issues under this Article.

B. Dispute Resolution Procedures

1. Any disagreement, claim or dispute between DARPA and the Performer concerning questions of fact or law arising from or in connection with this Agreement, and, whether or not involving an alleged breach of this Agreement, may be raised only under this Article.
2. Whenever disputes, disagreements, or misunderstandings arise, the Parties shall attempt to resolve the issue(s) involved by discussion and mutual agreement as soon as practicable. In no event shall a dispute, disagreement or misunderstanding which arose more than three (3) months prior to the notification made under

subparagraph B.3 of this article constitute the basis for relief under this article unless the Director of DARPA in the interests of justice waives this requirement.

3. Failing resolution by mutual agreement, the aggrieved Party shall document the dispute, disagreement, or misunderstanding by notifying the other Party in writing of the relevant facts, identify unresolved issues, and specify the clarification or remedy sought. Within five (5) working days after providing notice to the other Party, the aggrieved Party may, in writing, request a joint decision by the DARPA Senior Procurement Executive and senior executive, no lower than (INSERT A LEVEL OF EXECUTIVE FAR ENOUGH REMOVED FROM THE PROGRAM TO MAINTAIN A GREATER LEVEL OF IMPARTIALITY) level, appointed by the Performer. The other Party shall submit a written position on the matter(s) in dispute within thirty (30) calendar days after being notified that a decision has been requested. The DARPA Senior Procurement Executive and the senior executive shall conduct a review of the matter(s) in dispute and render a decision in writing within thirty (30) calendar days of receipt of such written position. Any such joint decision is final and binding.
4. In the absence of a joint decision, upon written request to the Deputy Director of DARPA, made within thirty (30) calendar days of the expiration of the time for a decision under subparagraph B.3 above, the dispute shall be further reviewed. The Deputy Director of DARPA may elect to conduct this review personally or through a designee or jointly with a senior executive, no lower than (INSERT A LEVEL OF EXECUTIVE FAR ENOUGH REMOVED FROM THE PROGRAM TO MAINTAIN A GREATER LEVEL OF IMPARTIALITY) level, appointed by the Performer. Following the review, the Deputy Director of DARPA or designee will resolve the issue(s) and notify the Parties in writing. Such resolution is not subject to further administrative review and, to the extent permitted by law shall be final and binding.

C. Limitation of Damages

Claims for damages of any nature whatsoever pursued under this Agreement shall be limited to direct damages only up to the aggregate amount of DARPA funding disbursed as of the time the dispute arises. In no event shall DARPA be liable for claims for consequential, punitive, special and incidental damages, claims for lost profits, or other indirect damages.

Summary: This sample disputes clause requires the parties to notify one another of potential disputes and attempt to resolve them by agreement. B 1 makes this an "all disputes" clause. A party cannot go to court without exhausting potential remedies under this clause. Available remedies are restricted. Everything about this clause pushes the parties to decide their dispute by mutual agreement. In the end, absent an agreed resolution the government makes a final decision. A unilateral government decision will be subject to court review on interpretations of law.

Follow-on Production

ARTICLE X: FOLLOW-ON PRODUCTION CONTRACTS FOR OTHER TRANSACTIONS

In accordance with 10 U.S.C. § 4022(f), the Government may award a follow-on production contract or Other Transaction (OT) to the Performer, or a recognized successor in interest to the OT, following the successful completion of the project, as modified.

Summary: Reference to follow-on production is mandated by the 2018 USD A&S OT Guide.

IN NEGOTIATING AND DRAFTING THE TERMS OF THE PROTOTYPE OT AGREEMENT, ***THE PARTIES MUST PROVIDE FOR ANY ANTICIPATED FOLLOW-ON ACTIVITIES, TO INCLUDE FOLLOW-ON PRODUCTION****...GOVERNMENT ORGANIZATIONS THAT AWARD A PROTOTYPE OT UNDER 10 U.S.C. §4022 DO NOT HAVE TO BE THE GOVERNMENT ORGANIZATION THAT AWARDS THE FOLLOW-ON PRODUCTION CONTRACT...Add language from pg. 33 of OSD guide*

2018 USD A&S OT Guide

Managing Agreements

The 2018 USD A&S OT Guide provides useful details on executing and administering OT agreements. In this section, we touch and elaborate on a few items with additional commentary.

Reporting

When OTs were introduced in the 1990's annual reports were submitted to Congress. These reports provided useful data for analysis of the numbers of OTs awarded by various elements of DOD; funds obligated; total funding; participation by non-traditional contractors and other data. This reporting requirement was rescinded in 2006. Subsequently a DOD policy of reporting OTs under the Federal Procurement Data System was established. Some elements of DOD failed to comply with this policy. When a new Administration came into office in 2017, it discovered there was no comprehensive or accurate repository of OT data. Congress has agreed language in a Congressional Conference Report directed DOD to report on OTs. In addition, there is a statutory requirement to report prospective OTs in excess of $500 million to Congress 30 days in advance of award. Reporting need not become burdensome or bureaucratic. Current DOD policy is to report data on 4021 OTs through the Defense Assistance Awards Data System and 4022 OTs through the Federal Procurement Data System-Next Generation.

Performance

Most early OTs were cost-shared, dual-use projects under 10 U.S.C. 2371 (now 4021). Performers that had their own resources committed to the project, as well as an interest in meeting the needs of the commercial marketplace, had a strong incentive to perform in an efficient and cost-effective manner. In such cases the need for detailed government oversight was minimized. Depending on the project, oversight might be targeted on technical feasibility, for example, where the state of the art was being stretched. If collaboration between performers was important, the government might want to monitor performer relations. The target and amount of oversight should be tailored to the specifics of the project. Where there is no cost-sharing and no potential commercial market opportunity (e.g., some section 4022 projects), more detailed forms of oversight may be appropriate.

Payable Milestones

An important management tool as well as method of project financing involves payable milestones based on observable results. With systems engineering in mind, payable events along the critical path to project success can be laid out. These are not merely "deliverables", but key events or accomplishments needed for project success. The mutual definition and description of the milestone events is a key element of OT negotiations. This focuses payment on performance rather than incurring costs. Generally, milestones will be technical in nature. Exceptions include "soft milestones" to initiate cash flow early in a project and milestones based on infusion of private financing in cases where that is applicable. A well-known example of private investment milestones is NASA's Space Act OT with SpaceX for development of the Falcon 9 launch vehicle.

Failure to achieve a milestone event in a timely manner forces a management decision. What caused the failure? Poor performance? Intervening unanticipated event? Poorly defined milestone? Whatever the possible cause, it needs to be discussed, understood, and dealt with. Performance failure or even an unanticipated intervening cause may result in a "fail early" decision. Redesign of the milestone may be in order. A reasoned management decision should result. This differs from cost reimbursement contracting where costs continue to be incurred until absolute failure is evident. Payable milestones are the preferred method of structuring OT payments. They are not the exclusive method. Firm fixed price, best efforts or completion agreements can be used; payments for time and materials; or, cost-reimbursement agreements can be negotiated.

Completion

Successful project completion should be defined in the agreement. This is a key issue since seamless follow-on production requires successful completion. Policy is:

"Those organizations seeking to use the follow-on production authority provided for in subsection 4022(f) shall apply the following definition for 'successful completion.'" A transaction for a prototype project is complete upon the written determination of the appropriate approving official for the matter in question that efforts conducted under a Prototype OT: (1) met the key technical goals of a project; (2) satisfied success metrics incorporated into the Prototype OT; or (3) accomplished a particularly

favorable or unexpected result that justifies the transition to production. Furthermore, successful completion can occur prior to the conclusion of a prototype project to allow the Government to transition any aspect of the prototype project determined to provide utility into production while other aspects of the prototype project have yet to be completed." (Definitions and Requirements for Other Transactions, 20 November 2018).

Protests

Protests of the solicitation or award of an OT can be filed with the cognizant agency, in federal court, or with the Government Accountability Office (GAO). Of particular concern are GAO protests because they are cheap and simple to file and have the potential to cause expense and delay in a contract action, even if ultimately found to be totally lacking in merit. GAO has a statutory charter to consider protests under the procurement statutes. GAO has long taken the position that its role in the protest of a non-procurement agreement (OT, grant, CRADA etc.) is strictly limited. Namely, its only role is to determine if a procurement contract was required under the particular circumstances of the case. If it finds the non-procurement agreement was authorized, it has no further role.

Oracle Protest:

GAO appeared to expand its role in the Oracle America protest of an Army/DIU award of a follow-on production OT to REAN CLOUD decided in May 2018. For several reasons GAO's decision in that case was wrong. However, DOD could have rejected GAO's decision but did not. The decision stands and needs to be considered. To reach its decision, GAO interpreted key provisions of the section 4022 in a manner draped with FAR thinking and applied its own FAR-based precedents to the government's actions. It also violated rules of statutory construction that it asserted it was applying to the case. DOD's main response to Oracle was to mandate that all 4022 solicitations and OT prototype agreements clearly state follow-on production is a possibility (even when there is no intent to have follow-on production). DOD also issued policy on what "successful completion" means in section 4022(f). In more recent cases, GAO seems to have retreated into its more traditional and restricted role in protests of non-procurement agreements.

CASE STUDY: Chemical, Biological, and Radiological Technology Alliance (CBRTA)

PROGRAM DESCRIPTION:

The CBRTA was part of a multi-faceted consortium (National Technology Alliance) authorized by Congress to inject commercial technologies for security and defense needs. It consisted of thirteen commercial firms and academic institutions, awarded under an OT agreement, with 3M leading the consortium in an administrative capacity. The National Geospatial-Intelligence Agency (NGA) acted as executive agent and provided the contracting support.

EXECUTION:

CBRTA afforded the government access to a reservoir of intellectual talent consisting of thousands of the best and brightest scientists and engineers employed by the CBRTA member companies and institutions. Projects were initiated as a modification to the basic agreement and are in the form of task orders. Because industry could formulate a program plan in response to a government need in a matter of days (potentially hours), work could begin under an approved plan almost as quickly. Work could be performed by members of the Alliance or subcontracted if the requisite expertise existed outside CBRTA companies.

Administrative costs were funded separately from R&D efforts. Most projects were funded as time and materials efforts, while others were either cost-reimbursement or fixed price milestones. The government obtained the leverage of industry investment, which was often five or ten times that of the government in many of the technologies supported by CBRTA member companies. Project time was shortened due to the reduced need for cost and pricing data, elimination of a formal engineering change process, and simplified terms and conditions with suppliers, all due to the fact that the OT instrument included these terms and conditions.

This type of consortium embraces nontraditional participants both as members of the consortium and also in the subcontract role. OT allows flexibility in intellectual property and freedom from government-unique requirements such as hourly timecard reporting and DCAA compliance, which would be absolute nonstarters for many of the companies and scientists involved in CBRTA projects.

OUTCOMES:

- The CBRTA operated as a successful program for several years and was a potential model that could be applied to many technology areas relevant to DOD needs.
- **Leadership support and education is important!** Sadly, NGA turnover and differing priorities greatly affected the attitudes of those working on the OT. A supportive NGA director early on was succeeded by a director uninterested in CBRTA and with him came new legal counsel with no background on OTs to oversee CBRTA. Issues between CBRTA and the government that had previously been raised and resolved, were reopened and the government (new legal counsel and agreements officer) took a more restrictive view than previously.
- A highly successful program with virtually unlimited potential to provide the government with novel solutions was allowed to lapse.

Chapter 5:
Varieties of Other Transactions

CASE STUDY: CERAMIC FIBER CONSORTIUM

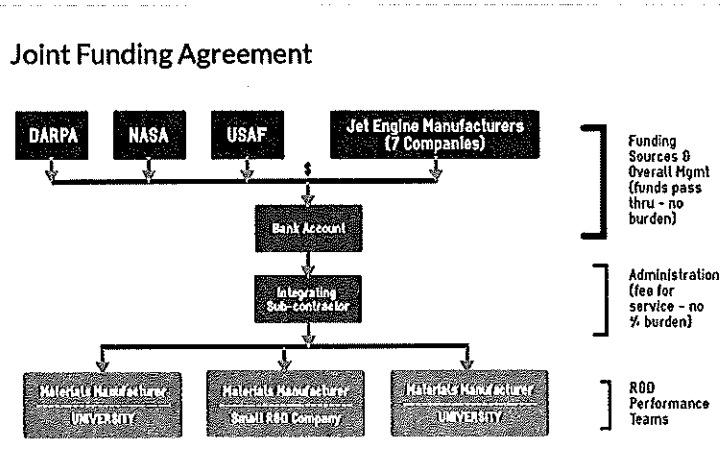
PROGRAM DESCRIPTION:

The Ceramic Fiber Consortium supported the Integrated High-Performance Turbine Engine Technology (IHPTET) program. The program goal was to develop components that could be manufactured and put into use in engines and not merely to advance the state of the art or publish research results. The fiber consortium was a cost-shared program consisting of seven gas turbine engine manufacturers with government funding provided by the Air Force, DARPA and NASA. Today, high performance engines (e.g., F-119 and F-135) incorporate ceramic matrix composites.

The ceramic fiber consortium had several unique features. Utilizing DARPA's original OT authority for contracting, technical leadership was provided by the Air Force. The engine companies provided funding and strategic management of the program with leadership rotating among the companies. Consortium voting was weighted based on financial contributions. Administrative matters were handled by a non-profit integrating sub-contractor on a fee-for-service basis. Funds from both the government and companies were deposited in a project bank account. The fee was the sub-contractor's sole source of project income. Pass-through funds were not burdened with a percentage tax.

Research was in many cases conducted by small innovative companies or universities. However, all researchers were required to partner with a materials manufacturer. Consortium decisions on what projects to fund were all fully open. Intellectual property vested jointly in the engine companies; the use any engine company made of a particular component or technology was proprietary. Project funding decisions were exclusively in the hands of the consortium members.

Ceramic Fiber Consortium



OUTCOMES:

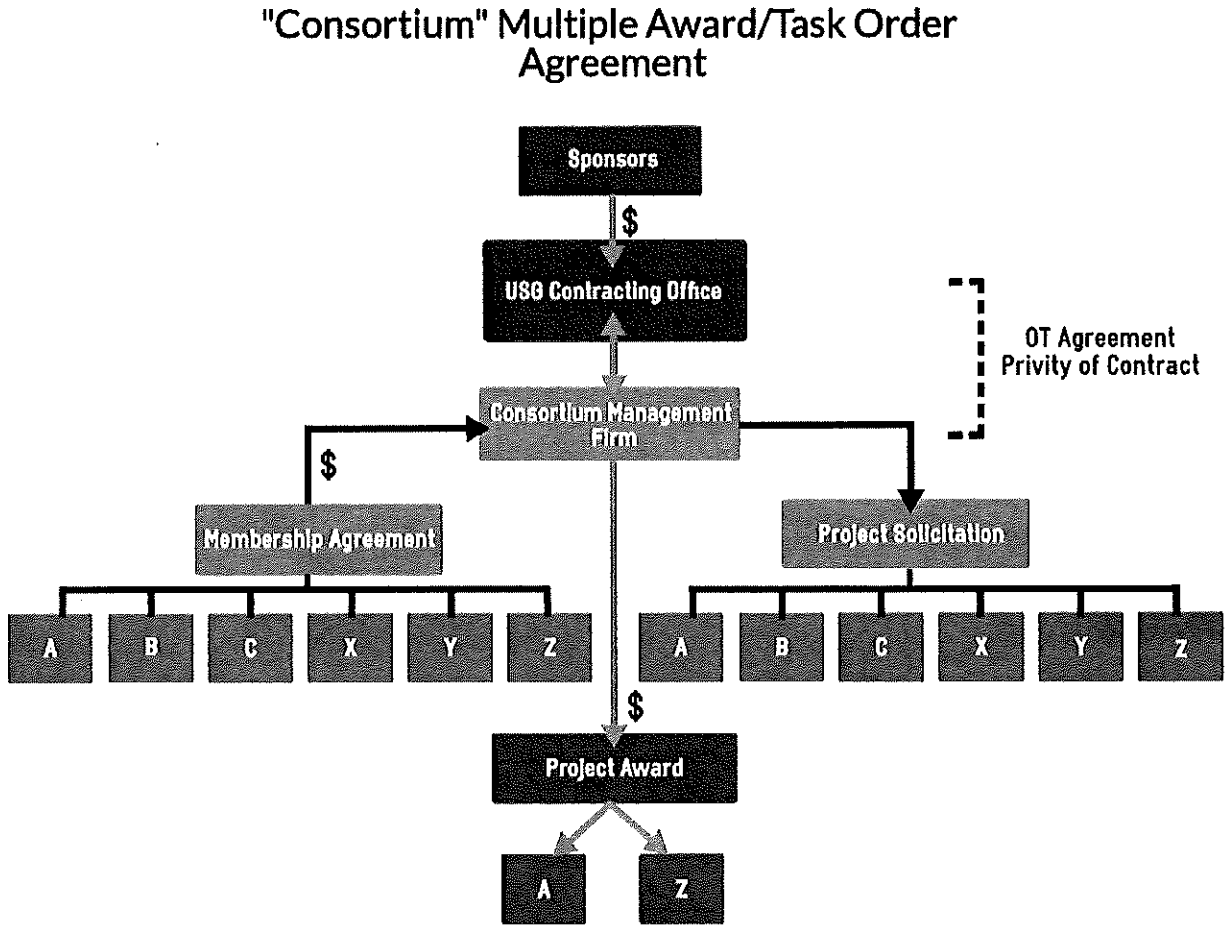
- **The ceramic fiber consortium developed high-performance ceramic fibers for applications in gas turbine engines and was considered highly successful.**

These examples of OTs are not meant to be exhaustive. They are meant to illustrate that a creative program manager or agreements officer need not feel constrained by the "business as usual" inertia of the procurement system or other standard ways of doing business. If there is a good idea that makes business sense, an OT can probably be molded to make it work.

The Consortium Model

The most common current use of OTs is to form consortia. Perhaps it would be best to refer to them as "so-called" consortia. Many of the OT consortia currently in operation can more accurately be termed multiple award task order (MATO) contracts. The government awards an ostensible OT to a consortium management firm that does not engage in research and development or prototyping but helps to create and administer the MATO arrangement. In many cases there is no agreement among the companies that perform research but merely individual agreements with the consortium management firm.

Figure 5-A: Consortium Agreement



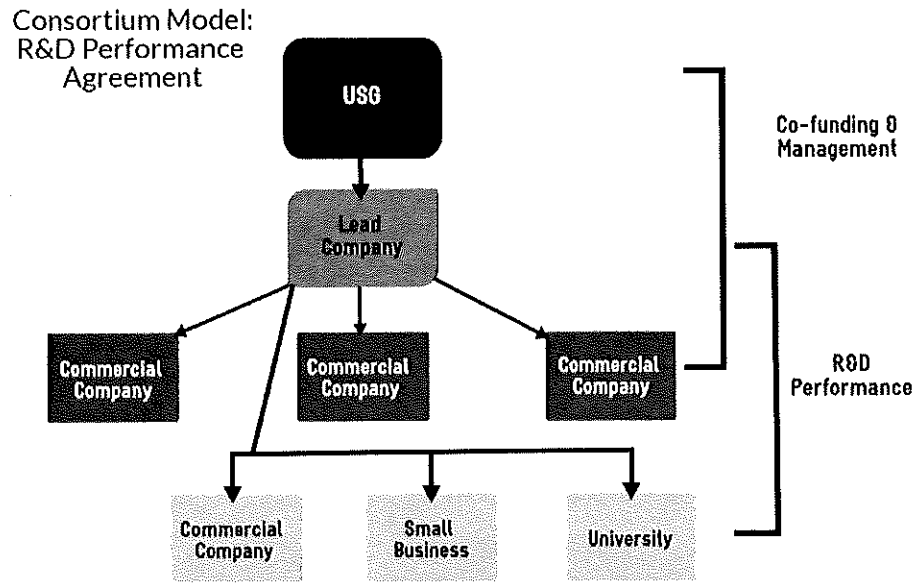
Other Transaction (OT) consortia as commonly practiced today are a welcome advance over business as usual. They serve several purposes, from moving money quickly onto contract, to attracting non-traditional performers, and, in some cases encouraging collaboration among consortia members. There are other virtues as well. Multi-party arrangements can be very useful, but in current practice they seem to have obscured other potential uses of OTs with individual companies and have failed even to optimize collaborative multi-party arrangements.

The Merriam Webster definition of a consortium is: an agreement, combination, or group (as of companies) formed to undertake an enterprise beyond the resources of any one member. The definition from a legal dictionary is "a group of separate businesses or businesspeople joining together and cooperating to complete a project, work together to perform a contract or conduct an on-going business."

What is often missing today is the association, the working together of different businesses with a common goal. Typically, current consortia have a relationship that flows from government funder, through consortium management firm, to an individual performer awarded funding pursuant to a competitive request for project proposals limited to consortium members. There is no guarantee "members" of the consortium will work together or that any individual company will ever receive funding. Does an arrangement like this really fit within the definition of a consortium? In this model, it is typical to require individual project awards to meet the requirements of section 4022 (d)(1). This could be avoided if the basic other transactions agreement was awarded to a consortia management firm that was a non-profit research institution.

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 two fiscal years in the early 1990's, funded 194 dual-use projects involving multiple parties (without using the term consortia) with $760M which leveraged approximately $1B in private resources. Today's consortia devote little effort to leveraging private investment.

Figure 5-B: Consortium R&D Performance Agreement



This chart illustrates a generic example of a consortium. The "lead company" is not a prime contractor but takes the lead in either an administrative or technical sense, or both. In fact, the lead company may change either by rotation among the participating companies or the lead may change during different phases of the program as different strengths become important. This is a matter for agreement among the participating parties with government input in the form of guidance or suggestion. The consortium may be vertically or horizontally integrated.

The wiring diagram is meant to show that the lead and other commercial companies may be members of the consortium in both funding, managing, and performing some of the work in whatever variation make sense. In addition, work may be farmed out to non-members of the consortium. These "subs" are not members of the consortium and can perform as traditional subcontractors. There is, however, one significant difference: there is no mandatory flow down or prescribed allocation of intellectual property rights. Rather, it is entirely a matter of negotiation.

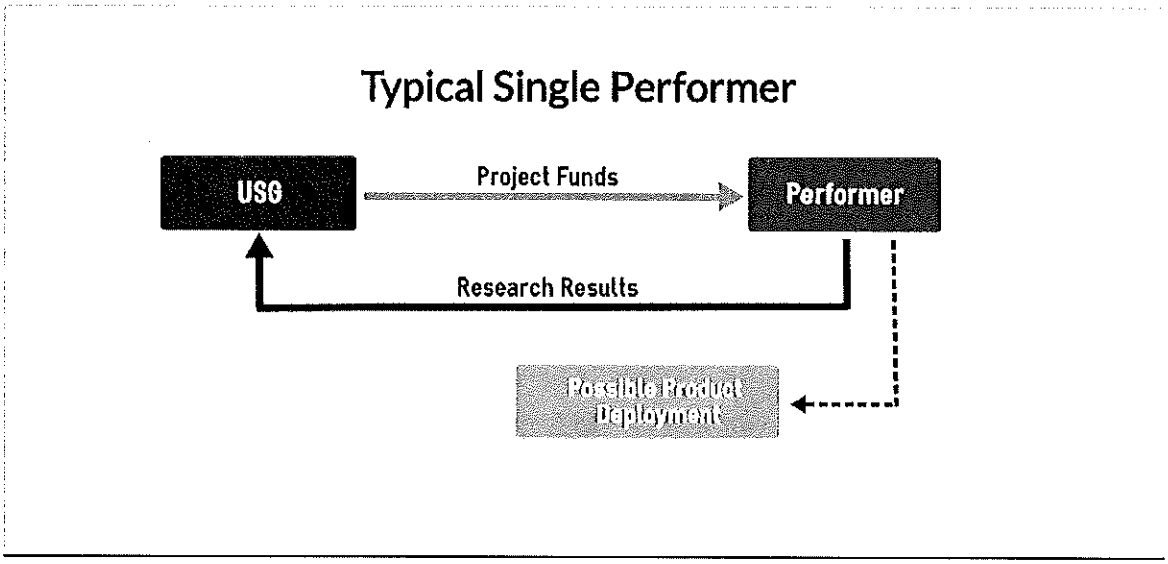
DOD organizations seem to be slavishly following a single model of what are referred to as consortia (see page 65). Senior leaders, program managers, and their supporting finance, contracting and legal staffs have failed to take advantage of the flexibility of OTs in creating powerful arrangements to conduct DOD's business. Intellectual capital, expertise, key resources, and private funding can be arrayed in ways unique to particular domains or problem sets.

The current consortia are certainly convenient for government organizations that want to obligate dollars quickly. They are, however, not necessarily the most efficient and effective way to apply government funding to solve important problems and create needed capabilities. DOD needs to undertake serious study of how OTs can help it solve problems and field innovative solutions in timely and cost-effective ways. One way to start is to study past success stories. Approaches that were successful in the past and all but forgotten today can spur new thinking and new approaches.

Exploring Additional Other Transactions Models

Single Project Other Transactions

Figure 5-C: Single Performer Agreement



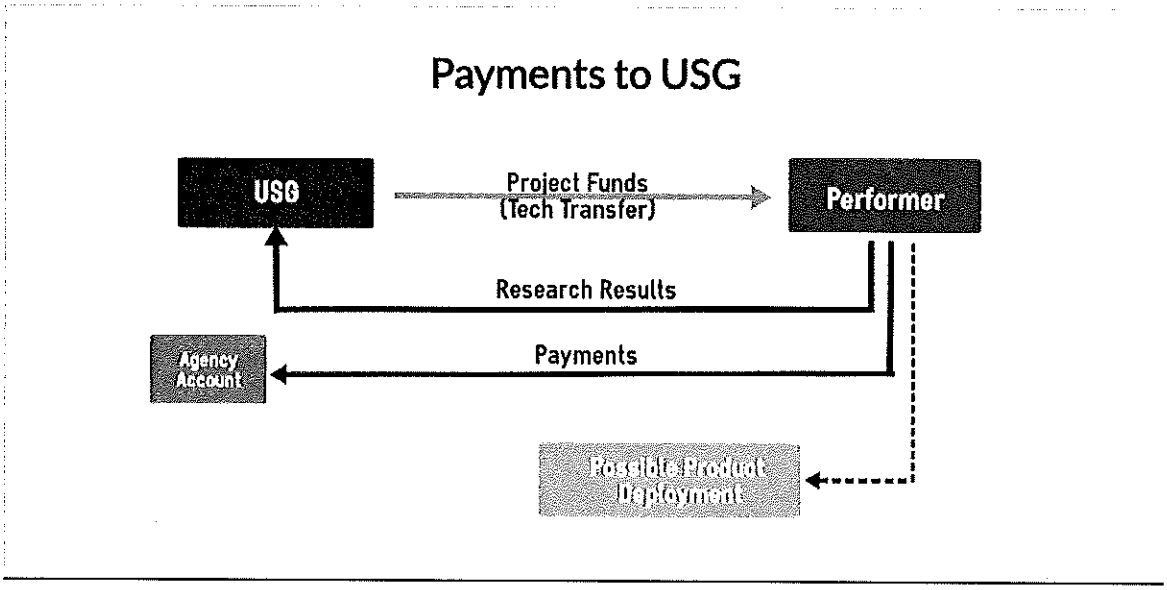
A simple "other transaction" looks a lot like any other R&D effort that is entered into by general solicitation (BAA or program specific) or noncompetitively. Government funds can be paid in advance, upon completion, or most constructively, as milestone payments based on observable results. The key is not to burden the transaction with unnecessary terms and conditions and to administer it at the speed of science and engineering not at a speed dictated by bureaucracy.

Section 4022 (d)(1)(B) references the SBIR program, indicating that 4022 can be used as a funding instrument in that program. (can start as 4021, move to 4022, and then to production – see chart below)

Figure 5-D: Using OTs as the award instrument for SBIR

It makes sense to use OTs as the award instrument for the Small Business Innovation Research (SBIR) program. DOD has specific authority to use OTs in addition to contracts, grants and cooperative agreements. OT authority of other agencies may also fit nicely with SBIR requirements. SBIR's call for proposals constitutes "competitive procedures" for purposes of 10 U.S.C 4022. The award instrument for phase of 1 of the SBIR program can cite either section 4021 or 4022 with further SBIR phases (2 and 3) being funded as subsequent phases of the initial agreement under the authority of section 4022. At each down select funds are added to the agreement and the terms of the agreement modified if and as needed. If the agency funding phase 3 is different from the agency awarding the agreement at phase 1, a modification memorializes that change. If a private sector entity takes over at phase 3, the final phase of the OT agreement can be used to aid in transition of the technology to that entity. See page 40 for more information on funding OTs using SBIR funding.

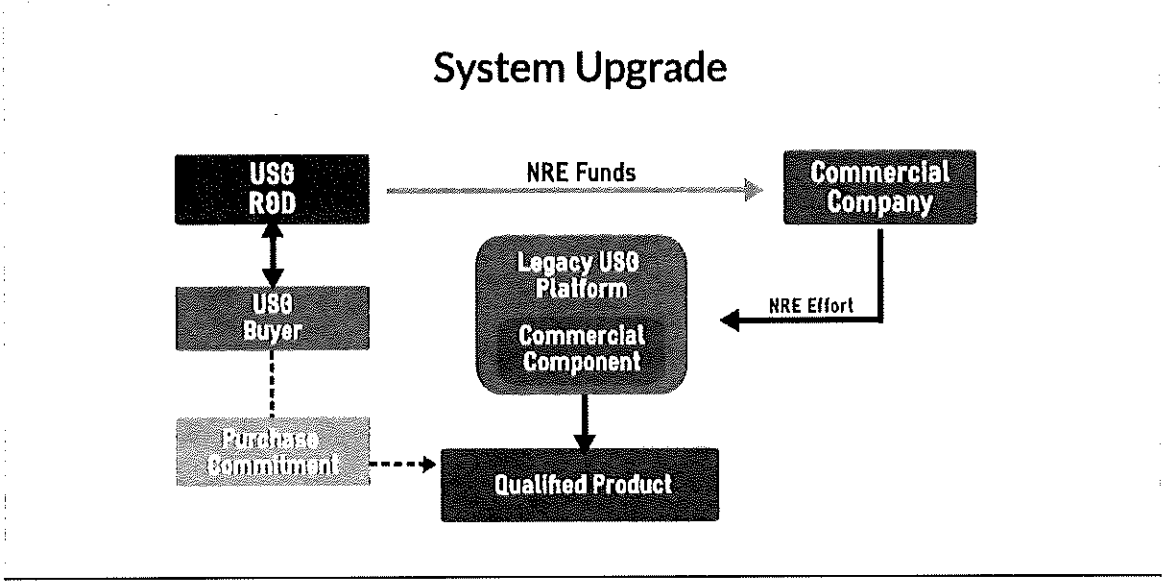
Figure 5-E: Single Party OT



Illustrated here is a relatively simple transaction, but one in which funds flow in both directions. Authority for this is expressly stated in section 4021 and by inference applies to 4022. This technique is seldom used, mainly because the resulting funds are typically sequestered at Department HQ and not at the funding organization. To take full advantage of the ability to recover funds and use them for additional R&D, organizations should request permission to establish sub-accounts which they control. These "accounts" are typically just Program Elements (PEs) in the accounting system. Payments to the Government might be based on royalties from commercial product sales, use of government facilities or technology, or, in the case of VC supported firms, based on some ratio of their increase in value upon Initial Public Offering (IPO).

Other Transactions in Specialized Programs

Figure 5-F: OTs for sustainment

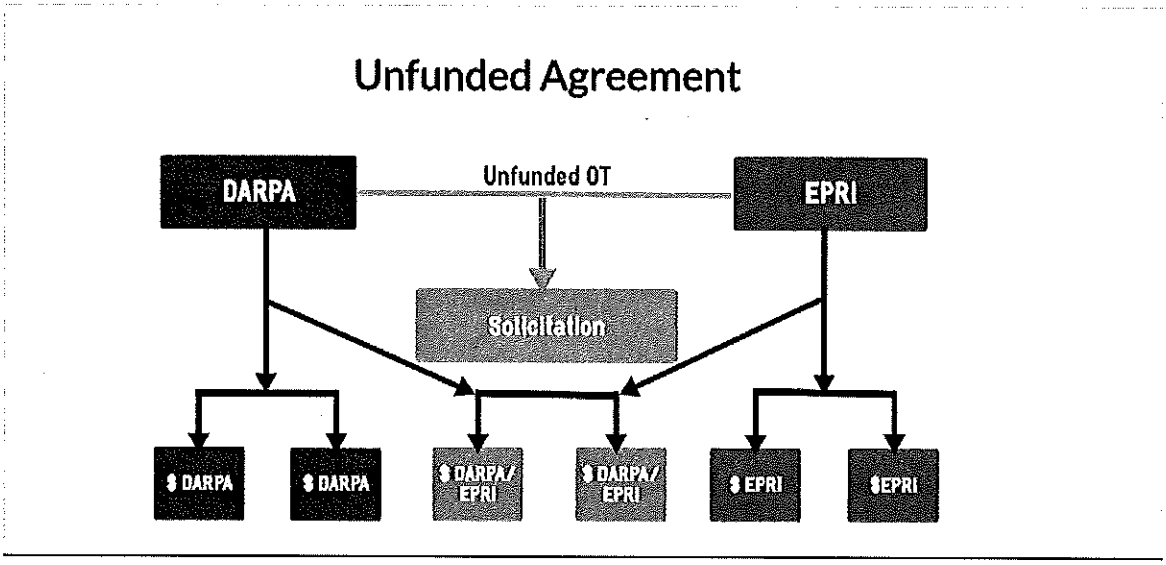


Original COSSI Program - $36 Savings for $1 of R&D Spent

This illustrates basic aspects of the DoD Commercial Operations and Support Savings Initiative (COSSI). COSSI proceeded in two phases using either S&T (4021) or prototype (4022) contracting techniques. Agreements had two phases. Phase one consisted of the government funding (fully or typically partially) non-recurring engineering to take a commercial product and make it part of a kit that could replace a component of a legacy system. Phase two involved testing and qualification of the kit to verify utility, safety, and cost savings. The R&D organization needed to be partnered with a buying command that made future purchase commitments if agreed performance was met, which significantly boosted transition rates. An example is the change out of a legacy suspension on a fleet of Army trucks. With a state-of-the-art suspension, tire wear on expensive heavy-duty tires was greatly reduced, increasing their useful life and resulting in significant savings.

Unfunded Agreements

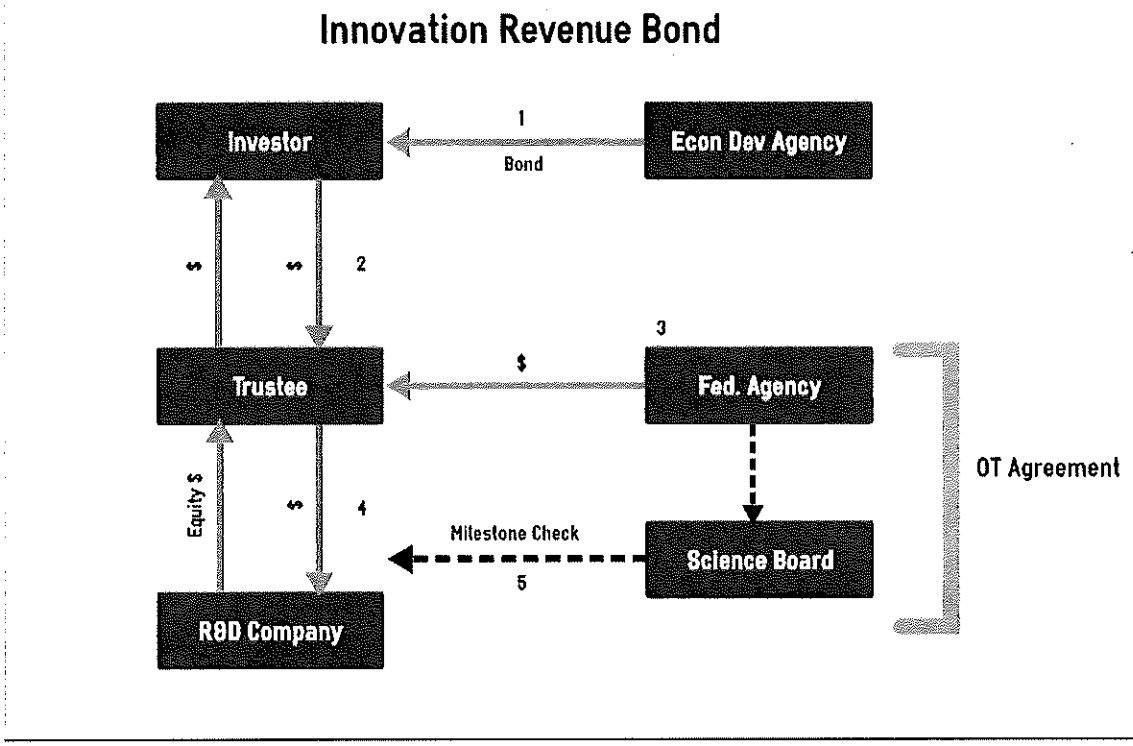
Figure 5-G: Unfunded Agreement



In this illustration, DOD had an interest in high speed, high power electrical switching capacity (for example, an all-electric tank). The recently de-regulated electric power industry, represented by the Electric Power Research Institute (EPRI), was also interested in the development of new switching technology. DoD and EPRI entered into an unfunded OT to conduct a joint solicitation and review of research proposals. Proposals received were classified as fundable by the government, the power industry or both. Each used its own funding mechanisms directly with the selected companies. There was an ongoing collaboration to ascertain if projects initially funded by only one or the other had relevance in the other domain.

Untapped Possibilities in Other Transactions – OT R&D Bond Financing

Figure 5-H: R&D Bond Financing



1. An Economic Development Agency (or other financial institutions) acts as a conduit issuer for the Innovation Bond. This EDA bears no risk/promise of bond principal or interest payment.

2. The Innovation Bond, a taxable revenue bond, is issued and sold to investors. The proceeds are assigned to a trustee who is in charge of their administration. The bond buyers receive interest and principal over time. Repayment of bond is not subject to the success of R&D.

3. A Federal R&D funding Agency selects the company that will develop the R&D project and pays back to investors principal and interest on its own funding timeline. Scientists appointed by the funding agency join a Science Board that will verify the completion of the project by the R&D company.

4. The R&D company contributes to the funds assigned for the project and managed by the Trustee. The R&D project begins. The funding agency issues a release letter to the trustee, who release the funds.

5. The R&D company receives the entire funds necessary to perform the first stage of the project, to the first milestone. The company posts assurances that it will conduct the R&D according to the required performance standards.
- When the first project phase is complete, a Science Board will review that predefined milestone achievement and if satisfactory, will inform the funding agency to release the next tranche of funds.
- The process is repeated until all milestones are completed.
- If any milestone is not achieved, no more funds are disbursed to the company by the Trustee and the Innovation Bond is redeemed and any pending amounts are paid back to investors.

CASE STUDY: DUAL-USE AND COMMERCIAL OPERATIONS AND SUPPORT SAVINGS INITIATIVE (COSSI)

PROGRAM DESCRIPTION:

COSSI was a program started in 1997 that aimed to reduce operations and support costs by replacing (often expensive and outdated) military specific components in DOD systems, with components adapted from commercial products or technology.

EXECUTION:

The COSSI program was executed using a combination of the original authority (10 U.S.C. 4021) and prototype OT agreements (10 U.S.C. 4022). The program was premised on DOD funding the modification, testing, and adaptation of the commercial component for military needs on a cost shared basis, while the commercial partner gained the promise of a fixed price procurement if the savings were successfully demonstrated. Since OT production authority did not then exist, COSSI was designed to use FAR Part 12 commercial item contracts for the follow-on procurement.

OUTCOMES:

- **COSSI was successful in the sense that documented operations support cost savings greatly exceeding the government's R&D investment were realized.**
- **The program attracted considerable participation by nontraditional firms.**
- **Flexibility in intellectual property rights and streamlined business practices were important to attracting commercial firms.**
- **DOD's credibility suffered when, contrary to program guidelines, it refused to grant a preferred position to the cost shared developer.**
    - They went out competitively to procure the improved component (often from a traditional defense contractor) -or-
    - Opted not to procure the improved item despite demonstrated cost savings.
- **Eventually COSSI died as a major program but episodically serves as a model that is put into use by various DOD components.**

An important note: The interesting thing about both COSSI and the follow-on dual-use application programs is that, despite achieving a record of success, both have been allowed to fade away. Although vestiges of both programs persist, neither exists as a coherent entity. When programs are successfully piloted at the Office of Secretary of Defense level, there is no guarantee of their institutionalization or continued existence when they are transitioned to the military departments. Business as usual attitudes and the budget priorities of the individual services seem to trump innovative approaches, opening the technology base to new entrants, and cost savings.

DARPA's success in promoting dual-use technologies (those with both commercial and military applications) through cost shared collaborations with commercial firms, using OT contracting, was such that it led a distinguished study panel, under retired Marine Commandant General Al Gray, to recommend the dual-use approach as the DOD's primary means of undertaking new technology developments. Other reports also found that these OT programs were highly successful.

Inventing the Future

The cry for acquisition reform has been repeated for decades. The Commission on Government Procurement found a "mass and maze" of procurement regulations in the early 1970's. The Packard Commission concluded defense systems "cost too much and take too long" in the 1980's. They pointed to a highly regulated acquisition system, overly reliant on process and encumbered by risk avoidance. Working level practitioners were fearful of making timely decisions and taking risks. The 1990's saw another decade of acquisition reform. Congress repealed laws, amended laws, and enacted laws. Yet, defense systems just kept taking longer and costing more. The first wave of OTs pioneered by DARPA (followed by the Air Force and later other services) drove down costs, accelerated developments, and encouraged new entrants into defense science, technology and systems development programs. No matter how many reforms, a highly regulated system can never result in freedom of contract or tap into individual creativity in an effective manner. The first decade of the 2000's saw a backlash in which "business as usual" advocates, wedded to the highly regulated system, managed to suppress and nearly kill OT authority. Thankfully, OTs survived and have rebounded over the past several years.

By reading this Guide and attending a Strategic Institute educational event, you have equipped yourself to become a practitioner of Other Transactions. You have learned the "why" of OTs. You can be part of a new wave of OT practitioners: a like-minded tribe of individuals focused on overcoming "costs too much, takes too long." Freedom of contract, not regulation. Freedom to think and achieve, not conformity and standardization.

Knowing the OT statutes is important but so is the *spirit* of OT contracting. Do not try to fit a project into a preconceived contract structure. Visualize the optimum structure for a project and negotiate an agreement around project goals. Seek out win/win scenarios with industry. Affordability is important but the focus should be on value, not chasing nickels and dimes or getting hung up on detailed cost and pricing data. Seek new approaches to production and sustainment that minimize the need to acquire intellectual property.

Cast off the old paradigm. The challenge is to think as individuals and as a team. Seek the optimum solution informed by understanding the problem. Then collaborate to find available solution sets resulting in achievable goals. **The most important OT is the one you can invent.**

Thank you for your part in inventing the future.

Strategic Institute
INNOVATION IN GOVERNMENT CONTRACTING

Resources cited:

1) 2018 USD A&S OT Guide - https://aaf.dau.mil/ot-guide/
2) DARPA Sample Agreement - https://www.darpa.mil/attachments/DARPA-BAA-16-08_845%20Sample.pdf

For more OTA information and resources, visit our website:

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