

NEW SPACE FOR AN OLD GOAL—USING THE SPACE ACT AGREEMENT TO (FINALLY)
ENABLE THE COMMERCIAL SPACE INDUSTRY

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I. INTRODUCTION

Around the same time the United States began its foray into human spaceflight with Project Mercury in 1958, it also introduced legislation that created the nation’s space agency, the National Aeronautics and Space Administration (NASA). This agency was created by the National Aeronautics and Space Act of 1958 (Space Act).¹ Perhaps it was the public, political, and scientific excitement surrounding spaceflight at the time that persuaded Congress to imbue NASA with the broad, flexible authority it was given. Specifically, the agency is authorized to:

[e]nter into and perform such contracts, leases, cooperative agreements, or *other transactions* as may be necessary in the conduct of its work and on such terms as it may deem appropriate, with any agency or instrumentality of the United States, or with any State, territory, or possession, or with any political subdivision thereof, or with any person, firm, association, corporation, or educational institution.²

Even with this largess of power, however, NASA relied mostly on everything but its other transaction authority for the next several decades. When NASA did exercise this power, it is fitting that the benefitting program office shares its acronym with a famous science fiction character from Star Wars—C3PO. This office, the Commercial Crew and Cargo Program Office, is charged with one overriding goal—“extend human presence in space by enabling an

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¹ National Aeronautics and Space Act, Pub. L. 85-568, 72 Stat. 426 (1958), codified 51 U.S.C. §§ 20101–20164 (Supp. IV 2010).

² 51 U.S.C. § 20113(e) (Supp. IV 2010) (emphasis added).

expanding and robust U[nited] S[tates] commercial space transportation industry.”³ After dozens of years waiting for the creation, growth, and use of commercial spaceflight as directed by nearly every national space law ever enacted,⁴ NASA tried something new. It replaced its traditional approach for achieving this goal by replacing Federal Acquisition Regulation (FAR)⁵ based contracts with a new agreement model using the agency’s Other Transaction authority.⁶ In doing so, NASA began to greatly impact the United States’ commercial spaceflight industry in a way that truly helps the development and viability of private space companies and greatly increases their capabilities in a way never before achieved through traditional contracting methods.

II. NASA’S OTHER TRANSACTION AUTHORITY

As the first agency to be granted authority to enter into “other transactions,” NASA has put this power to excellent use to develop, demonstrate, and secure the future availability of procuring cargo and crew transportation services from commercial entities quicker and much more efficiently than if it had opted for a FAR based contract.

Several key differences (read advantages) dwell between Other Transaction Agreements (OTA) and a FAR based contract. First, the Competition in Contracting Act, FAR, supplements

³ NASA, Commercial Crew and Cargo Program Office, Program Goal and Program Objectives, http://www.nasa.gov/offices/c3po/home/c3po_goal_objectives.html (last visited Sept. 21, 2012). Under C3PO’s overarching goal are the following three primary objectives:

Implement U.S. Space Exploration policy with investments to stimulate the commercial space industry[;]
[f]acilitate U.S. private industry demonstration of cargo and crew space transportation capabilities with the goal of achieving safe, reliable, cost effective access to low-Earth orbit[; and] [c]reate a market environment in which commercial space transportation services are available to Government and private sector customers.

Id.

⁴ For example, as stated in the National Aeronautics and Space Act: “Commercial Use of Space.—Congress declares that the general welfare of the United States requires that the Administration seek and encourage, to the maximum extent possible, the fullest commercial use of space.” 51 U.S.C. § 20102(c) (Supp. IV 2010).

⁵ A chart of abbreviations and acronyms used is provided at the end of this article for the reader’s convenience.

⁶ An agency with other transaction authority can use it whenever a FAR based contract is not required. The FAR requires agencies to use FAR based contracts when it is procuring goods or services. *See* Rocketplane Kistler, B-310741, 2008 CPD ¶ 22, at 3 (Comp. Gen. Jan. 28, 2008), *available at* <http://www.gao.gov/decisions/bidpro/310741.pdf>. *See also* Exploration Partners, LLC, B-298804, 2006 CPD ¶ 201 (Comp. Gen. Dec. 19, 2006), *available at* <http://www.gao.gov/decisions/bidpro/298804.pdf>.

to FAR, and similar laws and regulations do not apply to OTAs and do not affect an agency's actions relating to them.⁷

Additionally, OTAs are not subject to a General Accountability Organization (GAO) protest, because they do not fall within the GAO's jurisdiction.⁸ Furthermore, because protest procedures for government agencies are promulgated by the FAR and FAR supplements, actions an agency takes in its formation and administration of OTAs are also not subject to agency protests. Despite these differences, however, these agreements are legally binding and should not be equated with vehicles like the Memorandum of Understanding.

III. THE SPACE ACT AGREEMENT

Agreements using NASA's Other Transaction authority are called Space Act Agreements. By operating outside of the Government's typical contract regime, SAAs allow for much more actual progress by streamlining the agreement formation and administration—allowing companies to focus their resources more effectively than they could under most, if not all, FAR contracts.

NASA's primary implementing reference governing SAAs is the Space Act Agreement Guide.⁹ This guide describes the basic agreement process and provides the framework and sample articles for all SAAs, including the three key types used for domestic non-governmental

⁷ 10 U.S.C. § 2304(a)(1)(A) (2006); 41 U.S.C. § 253a(a)(1)(A)-(C) (2006). *See also* GENERAL SERVS. ADMIN., ET AL., FEDERAL ACQUISITION REG. 1.104 (2011) [hereinafter FAR] (The Federal Acquisition Regulation expressly applies to “all acquisitions as defined in Part 2 of the FAR, except where expressly excluded.”); FAR 2.101b(2) (2011) (“Acquisition” in Part 2 of the FAR is defined as “the acquiring *by contract* with appropriated funds” (emphasis added)).

⁸ Rocketplane Kistler, B-310741, at 3. The GAO noted:

Under the Competition in Contracting Act of 1984 and our Bid Protest Regulations, we review protests concerning alleged violations of procurement statutes or regulations by federal agencies in the award or proposed award of contracts for procurement of goods and services, and solicitations leading to such awards. . . . We have found that Space Act [A]greements, which are issued by NASA under its “other transactions” authority pursuant to [the NASA Act] . . . , are not procurement contracts, and therefore we generally do not review protests of the award, or solicitations for the award, of these agreements under our bid protest jurisdiction.

Id. Additionally, the GAO stated it would generally only review a timely protest alleging that an agency is improperly using non-procurement instruments where a procurement contract is required. *Id.* *See also* Exploration Partners, LLC, B-298804.

⁹ OFFICE OF THE GEN. COUNSEL, NASA ADVISORY IMPLEMENTING INSTRUCTIONS, NAI 1050-1B: THE SPACE ACT AGREEMENT GUIDE (June 10, 2011) [hereinafter SAA GUIDE], available at http://nodis3.gsfc.nasa.gov/NPD_attachments/NAII_1050_1B.pdf. This guide promulgates NASA Policy Directive 1050.1, “Authority to Enter into Space Act Agreements.”

entities: reimbursable, non-reimbursable, and funded.¹⁰ The type of Space Act Agreement used is primarily based on what type of entity the agreement will be with and the financial arrangement between NASA and that entity.

A. *LEXICON*

The law loves the double-edged sword of surgical precision and obfuscation provided by its terms of art; Space Act Agreements are no different. First, because SAAs are not FAR based, it is inaccurate to refer to them as a “contract.” Instead, SAAs are referred to as “Agreements.” Instead of “Contractors,” SAAs have “Partners” or “Participants.”¹¹ Rather than “Contracting Officers,” SAAs have much friendlier sounding “Agreements Officers.” FAR clauses are replaced by drastically less onerous “Articles.” Also, SAAs do not get modified, they are changed using “Amendments.” These may seem like distinctions without a difference, and in some ways they may be, but for anyone who has worked intimately with both contracts and SAAs, the feeling an SAA provides of having two cooperating parties intent on finding a way to achieve mutually agreed-to goals is unmistakable.

B. *LOGISTICS*

While SAAs are significantly more streamlined than contracts, how would one know one was dealing with the Government if there were not at least a few layers of bureaucracy process to navigate? There are two general types of SAAs: ones that require that an abstract summary review of the proposed SAA be submitted to the Headquarters Mission Support Directorate (MSD) and those that do not. Most SAAs fall into the first category.¹²

The person charged with the overall administrative responsibility of a Space Act Agreement is the Agreement Manager (AM). This person performs a multitude of tasks in

¹⁰ *Id.* at 3.

¹¹ Typically, funded SAAs use “Participant,” while other SAAs use the term “Partner.”

¹² SAA GUIDE, *supra* note 9, at 8-9. SAA’s involving commercial cargo and crew require MSD review.

overseeing the SAA process from initiation through the SAA's expiration or termination.¹³ For the SAA's that require MSD review, the AM submits an abstract containing key information about the proposed SAA. The MSD is then responsible for coordinating the agreement's preliminary review throughout NASA.¹⁴ These abstracts are submitted to the MSD using the electronic Space Act Agreement Maker. Coordination of this review includes several NASA Headquarters organizations.¹⁵ After the proposed SAA has made it through review steepchase and has been reviewed for acceptability by the Partner, it is then sent to the NASA Signing Official. All amendments must have at least a legal review, but a majority will be coordinated through many, if not all, of the departments that reviewed the original SAA.

This basic review approach occurs regardless of which type of domestic non-government Space Act Agreement is used, including the two key types of SAAs, which have been and continue to be critical to enabling a strong commercial spaceflight industry—the Funded SAA and the Reimbursable SAA.

IV. FUNDED SPACE ACT AGREEMENTS

The funded agreement should be used when NASA's objectives cannot be met using any other type of agreement vehicle. In the commercial space arena, the core purpose of the Funded SAA continues to be using appropriated funds (taxpayer dollars) to provide the Participant with the funding required to develop and to demonstrate a commercial space transportation system for both cargo and crew. In these agreements, NASA is truly beginning to accomplish the many legislative exhortations aimed at the agency to stimulate and strengthen the United States' commercial space industry. These investments in funded SAAs are used to achieve national

¹³ *Id.* at 4-11.

¹⁴ SAA GUIDE, *supra* note 9, at 6.

¹⁵ This review typically involves the applicable Mission Directorate, Office of the Chief Counsel, Office of the Chief Technologist, and Office of International and Interagency Relations, among others, including the NASA center or affiliate that would be affected by the SAA. *Id.* at 9. There are specific items required in the reviews of these various offices and departments. *Id.* at 10.

space goals while increasing the number, strength, and capabilities of commercial providers. The funded SAA also breaks from traditional contracting, because they allow the Participant to develop space transportation systems, which it will privately own and operate. Along with the majority of the investment into the development of the space transportation systems, these funded SAAs also provide NASA as a ready customer in the form of follow on contracts for the space transportation systems the companies have spent years and incredible amounts of resources developing. This is critical to providing a business case rationale for industry to begin developing a commercial space transportation system.

Although NASA provides most of the agreement's funding, the Participant also has skin in the game. In the Commercial Orbital Transportation Services (COTS)¹⁶ SAA, Participants were required to provide a substantial amount of investment into achieving their agreement's milestones. In many of the funded SAAs that followed COTS, Participant investment is still an important part of the agreements. Upon the successful conclusion of a Participant's COTS SAA, it is then allowed to begin cargo resupply missions to the International Space Station under its Commercial Resupply Services (CRS) contract. Following in the COTS SAA/CRS contract footsteps, NASA currently intends to use a FAR based contract to procure the private, commercial crew transportation systems it helped fund the development of under its multiple commercial crew SAAs.¹⁷

NASA has also engaged with several private spaceflight companies in Commercial Crew Development funded SAAs (Rounds 1 and 2) (CCDev1 and CCDev2, respectively).¹⁸ These

¹⁶ For an overview of COTS, see NASA, Commercial Crew and Cargo Program Office, About, <http://www.nasa.gov/offices/c3po/about/c3po.html> (last visited Sept. 21, 2012).

¹⁷ NASA, Commercial Crew and Cargo Program Office, Program Goal and Program Objectives, http://www.nasa.gov/offices/c3po/home/c3po_goal_objectives.html (last visited Sept. 19, 2012).

¹⁸ NASA, Commercial Crew and Cargo Program Office, CCDev Information, http://www.nasa.gov/offices/c3po/partners/ccdev_info.html (last visited Sept. 21, 2012).

have been followed up with Commercial Crew Integrated Capability (CCiCap) development and demonstration SAAs currently underway.¹⁹

While not contracts, these funded SAAs were created using a process in some ways similar to contract procurements in that the solicitations were posted on FedBizOpps (the Federal Business Opportunities website),²⁰ Offerors were invited to submit proposals, and the proposals were evaluated based on specified factors and using a predetermined scoring methodology. Instead of the technical capability, price, and past performance required of contract proposals, however, solicitations, instructions, and evaluation for funded Space Act Agreements vary and are tailored according to the goal NASA is aiming to achieve in that particular agreement.

Also, rather than requiring an Offeror to submit hundreds of pages of often complicated and intricately compiled volumes that follow the mantra that one cannot launch a rocket unless the paperwork weighs as much as it does, funded SAA solicitations tend to provide an overarching goal and a few sub goals NASA would like the Offeror's proposal to meet. While in some cases, the Participant's ability to successfully complete milestones in its SAA will require adherence to, or waiver from, specific NASA requirements, the SAAs contain the minimum of articles needed to protect the Government and effectuate the agreement.

While the SAAs will typically be the same, the appendices will differ widely from Participant to Participant. The usual appendices in funded Space Act Agreements include one that lists the Participant's declared background information (which affects part of the data rights), one that lists the milestones, and one that contains the executive summary from the proposal. The core work in funded SAAs is provided in Appendix 2. As noted in the CCiCap solicitation, "[m]ilestones should represent the progress of significant technical and financial

¹⁹ See NASA, Commercial Crew Program, <http://www.nasa.gov/exploration/commercial/crew/index.html> (last visited Sept. 21, 2012).

²⁰ FedBizOpps.gov, Federal Business Opportunities, <https://www.fbo.gov/> (last visited Sept. 20, 2012).

events in the Participant’s program. With a focus on crew and public safety, show how the plan addresses risk reduction during the proposed period of performance”²¹ This appendix provides the Offeror’s individually created milestones, the entrance criteria that must be met in order to perform the milestone work, the success criteria by which such performance will be measured, and the associated milestone payment.²²

By creating its own milestones, the Offeror is given great flexibility to determine the type, scope, and timing of the work it chooses to perform to meet NASA’s goals through the milestones and the freedom to decide how to allocate the funding among the various milestones it offers. This agreement formation process allows each company to determine the best way it can leverage its unique resources, expertise, creativity, and experience to meet NASA’s goals for the SAA. Thus, the funded SAA allows for the creation of a variety of different agreements, which include widely different work depending on the Offeror. While each of the awarded SAAs will be the same, or very similar, for each Participant, the work each Participant will be performing in furtherance of the SAA’s goal will differ widely between the awardees.

This is in drastic contrast to typical contract proposing where every Offeror has to perform the same objective within the same set of criteria, which will not vary depending on the Offeror awarded the contract. This is also part of why the SAA is succeeding in finally enabling a United States commercial spaceflight industry—because it does not require each selected awardee to be at the same state of development or to do the same work. Rather, NASA uses these funded SAAs to invest in as many companies as possible that can demonstrate sufficient technical and business capabilities to successfully complete their proposed milestones. This is a

²¹ NASA, Commercial Crew Integrated Capability: Announcement No. NASA-CCiCap, at 5.2.3 Performance Milestones (Feb. 7, 2012), <http://prod.nais.nasa.gov/cgi-bin/eps/sol.cgi?acqid=149848> (follow “CCiCap Announcement (NASA-CCiCap)” hyperlink) (solicitation for NASA-CCiCap proposals).

²² Depending on the ultimate goal and complexity of the work to be performed under the Funded SAAs, like the COTS SAAs, additional appendices are added which further list specific success criteria. COTS SAAs can be found here: NASA, Space Act Agreements, http://www.nasa.gov/offices/c3po/partners/space_act_agreements.html (last visited Sept. 21, 2012).

critical reason why funded SAAs succeed where contracts fail. Investing in the development of each particular company's space transportation system (STS) at that company's current state of development allows the company to increase the development of the particular capabilities that company needs in order to further the creation of its STS. This is a critical reason the funded SAAs produce a different result than the traditional contract approach and are actually building a commercial base with several providers with varied capabilities and contribution to provide. In doing so, they not only greatly benefit the SAAs' Participants, they greatly benefit our country and represent the current, most promising path towards the United States reclaiming its self-reliance in space transportation.

Another core difference and benefit of the SAA is the Offeror's ability to actually recommend specific changes to the text of the Space Act Agreements. While NASA typically will not stray too far from the sample articles given in the solicitation's draft SAA, Offerors are able to submit a redlined version of the draft SAA and provide rationales to support their requested changes.²³ Due to the flexibility Other Transaction authority allows, the SAA source selection board is able to accept, amend, or reject these changes without having to declare the proposal ineligible for award for non-compliance nor does it need to take the required formal steps to alter or delete a FAR clause.²⁴ Furthermore, as the Participants are performing their SAAs, NASA is able to provide some technical assistance, but not direction, as these agreements are investments in private industry rather than strict orders of goods or services.

Thus, funded SAAs provide a streamlined, efficient vehicle that is proving to effectively accomplish the elusive goal envisioned in our country's space laws since 1958—enabling a

²³ See Kennedy Space Center Procurement Office, <http://procurement.ksc.nasa.gov/> (last visited Sept. 21, 2012) (for executed SAAs which includes the articles typically found in a funded SAA). The latest round of Commercial Crew funded SAAs for the Commercial Crew Integrated Program (CCiCap) included two new articles not seen in the previous commercial space SAAs. These are Termination for Unacceptable Risk to Human Life and a Mishap Reporting requirement.

²⁴ For an example of this, see Commercial Crew Integrated Capability, Solicitation: NASA-CCiCap, <http://prod.nais.nasa.gov/cgi-bin/eps/sol.cgi?acqid=149848> (follow the "CCiCap Announcement (NASA-CCiCap)" hyperlink).

commercial space industry that shows potential to grow into a strong base of United States spaceflight providers.²⁵

V. REIMBURSABLE SPACE ACT AGREEMENTS

There is another type of Space Act Agreement that also greatly helps the commercial space industry gain the critical, scarce resources needed to increase its spaceflight capabilities—the reimbursable SAA (RSAA). The RSAA is empowered by the Space Act, which authorizes NASA “to use, with their consent, the services, equipment, personnel, and facilities of Federal and other agencies with or without reimbursement, and on a similar basis to cooperate with other public and private agencies and instrumentalities in the use of services, equipment, and facilities.”²⁶ Reimbursable Space Act Agreements allow for NASA to make its goods, services, equipment, and facilities available for use by a Partner who will pay for all or a part of the cost for such use. As NASA has acquired a broad range of specialized space related equipment, facilities, knowledge, and capabilities, it is well poised to greatly advance the capabilities of space companies. Such advancement can aid such companies in the performance of their funded Space Act Agreements, other space related contracts, or assist in general research and development.

The RSAA is the umbrella agreement that provides the overall legal framework, including all the terms and conditions that will apply to the work that will take place through various “Annexes.”²⁷ Unlike funded SAAs, RSAs do not contain appendices of the milestone work to be completed. Instead, in the umbrella agreement, NASA and the prospective Partner agree to generalized areas of work under a (usually) broad scope. The specific scope of work to

²⁵ In just six years, through its COTS SAA, SpaceX developed and demonstrated a launch vehicle and cargo capsule able to successfully berth to the ISS and deliver and return cargo. This accomplishment has only been previously performed by a handful of countries.

²⁶ 51 U.S.C. § 20113(f) (Supp. IV 2010).

²⁷ SAA GUIDE, *supra* note 9, at 15.

be performed, schedule, deliverables, and resources required are included in individual Annexes under the umbrella agreement. Therefore, NASA requires each new RSAA to be accompanied with at least one Annex.²⁸ There is no set limit to the number of Annexes an RSAA can have, but each must be within the scope of the umbrella agreement. Keeping with the Government’s love of confusing titles, Reimbursable Space Act Agreements (RSAA) are actually pre-paid, not reimbursable. Depending on the scope of the annexes under a particular RSAA, however, the practitioner can usually negotiate the amount and timing of the funding.

The formation of an RSAA starts with the prospective Partner’s request to the specific NASA center or entity under a center’s purview for any of the four items referenced above.²⁹ In addition to going through the standard approval and coordination discussed above,³⁰ a proposed RSAA must also: (1) “be consistent with NASA’s mission” and (2) ensure that what the potential Partner is requesting is not “reasonably available on the U[nited] S[tates’] commercial market from another source.”³¹ Therefore, the prospective Partner should address the second requirement in making the request.

Typically an RSAA includes around twenty-seven standard Articles of varying importance and negotiating flexibility for the Partner. The area containing the greatest freedom for the practitioner to actively benefit his or her company, however, resides in the Annexes, which are executed under the RSAAs.³²

While a full discussion of the umbrella agreement’s articles is not included herein, there are a few things the practitioner can do in the Purpose Article of the umbrella agreement that will

²⁸ *Id.*

²⁹ See *supra* text accompanying note 25. For example, RSAAs for the White Sands Testing Facility are under the purview of the Johnson Space Center, as is the Jet Propulsion Lab (JPL)—even though JPL is a Federally Funded Research and Development Center operated by Cal-tech.

³⁰ See *supra* Part III.B.

³¹ SAA GUIDE, *supra* note 9, at 12.

³² See *id.* at 20 (for the full list of all possible articles an RSAA can include).

ensure it will support the broadest range of Annexes possible, thereby avoiding the added administrative burden and schedule delay of having to enter into additional, and avoidable, RSAAs and Annexes. The Purpose Article gives the general scope of planned activities, the reason NASA is entering into the agreement, and an explanation of how the agreement is consistent with NASA's mission. This seems pretty straightforward, so what can go wrong? A few things. Each could impact a company's ability to use the RSAA to support as many Annexes as possible.

To avoid this, one should make sure the language used in the Purpose Article is as broad and general as possible as an RSAA can only serve as the umbrella agreement for Annexes that are within the purpose of that RSAA. It is also important to make sure that this Article does not contain a reference to any specific contract or agreement, even another SAA, even if one is pretty confident one's business will only need work related to that particular agreement.³³ If this is done, one greatly lessens the chances that Annexes needed in the future will require setting up a new umbrella agreement. If this is not done, one will have the pleasure of requesting and coordinating a new SAA and waiting much longer in order to get the work, facility use, etc., one's company needs. This may be true even if one is asking for the same service, goods, etc., NASA provided under a previous Annex.

So, by paying close attention to the phrasing of the few sentences in an article that many people would have the urge to barely skim, assuming it contains harmless boilerplate, one can set up the umbrella agreement to cover as many Annexes as possible, thereby benefitting one's organization in the future.

³³ Unfortunately, once in a while, a NASA center may require the SAA to refer to a specific agreement or contract of which the requested work, services, facility use, or equipment is in furtherance.

A. ANNEXES

Since the Annex basically acts as a statement of work, it comes with much greater flexibility in its terms. For the most part, an Annex starts as a skeleton agreement with only a few standard articles provided in full text that span a few pages. The Annex articles are typically streamlined versions of their larger counterpart Articles from the umbrella agreement. For each article, well thought out crafting and knowing what language the Government can be flexible with will have a significant impact on the effectiveness and the overall degree of benefit the Annex will bring to a company.

Typically, an Annex includes articles covering the following topics: purpose; Partner and NASA responsibilities; milestones and schedule; technical and administrative points of contact; financial obligation; term and termination; and amendment. Most of these standard Articles come with the opportunity to benefit a company as explained below.

B. PURPOSE OF ANNEX

As with the SAA purpose, the Annex purpose should be drafted as broadly as possible. Obviously how one goes about doing this is predicated on what the company's request is. Also, remember not to refer specifically to any contract or other funded SAA (like a funded SAA such as CCIcap). If a specific reference is made (i.e., "to perform work related to CCIcap SAA"), it could prevent one's company from being able to execute an Annex for any work not specifically for the referenced agreement. This will in turn mean a new RSAA and initial Annex must be formed and executed to include the desired work. Thus, paying particular attention to the language in the Purpose Article can save a company a lengthy, likely unanticipated, delay in getting the resources it needs.

C. RESPONSIBILITIES

This Article contains the specific tasks, obligations, and nature of resources each party commits to providing. These must fall within the Purpose and Responsibilities Articles of the Annexes' umbrella agreement. Even though this article must contain specific activities, it should still be approached with a wide-angle lens. For example, if the core focus of the Annex is to perform specific types of testing on specific types of material, after listing each in detail in the Partner Responsibilities Article, add a last line that will allow the company to use this Annex for future testing of the same kind. This can be done by adding language similar to "provide additional samples either of the kind listed above or similar, for the types of testing included in this Article on an as needed basis." NASA's Responsibility section would then include language requiring NASA to perform such testing on an as needed basis. One would then include other responsibilities for each party to carry out the testing and provide the results in similar fashion as included in the original request. If the work includes use of NASA's equipment, it may be useful to include the Partner's ability to assess and concur with the proposed assets, equipment, and resources selected by NASA to perform the services.

Additionally, this article should include the obligation for each party to promptly notify all of the listed points of contact in the Annex of any changes to the agreed upon schedule(s) or any other event that may negatively impact the performance of the Annex.

D. SCHEDULE AND MILESTONES

There are a few options for the best way to provide the information in this Article. One is to have the schedule and milestones presented under two sections, one for the Partner and one for NASA. Alternatively, the information can be provided chronologically, with the Partner's and

NASA's work comingled.³⁴ The deliverables can be listed either way and can be included under the applicable schedule or milestone item. Alternatively, the deliverables can be separated out as a distinct section in the Article and then either further separated between the Partner's deliverables and NASA's.³⁵ In this section, it is also good to note if one's company needs or expects to receive any information/deliverables in a particular format.

Because the formation and execution of the first SAA and Annex could take anywhere from one to six months, this administrative time should be taken into account when crafting the milestone and/or deliverable schedule. While NASA can try to expedite the process, the Partner should not rely on it. Therefore, when possible, consider providing dates in a format similar to "Effective date + 4 weeks" rather than a specific date. This way the schedule has a better chance of not starting a week or more behind.³⁶

Keeping these few things in mind when working on this part of the Annex can better ensure the intended work and information, the resources needed to complete the work, and the deliverables and timeframes are clearly understood and accurately performed by both parties.

E. FINANCIAL OBLIGATIONS

This Article is one of the least negotiable in the Annex; there are, however, a few changes the Partner can make which could result in much more favorable terms than those typically provided in the Article in the draft Annex.

First, the draft language in this section often states that the Partner will reimburse (as noted, this means pay before the work commences) the Government an estimated lump sum

³⁴ In practice, however, this method risks a party missing one of its obligations or dates.

³⁵ This is preferable in most cases to ensure each party has a clear understanding of what it needs to provide and what it can anticipate receiving. If it matters, the parties should also indicate the type and format of the data or deliverable they desire.

³⁶ Also, the event and the scheduled time for the event to occur should be presented in columns so the dates line up with the event. Yes, this is common sense, but some Annex drafts occasionally come with the dates imbedded as part of the event, which makes them much easier to overlook.

amount.³⁷ NASA centers, however, are generally able to allow very flexible payment schedules, and the SAA Guide specifically allows for the division of the lump sum into increments.³⁸

Therefore, the Partner should refer to the events listed in the Schedule and Milestones Article and look for ways the payment can be separated accordingly. If the work has been broken into phases, then it makes sense to divide the payments into correlating phases. One can also propose the timing of the payments. The only main requirement is that the payments must precede NASA's commencement of work. The time NASA needs the funds by can vary greatly from one Annex to another and could be required a few weeks before the milestone event in the schedule. Alternatively, the payment can sometimes be made as late as a day or two before NASA begins work. This is a key area where having a great working relationship with the SAA/Annex Agreements Officer can make quite a difference.

Another part of this clause that can be altered is in the accounting language in paragraph

2. The language in the sample clause provided for this states:

Should this Annex be terminated, or the effort completed at a cost less than the agreed-to estimated cost, NASA shall account for any unspent funds within [*Insert timeframe, cannot exceed one (1) year*] after completion of all effort under this Annex, and promptly thereafter, at Partner's option return any unspent funds to Partner or apply any such unspent funds to other activities under the Umbrella Agreement.³⁹

Typically, NASA's draft Annex will already include one year instead of alerting the Partner to the fact that this is not an inflexible date.⁴⁰ One year is a long time to wait for a refund, and NASA centers are usually able to change this timeframe to three months.

Another helpful way the Annex funding works, is that if one does have excess funds after work is completed under one Annex, one's company can authorize NASA (usually email is

³⁷ In cases where NASA will also receive some benefit from the agreement, a party may be able to reimburse NASA for less than the full cost of the agency's work.

³⁸ SAA GUIDE, *supra* note 9, at 56.

³⁹ *Id.* (emphasis in original).

⁴⁰ *Id.* at 55.

acceptable) to utilize those funds, or a portion thereof for work under another Annex.⁴¹

Alternatively, if one's company anticipates needing another Annex or amending the original Annex to include more work within the scope of the Annex, the Partner can have NASA hold the funds after the three month (or other stated timeframe) so NASA will already have money on hand to begin the new work as quickly as possible.

F. *TERM OF ANNEX*

The usual language states the Annex terminates on the earlier of the completion of all tasks or a specific timeframe from the effective date.⁴² When the Annex activity is something with a definite timeframe of work and a company does not anticipate needing any additional work in the future that would fall within the Annex, it may make sense to specify a timeframe or keep the original article wording. Because an Annex automatically expires upon the expiration of the RSAA, however, having the Annex remain in effect until the expiration of the RSAA the Annex falls under is the easiest way to avoid the administrative burden of amending the Annex to extend its term.

VI. CONCLUSION

It has been fifty-four years since the Space Act was penned. A day after this writing, the Space Shuttle Endeavor will be flying over California. Paying homage to its roots, but also serving as inspiration for the new space industry, which now must take the baton from the way things used to be and deliver it to the way things need to be in order for the United States to stay relevant and competitive in the world space market.

While there is a long bridge between the two, use of funded and reimbursable Space Act Agreements are showing great promise helping private industry bravely forge ahead. This

⁴¹ *Id.* at 56.

⁴² *Id.* at 90.

progress enabled by these tools has increased the number of new space companies and furthered their individual capabilities in unprecedented ways and in unprecedented timeframes. In doing this, the United States is finally starting to realize the goals it has set for the development of a robust commercial space industry. In the short term, the focus of private space companies will likely be developing and providing ISS cargo and crew resupply services and related space transportation systems.

These are exciting times indeed. But even better than the future we can see, is the future we cannot yet see. Science is hailed as being created by each generation “standing on the shoulders of giants.” The beautiful, thrilling fact about doing this with space capabilities is the view—*terra incognita*.

ACRONYM AND ABBREVIATION TABLE

Agreement Manager	AM
Commercial Crew and Cargo Program	C3PO
Commercial Crew Development Round 1	CCDev1
Commercial Crew Development Round 2	CCDev2
Commercial Crew Integrated Capability	CCiCap
Commercial Orbital Transportation Services	COTS
Commercial Resupply Services	CRS
Federal Acquisition Regulation	FAR
General Accountability Office	GAO
Mission Support Directorate	MSD
Other Transaction agreement(s)	OTA(s)
Reimbursable Space Act Agreement	RSAA
Space Act Agreement(s)	SAA(s)
Space transportation system	STS