

SBIR/STTR Open Technical Volume Template (applicable to X22.4/D)

Notional/Example - For reference only

Please send questions to usaf.team@afsbirsttr.us

Overall Summary Slide

Photo: A real picture/screenshot of your solution really helps show that you aren't proposing 'vaporware'

- Include Company Name and Overview of Proposal
- **Technical Abstract:** While many proposals treat this as an afterthought, it is the first thing that reviewers see - so make this very clear.
- **Overview:** One sentence could include a quick overview of what you are trying to accomplish in the Phase I, including your *specific* Air Force customer.
- **Technical Merit:** One sentence could clearly describe your technical merit, including how your solution has been de-risked in the commercial marketplace.
- **Team:** One sentence could describe your team's ability to perform the task and commercialize the results.
- **Commercialization:** One sentence could focus on how you have/will commercialize the solution.

If you have proprietary data in your slides - include this statement VERBATIM on the first slide.

"This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed-in whole or in part-for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of – or in connection with – the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in pages [insert numbers or other identification of sheets]"

Technical Merit Summary

- Include the most effective points that demonstrate the technical merit of your solution and the technological risk that remains
- Show, don't tell - use evidence to show that your solution does not carry significant technical risk
- If you are looking to **adapt your own non-defense solution**:
 - **Pictures/screenshots** of your solution being used
 - Pictures/screenshots of your solution
 - **Sales numbers** for similar or related non-defense commercial solutions
 - Customer testimonials/quotes from interviews
 - **Investment** from investors who have experience in evaluating technological merit
- If your solution is **based on someone else's commercially available technologies**:
 - Pictures of the **actual implementation** of those technologies combined into **your solution**
 - Pictures of end users/customers testing your 'Frankenstein' implementation
 - **Investment** from investors who have experience in evaluating technological merit

These lists are not exhaustive - use your own ideas to best demonstrate (not tell) why your solution has technical merit

For **every** slide with proprietary information, include this statement in the footer.

"Use or disclosure of data contained on this page is subject to the restriction on the first page of this volume."

Significance of Problem/Opportunity

- Define the specific technical problem or opportunity addressed and its importance. Include a brief description of the proposed solution AND HOW YOUR SOLUTION IS SUPERIOR TO CURRENT as applied to both defense and non-defense customers.
- This is not the time to show off your technical depth, but rather to explain your technology/value proposition and why people should care.

“You do not really understand something until you can explain it to your grandmother.”

Summary of Commercialization Potential

Not all VCs/investors are created equal - it is not just about money, it is also about their track record in commercialization

- Use this slide to communicate the most effective points that demonstrate the firm's ability to commercialize the solution inside the DoD AND in the commercial sector.
- For non-defense commercialization
 - **Target customer and market** of your non-defense version of your proposed solution
 - **Outside investment** from people who have proven records of commercializing technologies (i.e. VCs, accredited investors)
 - **Trials with non-defense customers** using your solution (or similar)
 - Quotes and specifics from these trial customers
 - Broad, general statements about **potential market size are not valued** as heavily
- For defense commercialization
 - Think about all of the stakeholders who will be needed to get your solution to a **program of record**
 - Contracting, finance, legal, security, information assurance, etc.
 - **Large DoD contractors** are helpful - but are **NOT a replacement for AF users/stakeholders**
- COMPETITIVE LANDSCAPE: What is the competition for your solution? Who else is working on this solution? What gives you firm or your solution the competitive advantage over your competition

There is a high risk of 'vaporware' with this topic. If this is the case, you need to be specific about your actual solution and show a path to existence

If there are no dollar signs on this slide, you are likely missing something. We are looking for you to demonstrate knowledge of your target customer and market(s)

Summary of Commercial Potential (cont'd)

- In this section, explain your expected Air Force Customer (i.e. Acquisition professional), note that this person will likely be different than your Air Force end-user (i.e. Operator). For a successful acquisition, you will need to understand both your user and your customer.
- Show **who** you plan on talking to inside the government to **start your customer discovery process**
 - Don't just say 'the Air Force' is your customer
 - Give **specific units or specific people** with whom you will start your customer discovery
 - Give any lessons learned from **DoD user testing** or customer discovery
 - The **closer you are to the user, the better** - don't just get feedback from scientists and engineers, go talk to the actual users
 - Large DoD contractors are helpful - but are NOT a replacement for AF users/stakeholders
- Ability for non-government commercialization
 - **Sales** numbers for a non-defense commercial version of your solution
 - **Investment** from investors who have experience in commercializing

Summary of the Team's Ability to Perform Research and Commercialize the Solution

- Use this slide to **demonstrate** the most effective points for demonstrating the team can continue technical development AND commercialize the results for Air Force customers.
- The ability to execute a successful STTR and commercialization inside the government will largely be based on people - as they are the ones who will help you determine **product/market fit**

The question is not only can you do it, but can you do it in our compressed timelines?

H4D is a good resource for DoD customer discovery:
<http://hacking4defense.stanford.edu/>

The AF is just like any other B2B organization - you need to be entrepreneurial to find your way into the sales cycle.

Defense Need

- Demonstrate knowledge of prospective AF End-User(s)/Customer(s) and their most reasonable use-case for your solution.
- Highlight previous DoD funding for the solution or underlying technology (e.g., AFOSR research grants, etc.). Include a description of the proposed solution and how it compares to the user's current alternative.
- The potential for government commercialization was addressed earlier in the presentation, this section details the user- and organizational-level need for your solution. If applicable, reference a Strategic Capability area, as described in Section 2.1.
 - Why is this important to users? How is your solution better than the current alternative
 - Why is this important to the DAF? How does it tie into published needs and/or priorities?
 - What direct user- or organizational-level benefits are expected following implementation of your solution?

Phase I Objectives

- Enumerate the Phase I's specific objectives, including the questions the effort should answer to determine the feasibility of the proposed approach and proof-of-concept development. Describe the problem or benefit area in relation to the solution. Describe the solution and how success will be measured in helping that user.
- List at least one **working-level** organization or community in the Air Force who may be able to benefit from your solution.

This is VERY important - who is the first AF Stakeholder you will contact once you start your Phase I? If you have trouble with this, try looking through news reports or networking through LinkedIn.

Work Plan / Statement of Work (SOW)

- Provide an explicit, detailed description of the Phase I approach. The SOW should indicate the planned tasks, how and where work will be conducted, a schedule of major events, and the final product(s) to be delivered. All Phase 1 contracts should include the following deliverables: 1) Preliminary Report, including a 1 slide project summary, 2) Final report. Provide explicit, detailed discussion of methods planned to achieve each objective or task. Describe the specific tasks, durations, descriptions, and performers to complete the tasks. Be sure to include any subcontractors efforts in the SOW as well.

Task	Duration	Description	Performer
01 – Write Preliminary Report (DELIVERABLE)	Days 0-5	We will write the initial 15-slide report describing our research approach to accomplish this Phase I feasibility study.	Jane Doe
02 – USAF Customer Discovery	Days 0-60	We will begin by reaching out to SSgt Snuffy, and will attend several conferences related to Aircraft maintenance. We will also attend the AF Collider event.	Jane Doe, Bob Smith
03 – Problem Refinement	Days 15-60	We will perform site visits with our most promising USAF End-Users in order to deeply understand their problem	Bob Smith, Abe Lincoln
04 – Technical Adaptation/Modification Study	Days 40-80	Our engineers will work to define the necessary adaptations of our non-defense commercial solution to meet the needs of our final AF End-User.	Abe Lincoln, Vanenvar Bush
05 – Definition of Solution Trial with AF End-User and AF Customer	Days 40-90	We will work with our AF End-User (Operator) and the associated AF Customer (Acquisitions expert) to clearly define a set of milestones and a trial to demonstrate how our adapted solution can meet the needs of the specific Air Force end-user.	Vanevar Bush, Jane Doe
06 – Write Final Report (DELIVERABLE)	Days 60-90	We will incorporate all of the information derived from tasks 02-05 to write the final report that is 15 pages, 15 slides and a 100 second video.	Jane Doe

Transition Plan

- Describe your plan to transition your solution into the Air Force. Describe **briefly** how your proposed solution could integrate with the existing efforts of your proposed Air Force customer.
 - What integration efforts need to be completed before your solution is 'useable' by your intended customers?
 - What regulatory, policy, or other compliance efforts need to be undertaken in order for your solution to be implemented?
- Who needs to be part of your transition plan? Who needs to be 'on-board' as you look to scale past your early adopters? Functional or command leadership? Regulatory bodies?
 - The list of high-level Air Force 'Customers' (Program Executive Offices) can be found here:
<https://www.dropbox.com/s/e00ljab5qjdjdb9d/AF%20Acquisitions%20%28PEOs%29%20Cheat%20Sheet.pdf?dl=0>

Related Work (Dual-Use)

- Describe significant activities directly related to the proposed effort, including any conducted by the principal investigator, the proposing firm, consultants, or others. Describe how these activities interface with the proposed project and discuss any planned coordination with outside sources. The technical volume must persuade reviewers of the proposer's awareness of the state-of-the-art in the specific topic. Describe relevant previous and parallel work not directly related to the proposed effort. Provide the following: (1) short description, (2) client for which work was performed (including point of contact's name and phone number), and (3) date of completion. Describe the non-defense customers and any interviews conducted with them. Describe the defense customers and any interviews conducted with them. Describe the solution's competitive landscape.
- We have a renewed focus on attaching our defense solutions to the pace of technological change - and therefore non-defense and non-governmental commercial solutions.

For the STTR Phase I Special Topics, include information on any user interviews you have done.

Clearances / Certifications / Approvals / Registrations

- Include the System for Award Management Managed Identifier (SAMMI) number (formerly called DUNS number), Commercial and Government Entity (CAGE) code, Small Business Administration (SBA) ID, and DoD SBIR ID number. If the firm does not currently have these numbers, include the date on an application was submitted. A valid CAGE code is required to receive a contract or OT. Lack of a valid CAGE code at the time of award will result in disqualification.
- DUNS Number
 - My DUNS Number is: _____
 - *(If you have not registered at Dun and Bradstreet and received a DUNS number, register here: <https://fedgov.dnb.com/webform>)*
- System for Award Management (SAM) (CAGE Code)
 - My CAGE Code is: _____ **OR** I applied for my CAGE code on: _____
 - *(If you have not registered in SAM and received a CAGE code yet, register here: <https://www.sam.gov/portal/SAM/>)*
- Small Business Association ID
 - My SBA SBC ID Number is _____
 - *(If you have not registered with the Small Business Association (SBA) and received your 'Small Business Concern' (SBC) Identification (ID) number, register here: <https://www.sbir.gov/registration>)*
- DoD SBIR/STTR ID
 - My SBA SBC ID Number is _____
 - *(If you have not registered with the Small Business Association (SBA) and received your 'Small Business Concern' (SBC) Identification (ID) number, register here: <https://www.sbir.gov/registration>)*

The CAGE code often takes the longest. If you have yet to receive your CAGE code just enter the date at which you applied for it.

'As-Applicable' Slides

Key Personnel

(Potential extension of 'Team's Ability to Perform Research' slide)

- Identify key personnel involved in the effort including directly related education and experience. Provide a concise technical resume of the principal investigator, including a list of relevant publications (if any). Describe how team members' backgrounds qualify them for the specific work to be performed on this project. **Full resumes for key technical personnel should be included in Volume 5: Supporting Information.**
- This section should include brief descriptions of the qualifications of your key personnel. Include details that are relevant to their role on the team for this Phase I research. Include any military experience as it pertains for their ability to better understand the needs of a potential Air Force stakeholder.
- Key personnel should include:
 - Principal Investigator (required)
 - Research Institute POC (required)
 - Key Technical Personnel (required)
 - Relevant Advisors
 - Relevant Investors
 - Key consultants
 - Key members of any sub-contractors
 - Any other key members of the team
- What percentage of the principal investigator's total time will be on the project?
 - i. Any non-zero answer is awardable.
 - ii. If the answer is below 25%, please describe the principal investigator's other roles.
 - NOTIONAL EXAMPLE: Our principal investigator intends to spend 20% of her time (~8 hours per week) working on this Phase I. Her other responsibilities include spending 30% of his time managing our non-defense commercial clients and she is spending 50% of her time on a prior Phase II that was awarded with the Air Force in March of 2019 (contract No. FA123456CA789).

Commercialization Strategy

(Potential extension of 'Commercialization' slide)

- Describe in approximately one page the company's strategy for commercializing the technology in DoD, other Federal Agencies, AND private sector markets. Provide specific information regarding the market need the technology will address and the market size. Include a schedule of the quantitative commercialization results the company expects to achieve. Describe any outside investment, sources of cash flow and potential to scale the proposed solution. Focus mainly on non-defense sales.
- **PREVIOUS OUTSIDE INVESTMENT:** Has your firm received outside investment? How much, and who are your investors? Was this investment to further the development of the technology related to your proposed solution?
- **SOURCES OF CASH FLOW:** How will your business and this particular solution generating cash flow? Are you raising money from investors? Do you have non-defense sales or leads? Do you have defense sales? Are receiving government grants or contracts? Is this solution being funded by internal research and development funding? What potential sources of defense sales do you see?
- **POTENTIAL TO SCALE:** What is the potential for your firm and this solution to scale to capture a large market? Provide examples of people on your team that have demonstrated ability to scale solutions and/or companies.

Relationship with Future Work

(Potential extension of 'Commercialization' slide)

- (a) State the anticipated results of the approach if the project is successful. (b) Discuss the significance of the Phase I effort in providing a foundation for Phase II R/R&D effort. (c) Identify the applicable clearances, certifications and approvals required to conduct Phase II testing. Outline the plan for ensuring timely completion of said authorizations in support of Phase II R/R&D effort. Identify the high-level Air Force acquisition customer, e.g., Air Force Research Laboratory, and how the solution could integrate with their current projects.
- PROPOSED HIGH-LEVEL AIR FORCE CUSTOMER: Propose which areas you believe would best be able to integrate your solution into the Air Force **(if you need more information about these, just search the internet for 'Air Force _____' (e.g. 'Air Force PEO Digital'))**:
 - PEO Fighters and Bombers
 - PEO Business and Enterprise Systems
 - PEO Armament
 - PEO Presidential and Executive Airlift
 - PEO Tanker
 - PEO Mobility and Training Aircraft
 - PEO Agile Combat Support
 - PEO Digital
 - PEO Command, Control, Communication, Intelligence, and Networks (C3I&N)
 - PEO Intelligence, Surveillance, Reconnaissance and Special Operations Forces (ISR/SOF)
 - PEO Services (Combat and Mission Support)
 - PEO Space Systems (Space and Missile Systems Center)
 - PEO Strategic Systems
 - PEO Nuclear Command, Control and Communications (NC3)
 - F-35 Program Office
 - Rapid Capabilities Office (RCO)
 - Rapid Sustainment Office (RSO)
 - Air Force Research Labs (AFRL)
 - Other
- *DESCRIPTION OF HOW YOUR SOLUTION INTEGRATES WITH THE PROPOSED AIR FORCE CUSTOMER: After doing a bit of searching the internet about your proposed Air Force Customer (i.e. Acquisitions Office), describe *briefly* how your proposed solution could integrate with the existing efforts of the proposed Air Force customer. (Notional Example: Our software solution automatically completes lines of code while you are typing and double checks them for errors, instituting a testing level during the writing of the software. PEO digital has a focus of speeding development to the warfighter and is currently developing solutions to better organize and task our air forces, this could ensure a lower rate of error for the fielded systems, thus increasing the speed.)*

Pick at least one of these.
Then say how your solution
could integrate with what they
are doing.

Firm Ownership

This is a busy slide. But for most companies this will not apply. For any questions that do not apply, just remove from the slide.

- Question 5) Is 50% or more of your firm owned or managed by a corporate entity?
 - i. If YES, and the corporate entity is also a small business as described in section 3.15, please include in this section a description of your corporate relationship, including any other affiliates of the owning corporate entity.
 - ii. If your firm is 50% or more owned or managed by a corporate entity that is not a small business, your proposal will be disqualified.
 - NOTIONAL EXAMPLE: My firm, 'Small SSA LLC' was 'spun-out' of another small business, 'Small Rocket Co.', to focus on the emerging space situation awareness market. Small Rocket Co. owns a 75% stake in 'Small SSA LLC'. Small Rocket Co. is also classified as a small business concern via the SBA and has no other affiliates. The total size of all of the affiliates is still less than 500 employees, with Small Rocket Co having 147 employees and 'Small SSA LLC' having just 13, making our total number of employees, including affiliates equal to 160.
- Question 11) Is your firm registered in the SBA's venture capital database as majority-owned by venture capital operating companies, hedge funds, or private equity firms?
 - i. If YES, please state whether the VCOC, hedge fund, or private equity firm is also a small business as defined by the SBA. If so, then the VCOC, hedge fund, or private equity firm would count as an 'affiliate' and their employee numbers will need to be added to your employee total.
 - ii. If your firm is majority-owned by venture capital operating companies, hedge funds, or private equity firms that do NOT qualify as a small business concerns, your proposal will be disqualified from the Air Force Special Topic.
- Question 12) Is your firm more than 50% owned by a single Venture Capital Owned Company (VCOC), hedge fund, or private equity firm?
 - i. If YES, please state whether the VCOC, hedge fund, or private equity firm is also a small business as defined by the SBA. If so, then the VCOC, hedge fund, or private equity firm would count as an 'affiliate' and their employee numbers will need to be added to your employee total.
 - ii. If your firm is more than 50% owned by a single venture capital operating company, hedge fund, or private equity firm that does NOT qualify as a small business concern, your proposal will be disqualified.
- Question 13) Is your firm more than 50% owned by multiple business concerns that are VCOCs, hedge funds, or private equity firms?
 - i. If YES, please state whether the VCOC, hedge fund, or private equity firm is also a small business as defined by the SBA. If so, then the VCOC, hedge fund, or private equity firm would count as an 'affiliate' and their employee numbers will need to be added to your employee total.
 - ii. If your firm is more than 50% owned by multiple venture capital operating companies, hedge funds, or private equity firms that do NOT qualify as a small business concerns, your proposal will be disqualified.
- **If questions 10,11, or 12 are answered 'YES, then explain the ownership structure of your firm. If the VCs, hedge funds or PE firms that own equity in your company are themselves small businesses, then you may be still eligible for award.**
- Question 15) Is your firm affiliated as set forth in 13 CFR 121.103?
 - i. If yes, then please describe your affiliations as described here: <https://www.sba.gov/document/support--affiliation-guide-size-standards>
 - NOTIONAL EXAMPLE: My firm, 'Carbon Fiber Wheels LLC' is an affiliate of 'High End Cars Corp.' because each of our boards share 3 of our 5 board members.
- 23) Are teaming partners or subcontractors proposed?
 - i. If yes, be sure to include this information in the proposal Coversheet, Cost Volume and Supplemental Cost Information.
 - For this question – be sure to include your sub-contractor information in the Cost Volume (how much you are subcontracting them for) and in the Supplemental Cost Information by including the agreements between your firm and the subcontractor. If you are teaming with another firm, but not sub-contracting them, be sure to include this teaming arrangement in Volume 5: Supplemental Information.

Foreign Citizens

- Identify any foreign citizens or individuals holding dual citizenship expected to be involved on this project as a direct employee, subcontractor, or consultant. For these individuals, please specify their countries of origin, the type of visa or work permit under which they are performing and an explanation of their anticipated level of involvement on the project.
- Offerors frequently assume individuals with dual citizenship or a work permit are permitted to work on an STTR project and do not report them. This is incorrect; proposals without the requested information will be rejected. Therefore, firms should report all individuals expected to be involved on this project considered “foreign national” as defined in Section 3.5 of the STTR Solicitation. The firm may be asked to provide additional information during negotiations to verify foreign citizens’ eligibility to participate. Supplemental information provided in response to this paragraph will be protected in accordance with the Privacy Act (5 U.S.C. 552a), if applicable, and the Freedom of Information Act (5 U.S.C. 552(b)(6)).
- H-1B visa allows non-US citizen graduate students in specialty areas (<https://workpermit.com/immigration/usa/us-h-1b-visa-occupation-list>) to be employed only for efforts which directly pertain to their graduate studies.
- H-1B visa holders cannot work more than 15-20 hours a week on a single project.

Full Name	Foreign National (Yes or No)	Country of Origin	Type of Visa or Work Permit	Description of Involvement (specific task(s) in the work plan)
Nikola Tesla	Yes	Serbia	Work Visa - (E2): Professionals Holding Advanced Degrees and Persons of Exceptional Ability)	Task 04 – Technical Modification Study

Facilities/Equipment

- This section should describe any facilities or equipment/instrumentation that your team is proposing to use during the phase I research. State whether or not the facilities where the proposed work will be performed meet environmental laws and regulations of federal, state (name), and local Governments for, but not limited to, the following groupings: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.

Confirm this statement is true and include it verbatim in this slide.

- “All of the facilities where the proposed work will be performed meet environmental laws and regulations of federal, state and local governments.”

Prior, Current, or Pending Support of Similar Proposals or Awards

- If a proposal submitted in response to this solicitation is substantially the same as another proposal that was funded, is now being funded, or is pending with another Federal Agency, or another or the same DoD Component, you must reveal this on the Proposal Cover Sheet and provide the following information:
 - (a) Name and address of the Federal Agency(s) or DoD agency to which a proposal was submitted, will be submitted, or from which an award is expected or has been received.
 - (b) Date of proposal submission or date of award.
 - (c) Title of proposal.
 - (d) Name and title of principal investigator for each proposal submitted or award received.
 - (e) Title, number, and date of solicitation(s) under which the proposal was submitted, will be submitted, or under which award is expected or has been received.
 - (f) If award was received, state contract number.
 - (g) Specify the applicable topics for each STTR proposal submitted or award received.

Note: If this does not apply, state in the proposal "No prior, current, or pending support for proposed work."
- Question 18) Has a proposal for essentially equivalent work been submitted to other US government agencies or DOD components?
- i. If the answer to this question is yes, you must include the requested information in the Coversheet Supplement.

This is very important for the open topic, as many companies will want to adapt their solutions in different ways to different customers, but it is important not to accept awards for substantially similar work. If you have submitted any proposals to ANY special topic (i.e. Open Topic or Pitch Day), include that information in a table like the one below. Failure to disclose the other awards may make your proposal ineligible.

Name of Federal Agency to which the Proposal was submitted	Date of Proposal Submission	Title of Proposal and (if SBIR/STTR) Proposal Number	Name of Principal Investigator	Was awarded? If so, include contract number.
Air Force	28 June 2019	AF192-001-0123 'Edge Neural Net Processor - Phase I'	Dr. William Shockley	YES – FA123456CA789

Technical Data Rights (Assertions)

- This can get a bit complicated, and in many cases firms will not have data rights assertions in the Phase I feasibility study, as the deliverables generally don't ask for detailed technical information during the Phase I. This table can be useful if you intend to deliver specific data or non-commercial software to the government as one of your deliverables that was developed at private expense. This happens often in Phase II and Phase III, but not often in Phase I under the special topics. In general the SBIR data rights are here to protect your firm and to allow the firm to grow in value. One resource to learn more about this is here: <https://www.cit.org/file.aspx?DocumentId=1066>
- Rights in technical data, including software, developed under the terms of any contract resulting this solicitation generally remain with the contractor, except that the Government obtains a royalty-free license to use such technical data for Government purposes for 20 years after contract award. More detailed information is available at <https://www.sbir.gov/tutorials/data-rights/tutorial-1>. This data should be marked with the restrictive legend specified in DFARS 252.227-7018. Upon expiration of the five-year restrictive license, the Government has unlimited rights in the SBIR data. During the license period, the Government may not release or disclose SBIR data to any person other than its support services contractors except: (1) For evaluation purposes; (2) As expressly permitted by the contractor; or (3) A use, release, or disclosure that is necessary for emergency repair or overhaul of items operated by the Government. See DFARS clause 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program."
- **Proposing firms that wish to assert data rights should include the following table in the proposal. If a proposer plans to submit assertions in accordance with DFARS 252.227-7017, those assertions must be identified and assertion of use, release, or disclosure restriction MUST be included with your proposal submission. The contract cannot be awarded until assertions have been approved.**

Technical Data or Computer Software to be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	<ul style="list-style-type: none"> • None, • Developed exclusively at private expense, • Developed partially at private expense 	<ul style="list-style-type: none"> • None, • Government Purpose Rights • Limited Rights (Technical Data) • Restricted Rights (Software) • Specifically Negotiated License • Rights in SBIR Data 	(LIST)

Supplemental Information on Direct Labor Costs

This table is only needed if you have estimated hourly rates that are very high.

- For any notable instances e.g., a significant number of hours, very high hourly wages or significant labor overhead/fringe rates, justify in this section. A helpful resource for comparing wage rates is <https://www.bls.gov/bls/blswage.htm>.
- (1) Direct Labor **For any notable instances** (i.e. a significant number of hours, very high hourly wages or significant labor overhead/fringe rates), please justify them in this section. A helpful resource for telling if a wage is very high is <https://www.bls.gov/bls/blswage.htm>.

For all of the estimated costs, they are meant to be estimates used to justify the price reasonableness of the contract. For the special topics, you will be issued fixed price contracts and thus these costs will not be audited and **it is okay if the actual charges are not the exact same as these estimates.**

Employee Name	Position	Location	Proposed Rate/Hour	BLS Average Rate/Hour	Rationale
Grace Hopper	Software Developer	San Francisco	\$250	\$69.25	Grace is a skilled programmer with degrees from Vassar and Yale. She is one of the original developers of a critical software language (COBOL). Additionally the market demand for software developers is very high in San Francisco right now.

Supplemental Information for Direct Material Costs

- Justify costs for materials, parts, and supplies with an itemized list containing types, quantities, and price and where appropriate, purposes. For the materials included in the cost volume, please provide the bases for the listed costs. This can be historical information, vendor quotes, catalogs, etc.
- **For many companies, there may not be a large amount of direct material costs needed during the Phase I feasibility study.** However, some companies may need this to iterate on their solutions during interactions with their potential AF end-users and AF customers. If you believe you'll need significant amounts of direct material, list them in this section. If you cannot find a website listing the cost, feel free to include the vendor quotes in this slide.

Many Phase I companies may NOT have these costs.

Description	Quantity	Price	Purpose	Basis for cost
3D Printing Filament	40 Spools	\$28.11/spool	In order to adapt our sensor mount to the F-16, we intend to print 100 different variations to get user feedback on which one is best.	https://www.mcmaster.com/1317n13

Detailed Travel Costs (Included in Other Direct Costs)

- For AF Special Topics greater travel expectations may be required. If travel was proposed (as an Other Direct Cost), justify those expenses here. Travel costs must be justified and related to the needs of the project. In the proposal, provide the number of trips, travelers per trip, specific locations and purpose of each trip. Also include, to the extent practicable, the basis for the proposed flight, lodging, per diem (meals), and ground transportation costs. A useful resource for this section is <https://www.gsa.gov/travel/plan-book/per-diem-rates>.
- Remember that these costs are estimates and it is likely the actual costs incurred to travel will be different and that is okay. This information is just to allow the contracting officers to ensure that your proposed costs are reasonable.

Most Phase I companies do have these costs. Provide estimates and top-level details of your estimated travel costs. (The actual values are likely to be different than these estimates, and that is okay.)

Trip	Attendees	Estimated Airfare	Estimated Lodging	Estimated Meals & Incidentals	Total Cost
Attend Spark Collider (Boston, MA - Austin, TX)	1. Ada Lovelace 2. Albert Einstein	\$600	\$250/night 3 Nights (\$750 Total)	\$145/day 4 days (\$580 Total)	\$3,860

Supplemental Information for Special Tooling and Test Equipment

- While special tooling and test equipment and material cost may be included under Phase I, the inclusion of equipment and material will be carefully reviewed for need and appropriateness to the work proposed. The purchase of special tooling and test equipment must, in the opinion of the Government Contracting Officer, be advantageous to the Government and related directly to the specific topic. These may include such items as innovative instrumentation or automatic test equipment. Title to property furnished by the Government or acquired with Government funds will be vested with the Air Force, unless it is determined transfer of title to the contractor would be more cost effective than recovery by the Air Force.
- In general, most companies will not have specialized equipment costs during their Phase I feasibility study. This is equipment that you are buying only for the purpose of performing this Phase I, therefore if you intend to use a specific piece of equipment in other applications, such as for your non-defense commercial customers, it may NOT be appropriate to include that cost in the proposal. Additionally, any specialized equipment purchased specifically for this purpose may need to be transferred to the government at the end of the contract (depending on whether it is cost effective to do so). If you do have specialized equipment costs for your Phase I, include this information below.

Equipment	Purpose	Cost	Basis for Cost
Drop Test Machine (small electronics, 2M height)	Our Air Force end-users require higher drop protection for our high security smart phone than our commercial customers, therefore we will need to purchase a drop testing equipment to make sure it meets their needs.	\$9,845	www.droptestmachine.com/smallelectronic2M

References / Acronyms

- List any applicable references or acronyms here