



**Strategic & Spectrum Missions Advanced Resilient Trusted Systems (S²MARTS)
Request for Solutions (RFS)**
in support of
Hypersonics Advanced Capabilities for Weapon System Improvements
Project No. 22-04

A. OPPORTUNITY OVERVIEW

Project Title	Hypersonics Advanced Capabilities for Weapon System Improvements
Project Sponsor	Naval Surface Warfare Center (NSWC), Crane Division, Advanced Concepts, Code GXDN
Contracting Activity	Naval Surface Warfare Center (NSWC), Crane Division
Questions Deadline	March 17, 2022
Response Deadline	March 25, 2022
Anticipated Project Budget	\$14,000,000 (details below)
Resultant Award Type	Prototype Other Transaction Agreement (10 U.S.C. § 4003)

All respondents must be active NSTXL members.

B. PROTOTYPE PROJECT DETAIL

1. Authority: 10 U.S.C. § 4003, “Authority of the Department of Defense to Carry Out Certain Prototype Projects”

2. Project Background & Current Capability:

The Hypersonics opportunity seeks to improve and upgrade its capabilities portfolio to meet warfighter requirements. Technologies include battery modules, alternative Position, Navigation, and Timing (PNT) for navigation in place of Global Positioning System (GPS), and high temperature Radio Frequency (RF) apertures to survive the extreme environment external to the vehicle. Target environments range from onset of hypersonic regimes at Mach 5 to traditional reentry regimes experienced by the Space Shuttle, for example, nearing Mach 25.

BATTERY MODULE

Batteries are an essential component to a hypersonic vehicle. The Hypersonics opportunity is soliciting solutions addressing high power-density, storable battery chemistries suitable for high reliability, long term storage (greater than 20 years) and suitable for naval applications. Battery module requirements are identified in the “Desired End State” section.

ALTERNATIVE PNT

Current navigation systems are heavily reliant on GPS technology for both commercial and military applications. While GPS has become a pervasive technology for military uses, it has security and availability challenges. This creates a need to explore alternative technology solutions that could utilize terrestrial or non-terrestrial, natural or man-made objects, or signals of opportunity that may be available worldwide to provide navigation accuracy comparable to GPS. NSWC Crane desires

alternative PNT solutions to alleviate or replace GPS reliance, with consideration for Size, Weight, and Power (SWaP) constraints. Examples of alternative PNT in other DoD programs include optical, radio frequency, terrestrial and non-terrestrial, celestial, and terrain mapping inputs. These solutions, as well as novel solutions of other PNT modalities, are acceptable responses to this solicitation.

HIGH TEMPERATURE APERTURES

Hypersonic vehicles experience extreme environments during flight with dynamic aero heating, shock, and vibration challenges. Sensor apertures external to the vehicle need to not only survive in extreme environments but operate as well. Approaches for high temperature RF apertures range from extremely high temperature capable materials, active and passive cooling methods, and heating mitigation assembly techniques. Publicly available data for the X-43/Hyper-X aircraft, for example, reports the vehicle experiences temperatures in ranging between and in excess of 1,100°C to 1,800°C. NSWC Crane desires industry propose State of The Art (SoTA) and novel aperture solutions to enable RF applications in the hypersonic environment.

Current State:

BATTERY MODULE

Thermal batteries generally operate between 350-550°C. They use a molten, ionically conducting electrolyte as a separator between the anode and cathode. The liquid electrolyte is immobilized by a powdered metal oxide or ceramic that retains the electrolyte in place by capillary action. Until the electrolyte becomes molten, the battery is essentially inert. Once activated, the power can be delivered at extremely high rates over 1,500 mA/cm² on the order of seconds. At low current densities (<50mA/cm²), the lifetime can potentially be extended to an hour.

ALTERNATIVE PNT

Alternative PNT historically was completed referencing topological terrain mapping or using star trackers. However, government, industry, and academia have identified numerous alternative PNT methods as the necessity of navigating in absence of GPS becomes more critical for mission success.

Celestial navigation systems have historically been used on military, aerospace, and spaceflight systems, examples include the SR-71 Blackbird, Snark cruise missile, B-2 bombers, and Intercontinental Ballistic Missiles. The SR-71's Astroinertial Navigation System utilized celestial navigation as an input to the inertial navigation computation, enabling accuracies within 300 feet. Current celestial navigation research includes using pulsars as navigational beacons and timers, demonstrated by NASA's NICER/SEXTANT project. Star trackers are becoming increasingly popular attitude determination systems with space missions, specifically with small satellites.

HIGH TEMPERATURE APERTURES

Integration of RF apertures to extremely high temperature applications is one of the leading challenges for hypersonic vehicles such as the space shuttle. One approach for RF apertures is to utilize high temperature capable materials in the surface mounted aperture. Another example is to place an aperture interior to a high temperature capable RF window, or radome. Early communications studies for the Space Shuttle program recommended the latter approach. Designers utilized maximum antenna aperture and internal structure temperatures were defined and utilized to select radome designs.

3. Desired End-State & Success Criteria:

The primary objective of this effort is to rapidly develop capability prototypes which will be integrated into a developmental flight test campaign for demonstration. Demonstration of the prototype on a developmental test flight will require survival of high shock and vibration environments. Prototypes must be delivered by quarter 3 of the fiscal year 2023 or 2024, depending on the technical maturation of the prototype, to meet the annual developmental test flight integration schedule. Following a successful Technology Readiness Assessment (TRA) and technology demonstration, the capabilities will be considered for the program's inclusion. Industry responses shall identify how the proposed solution addresses the individual topics – a battery module solution, an alternative PNT solution, or a high temperature apertures solution. Target Technology Readiness Levels (TRLs) for solutions are TRLs 3 – 5. Solutions will be accepted as low as TRL 3 or exceeding TRL 5. Each technology will be utilized in naval applications and needs to be suitable for shipboard and submarine use. The length of the project is estimated not to exceed two years. However, the project's period of performance will be based on the performer's proposed schedule.

BATTERY MODULE

The objective of the battery module effort is to develop and demonstrate battery modules of equal performance by reduced volume which will be evaluated in the lab and onboard a developmental flight test. High voltage battery modules will be the target for comparison of battery performance. The maximum sustained power supply is 25kW for greater than or equal to 30 minutes. The battery module should be suitable for naval applications and storable for greater than 20 years.

The following areas should be considered for improvement:

- a) **Anode Materials:** The area with the least chance of realizing significant improvements in thermal-battery technology is the anode. The development of ternary alloys could result in an improvement in the capacity of the alloys but provide little likelihood of realizing any significant improvement in Electromotive Force (EMF).
- b) **Electrolytes:** A considerable amount of work has already been done examining improved electrolytes for thermal batteries. Many of these improved electrolytes contain bromide as a constituent, which immediately reduces the voltage-stability window relative to electrolytes based on chloride or fluoride. Other proposed solutions include cesium (Cs) and Rubidium (Rb) based, iodide-based and other electrolytes which introduce reduced voltage-stability, increased expenses and limited thermodynamic stability.
- c) **Cathode Materials:** The biggest payoff in improving thermal-battery technology will come in the area of better cathodes. An ideal cathode will have the following properties: high EMF, low solubility in molten salts, good electronic conductivity, low equivalent weight, good kinetics (rate), high capacity, multiphase discharge (non-intercalating), reaction products with similar properties and reasonable costs.
- d) **Improved Insulation:** The best commercial insulation on the market today is molded composite board containing silica, titania and quartz fibers (Min-K and Microtherm). When considering solutions, vacuum/foil insulation is not likely to be practical for small thermal batteries due to significant heat losses associated with the ends of the batteries. Aerogel insulations though are a promising solution, with the potential of having up to one-third the thermal conductivity of the best molded insulations.

There is great potential for extending current thermal battery technology through the development of improved cathodes with higher EMFs, thermal stabilities, capacities, and kinetics along with the simultaneous development of improved thermal insulations based on aerogels containing thermal opacifiers and strengthening agents.

Acceptance Criteria: A technology solution that is responsive to battery modules that addresses the desired end state parameters to include power, operational time, and volume. Thermal batteries or other high energy density batteries are acceptable responses. The battery module should be suitable for naval applications and storable for greater than 20 years.

Success Criteria: The battery module prototypes will be considered a success upon demonstration of 25kW power output for greater than or equal to 30 minutes and surviving relevant environments.

ALTERNATIVE PNT

The objective of the alternative PNT effort is to develop and demonstrate an alternative PNT solution which will be evaluated on a developmental flight test. The capability will provide GPS-independent position determination through terrestrial or non-terrestrial, natural or man-made objects, or signals of opportunity that may be available throughout the world to provide navigation accuracy comparable to GPS. Garmin™ reports GPS accuracy within 50 feet, NSWCCD desires industry propose alternative PNT solutions and achievable three-dimensional accuracies.

Proposed approaches should be appropriate for the high-velocity and challenging environmental conditions associated with hypersonic flight. The proposed approaches should be demonstrated via analysis or simulation to be able to provide precision approaching that of GPS at high altitude, at high velocity, must be broadly applicable throughout the world, and ideally in all weather conditions. Weather or other limitations of a proposed solution should be clearly defined. Additional challenges include consistent reliability and size, weight, and power that would be compatible with current and future weapon systems and communicate signals similar to GPS output codes. All development, to include preliminary modeling and simulation, should be conducted with the goal of designing and demonstrating a prototype alternative PNT system with minimized Size,

Weight, and Power (SWaP). Proposers should identify theoretic accuracy limits of the proposed approach and compare expected performance against theoretical performance.

Acceptance Criteria: A technology solution that is respondent to alternative PNT solutions with modality description, accuracy identified, and proposed system SWaP.

Success Criteria: The capability prototypes will be considered a success upon demonstration of solution accuracy onboard the developmental test flight at hypersonic velocities.

HIGH TEMPERATURE APERTURES

The objective of the high temperature RF apertures effort is to develop and demonstrate high temperature apertures. The apertures will be tested in laboratory environments with appropriate testing including wind tunnels or arc jets. Additionally, the apertures will be integrated and demonstrated on a developmental flight test. The Hypersonics opportunity requests industry propose aperture solutions that will survive and operate at the extreme temperatures associated with hypersonic flight. Industry shall provide what is achievable utilizing their aperture solution. Surface mounted high temperature apertures, apertures contained within a high temperature radome, or other novel solutions are acceptable responses to this solicitation.

Acceptance Criteria: A technology solution that is respondent to high temperature RF apertures and the limits of operational performance to include RF performance and temperature bounds. Integration plans and challenges must be identified in the proposal.

Success Criteria: The capability prototypes will be considered a success upon a successful developmental flight test demonstrating aperture survival and operation.

4. Potential Follow-On Activity:

- a. Upon successful completion of this prototype effort, the Government anticipates that a follow-on production effort may be awarded via either contract or transaction, without the use of competitive procedures if the participants in this transaction successfully complete the prototype project as competitively awarded from this document. The prototype effort will be considered successfully complete upon demonstration of the aforementioned technology objectives.
- b. Successful completion for a specific capability may occur prior to the conclusion of the project to allow the Government to transition that aspect of the prototype project into production while other aspects of the prototype project have yet to be completed.
- c. Requirements of other potential follow-on activities could involve, though not limited to, continued development and baseline management, fielding, sustainment, training, further scaling of the solution, integration of future capabilities, or integration of the solution with other capabilities.

5. Project Deliverables:

No.	Title	Description	Frequency	Delivery Method
1	Monthly Status Report	Report summarizing the project’s process and events/actions completed during the previous month which includes financial and risk managements reports	Monthly	Via Encrypted Electronic Submission
2	Integrated Master Schedule (IMS)	Provide an IMS that represents capability development key knowledge points and milestones, as well as test events and developmental test flight hardware delivery.	Once/Updated as Needed	Via Encrypted Electronic Submission
3	Developmental test flight campaign milestone reviews support	The flight test campaign team hosts the following reviews leading up to fielding: Payload Selection Review (PSR), Mission Design Review	Once per Review	Via Encrypted Electronic Submission/Video Teleconferences

		(MDR), Payload Readiness Review (PRR), Mission Readiness Review (MRR), and Flight Readiness Review (FRR).		
4	System Requirements Document and System Requirements Review (SRR)	Document containing all pertinent requirements for the capability	Once	Via Encrypted Electronic Submission/Video Teleconferences
5	Preliminary Design Review (PDR)	A PDR shall be conducted on the proposed solution	Once	Via Encrypted Electronic Submission/Video Teleconferences
6	Critical Design Review (CDR)	A CDR shall be conducted on the proposed solution	Once	Via Encrypted Electronic Submission/Video Teleconferences
7	Technology Readiness Assessments (TRA) for the capability	Government subject matter experts will assess the capability enabling technologies and overall capability during development and after the successful flight test for technology readiness levels. These assessments will inform program decisions on whether to transition projects. Assessments will include requests for a Technology Readiness Artifact tracking spreadsheet and artifacts and a technology maturation plan.	As needed per TRA team of NSWCC Crane	Encrypted Electronic Submission
8	Engineering Development Unit (EDU)	An EDU will be provided to the vehicle integration team for testing and characterization	Once	EDU delivered to vehicle integration team

6. Anticipated Budget

\$14,000,000 Total

This value represents what is currently available for the subject project at the time of RFS release. This value is subject to change and is being provided for planning purposes only.

Respondents are encouraged to clearly explain how much of their solution can be developed for the advertised amount. Capabilities or project phases that will require additional funding beyond the project budget must be identified as such.

7. Anticipated Number of Awards

The Government intends to award multiple Other Transaction Agreement(s) on a fixed-price basis as a result of this RFS. The Government also reserves the right to execute fewer awards than anticipated, select aspects of a proposal for award, or not select any of the solutions proposed. The Government will collaborate with prospective awardees prior to finalizing the award.

Partial responses addressing only a subset of the project’s overall objectives are permitted for this effort.

8. Supporting Attachments:

- a. Section 889 Prohibition and Reporting
- b. Section 889 Verification and Representation

C. SECURITY INFORMATION & RESTRICTIONS

1. This RFS, to include attachments, has been released in accordance with:

Distribution Statement A: Approved for public release

2. Security classification & other restrictions:

- Security Classification: This project is **Unclassified**
- Respondents are restricted to domestic, United States based companies only.
- Compliance with International Traffic in Arms Regulation (22 C.F.R. §§ 120-130) is required at time of proposal submission.
 - Export controls (if applicable): Research findings and technology developments arising from the resulting proposed solution may constitute a significant enhancement to the national defense and to the economic vitality of the United States. As such, in the conduct of all work related to this effort, the selected performer must comply strictly with the International Traffic in Arms Regulation (22 C.F.R. §§ 120-130), the National Industrial Security Program Operating Manual (DoD 5220.22-M) and the Department of Commerce Export Regulation (15 C.F.R. §§ 730-774).
- By submitting a response, respondents shall certify whether covered telecommunications equipment or services **will or will not** be included as a part of its offered products or services to the Government in the performance of this effort. RFS Attachment b includes additional detail regarding the representation which must be signed and returned with any submissions.

What is included under “covered telecommunications equipment or services”?

- ✓ Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);
- ✓ For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);
- ✓ Telecommunications or video surveillance services provided by such entities or using such equipment; or
- ✓ Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.



3. All respondents/prospective performers must be compliant with the following:

- DoDI 8582.01, “Security of Unclassified DoD Information on Non-DoD Information Systems” and DoDM 5200.01 Volume 4, “DoD Information Security Program: Controlled Unclassified Information”.
- NIST SP 800-171, “Protecting Controlled Unclassified Information in Non-Federal Information Systems and Organizations”
- Research findings and technology developments arising from the resulting proposed solution may constitute a significant enhancement to the national defense and to the economic vitality of the United States. As such, in the conduct of all work related to this effort, the selected performer must comply strictly with the International Traffic in Arms Regulation (22 C.F.R. §§ 120-130), the National Industrial Security Program Operating Manual (DoD 5220.22-M) and the Department of Commerce Export Regulation (15 C.F.R. §§ 730-774).

D. DESIRED LEVEL OF DATA RIGHTS

1. The Government desires the following restrictions/limitations as it relates to Data Rights allocated under the subject effort:

Government Purpose Rights: The right to use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction. This also includes the rights to release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose technical data for United States government purposes. This level of restriction is set at five-years but may be negotiated & tailored to a specific project. The five-year period, or such other period that may be negotiated, would commence upon execution of the agreement that required development of the items, components, or processes or creation of the data. The performer will have the exclusive right, including the right to license others, to use technical data in which the Government has obtained government purpose rights under this agreement for any commercial purpose during the five-year period. Upon expiration of the five-year period (or other negotiated length of time), the Government will receive unlimited rights in the technical data and computer software.

2. Respondents may elect to propose alternative options for the Government’s consideration & subsequent approval via negotiations.

E. PROCESS OVERVIEW & INSTRUCTIONS

1. Submission Process for Questions & Proposals

a. Questions

To submit any questions, visit the opportunities page at www.nstxl.org/opportunities, select the “Current” tab, locate the respective project, and select “Submit a Question”. Please refer to Page 1 for associated deadlines.

b. Proposals

To submit your proposal, visit the opportunities page at www.nstxl.org/opportunities, select the “Current” tab, locate the respective project, and select the “Submit Proposal” link. You must have an active account and be logged-in to submit your response.

Respondents are solely responsible for the timeliness of their submission and are cautioned that late submissions will not be accepted for evaluation. It is strongly recommended that interested parties submit their proposal as early as possible to uncover any potential technical or account issues. Please notify NSTXL immediately (membership@nstxl.org) if technical issues occur during the submission process and/or if confirmation related to membership status is required. Please refer to Page 1 for associated deadlines.

2. Proposal Structure & Assessment Methodology

		(1) Initial Review		>>>	(IF APPLICABLE)		>>>	(2) Follow-On Assessment		>>>	(3) Selection	
ANTICIPATED TIMELINE*		Due: 03/25/2022, 12:00PM ET			Start of Follow-On phase: N/A			Award: 04/26/2022				
TECHNICAL		{Type of Submission/Assessment} Page Limit: {10} 1 page company overview 1 page team overview 8 pages technical response Format: MS Word and/or Adobe PDF			{Type of Submission/Assessment} Details will be provided to Government-selected respondents identified for additional exchanges with the Government.			Award of Prototype Level Project				
PRICE		{Type of Submission/Assessment} Page Limit: {5} Format: MS Excel for pricing information; MS Word and/or Adobe PDF for supporting narratives			{Type of Submission/Assessment} Details will be provided to Government-selected respondents identified for additional exchanges with the Government.							

**Anticipated dates are subject to change and are provided for planning purposes only.*

NSTXL will notify and invite Government-selected respondents to participate in a follow-on assessment/down select pending the outcome of the Government’s review of initial responses. Additional detail regarding the follow-on assessment will be provided at that time. Respondents who are not selected for follow-on assessments will also be notified of their status accordingly.

3. Format Detail

- a. 12-point font (or larger) for all response narratives; smaller type may be used in figures and tables but must be clearly legible.
- b. Page size of 8.5 x 11 inches.
- c. The following items are not included within the page count: Cover page, Table of Contents, supporting Foreign Owned, Controlled, or Influenced (FOCI) documentation, Section 889 Representation, and the Task Description Document/Statement of Work.

4. Contents of Response (Cover Page, Technical Response, Price Response)

- a. Proposal Cover Pages **must** identify the following:
 - Company name
 - Confirmation of active NSTXL Membership (e.g., “Verified NSTXL Member”)

Reminder: Contact membership@nstxl.org with any questions or requests for confirmation.

- Commercial and Government Entity (CAGE) Code (if available)
- Level of facility clearance (if available)
- Street Address
- Primary Point of Contact (with title, email address and phone number)
- Government Cognizant Security Office (CSO) responsible for monitoring the company's National Industrial Security Program Standards compliance (with address, email address and phone number)
- Company's security officer point of contact (with title, email address and phone number)
- All locations where work will be performed
- Business Size
- Business Type (Traditional or Non-Traditional)
- Status of U.S. ownership
- If the proposed approach requires any exceptions to this RFS
- If the proposed approach addressed all RFS objectives or a partial subset of the RFS objectives
- The applicable 10 U.S.C. § 4003 eligibility criteria (select **one** of the following)
 - There is at least one nontraditional defense contractor or nonprofit research institution participating to a significant extent in the project;
 - 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; OR
 - At least one third of the total cost of the project is to be provided by sources other than the Federal Government.
 - If resource-sharing is proposed in accordance with 10 U.S. Code § 4003(d)(1)(C), then the non-Federal amounts counted as provided, or to be provided, by parties other than the Federal Government may not include costs that were incurred before the date on which the OT agreement becomes effective. Costs offered as a resource-share that were incurred for a project after the beginning of negotiations, but prior to the date the OT agreement becomes effective, may be counted as non-Federal amounts if and to the extent that the Agreements Officer determines in writing that: (1) the party other than the Federal Government incurred the costs in anticipation of the OT agreement; and (2) it was appropriate for the entity to incur the costs before the OT agreement became effective in order to ensure the successful implementation of the OT agreement.

What is a nontraditional defense contractor?



An entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by the Department of Defense for the procurement or transaction, any contract or subcontract for the Department of Defense that is subject to full coverage under the cost accounting standards (CAS).

Review 48 CFR § 9903.201-1 for a list of CAS exemptions.

b. Technical responses must address the following topics:

TOPIC	INSTRUCTIONS
Solution Narrative	<ul style="list-style-type: none"> • Describe the approach used to design/deliver a unique prototype solution for the prototype technology objectives. • Include a discussion on schedule and the timing of all project deliverable(s) and other critical milestones • Responses that only address a critical element of the total solution being sought, often referred to as a “partial solution”, must be clearly identified as such. • If the proposed approach will require exception to any aspect of this solicitation, to include attachments, respondents must clearly identify those exceptions within the Technical Volume of their response. All respondents are encouraged to review the baseline S²MARTS Performer’s Agreement available within the NSTXL Members Portal (nstxl.org).
Team Overview	<ul style="list-style-type: none"> • Identify each subcontractor and include the following: <ul style="list-style-type: none"> – Summary of their role in support of the proposed concept – Commercial and Government Entity (CAGE) Code (if available) – Level of Facility Clearance (if available) – Address – Point of contact (with title, email address and phone number) – Business size – Business Type (Traditional or Nontraditional) – Status of U.S. ownership <p><i>Reminder: The responsibility to provide ample proof regarding nontraditional participation to a significant extent lies with the respondent and has a direct correlation to award eligibility.</i></p>
Level of Data Rights Proposed	<ul style="list-style-type: none"> • The rights offered should be displayed in a manner that allows for ease of discussion in determining trade-offs and potential options for long-term sustainability of the deliverables of this effort. • If rights are being asserted at a level less than the Government’s desired level, respondents must provide detail explaining the specific rationale for the assertion. • Any items previously developed with federal funding (and utilized in support of the proposed solution) should clearly identify all individual components funded by the Government and the recipient of the deliverables. • If commercial software is proposed as part of the prototype solution, all applicable software licenses must be identified and included with the response. Note that any software license term or condition inconsistent with federal law will be negotiated out of the license.
Explanation Supporting Eligibility for Award of a Prototype OTA	<ul style="list-style-type: none"> • Provide rationale to support the specific eligibility condition that permits award of an Other Transaction to the proposed performer/team.

	<ul style="list-style-type: none"> The responsibility to provide ample proof regarding nontraditional defense contractor participation to a significant extent; small business or nontraditional defense contractor status; or any cost sharing arrangement lies with the respondent and has a direct correlation to award eligibility. <p style="text-align: center;">Questions regarding eligibility?</p> <p style="text-align: center;">Contact NSTXL and/or review 10 USC 4003 and the DoD Other Transaction Guide for additional information.</p>
Foreign Owned, Controlled, or Influenced (FOCI) Information (if applicable)	<ul style="list-style-type: none"> Identify if the primary performer and/or any sub-performers (to include vendors, suppliers, subcontractors, and teaming partners) are considered under FOCI. <p style="text-align: center;">Supporting documentation may include but is not limited to:</p> <p style="text-align: center;">Standard Form 328 (Certificate Pertaining to Foreign Interest); Listing of Key Management Personnel; an Organizational Chart; Security Control Agreements; Special Security Agreements; and Proxy Agreements or Voting Trust Agreements.</p>
Government Furnished Support	<ul style="list-style-type: none"> Identify if the proposed solution will be dependent on Government Furnished Property (GFP) or other forms of Government support (i.e., information, schematics, laboratory, or facility access). If the solution is dependent on the Government furnishing specific information or items, describe the impact to the solution if the request cannot be met. All GFP proposed and/or required for the respondent to perform this effort shall provide documentation that the proposed Government property usage has been approved by the cognizant Contracting Officer or Agreements Officer.
Compliance	<ul style="list-style-type: none"> Respondents must address each mandatory restriction/requirement identified within this RFS and explain how each regulation or standard is currently or will be met. <ul style="list-style-type: none"> ✓ Note: If exceptions to any of the restrictions/compliance requirements exist, respondents must fully explain the basis for the exception and how any correlating risk will be mitigated. In addition to the mandatory representation included as Attachment b, respondents must include the following statement within the Compliance section (with the applicable answer checked): <p>“[Company Name] represents that it <input type="checkbox"/> will, <input type="checkbox"/> will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation.”</p> <ul style="list-style-type: none"> ✓ Note: If your company will provide covered telecommunications equipment or services, please contact S2MARTS@nstxl.org for additional mandatory disclosures that must be completed & submitted with your response (at least 72 hours in advance of the response deadline).
Organizational Conflicts of Interest (OCI)	<ul style="list-style-type: none"> All responses must disclose and address potential conflicts of interest and any proposed mitigation If Organizational Conflicts of Interests (OCI's) are not present, respondents must include a statement within the Technical Volume that no OCI's are present.
Task Description Document/	<ul style="list-style-type: none"> Provide a Task Description Document (TDD) outlining the project tasks to be performed along with schedule milestones and delivery dates required for successful completion.

Statement of Work	<ul style="list-style-type: none"> • It is anticipated that, if selected, the proposed TDD will be incorporated into the resultant prototype-level Project Order, similar to a Statement of Work (SOW). • Respondents are encouraged to be concise but thorough when outlining their TDD/SOW. The TDD/SOW may be submitted as an appendix or a separate file as part of the proposal.
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5. Contents of Pricing Response

Note: The Government reserves the right to seek additional detail related to pricing if a conclusive fair & reasonable determination cannot be achieved. Respondents are encouraged to provide thorough & detailed responses (to the maximum extent practicable) to reduce likelihood of schedule delays and increase the Government’s understanding of the proposed concept.

TOPIC	INSTRUCTIONS
Price Breakdown	<ul style="list-style-type: none"> • Delineate key pricing components and show clear traceability to the phases and/or milestones of the Technical Response. At a minimum, key pricing components include: <ul style="list-style-type: none"> – Labor Total(s), Other Direct Costs/Material Total(s), any license prices/fees, and subcontractor/vendor/sub-performer price(s). • Data should must be organized & clearly identified by technical objective, milestone, and/or phase proposed (if phasing is applicable).
Supporting Narrative	<ul style="list-style-type: none"> • Include a brief narrative that explains your pricing structure and maps the proposed prices to the solution’s technical approach.
Payable Milestone Schedule	<ul style="list-style-type: none"> • The overall total price should be divided among severable increments that align to a proposed milestone payment schedule. Milestones are not required to match actual expenditures but should realistically align to the effort expended or products delivered. <p>If assistance is needed, please visit the NSTXL Members portal for template support or contact our team.</p>
Innovation & Scalability <i>(if applicable)</i>	<ul style="list-style-type: none"> • Any additional features or beneficial capabilities that extend beyond the currently requested technical objectives shall be separately priced for the Government’s consideration.
Price Impacts of Data Assertions <i>(if applicable)</i>	<ul style="list-style-type: none"> • If limited or restricted rights are being asserted within the response, provide a table that includes prices if the Government elects to purchase increased level of rights.
Supporting Information	<ul style="list-style-type: none"> • Inclusion of supporting information, such as a Basis of Estimate, may substantially expedite evaluation of your response.

F. Solution Review & Assessment

Compliant responses will be evaluated with consideration given to:

**Demonstrated understanding and overall technical merit of the response;
Feasibility of implementation; and,
Total project risk (related to technical focus areas, price, schedule and/or compliance)**

- The Government will evaluate the degree to which the proposed solution provides a thorough, flexible, and sound approach in response to the prototype technical objectives. While the technology objectives are of significant importance, responses will be considered as a whole.
- The Government will select the prototype-level performer and award this project, via NSTXL, to the respondent(s) whose solution is assessed to be the most advantageous to the Government, when price, schedule, technical potential, level of data rights, and other factors are considered. In its sole discretion, the Government reserves the right to award to a respondent that does not meet all the requirements of the RFS.
- The Government reserves the right to reject a submission and deem it ineligible for consideration if the response is incomplete and/or does not clearly provide the requested information.
- Debriefings will not be provided.

G. Additional Project Information

- The Government intends to award multiple Other Transaction Agreements as a result of this RFS. The Government also reserves the right to not select any of the solutions proposed.
- Acceptable responses not selected for the immediate award will be retained by NSTXL & the Government for possible future execution and funding. The non-selected proposals will be considered as viable alternatives for up to 36 months. If a proposal (that was not previously selected) is determined to be a suitable alternative, the company will be contacted to discuss any proposal updates and details of a subsequent project award.
 - Respondents whose proposals are not selected for the initial award shall not contact the Government or NSTXL to inquire about the status of any ongoing effort as it relates to the likelihood of their company being selected as a future alternative.
- The United States Navy, specifically Naval Surface Warfare Center, Crane Division, maintains release authority on any and all publications or press releases related to this prototype project.
- Unsuccessful respondents will be notified by NSTXL, however, debriefings for this project will not be provided.
- Certain types of information submitted during the RFS and award process of an OT are exempt from disclosure requirements of 5 U.S.C. §552 (the Freedom of Information Act or FOIA) for a period of five years from the date the Department receives the information. It is recommended that respondents mark business plans and technical information that are to be protected for five years from FOIA disclosure with a legend identifying the documents as being submitted on a business confidential basis.
- No classified data shall be submitted within the proposal. To the extent that the project involves DoD controlled unclassified information, respondents must comply with DoDI 8582.01 and DoDM 5200.01 Volume 4. Respondents must implement the security requirements in NIST SP 800-171 for safeguarding the unclassified internal information system; and must report any cyber incidents that affect the controlled unclassified information directly to DoD at <https://dibnet.dod.mil>.