Strategic & Spectrum Missions Advanced Resilient Trusted Systems (S²MARTS)
Request for Solutions (RFS)

in support of

Microelectronics Commons (The Commons)

Project No. 22-16

A. OPPORTUNITY OVERVIEW

Project Title	Microelectronics Commons
Project Sponsor	Naval Surface Warfare Center (NSWC), Crane Division
Contracting Activity	Naval Surface Warfare Center (NSWC), Crane Division
Questions Deadline	N/A
Response Deadline	28 February 2023 at 12:00 PM EST
Anticipated Project Budget	First year $350,000,000/yr. (Fiscal Year (FY) 2023) Years 2-5 $320,000,000/yr. (FY 2024-FY 2027). Total Project Value of $1.63 Billion
Resultant Award Type	Prototype Other Transaction Agreement (10 U.S.C. § 4022)

All respondents must be active NSTXL members.

B. PROTOTYPE PROJECT DETAIL

1. **Authority:** 10 U.S.C. § 4022, "Authority of the Department of Defense to Carry Out Certain Prototype Projects"

2. **Project Background and Current Capability:**

Microelectronics Commons is a CHIPS and Science Act-funded national network for onshore, microelectronics hardware prototyping, lab-to-fab transition of semiconductor technologies and semiconductor workforce training. Commons complements other CHIPS efforts, such as the National Semiconductor Technology Center (NSTC), and will support infrastructure (physical, digital, and human) required for microelectronics prototyping across up to six DoD-critical technology areas while serving National economic and security objectives. By bringing key entities together across regions to solve these microelectronics hardware prototyping challenges, collaborations and connections required for a vibrant lab-to-fab prototyping ecosystem will be established through the Commons. The resulting infrastructure and

collaborations across the ecosystem, supported by CHIPS appropriations, are intended to provide a fertile foundation for future innovation and on-shore manufacturing and to serve as an asset for USG and commercial prototyping needs.

There is a need for domestic prototyping capability, including infrastructure, to accelerate technology demonstration by enabling materials, processes, devices, and architectural designs to be developed and quickly ported and re-characterized as they are transitioned from university or other R&D laboratory facilities to small-volume prototyping and then scaled up for large-scale prototyping, fabrication and production. Due to the complexity and market value of today's integrated microelectronic (ME) systems and the lack of adequate on-shore prototyping in which intellectual property (IP) can be protected, there is an urgent need to establish a network of domestic prototyping facilities to demonstrate, at-scale, the system-level benefits of innovations in microelectronics materials, processes, devices, and architectural designs. Demonstrating at-scale commercial viability is required to close the gap between university, small business and other laboratory innovations and marketplace adoption. However, at-scale prototyping is high-risk, expensive and often not readily available at scale for other than large and established companies. As a result, small and mid-size companies and universities have a great difficulty bridging the gap between research ideas and translation of those ideas into microelectronics hardware prototypes. In particular, prototyping capabilities for six technology areas that are important to the Department of Defense (DoD) will be supported with seed projects in order to partially offset prototyping facility operating costs and to give these facilities experience in supporting outside users. These areas include secure edge/Internet of Things (IoT) computing, 5G/6G technology, artificial intelligence hardware, quantum technology, electronic warfare, and commercial leap ahead technologies. While each is important to the DoD, it is also likely that these areas may have substantial dual-use marketability. By definition, a prototype developed through an OTA may include a physical or virtual model used to evaluate the technical or manufacturing feasibility or military utility of a particular technology or process, concept, end item, or system.

Research Universities, Start-ups have facilities for Lab prototyping but face barriers to Technology Demonstration.

Core Facilities or Foundries/Fabs provide access to early stage Fab prototyping.

Microelectronics Commons aims to enable lab-to-fab prototyping– evolve microelectronics laboratory prototyping to fabrication prototyping – in domestic facilities.

Currently, significant barriers exist in the domestic ecosystem for small and mid-size businesses, start-ups, entrepreneurs, and universities to conduct microelectronics prototyping and transition technology to large-scale commercial foundries. Major barriers include:

a. Lack of access to existing 200 mm and 300-mm. fabs for lab-to-fab prototyping of Silicon-based technologies; lack of access to 150 mm fabs for compound semiconductor technologies

b. High capital costs for process and metrology tooling to support manufacturing of ME technologies.

c. High Intellectual Property (IP) and Electronic Design Automation (EDA) design license costs.

d. Lack of domestic access to chip carriers, and packaging materials to support integration of electronics including high power electronics, photonic integrated circuits (ICs), radio frequency (RF), low loss electronics, and heterogeneous integration.

e. Misalignment of nontraditional defense contractors with existing government processes.

f. Lack of a professional, fulltime workforce with the talent and expertise to operate and maintain small-to-large scale prototyping facilities - to include novel materials and requiring new tools and equipment. – and to support technology transition.

g. Lack of federated infrastructure investment program.

Microelectronics Commons is comprised of Regional Hubs, Cores, and a Consortium Manager. A Hub is a network of regional entities with lab prototyping capabilities and sources of Microelectronics talent for onshore, lab-to-fab transition of semiconductor technologies. Hub composition may include Universities, startups, incubators, Federally Funded Research and Development Centers (FFRDCs), DoD Labs, Department of Energy (DoE) Labs, semiconductor companies, Defense Industrial Base (DIB) companies, and any entity that adds value to the network. It is anticipated that entities outside of a Region may need to be part of the Hub in order for the Regional Hub to be successful. With regards to Hub composition, the technical capabilities of the Hub is the priority. Hubs have the flexibility to bring in members from any region to be successful in their lab-to-fab efforts. The goal of the Commons is to connect regional organizations through the Hub to accelerate lab-to-fab prototyping based on proximity and to strengthen local economies through a workforce that supports those regions. Achieving that goal may require capabilities external to a Region; i.e., it is not expected that Regional Hubs can be fully self-contained.

Hubs will have the flexibility to incorporate a workforce development approach into their Hub model that is tailored to the needs of their regional ecosystem. A holistic approach to developing Hubs' semiconductor talent pipeline is encouraged as is the consideration of partners such as community colleges, primarily undergraduate institutions (PUIs), historically black colleges and universities (HBCUs), and minority serving institutions (MSIs). Ultimately, Hubs should develop a workforce that can support current and future efforts to accelerate lab-to-fab prototyping.

Hub facilities typically include $\leq$100-millimeter (mm) and $\leq$200-mm tooling for compound semiconductor and silicon-based technologies, respectively. Hubs can also generate and mature prototype candidates for Cores to scale up for subsequent potential selection by NSTC and/or industrial microelectronics companies – fabless or integrated device manufacturers (IDMs) – for commercialization. The role of the Regional Hubs is to connect researchers and designers to prototyping capabilities targeted to regional strengths in the Hub's technical topic areas. As previously stated, it is anticipated that entities outside of a region may be required in order for the Hub to be successful. Finally, Hubs will be centers of expertise for one or more of the six DoD technology areas, as well as other tech areas they deem appropriate. Hubs that specialize in specific new approaches to types of logic/memory/analog/RF/photonics/ power technologies will also need specialized equipment, materials, processes, tools, and specialized staff expertise.

Cores are fabs/foundries - manufacturing facilities where semiconductor devices are manufactured – and can be existing or new facilities, that have scalable capacity for

prototyping beyond what the regional Hubs can provide for and are available for use by innovators that run the gamut from university and small business up to large industrial concerns. Cores typically have 300-mm capabilities for silicon-based technologies (other sizes are technology appropriate) and are facilities that can demonstrate prototypes with the volume and characteristics required to ensure reduced risk for manufacturing. Cores serve a dual function: First, they serve to further complement and advance the work of the regional Hubs; i.e., they are integral to the Hubs themselves. For example, they provide capabilities at ≥200 mm wafer fab for Silicon CMOS-compatible technologies and ≥100 mm wafer fab for compound semiconductors. Second, they serve to engage with commercial fabs and better align Regional Hubs to commercial processes to facilitate transition of technologies. As such, Cores are an integral part of Hubs, and proposals from stand-alone Cores will not be accepted.

Cores may be Hub Leads or Hub Members. To achieve maximum flexibility in Hub-Core relationships, Cores may also be connected to Hubs via fee for service agreements. If Cores are Hub Members or Leads, they may still provide services to other Hubs, of which they are not a formal member, through fee for service agreements. Cores do not need to be geographically co-located with or in close proximity to the Hubs. If a Core is a Hub Lead, all success criteria of a Hub must be met. If a Core is a Hub member or the Hub will access a Core that is not a formal member of their Hub, the Hub proposal must identify the arrangement with the Core per Success Criteria i.

The National Security Technology Accelerator (NSTXL), is the Consortium Manager with the role of administering the Microelectronics Commons program. NSTXL will also facilitate teaming and convene the Microelectronics Commons Advisory Board. Hubs will have representation on this Advisory Board, which will collectively make technical priority recommendations to the DoD on a quarterly basis.

Following Hub selection, prototype projects that the Hubs will execute will be competitively selected. Annually, a separate call for projects will be issued to Hubs for these prototype project awards. These projects will 1) support operational expenditures such as tooling maintenance and staff, 2) support additional infrastructure needed for successful prototyping as the Hubs mature, 3) facilitate capacity increase of existing infrastructure through, for example, support for required staffing, 4) develop talent and technologies in parallel, and 5) provide challenges for Hubs and Cores to collaboratively solve, incentivizing the collaboration required for Cores to better align Hubs with commercial processes to facilitate transition of technologies. This better alignment will enable Hubs to better support the broader base of researchers and designers.

3. Desired End-State and Success Criteria:

The end-state goal is a national network of regional innovation Hubs collaborating with Cores for lab-to-fab transition and semiconductor workforce training. This network is ultimately intended to be a vital ecosystem with robust infrastructure and partnerships required to address critical DoD technology needs as well serve as an asset for other USG and US commercial microelectronics prototyping needs. Each Hub will develop an innovative Hub model and a 5-Year plan to meet the objectives and/or requirements.

a. Identifies and develops required resources for Hub member access to infrastructure, specialized laboratory to fabrication (“lab-to-fab”) equipment and technical expertise at existing or upgraded prototyping facilities; provides, including through existing facility augmentation, the required advanced prototyping tool and process capability (typically ≤200-mm tooling for silicon based technologies and ≤100-mm tooling for compound semiconductor technologies). That is, infrastructure such as tools, equipment, materials, personnel, wafer

brokerage, on-going workforce development and training, etc. that are required for successful prototyping will be considered as part of Hub proposals. All initial Hub members, existing resources, and additional resources needed must be identified.

b. Develops partnering arrangements with domestic Core facilities that collaborate with Hubs to better align Hubs with commercial processes to facilitate technology transition and provide key capabilities that are required to demonstrate prototypes with the volume and characteristics required to ensure reduced risk for manufacturing production; these facilities typically include 300-mm and 200-mm tooling for silicon based technologies and ≥100-mm tooling for compound semiconductor technologies. All initial Core members of the Hub, existing resources, and additional resources needed must be identified.

c. Financially sustainable without continued direct DoD investments; establishes a plan for transition from DoD support at the end of the Commons to a fully self-supporting model that includes supporting operation and maintenance costs. All existing sources of support and planned future sources of support must be identified.

d. Reduces barriers to innovation listed as a-f in Section B.2; reducing barriers includes developing shared resource arrangements. All existing resources and needed resources to reduce these barriers must be identified.

e. Enhances the existing domestic ME infrastructure. All existing resources and needed resources to enhance the existing domestic ME infrastructure must be identified.

f. Fosters a pipeline of innovative ideas and talent residing in university labs and small and mid-size business research and development teams. All existing workforce development resources and needed resources must be identified. Specific areas of the Hub's talent pipeline that will be addressed must be identified.

g. Leverages regional strengths. All existing resources and capabilities of the proposed Regional Hub must be identified.

h. Addresses DoD and commercial needs and requirements across one or more of six technology areas: secure edge/IoT computing, 5G/6G technology, artificial intelligence hardware, quantum technology, electronic warfare, and commercial leap ahead technologies in accordance with the Technical Guidance (see Section 7c). All existing capabilities and proposed expanded capabilities of the Hub to support one or more of the six technology areas must be identified. If the Hub will specialize in technical areas in addition to one of those six key technical areas, all existing capabilities and proposed expanded capabilities of the Hub to support those additional areas must be identified.

i. Develops equitable partnering arrangements among Hub members, including IP sharing and agreements, Hub project proposal vetting processes and Hub representation on the Microelectronics Commons Advisory Board—an advisory board comprised of DoD, other U.S. Government (USG), commercial, and Hub representation for inputs into priority technology gaps and industry trends.

j. Establishes an access model for prototyping facilities which details the pathways for outside users to access the resulting innovation Hubs, which include Hub-Core partnerships, to go from prototype idea to full scale foundry production; access model should include NATO, QUAD, AUKUS users and other security partners as determined by DoD.

In FY 2023, up to nine Hubs will be selected based on the innovative Hub models and objectives discussed above. In FY 2023-FY 2027, after Hub selection, individual Hubs will compete with all Hubs for project awards. These annual project awards may include

infrastructure (physical, digital, and human) required to accomplish the proposed prototypes. Priority technology gaps to be addressed by the project proposals, within the six technology areas, will be selected by the USG and may use inputs from 1) Microelectronics Commons Advisory Board (which will include a member from each Hub), and 2) USG requests for identification of priority technology gaps from Hub proposers.

In addition to Hubs, a Microelectronics Commons-wide research infrastructure with the below technical objectives:

a. Identifies and develops a 5-Year Intellectual Property (IP) infrastructure that would be accessible to all Hub leads and Hub membership.

b. Identifies and develops a 5-Year Electronic Design Automation (EDA) tools infrastructure that would be accessible to all Hub leads and Hub membership.

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 are 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.

4. Project Deliverables:

No.	Title	Description	Frequency	Delivery Method
1	Hub Model	A data package outlining detailed membership and operations/processes of the Hub to include, but not limited to, the project proposal vetting process and new Hub membership process. The model shall include metrics capable of assessing degrees of success at various levels of prototyping across the domestic prototyping ecosystem.	At time of award. Iterative update to the model should be submitted no later than 3 months from project award; annually thereafter.	Electronic submission, encryption may be required.

No.	Title	Description	Frequency	Delivery Method
2	Project Proposal Submissions	Submit project proposals supporting one or more of the six technology areas in response to annual call for projects.	First proposal/set of proposals to be submitted no later than 1 month from project award; second proposal/set of proposals to be submitted no later than 7 months from project award; annually thereafter.	Electronic submission, encryption may be required.
3	Hub Meetings	The Hub Lead shall conduct Hub meetings with all Hub members to discuss details of any efforts and processes executed in support of this program.	First meeting to be held no later than 1 month from project award; annually thereafter. Meeting minutes shall be submitted no later than 7 days after the monthly meeting.	Meetings may be held virtually. Meeting minutes may be submitted by electronic submission; encryption may be required.
4	Status meeting with assigned USG personnel	Hub Leads and Hub member representatives shall meet with assigned USG personnel for status updates to include details of any efforts and processes executed in support of this program.	First meeting to be held no later than 1 month from project award; up to weekly thereafter.	Meetings may be held virtually.
5	Microelectronics Commons Advisory Board Meeting	A Microelectronics Commons Advisory Board will consist of USG personnel, industry representative and Hub representatives. USG may request identification of priority technology gaps across the technology areas.	First meeting to be held no later than 6 months from project award; quarterly thereafter.	Meetings may be held in person or virtually as directed by the USG.

No.	Title	Description	Frequency	Delivery Method
6	Formal package for USG technical review	A formal package, as identified in the approved Work Breakdown Structure (WBS), shall include details of any efforts and processes executed in support of this program and documents the execution structure, operations, and metrics. The data provided shall be at the maturity level presented in the Integrated Master Schedule (IMS).	30 days prior to biannual program reviews. For the final data package (summary report) and annual review, the summary report and annual review data shall be submitted NLT 120 days prior to program conclusion.	Electronic submission, encryption may be required.
7	Biannual reviews	Government technical review	First to be conducted no later than 7 months from project award; biannually thereafter.	Meetings may be held in person or virtually as directed by USG.
8	Interim summary reports	The summary report shall include the completion of all open action items.	Within 30 days after completion of the annual review. The final annual summary report shall be submitted within 30 days after completion of the annual review, with all open action items completed.	Electronic submission; encryption may be required.
9	Metrics identification and collection plan	A metrics identification and collection plan with methodologies for data collection; metrics collection schedule, complete with any phased metrics to be established; data/metric maximum/minimum parameters (with actions to be taken when those maximums/minimums are observed and explanations stating why each metric data type is important).	First to be submitted no later than 3 months from project award; annually thereafter.	Electronic submission; encryption may be required.
10	EDA Tools	Hub Leads will submit Intellectual Property (IP) and Electronic Design Automation (EDA) Tools needed	At Award, Annually after initial award	Electronic, submission, encryption may be required

No.	Title	Description	Frequency	Delivery Method
11	CSWF Baseline	DoD Manual 8571.01M Cyber Security Certifications and Requirements. New Hire information for tasking requiring Cyber IT/Cybersecurity functions shall be submitted to the AOR at least 7 days prior to employee beginning performance of any Cyber IT/Cybersecuirty functions on this tasking	7 days prior to performance / As Needed	Electronic submission, Excel document, encryption may be required

5. Anticipated Budget

First year $350,000,000/yr. (FY 2023); Years 2-5 $320,000,000/yr. (FY 2024-FY 2027); total project value of $1.63 billion (nine separate transactions anticipated in FY 2023 and multiple transactions <$100M each in subsequent fiscal years).

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.

6. Anticipated Number of Awards

The Government intends to award up to nine Other Transaction Agreement(s) on a fixed-price basis as a result of this RFS. Please note, fewer than nine or more than nine award(s) may be issued if determined to be in the Government's best interest. 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.

7. Supporting Attachments:

a. Mandatory Section 889 Prohibition and Reporting

b. Mandatory Section 889 Verification and Representation

c. Technical Guidance

C. SECURITY INFORMATION AND RESTRICTIONS

1. This RFS, to include attachments, has been released in accordance with Distribution Statement A: approved for public release.

2. Security classification and other restrictions:

a. Respondents should state their current active Facility Clearance level at time of submission. Clearance is not required at time of Hub awards, but individual prototypes may require up to Top Secret on future prototype awards.

b. Respondents are not required to be a U.S. owned company to propose on this effort but must be located within the U.S.

c. The Performer is prohibited from providing to the Government any equipment, systems, or services from Chinese, Russian, Iranian, or N. Korean Foreign Nationals. Additional restrictions may be added at a later date.

d. Compliance with International Traffic in Arms Regulation (22 C.F.R. §§ 120-130) may be required on a per project basis.

- 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).

e. A DD Form 254 will be executed and flowed down to the selected performer(s) at the **Sub Performer** level for future prototype awards as applicable.

f. 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.

g. 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:

a. DoDI 8582.01, “Security of Non-DoD Information Systems Processing Unclassified Non-DoD Information” and DoDI 5200.48, “Controlled Unclassified Information.”

b. NIST SP 800-171, “Protecting Controlled Unclassified Information in Non-Federal Information Systems and Organizations”

c. 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. Cyber Security Workforce (CSWF) Qualifications and Reporting Tasking outlined in this RFS may require personnel to perform Cyber IT/Cybersecurity functions, therefore shall meet the requirements of DoD Manual 8570.01M Cyber Security Certifications and Requirements (https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodm/857001m.pdf?ver=2017-04-17-134634-203). The Performer shall ensure that personnel who are categorized as working within the DoD IA workforce meet the appropriate requirements of DoD Manual 8570.01M. The performer shall provide a list of all personnel assigned with personnel performing Cyber IT/Cybersecurity functions as a part of the monthly Performer’s Progress, Status, and Management Report (Deliverable 11 identified in Section B.4 above). The report shall include employee name, list of applicable Cyber IT/Cybersecurity function category/level required certifications and fulfillment status and CL status. New hire information for tasking requiring Cyber IT/Cybersecurity functions shall be submitted to the Action Officer Representative (AOR) at least 7 days prior to employee beginning performance of any Cyber IT/Cybersecurity functions on this tasking. New hire information shall include name, list of applicable Cyber IT/Cybersecurity functions category/level, required certifications and fulfillment status to include a copy of the certification documentation. Performers are encouraged to provide new hire information to ensure Government concurrence with qualification to perform Cyber IT/Cybersecurity functions. Per regulations, Performer personnel who do not have proper and current certifications shall be denied access to DoD information systems for the purpose of performing information assurance functions.” and therefore may not be allowed to perform nor charge under this Agreement.

D. DESIRED LEVEL OF DATA RIGHTS

☒ 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 5 years but may be negotiated and 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.

E. PROCESS OVERVIEW AND INSTRUCTIONS

1. Submission Process for Questions and 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 may 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.

In addition to the Technical and Price proposal, offerors must submit a separate proposal for potential Candidate Prototype Projects. This proposal will identify three to five projects accompanied by a one-to-two-page project summary and Rough Order of Magnitude (ROM) by Hub member/subcontractor for each proposed prototype project.

2. Proposal Structure & Assessment Methodology

S²MARTS	(1) Initial Review		(2) Selection
ANTICIPATED TIMELINE*	**Due:** 2/28/2023,12:00PM ET		**Award:** 04/2023
TECHNICAL RESPONSE	**Technical Proposal – Regional Innovation Hubs** **Page Limit**: 15 •One-page company and portfolio overview of the Hub Lead only •One to two pages summarizing the proposed project team •Twelve to thirteen pages of technical details on the proposed capability **Format:** MS Word and/or Adobe PDF		**Award of Prototype Level Project**
PRICE	**Standard Price Proposal to Technical Response** **Page Limit: 5** •Total Cost •Cost Breakdown by deliverables Format: MS Excel for pricing information; MS Word and/or Adobe PDF for supporting narratives		
CANDIDATE PROTOTYPE PROJECTS	**Written Proposal – Candidate Prototype Projects** **Page Limit**: **20** •Three to five projects •One to two pages project summary per project •One to two pages ROM (by Hub member/subcontractor) per project Format: MS Word and/or Adobe PDF		

**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-up question session 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:

1) Company name
2) Confirmation of active NSTXL membership (e.g., "Verified NSTXL Member")
    i. *Reminder: Contact **membership@nstxl.org** with any questions or requests for confirmation.*
3) Commercial and Government Entity (CAGE) Code (if available)
4) Level of facility clearance (if available)
5) Street address
6) Primary and secondary point of contacts (with title, email address and phone number)
7) Government Cognizant Security Office (CSO) responsible for monitoring the company's National Industrial Security Program Standards compliance (with address, email address and phone number)
8) Company's security officer point of contact (with title, email address and phone number)
9) All locations where work will be performed
10) Business size
11) Business type (Traditional or Non-Traditional)
12) Status of U.S. ownership
13) If the proposed approach requires any exceptions to this RFS
14) If the proposed approach addressed all RFS objectives or a partial subset of the RFS objectives
15) The applicable 10 U.S.C. § 4022 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.

What is a non-traditional 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 & Project Schedule	• Respondents must identify significant assumptions that influenced technical aspects of the proposed solution and/or any assumptions that may affect technical performance in the future • 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 S^{2}MARTS Performer's Agreement available within the NSTXL Members Portal (https://nstxl.org).
Team Overview	• Identify each subcontractor and include the following: – 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 *Reminder: The responsibility to provide ample proof regarding **non-traditional participation to a significant extent** lies with the respondent and has a direct correlation to award eligibility.*
Level of Data Rights Proposed	• 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	• Provide rationale to support the specific eligibility condition that permits award of an Other Transaction to the proposed performer/team. • The responsibility to provide ample proof regarding *non-traditional defense contractor participation to a significant extent*; *small business or non-traditional defense contractor status; or any cost sharing arrangement* lies with the respondent and has a direct correlation to award eligibility. **Questions regarding eligibility?** Contact NSTXL and/or review 10 U.S.C. 4022 and the DoD Other Transaction Guide for additional information.
Foreign Owned, Controlled, or Influenced (FOCI) Information **(if applicable)**	• Identify if the primary performer and/or any sub-performers (to include vendors, suppliers, subcontractors, and teaming partners) are considered under FOCI. **Supporting documentation may include but is not limited to:** 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.
Government Furnished Support	• 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	• Respondents must address each mandatory restriction/requirement identified within this RFS and explain how each regulation or standard is currently or will be met. ✓ **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): "[Company Name] represents that it **[ ] will, [ ] 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." ✓ **Note:** If your company **will** provide covered telecommunications equipment or services, please contact S2MARTS@nstxl.org for additional mandatory disclosures that must be completed and submitted with your response (at least 72 hours in advance of the response deadline).
Organizational Conflicts of Interest (OCI)	• All responses must disclose and address potential conflicts of interest and any proposed mitigation. • If OCIs are not present, respondents must include a statement within the Technical Volume that no OCIs are present.
Task Description Document/ Statement of Work	• Provide a Task Description Document (TDD) outlining the project tasks to be performed along with schedule milestones and delivery dates required for successful completion. • 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.

5. Contents of Pricing Response

Note: The Government reserves the right to seek additional detail related to pricing if a conclusive fair and reasonable determination cannot be achieved. Respondents are encouraged to provide thorough and 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	• 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: – Labor total(s), other direct costs such as material costs and/or operating costs, any license prices/fees, and subcontractor/vendor/sub-performer prices(s). • Data should must be organized and clearly identified by technical objective, milestone, and/or phase proposed (if phasing is applicable).
Supporting Narrative	• Include a brief narrative that explains your pricing structure and maps the proposed prices to the solution's technical approach.
Payable Milestone Schedule	• 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. If assistance is needed, please contact our team.
Innovation and Scalability *(if applicable)*	• 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 *(if applicable)*	• 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	• Inclusion of supporting information, such as a Basis of Estimate, may substantially expedite evaluation of your response.

F. Solution Review and 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)

a. 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.

b. 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. The Government reserves the right to award to a respondent that does not meet all the requirements of the RFS.

c. 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.

G. Additional Project Information

a. Acceptable responses not selected for the immediate award will be retained by NSTXL and 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.

b. If resource-sharing is proposed in accordance with 10 U.S.C. § 4022(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.

c. 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.

d. Unsuccessful respondents will be notified by NSTXL; however, debriefings for this project will not be provided.

e. 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 5 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 5 years from FOIA disclosure with a legend identifying the documents as being submitted on a business confidential basis.

f. 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 DoDI 5200.48. 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.