

PUBLIC WIRELESS SUPPLY CHAIN INNOVATION FUND

**NOFO 3 “Software Solutions for Industry Verticals
and Integration Automation” Information Session**

January 10, 2025



Agenda

1. Welcome
2. Overview of the Program and Third NOFO
3. Technical Overview
4. NOFO Response Best Practices and Guidelines
5. Moderated Audience Q&A
6. Closing

Welcome



Overview of Program and Third Notice of Funding Opportunity (NOFO 3)

Amanda Toman, Director
Richard Upchurch, Policy and Advisory Committee Lead



Program Overview

\$1.5 billion competitive grant program authorized by Section 9202(a)(1) of the *FY21 NDAA* and appropriated by Div. A, Section 106 of the *CHIPS and Science Act of 2022* over 10-year period.

Vision

Develop a competitive global ecosystem of trusted telecommunications vendors that are fielding open and interoperable network equipment domestically and overseas.

Mission

Implement a grant program that accelerates the adoption and deployment of open radio access networks through investments in interoperability, hardware maturity, security, and supply chain diversity.

FY21 NDAA Program Objectives

1. Promoting and deploying open technology
2. Accelerating commercial deployments of open, interoperable equipment
3. Promoting and deploying compatibility of new 5G equipment with future open, interoperable equipment
4. Managing integration of multi-vendor network environments
5. Identifying objective criteria to define equipment as compliant with open standards
6. Promoting and deploying security features
7. Promoting and deploying network virtualization

SRFA 1: Industry Vertical Solutions

Develop software solutions that leverage data made available through Open RAN interfaces and/or that capitalize on Open RAN-specific innovations, such as the RAN Intelligent Controller (RIC), to generate energy efficiencies, cost savings, productivity gains, or other value for industry verticals (e.g., utilities, mining, manufacturing, unmanned aviation).

Funding Range	\$24,000,000-\$50,000,000
Eligibility	Applicant is capable of developing and commercializing a software solution. Applicant or at least one partner must hold Ultimate Beneficial Ownership (UBO) in the U.S.
Partnership Requirement	Applicant must partner with one or more entities and demonstrate that they and their partners collectively can: 1) design and integrate software solutions across the network, 2) provide vertical-specific expertise and requirements, and 3) operate a network.
Period of Performance	Not to exceed thirty-six (36) months
Place of Performance	Project activities may be performed in the United States or overseas, excluding certain covered nations as described in Section 6.1.3. and Appendix A.
Cost Share Requirement	Minimum cost share of 30 percent of total project cost.

SRFA 2: Integration Automation Solutions

Develop software solutions that reduce the cost and complexity of multi-vendor integration through automation.

Funding Range	\$9,000,000-\$18,000,000
Eligibility	Applicant is capable of developing and commercializing Radio Access Network (RAN) integration automation prototypes. Applicant or at least one partner must hold Ultimate Beneficial Ownership (UBO) in the U.S.
Partnership Requirement	Applicants must partner with a minimum of three (3) different RAN suppliers. The applicant must demonstrate that the applicant and partners collectively are capable of designing, developing, and testing integration automation prototypes
Period of Performance	Not to exceed eighteen (18) months
Place of Performance	Project activities may be performed in the United States or overseas, excluding certain covered nations as described in Section 6.1.3. and Appendix A.
Cost Share Requirement	Minimum cost share of 20 percent of total project cost.

Eligibility, Partnerships, and Place of Performance

	SRFA 1: Industry Vertical Solutions	SRFA 2: Integration Automation Solutions
Eligibility and Partnerships	- Applicant must be capable of developing, integrating, and commercially selling and/or deploying software solutions that leverage data and/or features made accessible through Open RAN interfaces for use by vertical industry customers. - Applicant must partner with at least one entity in the value chain, demonstrated through a Letter of Partnership Intent. - Collectively, applicant and partner(s) must fulfill software, vertical, and network functions.	- Applicant must be capable of developing and commercially selling and/or deploying RAN network integration automation prototypes. - Applicant must partner with at least three (3) different RAN suppliers, demonstrated through a Letter of Partnership Intent.
Place of Performance	Applicant and partner(s) can be based in the U.S. or abroad, but the applicant, at least one partner, or both must hold Ultimate Beneficial Ownership (UBO) in the U.S.	

NTIA will evaluate an application's contribution to U.S. economic security, including work conducted in the U.S., in Merit Review.

Letter of Partnership Intent

Each partnership should be demonstrated through a Letter of Partnership Intent, signed by senior representatives of the applicant and each partner. NTIA will request a more formal demonstration of the partnership post-award.

Letter of Partnership Intent Key Elements (see NOFO Sections 2.4.5 and 3.4.5.)

- A brief explanation of the **form of the partnership**.
- A **demonstrable commercial need** for the technology from perspective of each partner.
- **Resources invested** by all parties.
- A statement that the partner(s) is **committed to executing its roles, responsibilities, and/or commitments**.
- The **proportion of federal funding** that would be utilized by the partner(s) (if applicable).
- **Point of Contact** at each partner organization for any inquiries.

Partnerships Evaluated in Merit Review (see NOFO Sections 2.5 and 3.5)

Application materials should demonstrate:

- That all parties are **committed to project success**, as evidenced by, for example, the **level of project resources committed** by each partner and the **depth of each partner's participation**.
- The partners' ability to work together to create a **market-ready product** and a **commercial need** for the solution, and the ability of each partner to contribute to the **development/demonstration** of the prototype.

Letters of Commitment

Who should submit a Letter of Commitment?

Partners or entities who will be integral to the success of the project, including consultants, sub-recipients, or subcontractors who will be actively executing the activities outlined in the Technical Proposal.

Key Elements

Per section 4.1. 1. (o) of the NOFO, Letters of Commitment **must** include:

- The **entity's role** and **overall level** of participation.
- The **qualifications** of personnel who actively involved.
- The **share of federal funding** for the entity (if applicable).
- Any **voluntary committed cost-share** (if applicable), including what specific services and/or products will be provided for any in-kind match.
- A **Point of Contact** at the entity for any inquiries regarding the Letter of Commitment.
- Additional info if the applicant seeks additional weighting in **Programmatic Review** for facilitating market access and competition

Important Submission Information

- Included letters **do not** count against the Technical Proposal's page limit.
- Letters **must** be signed by a senior representative of the entity on the participating entity's letterhead (see NOFO Section 4.1.1 (o)).
- **Letters of Commitment** are distinct from **Letters of Partnership Intent**.
 - **Letters of Commitment** are not required for entities with which the applicant has signed a Letter of Partnership Intent pursuant to the requirements in Section 2.4.5 (SRFA 1) and Section 3.4.5 (SRFA 2).

Commercial Transition Plan

All applicants must provide details about their plan to commercialize and scale their product after the Period of Performance, including the following:

- **Customer** and **end-market demand**.
- An **assessment** of **market position** and **key competitors**.
- **Deployment plan** specifying possible timing to move from **working prototype** to commercial-scale deployment.
- **Financial plan** outlining benefits across value chain and proposed revenue model
- **Analysis** of project's **commercial risks** and **mitigation strategies**.
- Description of project's benefit to **U.S. economic security**, e.g., contributions to job creation, U.S. economic productivity, U.S. innovation in software development, etc.

Technical Overview



SRFA 1 Technical Overview

- Projects must **develop a multi-vendor prototype** and demonstrate its technical and commercial viability
- Prototype must address an **industry vertical use-case** and be demonstrated in a **field environment** (e.g., utilities, mining, manufacturing, unmanned aviation)
 - Prototype demonstration must employ **End-Points** and meet other requirements in Section 2.4.1 (b)
- Applicant and partner(s) must collectively fulfill the **software, vertical, and network functions**
- At a minimum...
 - Project must **begin** the POP with defined functional requirements
 - Project must **exit** the POP with a working prototype that has been tested to evaluate functionality, effectiveness, and commercial viability
 - 5G Open RAN network configuration to support the solution must be compliant with **3GPP** and **O-RAN Alliance specifications**, as applicable
- Applicant must submit a **Product Security and Cybersecurity Management Plan**

SRFA 2 Technical Overview

- Projects must **develop a prototype** and demonstrate its technical and commercial viability
- Applicant must partner with at least three (3) different RAN suppliers to ensure baseline interoperability
- At a minimum...
 - Prototype must automate integration between an **open RU** from one supplier and an **open DU/CU** from another supplier
 - Project must **begin** the POP with defined functional requirements
 - Project must **exit** the POP with a working prototype that has been tested to evaluate functionality, effectiveness, and commercial viability
 - Network configuration must be compliant with **3GPP** and **O-RAN Alliance specifications**, as applicable
- Applicant must submit a **Product Security and Cybersecurity Management Plan**

NOFO Response Best Practices and Guidelines

Lynn Bagorazzi, Grants Lead



Submitting an Application through Grants.gov

Registering through Grants.gov

1. Register with SAM to receive a Unique Entity Identifier (UEI)
2. Register an account with Grants.gov
3. Add a profile to a Grants.gov account representing a single applicant organization (you will need your organization's UEI)
4. The EBiz POC will receive the request and must authorize the appropriate roles, including the Authorized Representative (AOR)

- Organizations must have an active System for Award Management (SAM) registration and UEI
- Plan accordingly as the SAM registration process may take weeks and is needed to meet submission deadlines.
- An active registration of the designated recipient is required at the time of an award.
- Waivers will not be provided for entities that do not have an active SAM registration.

Submitting an application via Grants.gov

1. Create a Workspace
2. Add participants to the workspace to complete required forms and work on the application together
3. Click the Sign and Submit button on the Manage Workspace page to submit an application. Grants.gov recommends submitting at least 24-48 hours prior to the close date

Important Submission Information

- **APPLICATION DEADLINE:** 11:59 pm (EDT) on March 17, 2025
- NTIA will only accept applications submitted electronically via Grants.gov
- Before you submit, confirm the latest and correct versions of your documents have been uploaded

For additional support on using Grants.gov, please visit: <https://www.grants.gov/web/grants/applicants/apply-for-grants.html>



NOFO 3 Application Requirements

Required Application Documents – Standard Documents
SF-424, Application for Federal Assistance
SF-424A, Budget Information for Non-Construction Programs
SF-424C, Budget Information for Construction Programs (as applicable)
Project/Performance Site Locations Form
CD-511, Certification Regarding Lobbying
SF-LLL, Disclosure of Lobbying Activities (if applicable)
SF-328 Certification Pertaining to Foreign Interests
Budget Narrative and Justification
Indirect Cost Rate Agreement (if applicable)
Technical Proposal
Work Plan
Commercial Transition Plan
Intellectual Property Plan (if applicable)
Product Security and Cybersecurity Management Plan
Letter(s) of Commitment for Consultants, Contracts and Subawards
Letter(s) of Partnership Intent
Resumes of Key Personnel
Domestic Content
Other Materials (Optional)

Lessons from NOFO #2

- **Individual Document Requirements** – do not combine your individual application documents into a single PDF. The individual documents should be separate PDFs except for the Budget Narrative and Justification which needs to remain in Excel.
- **Merit Review Criteria** - The requested information and organization of the applicant's technical response should align with the requested scoring factors. This assists merit reviewers in quickly targeting the content related to the scoring factor.
- **Letters of Commitment and Letters of Partnership** – Each letter must **fully** address the requirements of the NOFO. Failure to do so may create extra steps and require additional communication with applicants in order to obtain a letter that satisfies all required elements.



Construction

Construction is an allowable activity

- Construction is only allowable for SFRA 1 projects
- Any ground disturbance and/or modification to a building or structure greater than 50 years old may require further environmental review.

Examples of eligible construction activities include, but are not limited to, the following:

- ☐ RAN equipment structures, including major tower reinforcement or modifications to the construction of radio towers (e.g., size of tower, tower design, tower foundations, guy wires)
- ☐ Cabinets for radio equipment and power supplies/batteries
- ☐ Radio unit antenna installation
- ☐ Foundation, HVAC, and power infrastructure installation, including installation of cement pad and power infrastructure (i.e., cost of parallel/New 200A service)
- ☐ Radio frequency engineering tasks to ensure radio propagation sufficiently covers the pilot area (i.e., validating that the sweeps are correct)

Important Submission Information

For any construction projects, please submit the following with your application as applicable (NOFO 3 Section 6.4.13):

1. SF-424C, Budget Information for Construction Programs
2. a detailed description of all proposed construction activities
3. the extent of proposed ground disturbance
4. a description of the land uses and natural features at the proposed site and its immediate surroundings
5. maps and photographs



Mandatory Forms: SF 424, SF424-A

A full accounting of matching cost sources and the basis for the valuation must be included in the budget narrative and SF-424A

SECTION C - NON-FEDERAL RESOURCES				
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8.	\$	\$	\$	\$
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	\$	\$	\$	\$

Non-federal cost share amounts must be provided in Section A, B & C of the SF-424A, and exactly match the amounts in the SF-424 and budget narrative

Eligible Cost Share

- There is a 30 percent minimum cost share requirement for SRFA 1 (NOFO 3 Section 2.2.3). SRFA 2 applicants are required to have a 20 percent minimum cost share (NOFO 3 Section 3.2.3)
- Direct costs (e.g., cash, equipment, personnel, and facilities – NOFO 3 Section 4.1.1.h-i)
- Indirect costs (e.g., overhead and management and administrative costs – NOFO 3 Sections 4.1.1.h-i)
- For a proposed cost share to be eligible, the cost must be allowable as a direct cost (2 CFR 200.306 (b) Cost sharing)
- De minimis indirect costs cannot be used as cost share (2 CFR 200.306 (b) (1) Cost sharing)
- Cost share must be expended within the award's period of performance and reported in the Federal Financial Report (SF-425 Section 10 (i) – (k))

Preparing the Budget Narrative and Justification

Per NOFO 3 Section 4.1.1.h, the Budget Narrative and Justification must:

- Support the dollar amounts identified in the SF-424 and SF-424(A)
- Organize costs according to the cost categories in the SF-424(A)
- Provide itemization for each cost and a full description, including the necessity and basis of each charge
- Explain the rationale for the applicant's proposed cost share
- Identify whether the applicant is seeking the 5% market access and competition bonus for small businesses
- Include funding levels consistent with the project scope
- Only reflect allowable costs consistent with the project's scope

Lessons from NOFO #2

- Please ensure correct identification of Subrecipients vs. Contractors as it potentially impacts the calculation of the indirect cost rate, cost share, and market access and competition bonus for small business

Ineligible Costs Include

- Pre-application expenses including previously incurred administrative costs or previously purchased supplies or equipment
- Construction costs for SFRA 2 projects
- Equipment, supplies, and services from vendors associated with ineligible participants per Section 6.1.3 of the NOFO



Applicants Should Ensure Budget Alignment Before Submission

Common Mistakes

- Budgets do not exactly match across the:
 - ☐ SF-424
 - ☐ SF-424A
 - ☐ Budget Narrative and Justification
- The forms do not include the proposed cost-share breakdown
- The budget narrative and justification includes cost categories that do not align with the SF-424A categories
- Total project costs mentioned in the executive summary or other narratives do not align with the budget documents
- Supplies are miscategorized as Equipment

Best Practices

- Follow the instructions in NOFO 3 Section 4.1.1.h regarding each budget category
- Clearly indicate line items that will be funded partially or completely by matching funds, as applicable
- Ensure the latest versions of your budget materials are uploaded, and check over the entire application for cost alignment before submission
- Use the Additional Explanation box in the Instructions and Summary Tab of the Budget Narrative and Justification to identify how it meets the small business definition



Critical Application Elements

Indirect Cost Rate Agreement

- If indirect costs are included in the proposed budget, provide a copy of the approved negotiated agreement if this rate was negotiated with a cognizant Federal audit agency.
- If a successful applicant includes indirect costs in the budget and has not established an indirect cost rate with a cognizant Federal audit agency, the applicant will be required to obtain such a rate.*
- Alternatively - in accordance with 2 C.F.R. § 200.414(f), applicants that do not have a current negotiated (including provisional) indirect cost rate** may elect to charge a de minimis rate of up to 15% of modified total direct costs (MTDC) – must note this election as part of the Budget Narrative and Justification and an Indirect Cost Rate Agreement is not required.

*Section B.06 of the Department of Commerce Financial Assistance General Standard Terms and Conditions, dated October 1, 2024

**Except for those non-Federal entities described in 2 C.F.R. § 200, Appendix VII, D.1.b.

“Subrecipient” vs “Contractor”

- Bottom Line Up Front (BLUF) - A subrecipient is involved in financial assistance activities, and a contractor is involved in procurement.
- Through the recipient, a subrecipient performs work to accomplish a public purpose authorized by law.***
- In other words, a subrecipient performs substantive work on an award project.
- A contractor does not seek to accomplish a public benefit and does not perform substantive work on the project. A contractor is a vendor providing goods or services to directly benefit the recipient.

***31 USC §6303-04; see also 15 CFR §14.25(c) (8)



Submission Requirements

For Applicants with Multiple Projects

- Each SRFA 1 applicant is limited to three (3) applications
- Each SRFA 2 applicant is limited to one (1) application
- Each SFRA 1 application may only contain one proposed project
- Applicants may not submit a combined application for multiple SFRA 1 submissions or a combined SFRA 1 and SFRA 2 submission

Best Practices

- Clearly indicate in the Technical Proposal the specific research focus area and project sub-type(s)
- Name documents so they clearly indicate the contents and project they are associated with



Panel Discussion and Moderated Q&A

Amanda Toman, Director



Moderated Q&A

Today's session is being livestreamed and recorded to post online.

If you would like to ask a question during the audience Q&A, please use one of the standing microphones in either aisle.

If you are unable to access the microphone or prefer to stay seated, please raise your hand, and we will bring a wireless microphone to you.



THANK YOU

Email us at InnovationFund@ntia.gov

