

**NOTICE OF FUNDING OPPORTUNITY (NOFO)**  
**Manufacturing USA Technology Roadmap (MfgTech) Grant Program**

**EXECUTIVE SUMMARY**

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** Manufacturing USA Technology Roadmap (MfgTech) Grant Program
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2021-NIST-MFGTECH-01
- **Assistance Listing (CFDA Number):** 11.619: Arrangements for Interdisciplinary Research Infrastructure
- **Dates:** Full Applications must be received at [Grants.gov](https://www.grants.gov) no later than 11:59 p.m. Eastern Time, August 17, 2021. Applications received after this deadline will not be reviewed or considered. Paper applications will not be accepted.

Applicants should be aware, and factor in their application submission planning, that the Grants.gov system closes periodically for routine maintenance. Applicants should visit [Grants.gov](https://www.grants.gov) for information on any scheduled closures.

NIST expects to complete its review, selection of successful applicants, and award processing by October 2021. NIST expects the earliest start date for awards under this NOFO to be October 2021.

Applicants are strongly urged to read Section IV.2.b., Attachment of Required Application Documents, with great attention. Applicants should carefully follow the instructions and recommendations regarding attachments and use the Download Submitted Forms and Applications feature on [www.grants.gov](https://www.grants.gov) to check that all required attachments were contained in their submission. Applications submitted without the required documents will not pass the Initial Administrative Review.

When developing the submission timeline, please keep in mind that: (1) all applicants are required to have current registrations in the electronic System for Award Management (SAM.gov) and Grants.gov; (2) the free annual registration process in SAM.gov generally takes between three and five business days but can take more than two weeks; and (3) applicants will receive e-mail notifications over a period of up to two business days as the application moves through intermediate systems before the applicant learns via a validation or rejection

notification whether NIST has received the application. (See [Grants.gov](https://www.Grants.gov) for full information on application and notification through Grants.gov). Please note that a federal assistance award cannot be issued if the designated recipient's registration in SAM.gov is not current at the time of the award.

- **Application Submission Address:** Applications must be submitted using Grants.gov.
- **Funding Opportunity Description:** The NIST Manufacturing USA Technology Roadmap (MfgTech) Grant Program is seeking applications from eligible applicants to develop technology roadmaps for promising advanced manufacturing clusters. These grants will establish new or strengthen existing industry-driven consortia that address high-priority research challenges to grow advanced manufacturing in the United States. The emphasis of this NOFO is on technology roadmapping in areas of critical interest to the nation, including technology areas appropriate for potential future Manufacturing USA institutes. See Section I. of this NOFO for the full program description.
- **Anticipated Amounts:** In Fiscal Year 2022 (FY22), NIST anticipates funding individual awards up to \$300,000 each with a project performance period of up to 18 months. The total number of awards will be based on available funds.
- **Funding Instrument:** Cooperative Agreement

**Eligibility:** Eligibility for the program listed in this NOFO is open to all domestic non-Federal entities. Eligible applicants include accredited institutions of higher education; non-profit organizations; for-profit organizations incorporated in the United States (including U.S. territories); and state, local, territorial, and Indian tribal governments. Please note that individuals and unincorporated sole proprietors are not considered “non-Federal entities” and are not eligible to apply under this NOFO.

An eligible organization may work individually or include proposed subrecipients, contractors and/or unfunded collaborators in a project application, effectively forming a team or consortium. Eligible subrecipients are the same types of organizations eligible to be applicants.

Federal entities may participate in teams or consortia as unfunded collaborators, or in other roles allowed by law, consistent with each entity's authorities, policies, and procedures.

An entity may apply only once as a recipient; however, they may participate in any number of proposals as a subrecipient or collaborator.

- **Cost Sharing Requirements:** Non-federal cost share is not required for awards issued pursuant to this NOFO.
- **Public Website, Frequently Asked Questions (FAQs) and Webinar:** NIST has a public website (<https://www.nist.gov/ampo/manufacturing-usa-technology-roadmap-mfgtech-program>) that provides a “Frequently Asked Questions” page, webinar registration, and other information pertaining to this Funding Opportunity.

NIST will hold an informational webinar on June 25, 2021 at 2 PM Eastern Time to provide general information regarding this NOFO, offer general guidance on eligibility requirements, the evaluation criteria, and the review process, in addition to offering the opportunity for the public to ask questions. Proprietary technical questions about specific proposal ideas will not be permitted, and NIST will not critique or provide feedback on any proposal ideas during the webinar or at any time before submission to Grants.gov. There is no cost to attend the webinar, but participants must register in advance by sending email to [manufacturingusa@nist.gov](mailto:manufacturingusa@nist.gov) with “MfgTech Roadmap Webinar” in the subject line. Participation in the webinar is not required and will not be considered in the application review and selection process.

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### **FULL ANNOUNCEMENT TEXT**

#### **I. Program Description**

The statutory authority for the NIST Manufacturing USA Technology Roadmap (MfgTech) Grant Program is 15 U.S.C. § 272 (b) and (c). The Manufacturing USA® program is authorized by 15 U.S.C. § 278s.

#### **1. Background Information**

Manufacturing plays a critical role in the American economy, underpins U.S. innovation, and is essential to national security. The health and performance of the U.S. manufacturing sector is a topic of national interest and concern. “U.S. manufacturing was the Arsenal of Democracy in World War II and must be part of

the Arsenal of American Prosperity today, helping fuel an economic recovery for working families. From the invention of the semiconductor to the creation of the Internet, new engines of economic growth have emerged due to public investments that support research, commercialization, and strong supply chains.”<sup>1</sup> “U.S. leadership in new technologies—from artificial intelligence to biotechnology to computing—is critical to both our future economic competitiveness and our national security.”<sup>2</sup> In the Strategy for American Leadership in Advanced Manufacturing (2018), the National Science and Technology Council (NSTC) noted that “*Rapid advances in technology, in combination with economic forces, are changing the ways products and services are conceived, designed, made, distributed, and supported. ... Manufacturing leadership in emerging markets, exports, and trade not only requires investment in advanced technologies, but the ability to effectively leverage new technologies and platforms across industrial sectors.*”<sup>3</sup>

Substantive improvements in the health, robustness, and innovative capacity of the U.S. advanced manufacturing sector have an unrivaled ability to boost the nation’s global economic competitiveness. For the United States to remain a step ahead of the competition, a thriving cutting-edge manufacturing sector is needed. NSTC recognizes that large-scale consortia and public-private partnerships have the potential to expand regional innovation ecosystems and drive economic growth both within and across regions. These consortia are key to developing and transitioning new manufacturing technologies critical to America’s future competitiveness.<sup>4</sup>

Manufacturing USA<sup>5</sup>, formally established in 2014 and reauthorized in 2019<sup>6</sup>, focuses on advanced manufacturing innovation through a network of manufacturing institutes sponsored by the U.S. Departments of Defense, Energy, and Commerce. Each institute, a public-private partnership, brings together industry, academia, and federal partners within a growing network of advanced manufacturing institutes to increase U.S. manufacturing competitiveness and promote a robust and sustainable national manufacturing R&D infrastructure.

For the purpose of this NOFO, a “*technology roadmap*” is a strategic decision-making tool that identifies challenges, not solutions, and the time frame in which these challenges need to be addressed. Roadmap initiatives foster high-risk/high-reward research, enable the development of transformative tools and

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<sup>1</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/>

<sup>2</sup> Id.

<sup>3</sup> National Science and Technology Council, “Strategy for American Leadership in Advanced Manufacturing” available at <https://www.manufacturing.gov/sites/default/files/2021-06/Advanced-Manufacturing-Strategic-Plan-2018.pdf>. October 2018.

<sup>4</sup> Id. at 27.

<sup>5</sup> <https://www.manufacturingusa.com>

<sup>6</sup> See 15 U.S.C § 278s.

methodologies, and change competitors to collaborators. One perspective of technology roadmapping is as follows:

*Technology roadmapping is a flexible technique that is widely used within industry to support strategic and long-range planning. The approach provides a structured (and often graphical) means for exploring and communicating the relationships between evolving and developing markets, products and technologies over time.... Technology roadmaps are deceptively simple in terms of format, but their development poses significant challenges. In particular the scope is generally broad, covering a number of complex conceptual and human interactions.”<sup>7</sup>*

Furthermore, for the purposes of this NOFO, *technology infrastructure* means common resources, such as standards for system interfaces, measurement and test methods, and process control systems, that allow manufacturers within a supply chain compete with one another to align their diverse product and process capabilities, and to accelerate innovation and subsequent market penetration. Additionally, technology infrastructure includes platform technologies that many firms in an industrial cluster can take advantage of, but that no single firm can typically produce on its own.

The process of bringing members of the manufacturing ecosystem together to develop a roadmap that identifies barriers to their success in the US can have significant and enduring impact on specific U.S. manufacturing sectors. The 2013 & 2014 Advanced Manufacturing Technology (AMTech)<sup>8</sup> programs are a classic examples of this type of impact. In that program, stakeholders identified critical gaps in advanced manufacturing technology infrastructure, created industry-driven technology roadmaps that guide research to address industry problems, and produced numerous well-founded industry-driven plans for the entire research and development lifecycle. Many of the teams formed then are still active in their technology space and others merged to support the formation of institutes within the Manufacturing USA network.

## **2. Technology Challenges**

The emphasis of this NOFO is on technology roadmapping in areas of critical interest to the nation, including, but not limited to, technology areas appropriate for potential future Manufacturing USA institutes. Many cross-cutting technologies with the potential to transform U.S. manufacturing industry remain unaddressed and may be the subject of applications under this NOFO. Advanced communications networks, advanced industrial robotics, artificial intelligence &

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<sup>7</sup> Phaal, R, Farrukh, C, & Probert, D, Technology Roadmapping - A Planning Framework for Evolution and Revolution (2004). Technological Forecasting and Social Change, Elsevier, V. 71, I 1–2, pp 5–26, [https://doi.org/10.1016/S0040-1625\(03\)00072-6](https://doi.org/10.1016/S0040-1625(03)00072-6)

<sup>8</sup> More information about the awards can be found at <https://www.nist.gov/oam/programs/advanced-manufacturing-technology-consortia-amtech-program>.

machine learning, autonomous and remotely piloted vehicles, computing ecosystems, critical materials manufacturing, electronics design and manufacturing, food and agricultural manufacturing, high performance and nanomaterial processing, medical products manufacturing, quantum information science, and semiconductors and advanced packaging are just a few of the examples of cross-cutting industries and technologies that have the potential to increase U.S. manufacturing competitiveness.

### **3. Goals/Objectives**

The Manufacturing USA Technology Roadmap (MfgTech) Grant Program seeks applications from eligible applicants to develop technology roadmaps for promising advanced manufacturing clusters. The impacts from these grants may strengthen existing industry-driven consortia that address high-priority research challenges to grow advanced manufacturing in the United States. MfgTech consortia roadmaps should:

- Address major technological barriers that inhibit the growth of advanced manufacturing in the U.S. that no single organization could tackle on its own;
- Identify and prioritize research projects supporting long-term industrial research needs including but not limited to, those identified in the Strategy for American Leadership in Advanced Manufacturing<sup>9</sup>;
- Create new or update broadly available industry-driven, shared-vision technology roadmaps to support strategic and long-range planning; and
- Catalyze development and support the maintenance of a technology infrastructure and American excellence in advanced manufacturing, including identifying technology areas appropriate for potential new Manufacturing USA institutes.

### **4. Impacts/Outcomes**

NIST envisions that impacts from the MfgTech program will be to encourage industry-led consortia in advanced manufacturing. Additional impacts may be the identification, need, and planning for potential future Manufacturing USA institutes in critical areas for the nation.

Thus, over time the MfgTech program could:

- Increase the number of industry sectors and organizations that participate in technology partnerships across geographic regions and company size, including potential new Manufacturing USA institutes.
- Identify critical pre-competitive, manufacturing processes and platform technologies, and create pathways to translate these advancements into commercial reality by U.S. manufacturers.

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<sup>9</sup> <https://www.manufacturing.gov/sites/default/files/2021-06/Advanced-Manufacturing-Strategic-Plan-2018.pdf>. October 2018.

- Unlock capital and spur industry-driven research that arises from the partnerships and roadmaps that are created.
- Spur more efficient technology transfer, diffusion, and knowledge dissemination among the partnerships forged during the development of a MfgTech roadmap and across U.S. advanced manufacturing supply chains.

This NOFO announces a funding opportunity solely for technology roadmapping activities. Funding will not be awarded for the performance of research activities. Proposed projects should clearly demonstrate how the envisioned effort complements and does not duplicate other roadmapping projects already underway or completed, including those previously funded by Manufacturing USA<sup>10</sup> institutes, or other projects funded by the Department of Commerce or other Federal agencies. Roadmaps developed under the NIST AMTech 2013 – 2014 Programs<sup>11</sup> may be eligible topics; however, the burden will be on the proposer to demonstrate why it is needed.

Teaming is encouraged across the proposed industry ecosystem especially when it brings expertise, access to facilities, supply chain, or specialized goods and services together to produce a valuable roadmap. Note: The NIST Hollings Manufacturing Extension Partnership (MEP) National Network<sup>12</sup> is comprised of NIST MEP on the NIST Gaithersburg campus, 51 MEP Centers<sup>13</sup> located in all 50 states and Puerto Rico, and over 1,4000 trusted advisors and experts at more than 385 service locations. NIST encourages applicants to review the resources available through the MEP National Network, particularly for connecting applicants with potential subrecipients, contractors, or other collaborators. NIST cannot guarantee that any MEP Center or service location will be able to assist potential applicants.

In forming project teams, NIST strongly supports outreach to, recruitment of, and engagement with a diverse array of project participants. Applicants are encouraged to maximize the extent of geographic and institutional diversity among project participants.

## **II. Federal Award Information**

### **1. Funding Instrument**

The funding instrument that will be used for awards issued pursuant to this NOFO is a cooperative agreement. The nature of NIST's "substantial involvement" will generally include collaboration with the recipient

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<sup>10</sup> <https://www.manufacturingusa.com/>

<sup>11</sup> <https://www.nist.gov/oam/programs/advanced-manufacturing-technology-consortia-amtech-program>

<sup>12</sup> <https://www.nist.gov/mep>

<sup>13</sup> <https://www.nist.gov/mep/centers>

organization in developing and implementing the approved scope of work, in accordance with 2 CFR § 200.01.

## **2. Funding Availability.**

In Fiscal Year 2022 (FY22), NIST anticipates funding individual awards up to \$300,000 each with a project performance period of up to 18 months. The total number of awards will be based on available funds.

### **III. Eligibility Information**

#### **1. Eligible Applicants**

Eligibility for the program listed in this NOFO is open to all domestic non-Federal entities. Eligible applicants include accredited institutions of higher education; non-profit organizations; for-profit organizations incorporated in the United States (including U.S. territories); and state, local, territorial, and Indian tribal governments. Please note that individuals and unincorporated sole proprietors are not considered “non-Federal entities” and are not eligible to apply under this NOFO.

An eligible organization may work individually or include proposed subrecipients, contractors and/or unfunded collaborators in a project application, effectively forming a team or consortium. Eligible subrecipients are the same types of organizations eligible to be applicants.

Federal entities may participate in teams or consortia as unfunded collaborators, or in other roles allowed by law, consistent with each entity’s authorities, policies, and procedures.

An entity may apply only once as a recipient; however, they may participate in any number of proposals as a subrecipient or collaborator.

#### **2. Cost Sharing or Matching**

Matching funds are not required.

### **IV. Application and Submission Information**

#### **1. Address to Request Application Package**

The application package is available at [Grants.gov](https://www.grants.gov) under Funding Opportunity Number 2021-NIST-MFGTECH-01.

#### **2. Content and Form of Application Submission**

**a. Required Forms and Documents.** The Application must contain the following:



**(1) SF-424, Application for Federal Assistance.** The SF-424 must be signed by an authorized representative of the applicant organization.

For SF-424, Item 8.d. Zip/Postal Code field, should reflect the Zip code + 4 (#####-####) format.

For SF-424, Item 12, should list the NOFO number 2021-NIST-MFGTECH-01.

SF-424, Item 18, should list the total budget information for the duration of the project.

The list of certifications and assurances referenced in Item 21 of the SF-424 is contained in the Federal Financial Assistance Certifications and Representations (Certs and Reps) as part of the SAM.gov entity registration.

**(2) SF-424A, Budget Information for Non-Construction Programs.**

The budget should reflect anticipated expenses for the entire project, considering all potential cost increases, including cost of living adjustments.

- a) In Section A, the Grant Program Function or Activity on Line 1 under Column (a) should be entered as Arrangement for Interdisciplinary Research Infrastructure (11.619), or an abbreviation thereof. The Catalog of Federal Domestic Assistance Number in on Line 1 under Column (b) should be entered as “11.619”. The total budget amount for the term of the award should be listed in Section A, Line 1, Column (e).
- b) Section B, Column (1) of the SF-424A should reflect the allocation of costs by budget category for the entire project period.
- c) Section C should be blank. Non-Federal cost sharing is not required for awards issued pursuant to this NOFO.
- d) Section D requires a breakdown of the first 12-months of the budget by quarter.
- e) Section E should be blank.

**(3) CD-511, Certification Regarding Lobbying.** Enter “2021-NIST-MFGTECH-01” in the Award Number field. Enter the title of the application, or an abbreviation of that title, in the Project Name field.

**(4) SF-LLL, Disclosure of Lobbying Activities** (if applicable).

**(5) Project Narrative.** The Project Narrative is a word-processed document of no more than twenty (20) pages, which is responsive to the program description and the evaluation criteria.

The Project Narrative should contain the following information:

- a. Executive Summary.** An executive summary of the proposed project, consistent with the evaluation criteria. The executive summary should be a concise summary/abstract of the motivation of the proposed roadmapping effort, potential impact (i.e., benefits and outcomes) for US manufacturing in this area and identify major participants. It should identify the name of the applicant, the project director/principal investigator(s), and the project title. Do not include any proprietary or sensitive business information as NIST may make it available to the public after awards are issued. The executive summary should not exceed two (2) pages.
- b. Table of Contents.** (This does not count toward the page limit)
- c. Identification of Significant Technical Challenges with Substantive National Impacts.** The proposal narrative should describe how the applicant's approach will clearly address the program goals, objectives, technical challenges, and national impact (see Section I. of this NOFO, and Identification of Significant Technical Challenges with Substantive National Impacts evaluation criterion (Section V.1.a)).

Technical challenges in any area of advanced manufacturing will be considered provided they require solutions that include the development of highly innovative, transformational technologies that are broadly deployable to diverse manufacturing applications. The proposed project should clearly demonstrate how the envisioned effort complements and does not duplicate other roadmapping projects, including those previously funded by the NIST AMTech 2013-2014 Program<sup>14</sup>, or any institute within the Manufacturing USA<sup>15</sup> network.

*Goals & Objectives:* The applicant should present their scope and vision for the proposed project, including the goal(s), objective(s) and national outcomes; the importance and significance of the challenges to be addressed within the context of national needs, existing industry

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<sup>14</sup> <https://www.nist.gov/oam/programs/advanced-manufacturing-technology-consortia-amtech-program>

<sup>15</sup> <https://www.manufacturingusa.com/>

capabilities, and ongoing and existing efforts; and the potential for substantive national impacts enabled as a result of the activities being proposed.

*Significant technical challenges:* The roadmapping project being proposed should identify and address significant technical challenges in manufacturing that are common to an industry or a sector, for example, critical gaps, technologies, skill sets, infrastructure, or other significant challenges. The project and activities being proposed should support strategic and long-term goals that will significantly advance pre-competitive manufacturing processes and platform technology research, advance the state of the art, strengthen supply chains, and contribute to the U.S. knowledge base in critical advanced manufacturing sectors.

*National Impact:* The project being proposed should address critical national advanced manufacturing needs and demonstrate that by successfully addressing the significant technical challenges identified, there will be a strong potential for having substantive national economic impacts and enhance U.S. advanced manufacturing competitiveness. The project activities being proposed should have a strong potential to revitalize the U.S. leadership role in manufacturing and lead to the development of solutions that can provide U.S. manufacturers with a sustainable global competitive advantage.

- d. Roadmap Development Plan.** A complete statement of work covering all aspects of the project, including a schedule of measurable events and milestones as well as measurable performance objectives that can be used to determine the success of the project. This section should address Roadmap Development Plan evaluation criterion (see Section V.1.b).

*The Roadmap:* The description should include well-founded plans for the entire life cycle, including project development and execution, breadth of value chain engagement, knowledge and technology diffusion, and pathways to adoption. Participation by the full value chain, including small- and medium-sized firms, is desirable. A timeline should be included to logically illustrate the timing and interrelationships of major tasks and key subtasks and identify the parties responsible for their completion.

*Teaming:* Teaming is encouraged. Thus, if an incorporated industry consortium is the applicant, a team should be proposed to engage other relevant entities to participate in the proposed activities and work towards consortium development. As additional team members are

added to offer key expertise, access to facilities, or specialized goods and services, discuss what each brings to the project and what each will do. In all cases, required Letters of Commitment should be provided (see Section IV.2.a.(9) of this NOFO).

*Post-Award plans.* A key goal of MfgTech is ensuring that the output of the roadmapping activities will have a significant and enduring impact on the U.S. manufacturing sector. Therefore, the development plan should include dissemination plans, and consideration of post-funding impacts, including the continued leveraging of public, private, and academic organizations to ensure the roadmapping efforts are not the end of the process.

- e. **Table of Abbreviations and Acronyms.** (This does not count toward the page limit) An alphabetical list of all abbreviations and acronyms and their meaning.
- f. **Table of Funded Project Participants and Unfunded Informal Collaborators.** (This does not count toward the page limit) Provide a table that identifies all organizations that will participate in and contribute to the project, known at the time of the application submission. The table should consist of an alphabetically ordered list, by organization, of all Funded Project Participants and all Unfunded Informal Collaborators. The table should include the organization's name, address, administrative role, scope of work (funded participants only) and proposed funding amount (funded participants only). Administrative roles are applicant, subrecipient, or contractor for funded participants, or collaborator if they will not receive funding.
- g. **Resumes of Key Personnel** must be included. Resumes are not included in the page limit of the Project Narrative. Resumes included as part of the application must be a maximum of one page each. Additional pages beyond the first page per resume will not be considered during the evaluation of the application.
- h. **Dissemination Plan.** A description of the applicant's approach to broadly disseminate the roadmap to the public. The plan should include an approach to publish results through publications and white papers in appropriate literature, and through presentations at public meetings or technical events.

**(6) Budget Narrative and Justification.** There is no set format for the Budget Narrative and Justification; however, the written justification should include the necessity and the basis for the cost. Proposed funding levels must be consistent with the project scope, and only allowable costs should be included in the budget. Information on cost allowability is available in the

Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at [2 C.F.R. Part 200](#), which apply to awards in this program.

The Budget Narrative and Justification does not count against the twenty (20) page limit of the Project Narrative. The Budget Narrative and Justification must demonstrate its appropriateness and cost-effectiveness with respect to carrying out the work and objectives of the project.

This section will be evaluated in accordance with the Resource Availability and Qualifications evaluation criteria. (See Section V.1.c) It will also be reviewed to determine if all costs are reasonable, allocable, and allowable under 2 C.F.R. Part 200 Subpart E, Cost Principles.

Information needed for each category is as follows:

- a) **Personnel** – At a minimum, the budget justification should include the following: job title, commitment of effort on the proposed project in terms of average number of hours per week or percentage of time, salary rate, total personnel charges for each identified position on the proposed project, description of the role of the individual on the proposed project, and how the person's qualification will enable them to conduct the work to be performed.
- b) **Fringe Benefits** – Fringe benefits for each position should be identified separately from salaries and wages and based on rates determined by organizational policy. The items included in the fringe benefit rate (e.g., health insurance, parking, etc.) should not be charged under another cost category.
- c) **Travel** – For all travel costs, the budget justification should include the following: destination; names or number of people traveling; dates and/or duration; mode of transportation, lodging and subsistence rates; and description of how the travel is directly related to the proposed project. For travel that is yet to be determined, please provide best estimates based on prior experience. If a destination is not known, an approximate amount may be used with the assumptions given for the location of the meeting.
- d) **Equipment** – Equipment is defined as an item of property that has an acquisition cost of \$5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year. The budget justification should list each piece of equipment, the cost, and a description of how it will be used and

why it is necessary to the successful completion of the proposed project. Please note that any general use equipment (computers, etc.) charged directly to the award should be allocated to the award according to expected usage on the project.

- e) **Supplies** – Supplies are defined as all tangible personal property other than that described as equipment. Provide a list of each supply, and the breakdown of the total costs by quantity or unit of cost. Include the necessity of the cost for the completion of the proposed project.
- f) **Contractual (i.e. Contracts or Subawards)** – Each contract or subaward should be treated as a separate item. Identify the cost and describe the services to be provided and the necessity of the subaward or contract to the successful performance of the proposed project. Contracts are for obtaining normal goods and services. Subawardees perform part of the project scope of work.
- g) **Construction** – Not an allowable cost under this NOFO.
- h) **Other Direct Costs**– For costs that do not easily fit into the other cost categories, please list the cost, and the breakdown of the total costs by quantity or unit of cost. Include the necessity of the cost for the completion of the proposed project. Only allowable costs can be charged to the award.
- i) **Indirect Charges** – Commonly referred to as Facilities & Administrative Costs, Indirect Costs, are defined as costs incurred by the applicant organization that cannot otherwise be directly assigned or attributed to a specific project. For more details, see Section IV.2.a.(7) of this NOFO. Provide a cost calculation that includes the base amount multiplied by the indirect cost rate.

**(7) 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 the rate was not established by a cognizant Federal audit agency, provide a statement to this effect. If the 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 in accordance with Section B.06 of the [Department of Commerce Financial Assistance Standard Terms and Conditions](#), dated November 12, 2020.

Alternatively, in accordance with 2 C.F.R. § 200.414(f), applicants that do not have a current negotiated (including provisional) indirect cost rate

except for those non-Federal entities described in appendix VII, paragraph D.1.b. of 2 CFR 200 may elect to charge a de minimis rate of 10 percent of modified total direct costs (MTDC). Applicants proposing a 10 percent de minimis rate pursuant to 2 C.F.R. § 200.414(f) should note this election as part of the budget portion of the application.

- (8) Letters of Commitment.**(if applicable) If the applicant's proposal identifies third parties including contractors, subawardees, and/or other collaborators who will participate in the proposed project, then a letter from each currently known participant should be submitted. Each letter should indicate the organization's willingness to participate and what they will be doing for the project. A letter should be submitted whether or not the organization is receiving Federal funds.

Letters of Commitment should not be letters submitted by non-proposing entities wishing to vouch for the applicant's (or entities associated with the applicant) knowledge, skills, and abilities or entities to conduct the proposed work.

- (9) Current and Pending Support Form.** Any application that includes investigators, researchers, and key personnel must identify all sources of current and potential funding, including this proposal. Any current project support (e.g., Federal, state, local, public or private foundations, etc.) must be listed on this form. The proposed project and all other projects or activities requiring a portion of time of the Principal Investigator (PI), co-PI, and key personnel must be included, even if no salary support is received. The total award amount for the entire award period covered, including indirect costs, must be shown as well as the number of person-months per year to be devoted to the project, regardless of the source of support. Similar information must be provided for all proposals already submitted or that are being submitted concurrently to other potential funders.

Applicants must complete the Current and Pending Support Form, using multiple forms as necessary to account for all activity for each individual identified in the PI, co-PI and key personnel roles. A separate form should be used for each identified individual.

Applicants must download the Current and Pending Support Form from the NIST website at <https://www.nist.gov/oaam/grants-management-division/current-and-pending-support> and reference the guidance provided as it contains information to assist with accurately completing the form.

## **b. Attachment of Required Documents**

Items IV.2.a.(1) through IV.2.a.(4) above are part of the standard application package in Grants.gov and can be completed through the download application process.

Items IV.2.a.(5) through IV.2.a.(9) should be attached to field 15 of the SF-424 form by clicking on “Add Attachment”.

Following these directions will create zip files which permit transmittal of the documents electronically via Grants.gov.

Applicants should carefully follow specific Grants.gov instructions at [www.Grants.gov](http://www.Grants.gov) to ensure the attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicates only that an application was transferred to a system. It does not provide details concerning whether all attachments (or how many attachments) transferred successfully. Applicants will receive a series of e-mail messages over a period of up to two business days before learning whether a Federal agency’s electronic system has received its application. Applicants are strongly advised to use Grants.gov’s “Download Submitted Forms and Applications” option, found at <https://www.grants.gov/help/html/help/Applicants/CheckApplicationStatus/DownloadSubmittedFormsAndApplications.htm> to check that their application’s required attachments were contained in their submission.

After submitting the application, check the status of your application here: [CHECK APPLICATION STATUS](#). If any, or all, of the required attachments are absent from the submission, follow the attachment directions found above, resubmit the application, and check again for the presence of the required attachments.

If the directions found at <https://www.grants.gov/help/html/help/index.htm#t=GetStarted%2FGetStar%2Fted.htm> are not effective, please contact the Grants.gov Help Desk immediately. If calling from within the United States or from a U.S. territory, please call 800-518-4726. If calling from a place outside the United States or a U.S. territory, please call 606-545-5035. E-mails should be addressed to [support@grants.gov](mailto:support@grants.gov). Assistance from the Grants.gov Help Desk will be available around the clock every day, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays.

*Applicants can track their submission in the Grants.gov system by following the procedures at the Grants.gov site (<http://go.usa.gov/cjamz>). It*



*can take up to two business days for an application to fully move through the Grants.gov system to NIST.*

*NIST uses the Tracking Numbers assigned by Grants.gov and does not issue Agency Tracking Numbers.*

**c. Application Format**

- (1) Paper, Email, and Facsimile (fax) Submissions.** Will not be accepted.
- (2) Figures, Graphs, Images, and Pictures.** Should be of a size that is easily readable or viewable and may be displayed in landscape orientation. Any figures, graphs, images, or pictures will count toward the page limits for the Project Narrative.
- (3) Font.** Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.
- (4) Page Limit.** The Project Narrative is limited to twenty (20) pages, noting the limit of two (2) pages for the Executive Summary.
- (5) Page Limit Exclusions:**
  - SF-424, Application for Federal Assistance;
  - SF-424A, Budget Information for Non-Construction Programs
  - CD-511, Certification Regarding Lobbying;
  - SF-LLL, Disclosure of Lobbying Activities;
  - Table of Contents;
  - Table of Abbreviations and Acronyms;
  - Table of Funded Project Participants and Unfunded Informal Collaborators;
  - Resumes of Key Personnel;
  - Budget Narrative and Justification;
  - Indirect Cost Rate Agreement;
  - Letters of Commitment;
  - Current and Pending Support Form;
- (6) Page Layout.** The Proposal must be in portrait orientation.
- (7) Page size.** 21.6 centimeters by 27.9 centimeters (8 ½ inches by 11 inches).
- (8) Page numbering.** Number pages sequentially.

**(9) Application language.** English. All documents must be in English, including but not limited to the initial application, any additional documents submitted in response to a NIST request, all reports, and any correspondence with NIST.

**(10) Typed document.** All applications, including forms, must be typed; handwritten forms will not be accepted.

**d. Application Replacement Pages.** Applicants may not submit replacement pages and/or missing documents once an application has been submitted. Any revisions must be made by submission of a new application that must be received by NIST by the submission deadline.

**e. Pre-Applications.** Pre-applications will not be accepted under this NOFO.

**3. Unique Entity Identifier and System for Award Management (SAM).**

Pursuant to 2 C.F.R. part 25, applicants and recipients are required to: (i) be registered in SAM before submitting its application; (ii) provide a valid unique entity identifier in its application; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency, unless otherwise excepted from these requirements pursuant to 2 C.F.R. § 25.110. NIST will not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time that NIST is ready to make a Federal award pursuant to this NOFO, NIST may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

**4. Submission Dates and Times**

Applications must be received at Grants.gov no later than 11:59 p.m. Eastern Time, August 17, 2021. NIST will consider the date and time recorded by Grants.gov as the official submission time. Applications received after this deadline will not be reviewed or considered. Paper applications will not be accepted.

Applicants should be aware, and factor in their application submission planning, that the Grants.gov system closes periodically for routine maintenance. Applicants should visit [Grants.gov](https://www.grants.gov) for information about any scheduled closures.

When developing the submission timeline, please keep in mind that: (1) all applicants are required to have current registrations in the electronic System for Award Management (SAM.gov) and Grants.gov; (2) the free annual registration process in the SAM.gov generally takes between three and five business days but can take more than two weeks; and applicants will receive e-mail notifications

over a period of up to two business days as the application moves through intermediate systems before the applicant learns via a validation or rejection notification whether NIST has received the application. (See [Grants.gov](https://www.grants.gov) for full information on application and notification through Grants.gov.) Please note that a Federal assistance award cannot be issued if the designated recipient's registration in the System for Award Management (SAM.gov) is not current at the time of the award.

## 5. Intergovernmental Review

Applications under this Program ARE NOT subject to Executive Order 12372.

## 6. Funding Restrictions

Applications for product development and/or commercialization are not considered responsive to this NOFO. Profit or fee is not an allowable cost. In addition, a recipient or a subrecipient may not charge profits, fees or other increments above cost to an award issued pursuant to this NOFO.

## 7. Other Submission Requirements

### a. Applications must be submitted at [Grants.gov](https://www.grants.gov).

- (1) Applicants should carefully follow specific Grants.gov instructions to ensure that all attachments will be accepted by the Grants.gov system. A receipt from Grants.gov indicating an application is received does not provide information about whether attachments have been received. For further information or questions regarding applying electronically for the 2021-NIST-MFGTECH-01 announcement, contact the Grants.gov Help Desk at 800-518-4726.
- (2) Applicants are strongly encouraged to start early and not wait until the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov. The Grants.gov registration process must be completed before a new registrant can apply electronically. The typical registration process takes three to five business days. If problems are encountered, the registration process can take two weeks or more. Applicants must have a valid unique entity identifier number and must maintain a current registration in the Federal government's primary registrant database, the System for Award Management (<https://www.sam.gov>), as explained on the Grants.gov Web site. After registering, it may take several days or longer from the initial log-on before a new Grants.gov system user can submit an application. Only individuals authorized as organization representatives will be able to submit the application, and the system may need time to process a submitted application.

Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received and (b) call Grants.gov directly for immediate assistance. If calling from within the United States or from a U.S. territory, please call 800-518-4726. If calling from a place other than the United States or a U.S. territory, please call 606-545-5035. Assistance from the Grants.gov Help Desk will be available around the clock every day, except for Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, the applicant may also contact [support@grants.gov](mailto:support@grants.gov).

- (3) To find instructions for submitting an application on Grants.gov, applicants should refer to the “Applicants” tab in the banner just below the top of the Grants.gov home page. Clicking on the “Applicants” tab produces two exceptionally useful sources of information, Applicant Actions and Applicant Resources, which applicants are advised to review.

Applicants will receive a series of e-mail messages over a period of up to two business days before learning whether a Federal agency’s electronic system has received its application.

Applicants should pay close attention to the guidance under Grants.gov’s “[Applicant FAQs](#)”, as it contains information important to successful submission, including essential details on the naming conventions for attachments to applications.

All applicants should be aware that adequate time must be factored into applicants’ schedules for delivery of their application. Applicants are advised that volume on Grants.gov may be extremely heavy leading up to the deadline.

The application must be both received and validated by Grants.gov. The application is “received” when Grants.gov provides the applicant a confirmation of receipt and an application tracking number. If an applicant does not see this confirmation and tracking number, the application has not been received. After the application has been received, it must still be validated. During this process, it may be “validated” or “rejected with errors”. To ascertain whether the application was rejected with errors and the reasons for the rejection, the applicant must log in to Grants.gov, select “Applicants” from the top navigation, and select “Track my application” from the drop-down list. If the status is “rejected with

errors,” the applicant may still seek to correct the errors and resubmit the application before the deadline. If the applicant does not correct the errors, the application will not be forwarded to NIST by Grants.gov.

Refer to important information in Section IV.4. Submission Dates and Times, to help ensure the application is received on time.

- b. **Amendments.** Any amendments to this NOFO will be announced through Grants.gov. Applicants may sign up on Grants.gov to receive amendments by e-mail or may request copies by e-mail from [manufacturingusa@nist.gov](mailto:manufacturingusa@nist.gov).

## V. **Application Review Information**

### 1. **Evaluation Criteria**

The evaluation criteria that will be used in evaluating applications and their assigned weights are as follows:

- a. **Identification of Significant Technical Challenges with Substantive National Impacts (0 – 40 points).** Reviewers will evaluate the comprehensiveness and rationality of the roadmapping plan. Specifically, the following factors will be given equal weight within this Evaluation Criterion:
  - i. *Goals & Objectives:* Reviewers will assess the vision, goals, and objectives of the proposed project including how the project activities will address major scientific and technological barriers that inhibit the growth of advanced manufacturing in the United States.
  - ii. *Significant Technical Challenges:* Reviewers will evaluate the degree to which the proposed roadmap activity clearly identifies strategic and long-term goals and barriers to success to advance pre-competitive enabling manufacturing processes and platform technology research and the state of the art in that sector of advanced manufacturing.
  - iii. *Substantive National Impacts:* Reviewers will evaluate the importance and significance of the challenges to be addressed by the roadmap activities within the context of national needs, existing industry capabilities, identification of ongoing and exiting efforts, and the potential for having substantive national economic impacts and enhancing or revitalizing U.S. advanced manufacturing competitiveness.

- b. **Roadmap Development Plan (0 – 45 points).** Reviewers will evaluate the comprehensiveness and appropriateness of the plan to perform the proposed work and the extent to which the application addresses the questions, “what, how, where, when, why, and by whom.” Specifically:
  - i. *Roadmap:* Reviewers will evaluate the degree to which the roadmap identifies a clear strategic plan for the entire life cycle, including project development and execution, knowledge and technology diffusion, and pathways to adoption.
  - ii. *Teaming:* Reviewers will assess the quality, magnitude, and adequacy of industry’s leadership and involvement, and inclusion of representatives across the value chain and innovation ecosystem for realizing a roadmap that meets the needs of that industry. The consideration and involvement, where appropriate, of small- and medium-sized enterprises and/or a discussion of how their needs will be included, will also be assessed.
  - iii. *Award activities and Post-project plans:*
    - (1) Reviewers will assess roadmapping activities proposed during and after the award period, and how the team will pursue projects that result from the technology roadmapping needs identification. This includes the plan to obtain and/or leverage complementary additional or external resources or support for consortium actions after the award period concludes.
    - (2) Reviewers will also assess the project’s measurable success criteria and the means by which progress will be measured through the life of the award, including how the plan logically illustrates the timing and interrelationships of major tasks and key subtasks, and the parties responsible for their completion.
- c. **Resource Availability (0 – 15 points).** Reviewers will assess the resources and budget against the proposed project scope and activities will be conducted to determine the appropriateness and cost-effectiveness of the proposed resources and budget with respect to carrying out the work and meeting the objectives of the application relative to that described in Section I of this NOFO.

## 2. Selection Factors

The Selection Factors for this competition are:

- a. Results of the merit reviewers’ evaluations.
- b. The availability of funding.
- c. Alignment with the NOFO objectives

- d. The geographic diversity of project participants, which may include the number of states in which project participants are located and the distribution of project work among urban, suburban, and rural communities.
- e. The institutional diversity of project participants, which may include the extent of active project participation of small- and medium-sized manufacturing enterprises; women, minority, and veteran owned manufacturing enterprises; state, local, and Tribal governments; and career and technical education schools and community colleges in addition to research universities.
- f. The degree to which the proposed project complements national priorities and does not duplicate the portfolio of FY 2013 or 2014 AMTech Planning Awards, or other projects funded by the Department of Commerce or other Federal agencies including the Institutes within the Manufacturing USA Network.

### **3. Review and Selection Process**

Proposals, reports, documents, and other information related to applications submitted to NIST and/or relating to financial assistance awards issued by NIST will be reviewed and considered by Federal employees, or non-Federal personnel who have entered into conflict of interest and confidentiality agreements covering such information, when applicable.

#### **a. Initial Administrative Review of Applications**

Applications received by the deadline will be reviewed to determine eligibility, completeness, and responsiveness to this NOFO and to the scope of the stated program objectives. Applications determined to be ineligible, incomplete, and/or nonresponsive may be eliminated from further review. However, NIST, in its sole discretion, may continue the review process for an application that is missing non-substantive information, the absence of which may easily be rectified during the review process.

#### **b. Full Review of Eligible, Complete, and Responsive Applications.**

Applications that are determined to be eligible, complete, and responsive will proceed for full reviews in accordance with the review and selection process below:

- (1) Merit Review.** At least three (3) objective reviewers, who may be Federal employees or non-Federal personnel, with appropriate professional and technical expertise relating to the topics covered in this NOFO, will evaluate and score each eligible, complete, and responsive application based on the evaluation criteria. While every application will have at least three (3) reviewers, applications may have

more than three (3) reviewers if specialized expertise is needed to evaluate an application. During the review process, the reviewers may discuss the applications with each other, but scores will be determined on an individual basis. Reviewers will assess the merits of each application against the Evaluation Criteria and assign a score, based on the application's responsiveness to the Evaluation Criteria, with a maximum score of 100.

**(2) Program Review.** An Evaluation Panel will conduct a programmatic review of the applications that completed merit review. The Evaluation Panel will consist of at least three (3) persons and will be comprised of any mix of NIST staff, and other federal agency employees with appropriate professional and technical expertise. The Evaluation Panel may ask clarifying questions of some or all applicants in writing.

The Evaluation Panel will prepare and provide a final adjectival rating of the applications to the Selecting Official for further consideration, taking into consideration the relevance of an application to the program goals and objectives described in Section I. of this FFO, the results of the merit reviewers' evaluations, including scores and written comments, and any additional information obtained from the applicant by the Evaluation Panel. The adjectival ratings are:

- Fundable, Outstanding;
- Fundable, Very Good;
- Fundable; or
- Unfundable.

For decision-making purposes, applications receiving the same adjectival rating will be considered to have an equivalent rating, although their technical review scores will not necessarily be the same.

**(3) Selection.** The Selecting Official, the Director of the Office of Advanced Manufacturing or designee, will make final award recommendations to the NIST Grants Officer.

The Selecting Official shall generally select and recommend the most meritorious applications for award based upon the final adjectival ratings and one or more of the Selection Factors. The Selecting Official retains the discretion to select and recommend applications out of order (i.e., from a lower adjectival category) based on one or more of the Selection Factors (section V.2).

NIST reserves the right to negotiate the budget costs with any



applicant selected to receive an award, which may include requesting that the applicant removes certain costs. Additionally, NIST may request that successful applicants modify objectives or work plans and provide supplemental information required by the agency prior to award. NIST also reserves the right to reject an application where information is uncovered that raises a reasonable doubt as to the responsibility of the applicant. NIST may select some, all, or none of the applications, or part(s) of any application. The final approval of a selected application - and issuance of an award - will be by the NIST Grants Officer. The award decisions of the NIST Grants Officer are final.

- c. **Federal Awarding Agency Review of Risk Posed by Applicants.** After applications are proposed for funding by the Selecting Official, the NIST Grants Management Division (GMD) performs pre-award risk assessments in accordance with 2 C.F.R. § 200.206, which may include a review of the financial stability of an applicant, the quality of the applicant's management systems, the history of performance, and/or the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities.

In addition, prior to making an award where the total Federal share is expected to exceed the simplified acquisition threshold (currently \$250,000), NIST GMD will review and consider the publicly available information about that applicant in the Federal Awardee Performance and Integrity Information System (FAPIIS). An applicant may, at its discretion, review and comment on information about itself previously entered into FAPIIS by a Federal awarding agency. As part of its review of risk posed by applicants, NIST GMD will consider any comments made by the applicant in FAPIIS in making its determination about the applicant's integrity, business ethics, and record of performance under Federal awards. Upon completion of the pre-award risk assessment, the Grants Officer will make a responsibility determination concerning whether the applicant is qualified to receive the subject award and, if so, whether appropriate specific award conditions that correspond to the degree of risk posed by the applicant should be applied to an award.

#### **4. Anticipated Announcement and Award Date**

Review of applications, selection of successful applicants, and award processing is expected to be completed by October 2021. The earliest start date for awards under this NOFO is expected to be October 2021.

#### **5. Additional Information**

- a. **Safety.** Safety is a top priority at NIST. Employees and affiliates of award recipients who conduct project work at NIST will be expected to be safety-

conscious, to attend NIST safety training, and to comply with all NIST safety policies and procedures, and with all applicable terms of their guest research agreement.

- b. Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified by e-mail and will have the opportunity to receive a debriefing after the opportunity is officially closed. Applicants must request within 10 business days of the email notification to receive a debrief from the program office. The program office will then work with the unsuccessful applicant in arranging a date and time of the debrief.
- c. Retention of Unsuccessful Applications.** Unsuccessful applications will be retained in accordance with the [General Record Schedule 1.2/021](#).

## **VI. Federal Award Administration Information**

- 1. Federal Award Notices.** Successful applicants will receive an award package from the NIST Grants Officer.
- 2. Administrative and National Policy Requirements**
  - a. Uniform Administrative Requirements, Cost Principles and Audit Requirements.** Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which apply to awards in this program. Refer to <http://go.usa.gov/SBYh> and <http://go.usa.gov/SBg4>.
  - b. Department of Commerce Financial Assistance Standard Terms and Conditions.** The Department of Commerce will apply to each award in this program, the [Department of Commerce Financial Assistance Standard Terms and Conditions](#) in effect on the date of award. The current version is dated November 12, 2020. Refer to Section VII. of this NOFO, Federal Awarding Agency Contacts, Grant Rules and Regulations, if you need more information.
  - c. Pre-Award Notification Requirements.** The Department of Commerce will apply the Pre-Award Notification Requirements for Grants and Cooperative Agreements dated December 30, 2014 (79 FR 78390), accessible at <http://go.usa.gov/hKkR>. Refer to Section VII. of this NOFO, Federal Awarding Agency Contacts, Grant Rules and Regulations, for more information.
  - d. Funding Availability and Limitation of Liability.** Funding for the program listed in this NOFO is contingent upon the availability of appropriations. NIST or the Department of Commerce will not be

responsible for application preparation costs, including but not limited to if this program fails to receive funding or is cancelled because of agency priorities. Publication of this NOFO does not oblige NIST or the Department of Commerce to award any specific project or to obligate any available funds.

- e. Collaborations with NIST Employees.** If an applicant proposes collaboration with NIST, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the application prior to the merit review. Any collaboration with an identified NIST employee that is approved by appropriate NIST management will not make an application more or less favorable in the competitive process. NIST's costs should not be included in the application.
- f. Use of Federal Government-Owned Intellectual Property.** If the applicant anticipates using any Federal Government-owned intellectual property, in the custody of NIST or another Federal agency, to carry out the work proposed, the applicant should clearly identify such intellectual property in the proposal. This information will be used to ensure that no Federal employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use the Federal Government-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described in 35 U.S.C. §§ 200-212, 37 C.F.R. Part 401, 2 C.F.R. §200.315, and in Section C.03 of the [Department of Commerce Financial Assistance Standard Terms and Conditions](#), dated November 12, 2020. Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803, [nistcounsel@nist.gov](mailto:nistcounsel@nist.gov).

Any use of Federal Government-owned intellectual property by a recipient of an award under this announcement is at the sole discretion of the Federal Government and will need to be negotiated on a case-by-case basis by the recipient and the Federal agency having custody of the intellectual property if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek a license from the applicable Federal agency.

If any inventions made in whole or in part by a NIST employee arise in the

course of an award made pursuant to this NOFO, the United States Government may retain its ownership rights in any such invention. Licensing or other disposition of the Federal Government's rights in such inventions will be determined solely by the Federal Government, through NIST as custodian of such inventions, and include the possibility of the Federal Government putting the intellectual property into the public domain.

### 3. Reporting

a. **Reporting Requirements.** The following reporting requirements described in Sections A.01, Reporting Requirements, of the [Department of Commerce Financial Assistance Standard Terms and Conditions](#) dated November 12, 2020, apply to awards in this program:

- (1) **Financial Reports.** Each award recipient will be required to submit an SF-425, Federal Financial Report on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. A final financial report is due within 120 days after the end of the project period.
- (2) **Performance (Technical) Reports.** Each award recipient will be required to submit a technical progress report on a semi-annual basis for the periods ending March 31 and September 30 of each year. Reports will be due within 30 days after the end of the reporting period. Technical progress reports shall contain information as prescribed in [2 C.F.R. § 200.329](#) and Section A.01 of the [Department of Commerce Financial Assistance Standard Terms and Conditions](#), dated November 12, 2020.
- (3) **Patent and Property Reports.** From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.
- (4) **Recipient Integrity and Performance Matters.** In accordance with section 872 of Public Law 110-417 (as amended; see 41 U.S.C. 2313), if the total value of a recipient's currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of an award made under this NOFO, then the recipient shall be subject to the requirements specified in [Appendix XII](#) to 2 C.F.R. Part 200 for maintaining the currency of information reported to SAM that is made available in FAPIIS about certain civil, criminal, or administrative proceedings involving the recipient.

- b. Audit Requirements.** The Department of Commerce Financial Assistance Standard Terms and Conditions, Section D.01, and 2 C.F.R. Part 200 Subpart F, adopted by the Department of Commerce through 2 C.F.R. § 1327.101, require any non-Federal entity (i.e., including non-profit institutions of higher education and non-profit organizations) that expends Federal awards of \$750,000 or more in the recipient’s fiscal year to conduct a single or program specific audit in accordance with the requirements set out in the Subpart. Additionally, unless otherwise specified in the terms and conditions of the award, entities that are not subject to Subpart F of 2 C.F.R. Part 200 (e.g., for-profit commercial entities) that expend \$750,000 or more in DOC funds during their fiscal year must submit to the Grants Officer either: (i) a financial related audit of each DOC award or subaward in accordance with Generally Accepted Government Auditing Standards; or (ii) a project specific audit for each award or subaward in accordance with the requirements contained in 2 C.F.R. § 200.507. Applicants are reminded that NIST, the Department of Commerce Office of Inspector General, or another authorized Federal agency may conduct an audit of an award at any time.
- c. Federal Funding Accountability and Transparency Act of 2006.** In accordance with 2 C.F.R. Part 170, all recipients of a Federal award made on or after October 1, 2010, are required to comply with reporting requirements under the Federal Funding Accountability and Transparency Act of 2006 (Public Law No. 109-282). In general, all recipients are responsible for reporting sub-awards of \$25,000 or more. In addition, recipients that meet certain criteria are responsible for reporting executive compensation. Applicants must ensure they have the necessary processes and systems in place to comply with the reporting requirements should they receive funding. Also see the Federal Register notice published September 14, 2010, at 75 FR 55663 available here <http://go.usa.gov/hKnQ>.

## **VII. Federal Awarding Agency Contacts**

Questions should be directed to the following:

Subject Area	Point of Contact
Programmatic and Technical Questions	Lisa Jean Fronczek Phone: 301-975-6633 E-mail: <a href="mailto:manufacturingusa@nist.gov">manufacturingusa@nist.gov</a> with '2021-NIST-MFGTECH-01 Questions' in subject line
Technical Assistance with Grants.gov Submissions	<a href="http://grants.gov">grants.gov</a> Phone: 800-518-4726 E-mail: <a href="mailto:support@grants.gov">support@grants.gov</a>
Grant Rules and Regulations	Dean Iwasaki

Subject Area	Point of Contact
	Phone: 301-975-8449 E-mail: <a href="mailto:dean.iwasaki@nist.gov">dean.iwasaki@nist.gov</a>

## VIII. Other Information

### 1. Personal and Business Information

The applicant acknowledges and understands that information and data contained in applications for financial assistance, as well as information and data contained in financial, performance and other reports submitted by applicants, may be used by the Department of Commerce in conducting reviews and evaluations of its financial assistance programs. For this purpose, applicant information and data may be accessed, reviewed and evaluated by Department of Commerce employees, other Federal employees, and also by Federal agents and contractors, and/or by non-Federal personnel, all of whom enter into appropriate conflict of interest and confidentiality agreements covering the use of such information. As may be provided in the terms and conditions of a specific financial assistance award, applicants are expected to support program reviews and evaluations by submitting required financial and performance information and data in an accurate and timely manner, and by cooperating with Department of Commerce and external program evaluators. In accordance with 2 C.F.R. § 200.303(e), applicants are reminded that they must take reasonable measures to safeguard protected personally identifiable information and other confidential or sensitive personal or business information created or obtained in connection with a Department of Commerce financial assistance award.

In addition, Department of Commerce regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C. Sec. 552, are found at 15 C.F.R. Part 4, Public Information. These regulations set forth rules for the Department regarding making requested materials, information, and records publicly available under the FOIA. Applications submitted in response to this Federal Funding Opportunity may be subject to requests for release under the Act. If an application contains information or data that the applicant deems to be confidential commercial information that should be exempt from disclosure under FOIA, that information should be identified, bracketed, and marked as Privileged, Confidential, Commercial or Financial Information. In accordance with 15 CFR § 4.9, the Department of Commerce will protect from disclosure confidential business information contained in financial assistance applications and other documentation provided by applicants to the extent permitted by law.

### 2. Public Website, Frequently Asked Questions (FAQs), and Webinar

NIST has a public website (<https://www.nist.gov/ampo/manufacturing-usa-technology-roadmap-mfgtech-program>) that provides a “Frequently Asked

Questions” page, webinar registration, and other information pertaining to this Funding Opportunity.

NIST will hold an informational webinar on June 25, 2021 at 2 PM Eastern Time to provide general information regarding this NOFO, offer general guidance on eligibility requirements, the evaluation criteria, and the review process, in addition to offering the opportunity for the public to ask questions. Proprietary technical questions about specific proposal ideas will not be permitted, and NIST will not critique or provide feedback on any proposal ideas during the webinar or at any time before submission to Grants.gov. There is no cost to attend the webinar, but participants must register in advance by sending email to [manufacturingusa@nist.gov](mailto:manufacturingusa@nist.gov) with “MfgTech Roadmap Webinar” in the subject line. Participation in the webinar is not required and will not be considered in the application review and selection process.

Applicants must submit all questions pertaining to this funding opportunity in writing to [manufacturingusa@nist.gov](mailto:manufacturingusa@nist.gov) with ‘2021-NIST-MFGTECH-01 Questions’ in subject line.