

2016 NIST NNMI Institute Competition



NNMI: The Power To Apply



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***How Applications Will
Be Evaluated***

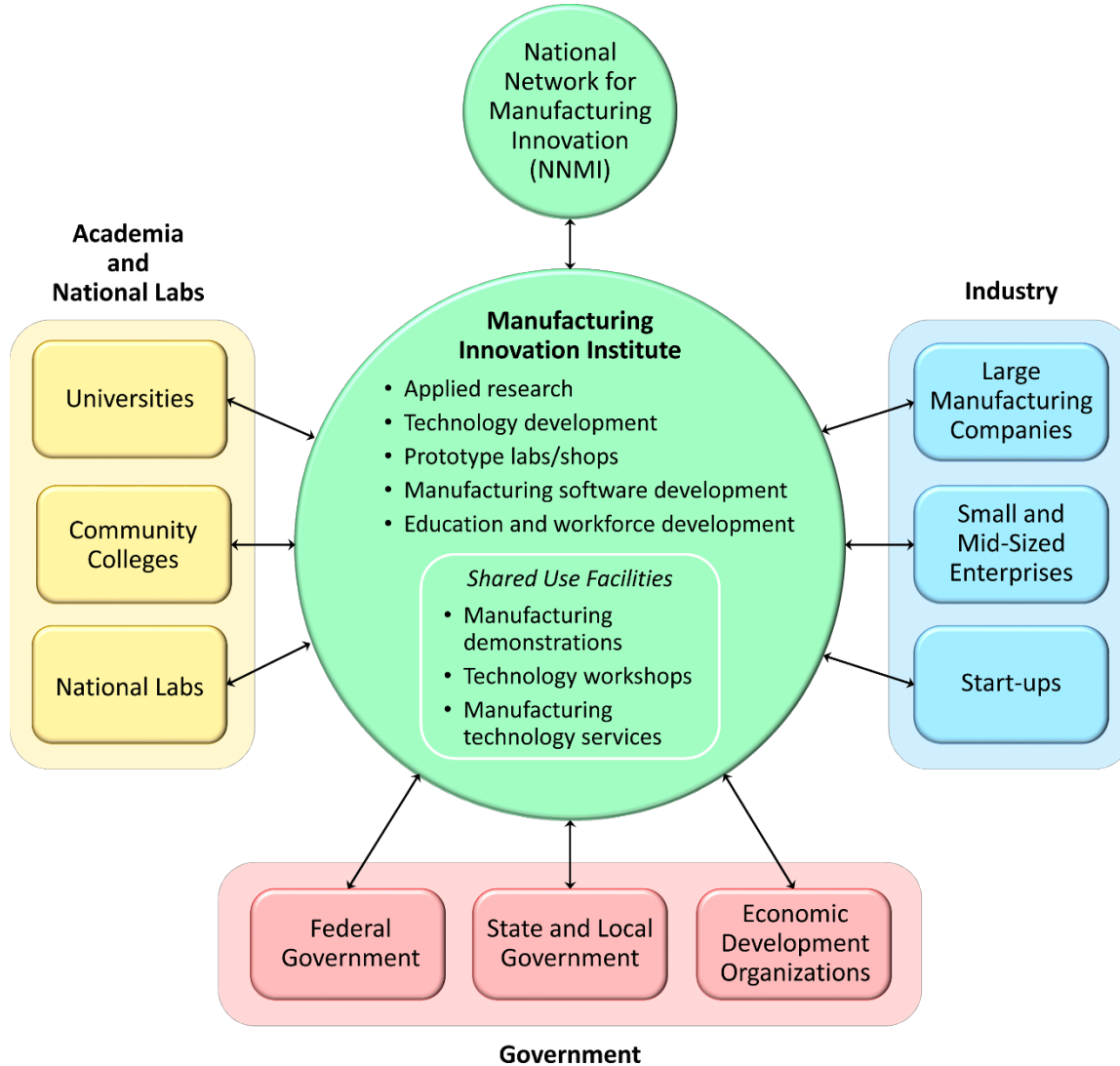
- **NNMI Institutes**
- **Two-Step Application Process**
 - Key Attributes and Anticipated Timeline
 - Pre-Applications
 - Invited Full Applications
- **Evaluating Applications**
 - Pre-Applications
 - Full Applications
- **Pre-Selection Interviews, Negotiations, and Awards**
- **Notifications and Updates**

Manufacturing Innovation Institutes

Public-private partnerships that co-invest in developing world-leading advanced manufacturing technologies and capabilities

- **Has a clearly defined focus**
- **Provides needed state-of-the-art facilities**
- **Enables collaborative, mostly pre-competitive development of promising technologies**
- **Strengthens and leverages regional resources**
- **Carries out workforce development education and training**
- **Increases non-Federal R&D investment**
- **Promotes the creation of a stable and sustainable innovation ecosystems.**

A Space for Industry and Academia to Collaborate



Benefits that Extend Beyond the Participants

- **Improves U.S. Competitiveness by Filling the Gap Between Basic Research and Commercialization.**
 - Stimulate U.S. leadership in advanced manufacturing research, innovation, and technology.
 - Transition innovative technologies into scalable, cost-effective, and high-performing manufacturing capabilities.
- **Increases production of goods within the U.S.**
 - Facilitate access by manufacturers to capital-intensive infrastructure and needed supply chains.
- **Creates and preserves jobs.**
 - Accelerate the development of an advanced manufacturing workforce.
- **Facilitates sharing of best practices.**
- **Transitions promising technology through the manufacturing scale-up phase — manufacturing readiness levels (MRLs) 4 through 7.**

Ongoing Institute Operations Phase

Areas of Primary Function

1. Technical operations
2. Business operations – including sustainability

Ongoing Institute Operations Phase (cont'd)

Technical Operations include:

- 1. A balanced portfolio of projects and strategic investments using existing or Institute-developed roadmaps that provide an effective national response to the challenges and opportunities in advanced manufacturing.**

- 2. Research, development, and demonstration activities - including proof-of-concept development and prototyping - to solve pre-competitive industrial problems with economic or national security implications:**
 - a) Reduce the cost, time, and risk of commercializing new technologies;
 - b) Improve existing technologies, processes, products; and
 - c) Research and development of materials.

Ongoing Institute Operations Phase (cont'd)

Technical Operations include (cont'd):

3. Education, training, and workforce recruitment courses and materials and programs to build workforce skills at all levels that enhance manufacturing capabilities in companies large and small.
4. Innovative methodologies and practices for supply chain integration and introduction of new technologies into supply chains.
5. Outreach and engage with small and medium-sized manufacturing enterprises, including women and minority owned manufacturing enterprises, in addition to large manufacturing enterprises.

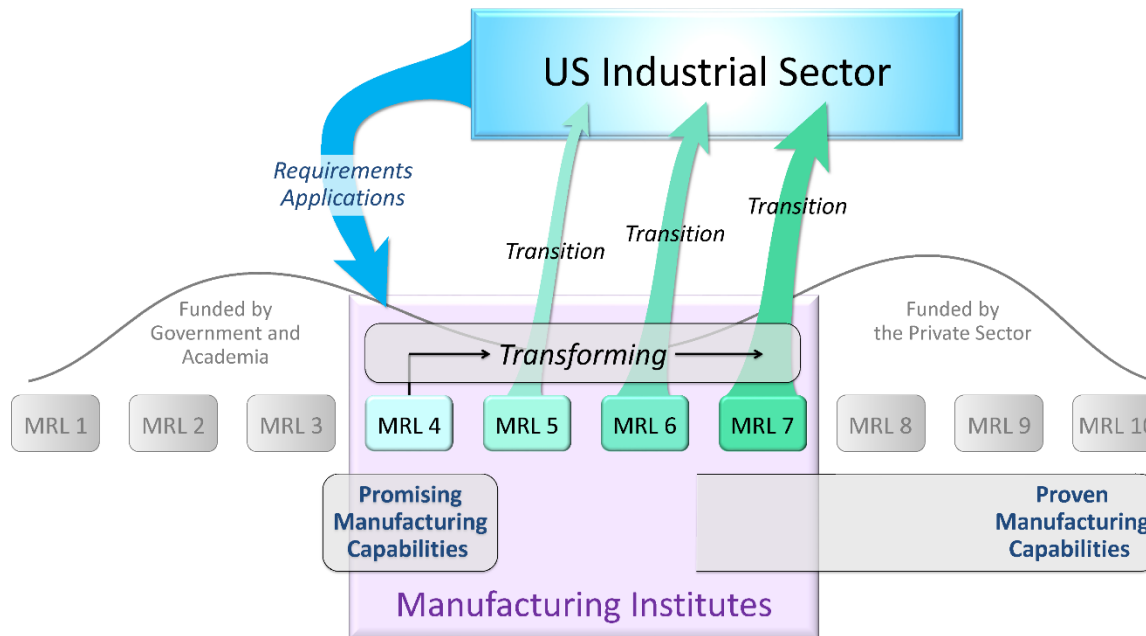
Ongoing Institute Operations Phase (cont'd)

Business Operations include:

- 1. Business structure, organization, management, and operations models**
 - a) Operate as an independent, neutral and non-biased entity able to coordinate and convene a broad range of stakeholders, including small and medium-sized enterprises (SMEs);
 - b) Become a unique component of the Nation's innovation infrastructure
 - c) The development and usage of the Annual Institute Plan (AIP) for how Project Calls will be conducted
- 2. Management, governance and membership structures**
- 3. Cost sharing from specific (known and anticipated) non-Federal sources and the Institute's transition strategy and sustainability towards attaining self-sufficiency**
- 4. Physical facility that meets the needs of U.S. manufacturing, innovation infrastructure, and the nation**

The Missing Middle

Transforming and Transitioning Promising Manufacturing Capabilities to the U.S. Industrial Sector



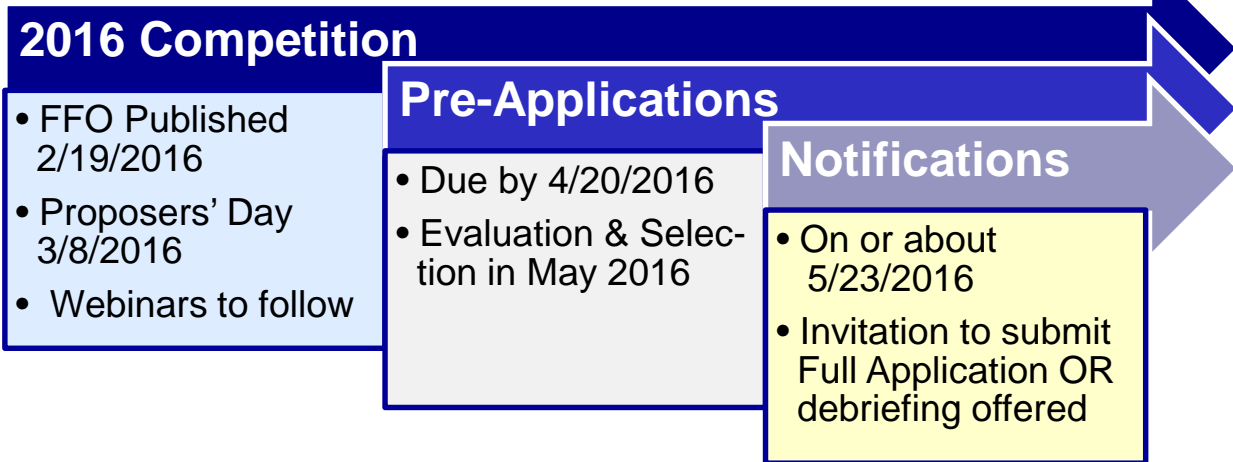
Institute Startup Phase

To effectively and efficiently assemble sufficient capabilities, resources, and controls to accomplish the Institute's mission and scope of work and begin ongoing (technical) Institute operations.

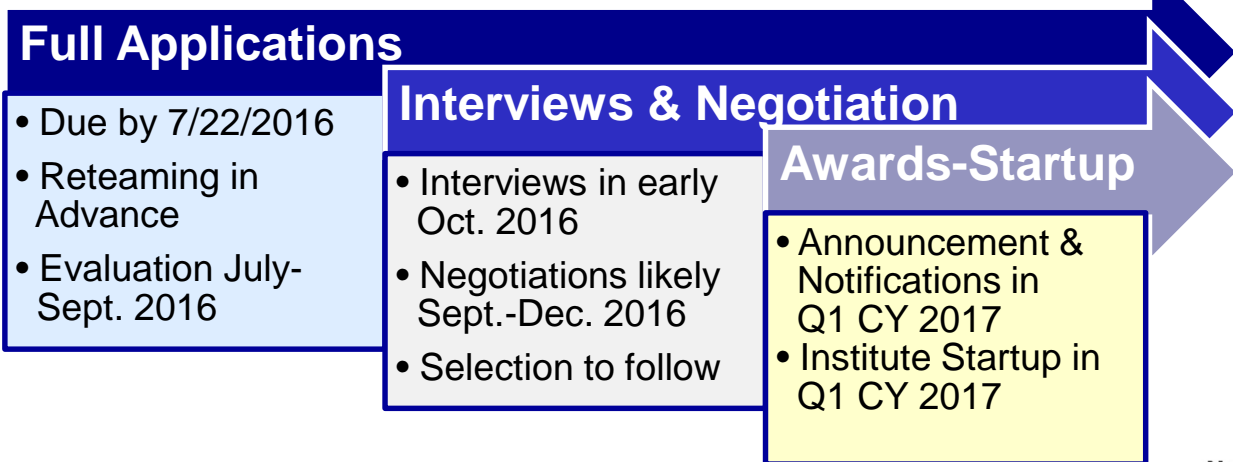
- 1. Finalizing and gather operational infrastructure to commence operations**
- 2. Gather the Institute's non-federal cost-sharing resources—should significantly exceed the federal financial assistance**
- 3. Finalize risk assessment and risk mitigation policies and procedures**
- 4. Methods to track and evaluate the Institute's performance and within-Institute reviews**
- 5. Industry road-mapping to identify technical and non-technical challenges that should be addressed by the institute**
- 6. Clear and appropriate milestones and deliverables for Startup**

Two-Step Process

Step 1: Pre-Applications



Step 2: Full Applications



Two-Step Application Process (cont'd)

Step 1: Pre-Applications

- **Submitted through Grants.gov only**
- **Due by April 20, 2016, 11:59 PM ET**
- **One Pre-Application per applicant**
 - Applicant entities may participate as a subrecipient, contractor, or unfunded collaborator within applications submitted by other entities
- **Selected applicants will then be invited to submit a Full Application**
- **Invitation notifications are expected on or about May 23, 2016**

Two-Step Application Process (cont'd)

Step 2: Full Applications

- **ONLY selected Pre-Applicants will be invited by NIST to submit a Full Application** (*Full Applications submitted by applicants who were not selected by NIST within the Pre-Application phase, and Full Applications submitted by applicants who did not submit a Pre-Application, will be returned without review.*)
- **Submitted through Grants.gov only**
- **Due by July 22, 2016, 11:59 PM ET**
- **Changes in applicant, requested budget and reteaming are permitted prior to submission of the Full Application**
 - Change lead entity, revise the requested budget amount, or reteam (subrecipients, contractors or contributors to the Institute)
 - Applicants must provide written notice of its intent in advance of the Full Application due date by mail or email to jessica.strickler@nist.gov

Full Applications must stand on their own and should not rely on information presented within a Pre-Application

Evaluating Applications

Pre-Application Process

- 1. Initial screening to determine eligibility, completeness, and responsiveness to the FFO.**
 - a) Any Pre-Application determined to be ineligible, incomplete, and/or non-responsive may be eliminated from further review.
 - b) NIST may continue the review process for a Pre-Application that is missing non-substantive information which may easily be rectified or cured in a Full Application.
- 2. Those passing:**
 - a) Reviewed by an Evaluation Team composed of five or more independent, objective, federal employees
 - b) With relevant professional and technical expertise from both the private and public sectors,
 - c) Are knowledgeable in the subject matter and are able to review.

Evaluating Applications (cont'd)

Pre-Application Process (cont'd)

3. Review will be based on:

- a) How well narrative meets the definition, goals, and mission of an Institute and the technical scope of the funding opportunity.
- b) How well the narrative meets the Pre-Application Evaluation Criteria.
- c) The degree of alignment of the Pre-Application and proposed Institute to U.S. advanced manufacturing national needs, and/or its complementarity to the research programs and goals of NIST and the Department of Commerce advanced manufacturing programs.

4. The Evaluation Team will select applicants with merit and invite them to submit a Full Application

Evaluating Applications

Full Application Process

- 1. Initial screening to determine eligibility, completeness, and responsiveness to the FFO.**
 - a) Any application determined to be ineligible, incomplete, and/or non-responsive may be eliminated from further review.
 - b) NIST may continue the review process for an application that is missing non-substantive information that may easily be rectified or cured.
- 2. Those passing will undergo the following using a diverse group of individuals with relevant expertise from both the private and public sectors:**
 - a) Merit Review
 - b) Program Review
 - c) Ranking
 - d) Selection

Evaluating Applications (cont'd)

Full Application Process (cont'd)

a) Merit Review

- Reviewed by at least three (3) independent, objective individuals with appropriate professional and technical expertise
- Limited to technical and cost matters, based on the Evaluation Criteria
- Any mix of Federal and non-Federal reviewers

b) Program Review

- Conducted by an Evaluation Panel (EP) that considers the merit review and determines the strengths and weaknesses of the applications
- The EP will consist of at least five (5) persons, comprised of any mix of NIST staff and other Federal agency employees, with relevant professional and technical expertise from both the private and public sectors

Evaluating Applications (cont'd)

Full Application Process (cont'd)

c) Ranking

- Prepared by the EP and provided to the Selecting Official, consists of written evaluations and a final adjectival ranking of the applications
- Four adjectival rankings: Fundable, Outstanding;
Fundable, Very Good;
Fundable; or
Unfundable
- Considers
 - Application's responsiveness to the FFO,
 - Results of the merit reviewers' evaluations, including scores and written analytic assessments,
 - Public information, and
 - Any additional information obtained from the applicant by the EP

Full Applications must stand on their own and should not rely on information presented within a Pre-Application

Evaluating Applications (cont'd)

Full Application Process (cont'd)

d) Selection – The NIST Director or his designee

- Shall generally select and recommend the most meritorious Full Application(s) based on the EP's final adjectival rankings and one or more Selection Factors
- Selection Factors:
 - 1) Merit reviewer results;
 - 2) EP evaluation and adjectival ranking;
 - 3) The availability of funds;
 - 4) Complementarity and uniqueness of the Institute within the NNMI network;
 - 5) The degree to which the Institute optimizes the use of available funding to achieve program objectives, with weighted preference to applications seeking less than the maximum Federal share of funds;
 - 6) The degree of alignment to U.S. advanced manufacturing national needs, and/or its complementarity to the research programs and goals of NIST and DOC advanced manufacturing programs.
- Retains the discretion to select and recommend a Full Application out of rank order based on one or more of the Selection Factors, or to select and recommend no applications for funding

Pre-Applications

- 1. Potential to fulfill a recognized national need with substantial broad based benefits and demonstrated industry leadership (40 pts)**
 - a) Proposed mission and technical scope.
 - b) National impacts and broad-based benefits.
 - c) Leadership and involvement from industry, academia and small-and medium-sized enterprises.
- 2. The proposed manufacturing innovation institute (30 pts)**
 - a) Business plan.
 - b) Integrated education, workforce development and technology transfer.
- 3. Resources, qualifications and experience for the proposed institute (30 pts)**
 - a) Rough Order of Magnitude (ROM) budget.
 - b) Cost sharing or matching.
 - c) Qualifications.

Full Applications

- 1. Potential to fulfill a recognized national need with substantial national impacts and broad based benefits (20 pts)**
 - a) Proposed national needs and scope
 - b) National impacts and broad-based benefits
- 2. Institute operations and management (25 pts)**
 - a) Business structure, organization, and management
 - b) Institute startup.
 - c) Ongoing Institute operations
- 3. Integrated education, workforce development and technology transfer (15 pts)**
 - Education and workforce development
 - Technology transfer

Full Application – Criteria (cont'd)

Full Applications (cont'd)

4. **Leadership, cost-sharing and sustainability (20 pts)**
 - a) Leadership and involvement from industry, academia and small- and medium-sized enterprises
 - b) Cost-sharing or matching
 - c) Self-sufficiency
5. **Resources, capabilities, qualifications, and experience (20 pts)**
 - a) Budget and resources
 - b) Award management
 - c) Qualifications and engagement

Pre-Selection Interviews

- **The EP may conduct pre-selection interviews with some Full Applicants during the program review phase.**
- **Purpose:**
 - Allow the applicant to provide clarifications on their Full Application,
 - Provide NIST an opportunity to ask questions.
- **Information provided during the interview will contribute to NIST's evaluation.**
- **Tentatively set for early October, 2016 (*subject to change*)**

Negotiations

- **Negotiations with selected applicant(s) will precede an award!**
- **Negotiations may begin within the program review phase and continue thereafter until an award is issued.**
- **Negotiations may include:**
 - Provide supplemental information required prior to an award
 - Budget costs
 - Modify objectives or work plans
 - Request fundable applicants consider working together in a single combined award if this approach might more effectively advance the program mission
- **Note:**
 - NIST may reject an application where information is uncovered that raises a reasonable doubt as to the present responsibility of the applicant.
 - NIST may select some, all, or none of the applications, or part(s) of any particular application.

Expectations

- **One (1) Institute award, with FY 2016 funds** (*subject to the multi-year award funding policy*).
- **Additional Institute award(s) from the competition** (*subject to the availability of funds*).
- **Each award - \$70 million Federal funds across five (5) years** (*with the possibility of renewal for an additional two (2) years*).
- **Timing** (*subject to change*)
 - Initial Awards: first calendar quarter of 2017
 - Earliest Start date: same
- **Successful performance of Institute Startup is required before subsequent Federal funds for ongoing Institute operations will be made available.**

Updates and Notifications

Updates

- Any competition updates will be published on Grants.gov and/or NIST competition website (www.nist.gov/amo/nnmi)
- Regular FAQ updates are expected

Notifications

- Applicants for both Pre-Applications and Full Applications will be notified in writing.
- Unsuccessful applicants will be given the opportunity to request a debriefing of their application's evaluation.

2016 NIST NNMI Institute Competition

Proposers' Day, March 8, 2016

Website and Resources

- Visit www.nist.gov/amo/nnmi/2016competition.cfm
- Resources to assist Applicants, include:
 - Documents, FAQs, Suggested Templates and Guidance, and How-To's
 - Cooperative Agreements & Award Requirements, and Publications
- Send questions to NIST hotline at nnmifund@nist.gov or (301) 975-0404

Competition Timeline

February 19, 2016	Announced on Grants.gov (2016-NIST-NNMI-01)
April 20, 2016, 11:59 p.m. ET	Pre-Applications due through Grants.gov
May 23, 2016 (on or about)	Pre-Application review and selection notification
July 22, 2016, 11:59 p.m. ET (on or about)	Full Applications due through Grants.gov
Q1, CY 2017	Anticipated start date for awards