APPLICATION INSTRUCTIONS for 2018-NIST-TPO-01

Applicants are strongly advised to use Grants.gov's "Download Submitted Forms and Applications" option to check that their application's required attachments were contained in their submission.

After submitting the application, follow the directions found at this link, https://go.usa.gov/xQgeh in the Grants.gov Online Users Guide.

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://go.usa.gov/xQgeh 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. 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 submissions 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; however, applicants can immediately check that they properly submitted the application in Grants.gov by following the Grants.gov procedures cited above.

This document consists of seven important sections:

1) Overview;
2) Required Application Forms and Documents;
3) Application Format;
4) Grants.gov Application Submission Process;
5) Attachment of Required Documents;
6) Verifying the Submission and Tracking the Application; and
7) Submission Date and Time.

1) Overview

We strongly recommend that applicants do not wait until the last minute to submit an application. Allowances will not make for any late submissions. To avoid any potential processing backlogs due to last minute Grants.gov registrations, applicants are highly encouraged to begin their Grants.gov registration process early.

When developing your submission timeline, please keep in mind that (1) all applicants are required to have a current registration in the System for Award Management (SAM.gov); (2) the free annual registration process in the electronic System for Award Management (SAM.gov) may take between three and five business days or as long as more than two weeks; and (3) electronic applicants are required to have a current registration in Grants.gov; and (4) applicants using Grants.gov 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.

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.

Applicants will find instructions on registering with SAM.gov as part of the Grants.gov process at:
http://www.grants.gov/web/grants/applicants/organization-registration.html .

All applicants should be aware that adequate time must be factored into an applicant's schedule for delivery of the application.

Submitters are advised that volume on Grants.gov may be extremely heavy leading up to the deadline date.

2) Required Application Forms and Documents

The Application must contain the following elements:

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

For SF-424 (R&R), Items 5, 14, and 19, use the Zip Code + 4 format (##### - ####) when addresses are called for.

For SF-424 (R&R), Item 17, the list of certifications and assurances is contained in the SF-424B (item 3 below).

SF-424 (R&R), Item 18. If the SF-LLL, Disclosure of Lobbying Activities form (item (6) below) is applicable, attach it to field 18.

Instructions for filling in the SF-424 (R&R) can be found in the 2018-NIST-TPO-01 Application Instructions document found on Grants.gov, as well as at Instructions SF-424 (R&R), Application for Federal Assistance.

(2) Research & Related Budget (Total Fed + Non-Fed). The budget should reflect anticipated expenses for the full term of the project, considering all potential cost increases, including cost of living adjustments.

The budget should be detailed in these categories:

A. Senior/Key Person;
B. Other Personnel;
C. Equipment Description;
D. Travel;
E. Participant/Trainee Support Costs (not relevant to this competition);
F. Other Direct Costs;
G. Direct Costs (automatically generated);
H. Indirect Costs;
I. Total Direct and Indirect Costs (automatically generated);
J. Fee (not relevant to this competition);
K. Total Costs and Fee (automatically generated);
L. Budget Narrative and Justification document (item (8) below) should be attached to field L.

Instructions for completing the Research & Related Budget (Total Fed + Non-Fed) form can be found in the 2018-NIST-TPO-01 Application Instructions document on Grants.gov, as well as at Instructions Research & Related Budget (Total Fed + Non-Fed) – Budget.

(3) SF-424B, Assurances - Non-Construction Programs

(4) CD-511, Certification Regarding Lobbying. CD-511, Certification Regarding Lobbying. Enter "2018-NIST-TPO-01" in the Award Number field. Enter the title of the application, or an abbreviation of that title, in the Project Name field.

(5) SF-LLL, Disclosure of Lobbying Activities (if applicable)

(6) Research and Related Other Project Information. Answer the highlighted questions and use this form to attach the Project Narrative (item (7) below), the

Indirect Cost Rate Agreement (item (9) below), and the Data Management Plan (item (10) below). Instructions for completing the Research and Related Other Project Information can be found in the 2018-NIST-TPO-01 Application Instructions document on Grants.gov, as well as at Instructions Research and Related Other Project Information. Please note that the Project Summary/Abstract field, which has a place to attach an optional Project Summary/Abstract, is not relevant to this competition.

(7) Project Narrative. The Project Narrative is a word-processed document of no more than twenty (20) pages responsive to the program description (*see* Section I. of this NOFO) and the evaluation criteria (*see* Section V.1. of this NOFO). The Project Narrative should contain the following information:

(a) Executive Summary. An executive summary of the proposed approach, consistent with the evaluation criteria (*see* Section V.1. of this NOFO). The executive summary should include information indicating how each evaluation criterion and its sub-factors are addressed. A table can be helpful in providing this information. The executive summary should not exceed two (2) pages.

- The executive summary must also clearly identify a broad, appropriate technology area towards which both NIST and/or other federal labs have contributed towards standards development research and/or participation in SDOs, and propose three federal laboratory research programs that are relevant to the proposed technology area (historical program, established ongoing program, and newly established cutting-edge program).

(b) Project Approach. A description of the applicant's approach to clearly address the program goals (*see* Section I. of this NOFO) and the methodology that will be used to:

- conduct a qualitative assessment of the impacts of the relevant standards research programs through three separate case study analyses (one for each program proposed);
- conduct a quantitative retrospective economic analysis, where appropriate, of the impact of the transferred research from the selected research programs on standards development in the selected technology area;
- conduct a quantitative empirical assessment of the portion of the national economic impact of the relevant documentary or other standard that is attributable to all federal lab contributions and NIST-only contributions through research and subsequent technology transfer efforts in the selected technology area;

- contribute to the development of the next generation of researchers focused on science, R&D, and technology transfer impact analysis; and
- broadly disseminate the results of the research to the public.

This section should address the *Project Approach* evaluation criterion (*see* Section V.1.a. of this NOFO).

(c) Statement of Work. 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. In particular, the following should be described:

- the methodologies that will be used to manage the project;
- the milestones for project tasks and how the milestones will permit the applicant to assess incremental progress of the project and fit into the overall schedule for the project;
- the tasks and activities to implement the proposed project objectives; and
- the key project risks and the risk response strategies to address these risks.

This section should address the *Statement of Work* evaluation criterion (*see* Section V.1.b. of this NOFO).

(d) Qualifications. A description of the qualifications of the key personnel, the time commitments of the key personnel, and how the project staff qualifications will enable them to conduct the project work. In particular, the following should be described, as applicable, for key personnel:

- any past experience with evaluating the economic impact of the technology infrastructure and documentary or other standards;
- any past experience with conducting retrospective economic impact studies;
- any past experience with or knowledge of standardization and the U.S. standards system;
- any past experience in the following disciplines: technology assessment, high-tech industry behavioral and structural analyses, microeconomic modeling of complex technology development and commercialization patterns, high-tech industry survey and data collection techniques, and quantitative and qualitative analyses of technology, including documentary or other standards (if an applicant as an organization cannot demonstrate expertise in these disciplines, the applicant should include a plan showing how the applicant will obtain such

expertise to meet the objectives of this NOFO); and
- any previously demonstrated ability to achieve positive outcomes in endeavors with program objectives that are similar to those described in Section I. of this NOFO.

This section should address the *Qualifications* evaluation criterion (*see* Section V.1.d. of this NOFO).

(e) Resumes of key personnel must be included. Resumes are not included in the page count of the Project Narrative. Resumes included as part of the application must be a maximum of two pages each. Additional pages beyond the two pages per resume will not be considered during the evaluation of the application.

(8) Budget Narrative and Justification. There is no set format for the Budget Narrative and Justification; however, further explanation must be provided for the specific cost categories and line items identified in the Instructions Research & Related Budget (Total Fed + Non-Fed) – Budget, as well as any other information you deem necessary for NIST's consideration.

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 (http://go.usa.gov/SBYh), which apply to awards in this program.

The Budget Narrative should also address the Match of Budget to Proposed Work evaluation criterion (see Section V.1.e. of this NOFO).

Information needed for each category is as follows:

A. Senior Key Person – At a minimum, the budget justification should include the following: name, 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 direct charges on the proposed project, description of the role of the individual on the proposed project and the work to be performed.

Fringe benefits 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.

B. Other Personnel - Data is requested at the project role level, and not at the individual level for Other Personnel. 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 direct charges on the proposed project, description of the role of the position on the proposed project and the work to be performed.

Fringe benefits 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. Equipment Description – 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. Any items that do not meet the threshold for equipment can be included under the supplies line item. 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. Applicants should provide at least two (2) quotes, if available, for equipment costing $25,000 or more. If two (2) quotes are not available, please provide a statement as to why two (2) quotes are not available. Any items that do not meet the threshold for equipment can be included under the Materials and Supplies line item in Section F, Other Direct Costs.

D. Travel - For all travel costs, required by the recipient to complete the project, including attendance at any relevant conferences, the budget justification for travel 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.

F. 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.

Each subaward or contractual cost or should be treated as a separate item in the Other Direct Costs category. 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 goods and services. Subawardees perform part of the project scope of work. For each subaward, applicants must provide budget detail justifying the cost of the work performed on the project.

H. Indirect Costs - 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.(9) of this NOFO).

(9) 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 the Department of Commerce Financial Assistance Standard Terms and Conditions dated March 31, 2017, accessible at https://go.usa.gov/xXRxK.

Alternatively, in accordance with 2 C.F.R. § 200.414(f), applicants that have never received a negotiated indirect cost rate may elect to charge indirect costs to an award pursuant to a de minimis rate of 10 percent of modified total direct costs (MTDC), in which case a negotiated indirect cost rate agreement is not required. 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.

(10) Data Management Plan. Consistent with NIST Policy 5700.00[1], *Managing Public Access to Results of Federally Funded Research,* and NIST Order 5701.00[2], *Managing Public Access to Results of Federally Funded Research*", applicants should include a Data Management Plan (DMP).

The DMP is a supplementary document of not more than two pages that must include, at a minimum, a summary of proposed activities that are expected to generate data, a summary of the types of data expected to be generated by the identified activities, a plan for storage and maintenance of the data expected to be generated by the identified activities, and a plan describing whether and how data generated by the identified activities will be reviewed and made available to the public. As long as the DMP meets these NIST requirements, it may take the

[1] https://www.nist.gov/sites/default/files/documents/2017/05/09/Final-P-5700.pdf
[2] https://www.nist.gov/sites/default/files/documents/2017/05/09/Final-O-5701_0.pdf

form specified by the applicant's institution or some other entity (e.g., the National Science Foundation[3] or the National Institutes of Health[4]).

All applications for activities that will generate scientific data using NIST funding are required to adhere to a DMP or explain why data sharing and/or preservation are not within the scope of the project.

For the purposes of the DMP, NIST adopted the definition of "research data" at 2 C.F.R. § 200.315(e)(3) (available at http://go.usa.gov/3sZvQ).

Reasonable costs for data preservation and access may be included in the application.

The inclusion of the DMP will be considered as part of the administrative review (*see* Section V.3.a. of this NOFO); however, the DMP will not be evaluated against any evaluation criteria.

(11) Subaward Budget Form. The Research & Related Subaward Budget Attachment Form is required if sub-recipients and contractors are included in the application budget.

Instructions for completing subaward budget forms are found at: https://www.grants.gov/help/html/help/ManageWorkspaces/Manage_Subforms.htm.

Select the checkbox for the Research & Related Subaward Budget (Total Fed + Non-Fed) Attachment(s) Form from the optional forms in the application template, and attach the subaward budget form or forms to it.

Please pay close attention to the guidance in Section 5) of this document, "Attachment of Required Documents".

3) Application Format

(1) Paper, E-mail 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 landscape orientation.

(3) Font. Easy to read font (12-point minimum). Smaller type may be used in figures and tables but must be clearly legible**.**

[3] http://www.nsf.gov/bfa/dias/policy/dmp.jsp

[4] http://grants.nih.gov/grants/policy/data_sharing/data_sharing_guidance.htm

(4) Page Limit. Twenty (20) pages for the Project Narrative, noting the limit of two (2) pages for the Executive Summary. Resumes are not included in the page count of the Project Narrative. However, if resumes are included, resumes must be a maximum of two (2) pages each.

(5) Page Limit Excludes: SF-424 (R&R), Application for Federal Assistance; Research & Related Budget (Total Fed + Non-Fed); SF-424B, Assurances – Non-Construction Programs; CD-511, Certification Regarding Lobbying; SF-LLL, Disclosure of Lobbying Activities; Research and Related Other Project Information; Budget Narrative and Justification; Indirect Cost Rate Agreement; the Data Management Plan; and the Subaward Budget Form.

(6) Page size. 21.6 centimeters by 27.9 centimeters (8 ½ inches by 11 inches).

(7) Application language. English.

4) Grants.gov Application Submission Process

(1) Applications must be submitted via Grants.gov at www.grants.gov, under announcement 2018-NIST-TPO-01.

(a) Applicants submitting applications through Grants.gov should carefully follow specific Grants.gov instructions to ensure the 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 2018-NIST-TPO-01 announcement, contact Leon Sampson by phone at 301-975-3086 or by e-mail at grants@nist.gov.

(b) 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. If all goes well, the registration process takes three (3) to five (5) business days. If problems are encountered, the registration process can take up to two (2) weeks or more. Applicants must have a 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. *See also* Section IV.3. of this NOFO. 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 authorized individual(s) 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, with the exception of Federal holidays. Help Desk service will resume at 7:00 a.m. Eastern Time the day after Federal holidays. For assistance using Grants.gov, you may also contact support@grants.gov.

(c) To find instructions on submitting an application on Grants.gov, Applicants should refer to the "Applicants" tab in the banner just below the top of the www.grants.gov home page. Clicking on the "Applicants" tab produces two exceptionally useful sources of information, Grant Applications 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. Closely following the detailed information in these subcategories will increase the likelihood of acceptance of the application by the Federal agency's electronic system.

Applicants should pay close attention to the guidance under "Applicant FAQs," as it contains information important to successful submission on Grants.gov, including essential details on the naming conventions for attachments to Grants.gov applications.

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 know whether the application was rejected with errors and the reasons why, 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 your application before the deadline. If the applicant does not correct the errors, the application will not be forwarded to NIST by Grants.gov.

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

5) Attachment of Required Documents

Items (1) through (5) in section 2) above, Required Application Forms and Documents, are part of the standard application package in Grants.gov and can be completed through the download application process.

Item (6), the SF-LLL, Disclosure of Lobbying Activities form, is an optional application form which is part of the standard application package in Grants.gov. If item (6), the SF-LLL, Disclosure of Lobbying Activities form is applicable to this proposal, attach it to field 18 of the SF-424 (R&R), Application for Federal Assistance.

Item (7), the Project Narrative, should be attached to field 8 (Project Narrative) of the Research and Related Other Project Information form by clicking on "Add Attachment".

Item (8), the Budget Narrative and Justification, should be attached to field L (Budget Justification) of the Research and Related Budget (Total Fed + Total Non-Fed) form by clicking on "Add Attachment".

Items (9), the Indirect Cost Rate Agreement, and (10), the Data Management Plan, must be completed and attached by clicking on "Add Attachments" found in item 12 (Other Attachments) of the Research and Related Other Project Information form.

Item (11), the Subaward Budget Form(s), if applicable to the submission, should be attached to the Research & Related Subaward Budget (Total Fed + Non-Fed) Attachment(s) Form in the application package.

Applicants should carefully follow specific Grants.gov instructions at 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 using Grants.gov 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.

6) Verifying the Submission and Tracking the Application

The Grants.gov Online Users Guide available at the Grants.gov site (http://go.usa.gov/cjaEh) provides vital information on application process.

Applicants are strongly advised to use Grants.gov's "Download Submitted Forms and Applications" option to check that their application's required attachments were contained in their submission.

After submitting the application, follow the directions found at this link, https://go.usa.gov/xQqeh ***in the Grants.gov Online Users Guide.***

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://go.usa.gov/xQqeh 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. 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 its own Agency Tracking Numbers.

7) Submission Date and Time

Electronic applications must be received at Grants.gov no later than 11:59 p.m. Eastern Time, Thursday August 23, 2018. 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 is expected to be closed for routine maintenance from 12:01 a.m. Eastern Time, Saturday, July 21, 2018 until Monday, July 23, 2018 at 6:00 a.m. Eastern Time; and again from 12:01 a.m. Eastern Time, Saturday, August 18, 2018 until 6:00 a.m. Eastern Time Monday, August 20, 2018. Applications cannot be submitted when Grants.gov is closed.