

February 11, 2015

**ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY (FFO)
NIST Standards Services Curricula Development
Cooperative Agreement Program**

EXECUTIVE SUMMARY

- **Federal Agency Name:** National Institute of Standards and Technology (NIST), United States Department of Commerce (DoC)
- **Funding Opportunity Title:** NIST Standards Services Curricula Development (SSCD) Cooperative Agreement Program
- **Announcement Type:** Initial
- **Funding Opportunity Number:** 2015-NIST-SSCD-01
- **Catalog of Federal Domestic Assistance (CFDA) Number:** 11.620 Science, Technology, Business and/or Education Outreach
- **Dates:** Applications must be received electronically through Grants.gov no later than 11:59 p.m. Eastern Time, Monday, April 13, 2015. Applications received after this deadline will not be reviewed or considered. The earliest anticipated start date for awards under this FFO is expected to be August 1, 2015.

When developing your submission timeline, keep in mind that (1) a free annual registration process in the electronic System for Award Management (SAM) (see Section VI.4.b.) may take between three and five business days or as long as more than two weeks, and (2) applicants using Grants.gov will receive a series of receipts over a period of up to two business days before learning via a validation or rejection whether a Federal agency's electronic system has received its application.

- **Proposal Submission Address:** See Section IV. in the Full Announcement Text of this FFO.
- **Funding Opportunity Description:** The NIST SSCD Cooperative Agreement Program provides financial assistance to support curriculum development for the undergraduate and/or graduate level. These cooperative agreements support the integration of standards and standardization information and content into seminars, courses, and learning resources. The recipients will work with NIST to strengthen education and learning about standards and standardization.

- **Anticipated Amounts:** Approximately \$350,000 may be available to fund two (2) to eight (8) projects in the \$25,000 - \$75,000 range with project performance periods of up to eighteen (18) months.
- **Funding Instrument:** Cooperative agreement.
- **Who Is Eligible:** Accredited institutions of higher education; non-profit organizations; commercial organizations; state, local, and Indian tribal governments located in the United States and its territories. An eligible applicant may work individually or include proposed sub-awards or contracts with others in a project application, effectively forming a team or consortium.
- **Cost Sharing Requirements:** This Program does not require cost sharing.

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FULL ANNOUNCEMENT TEXT

I. Program Description

The statutory authority for the NIST Standards Services Curricula Development (SSCD) Cooperative Agreement Program is 15 U.S.C. § 272(b) and (c).

The NIST SSCD Cooperative Agreement Program provides financial assistance to support curriculum development for the undergraduate and/or graduate level. This Program supports the integration of documentary and measurement standards and standardization information and content into seminars, courses, and learning resources.

The recipients will work with NIST to strengthen education and learning about documentary and measurement standards and standardization. Recipients are expected

to:

- (1)** develop curriculum for the undergraduate and/or graduate level to educate students about the impact and nature of standards and standardization so that they enter the workforce and/or continue their academic studies with a strong understanding and appreciation for the value and benefits of standards and standardization, in accordance with supporting, advancing, and/or integrating documentary and/or measurement standards and standardization in the educational infrastructure;
- (2)** identify new, sustainable approaches, methods, and models that can be replicated or built-on by other educational programs to support the integration of standards and standardization information and content into undergraduate and/or graduate level curricula;
- (3)** develop a communication plan to share project information with curriculum development stakeholders;
- (4)** participate in a one-day workshop at NIST in Gaithersburg, Maryland in the fall of 2016. Applicants should include travel related expenses to participate in this event in their proposed budgets (see Sections IV.2.a.(2) and IV.2.a.(8) of this FFO); and
- (5)** disseminate project results for public release, including a summary of major conclusions. This summary paper will be approximately 10 pages in length, describe the project and its importance, explain the original project goal, describe the project outcomes, describe how the work was evaluated, and report the findings and lessons learned through the activity, including a summary of the project's suitability and potential for adoption in other educational organizations, communities, or fields of practice. The summary paper must be in a publicly releasable form and must not contain any personal or proprietary information. Wherever possible, the results of the research should be published in the open scientific literature in such a way as to be generally available to American Scientific Libraries. The funding instrument is a cooperative agreement, and the NIST Standards Coordination Office will collaborate with recipients by reviewing the publication prior to release and assisting in dissemination of the publication. See also Department of Commerce Financial Assistance Standard Terms and Conditions, December 26, 2014, Section D.03., Intellectual Property Rights, and K.03.i., Publications, Videos and Acknowledgment of Sponsorship, available at <http://go.usa.gov/hKbj>.

Funds can be used for the design, testing, and evaluation of specific innovations in teaching methods, curricula, course content and materials, courses or course modules, class assignments, and/or student projects. Funds can also help cover the cost of students who assist instructors in revising a course or course module, travel and related expenses for guest lecturers, or other costs entailed with the integration of standards and standardization into the academic studies program. Standards

curriculum activities in any area that supports science, technology, engineering, and math (STEM) and/or other related disciplines such as law, public policy, business, and/or multi-disciplinary approaches will be considered. Activities involving the evaluation of the viability, necessity, or usefulness of a project are not within the scope of the NIST SSCD Cooperative Agreement Program and will not be funded.

NIST anticipates that most costs will be incurred within the first twelve months of the project to support project milestones but funding will remain available for eighteen months to complete milestones and to support summarizing and reporting what was accomplished during the first twelve months, including writing and disseminating a summary paper as described in Section I.(5) above.

II. Federal Award Information

- 1. Funding Instrument.** The funding instrument used in this program will be a cooperative agreement. The nature of NIST's "substantial involvement" will generally be NIST collaboration and involvement in the direction of the scope of work. Additional forms of substantial involvement that may arise are described in Chapter 5.C of the Department of Commerce (DoC) Grants and Cooperative Agreements Manual, which is available at <http://go.usa.gov/SNJd>. Please note the DoC Grants and Cooperative Agreements Manual is expected to be updated after publication of this funding announcement and before October 1, 2015. Refer to Section VII. of this FFO, Agency Contacts, Grant Rules and Regulations, if you seek the information at this link and it is no longer working or you need more information.
- 2. Funding Availability.** Approximately \$350,000 may be available to fund two (2) to eight (8) projects in the \$25,000 - \$75,000 range per year with project performance periods of up to eighteen (18) months.

III. Eligibility Information

- 1. Eligible Applicants.** Accredited institutions of higher education; non-profit organizations; commercial organizations; state, local, and Indian tribal governments located in the United States and its territories. An eligible applicant may work individually or include proposed sub-awards or contracts with others in a project application, effectively forming a team or consortium.
- 2. Cost Sharing or Matching.** This program does not require cost sharing.

IV. Application and Submission Information

- 1. Address to Request Application Package.** The standard application package, consisting of the standard forms, i.e., SF-424, SF-424A, SF-424B, SF-LLL, and the CD-511, is available at www.grants.gov. The standard application package may be requested by contacting the NIST personnel listed below:

Erik Puskar, National Institute of Standards and Technology, NIST Standards Services Curricula Development Grant Program, 100 Bureau Drive, Mail Stop 2100, Gaithersburg, MD 20899-2100. Phone: (301) 975-8619; e-mail: erik.puskar@nist.gov.

2. Content and Form of Application Submission

a. Required Forms and Documents

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

SF-424, Item 12, should list the FFO number 2015-NIST-SSCD-01.

For SF-424, Item 21, the list of certifications and assurances is contained in the SF-424B.

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

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

- (4) CD-511, Certification Regarding Lobbying**

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

- (6) Technical Proposal.** The Technical Proposal is a word-processed document of no more than ten (10) pages responsive to the program description (see Section I. of this FFO) and the evaluation criteria (see Section V.1. of this FFO). It should contain the following information:

- a. Technical Project Approach and Methodology.** A description of the proposed approach to support, advance, and/or integrate standards and standardization in the educational infrastructure. Include a description of new, sustainable approaches, methods, and models that can be replicated or built upon by other educational programs to support the integration of standards and standardization information and content into undergraduate and graduate level curricula. If you were a prior awardee under this program, include an explanation of why your performance under a new award would be the same or different relative to your previous award(s). Also include in this section a detailed Project

Management Plan, including all of the elements described in the *Technical Project Approach and Methodology* Evaluation Criterion (see Section V.1.a. of this FFO).

- b. Communication Plan.** A detailed communication plan to share project information, results, and/or outcomes, including how and when the plan will be implemented, in accordance with the *Communication Plan* Evaluation Criterion (see Section V.1.b. of this FFO). Communication Plans should consider how the proposed sustainable approaches, methods, and models can be replicated or built upon, including by other educational programs within the applicant's organization and/or other academic institutions, to support the integration of standards and standardization information and content into undergraduate and graduate level curricula. One way for applicants who are not educational institutions to demonstrate the strength of their Communication Plan is by describing their proposed or existing relationship with a university or college. Communication Plans should also include a description of the applicant's plans for composing and disseminating project results for public release, including a summary of major conclusions, in the form of a summary paper, as described in Section I.(5) of this FFO.
- c. Staffing Description.** Descriptions of relevant qualifications of key personnel who will be assigned to work on the proposed project. Examples of key personnel past experiences should include demonstrated knowledge of the current state, impact, and nature of standards and standardization activities. Experience with bringing together diverse stakeholders in educational environments for undergraduate and/or graduate level STEM and/or other related disciplines such as law, public policy, business, and/or multi-disciplinary curricula development will also be considered.

This section should address the *Staffing Description* Evaluation Criterion (see Section V.1.c of this FFO).

- (7) Letters of Support.** Up to three letters of support of no more than one page each for the proposed project should be submitted. A letter from leadership within the applicant organization, which, if submitted, will count as one of the three letters permitted, is strongly encouraged to demonstrate the extent to which the applicant has access to facilities and overall support necessary to accomplish project objectives, consistent with the *Resource Availability* Evaluation Criterion (see Section V.1.d. of this FFO). Letters of support from other organizations that may benefit from or otherwise collaborate on the proposed project may also be submitted.

(8) Budget Narrative. The budget narrative for the project as a whole should provide a detailed breakdown of each of the object class categories as reflected on the SF-424A and include a detailed description of how the funds will be used, in accordance with the *Resources Availability* Evaluation Criterion (see Section V.1.d of this FFO). If proposing sub-awards or contracts with others, the applicant should provide detailed information in the budget narrative regarding how the funds will be used by the sub-awardees or contractors.

The SF-424A will include the categories listed below for which applicants need to provide supporting narrative if an applicable cost is proposed in the project. A project may involve costs in one or more categories and applicants should only propose and describe costs appropriate for their proposed projects. The written justification should include the necessity and the basis for the cost. Only allowable costs should be included in the budget. Information on cost allowability is available at 2 C.F.R. Part 200, as described in the DoC Financial Assistance Pre-Award Notice Requirements for Grants and Cooperative Agreements, which are contained in the Federal Register notice of December 30, 2014 (79 FR 78390), and available at <http://go.usa.gov/hKkR>.

Supporting information for each category is as follows, in accordance with applicable federal cost principles set forth in 2 C.F.R. part 200 Subpart E:

- a) **Personnel** - At a minimum, the budget justification for all personnel should include the following: name, job title, commitment of effort on the proposed project (in hours or effort level), salary rate, and total direct charges on the proposed project, description of the role of the individual on the proposed project and the work to be performed.
- b) **Fringe Benefits** - 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 (health insurance, parking) should not be charged under another cost category.
- c) **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. 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.) that is charged directly to the award should be allocated to the award according to expected usage on the project.
- d) **Travel** - For travel costs associated with travel required by the recipient

to complete the project, the budget justification for travel should include the following: destination; names/number of people traveling; dates and/or duration; mode of transportation, lodging and subsistence rates; and detailed 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 travel.

- e) **Supplies** - 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) **Contracts/Subawards** - Each contract or subaward should be treated as a separate item. Describe the services to be provided in detail and the necessity of the subaward or contract to the successful performance of the proposed project. Include a detailed description of the proposed costs.
- g) **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.

(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, December 26, 2014, available at <http://go.usa.gov/hKbj>.

Items IV.2.a.(1) through IV.2.a.(5) above are part of the standard application package in Grants.gov and can be completed through the download application process. **Items IV.2.a.(6) through IV.2.a.(8) must be completed and attached by clicking on “Add Attachments” found in Item 15 of the SF-424, Application for Federal Assistance. If Item IV.2.a.(9) is relevant to the application, it too must be completed and attached by clicking on “Add Attachments” found in Item 15 of the SF-424, Application for Federal Assistance. This will create a zip file that allows for transmittal of the documents electronically via Grants.gov.** 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***

indicating an application is received does not provide information about whether attachments have been received.

b. Application Format

(1) Application language. English.

(2) E-mail, Hard Copies, or Facsimile (fax) Submissions. Will not be accepted. Applications must be submitted electronically. Electronic applications must be submitted via Grants.gov at www.grants.gov (see Section IV.6.a. of this FFO),

(3) Figures, Graphs, Images, and Pictures. Should be of a size that is easily readable or viewable and may be landscape orientation.

(4) Font. Easy to read font (10-point minimum). Smaller type may be used in figures and tables but must be clearly legible.

(5) Line Spacing. Applicants can use single spacing or double spacing.

(6) Margins. One (1) inch top, bottom, left, and right.

(7) Page numbering. Number pages sequentially.

(8) Page layout. Portrait orientation only except for figures, graphs, images, and pictures.

(9) Page Limit. The Technical Proposal (see Section IV.2.a.(6). of this FFO) is limited to ten (10) pages, one-sided print.

Page limit includes: Table of contents (if included), Technical Proposal with all required sections, including figures, graphs, tables, images, and pictures.

Page limit excludes: SF-424, Application for Federal Assistance; SF-424A, Budget Information – Non-Construction Programs; SF-424B, Assurances – Non-Construction Programs; SF-LLL, Disclosure of Lobbying Activities; CD-511, Certification Regarding Lobbying; Letters of Support; Budget Narrative; and Indirect Cost Rate Agreement.

(10) Typed document. All applications, including forms, must be typed.

c. Pre-Applications. NIST is not accepting pre-applications or white papers under the NIST SSCD Cooperative Agreement Program.

3. Dun and Bradstreet Universal Numbering System (DUNS) Number and System for Award Management (SAM). Applicants must have a Dun and Bradstreet Data

Universal Numbering System (DUNS) 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 Sections IV.6.a.(2). and VI.4.b. of this FFO for more details.

4. **Submission Dates and Times.** Applications must be received electronically through Grants.gov no later than 11:59 p.m. Eastern Time, Monday, April 13, 2015. Applications received after this deadline will not be reviewed or considered. NIST will consider the date and time stamped on the validation generated by www.grants.gov as the official submission time.

NIST strongly recommends that applicants do not wait until the last minute to submit an application. NIST will not make allowance 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, keep in mind that (1) a free annual registration process in the electronic System for Award Management (SAM) (see Section VI.4.b. of this FFO) may take between three and five business days or as long as more than two weeks, and (2) applicants using Grants.gov will receive a series of receipts over a period of up to two business days before learning via a validation or rejection notification whether a Federal agency's electronic system has received its application.

5. **Funding Restrictions.** Profit or fee is not an allowable cost.

6. **Other Submission Requirements**

- a. **Applications must be submitted electronically.** Electronic applications must be submitted via Grants.gov at www.grants.gov, under announcement 2015-NIST-SSCD-01.
 - (1) Submitters of electronic applications 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 2015-NIST-SSCD-01 announcement, contact Christopher Hunton by phone at 301-975-5718 or by e-mail at christopher.hunton@nist.gov.
 - (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. 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 Dun and Bradstreet Data Universal Numbering System (DUNS) number (see Section VI.4.b. of this FFO) 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 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.

- (3) 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 the "Grant Applicants" page.

In addition to following the "Steps" and instructions described in the "Applicant Actions" section and its sub-categories, further detailed instructions are described in "Applicant Resources" and all of its subcategories. This appears in the box near the top left of the Grant Applicants page. Applicants should follow the links associated with each subcategory.

Applicants will receive a series of receipts during a process of up to two business days before the application is either validated as electronically received by the Federal agency system, or rejected by it.

Applicants should pay close attention to the instructions 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.

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 on the deadline date.

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

- b. Amendments.** Any amendments to this FFO will be announced through Grants.gov. Applicants may sign up for Grants.gov FFO amendments or may request copies from Erik Puskar by telephone at (301) 975-8619 or by e-mail to erik.puskar@nist.gov.

V. Application Review Information

- 1. Evaluation Criteria.** The evaluation criteria that will be used in evaluating applications and assigned weights are as follows:

- a. Technical Project Approach and Methodology (0 – 50 points).** The extent to which the proposed project supports, advances, or integrates documentary and/or measurement standards and the standardization process into seminars, learning resources, and courses will be evaluated. Reviewers will evaluate the detailed work plan; clear and measurable performance objectives; key interim and final outputs reflecting the performance objectives; milestones and timelines, the intended audience, and the evaluation plan. The extent to which the proposed methodology of program management is likely to ensure effective operations and oversight and meet program objectives will also be evaluated. The extent to which the material developed encompasses the role of standards in competitiveness and innovation will be considered.

For an applicant with past performance under the NIST SSCD Cooperative Agreement Program, reviewers will assess the extent to which such an applicant identifies why their performance under a new award would be the same or different relative to their previous award(s). If an applicant with past performance under the NIST SSCD Cooperative Agreement Program has past performance deficiencies under the Program, reviewers will assess the extent to which such an applicant identifies the reasons for such performance deficiencies and provides a detailed course of action for ensuring better performance under a new NIST SSCD Cooperative Agreement Program award. If an applicant does not have performance deficiencies under the NIST SSCD Cooperative Agreement Program, reviewers will assess the extent to which such an applicant describes why such performance would continue under a new award.

Applicants without past performance under the NIST SSCD Cooperative Agreement Program will not be penalized and will still be eligible to receive the maximum amount of points under this criterion.

- b. Communication Plan (0 – 15 points).** The extent to which the proposed communication plan enables sharing project information, project results and/or outcomes with educational programs within the applicant's organization and other academic institutions, including implementation of the proposed communication plan, will be evaluated. The extent to which the Communication Plan considers how

the proposed sustainable approaches, methods, and models can be replicated or built upon by the applicant organization and/or other academic institutions to support the integration of standards and standardization information and content into undergraduate and graduate level curricula will be evaluated. Sharing information with other educational organizations, communities, or fields of practice may also be considered. (See Section I.3. of this FFO).

- c. Staffing Description (0 – 15 points).** The qualifications and experience of the proposed staff to carry out the objectives of the application will be evaluated. The extent to which the applicant has access to technical experts and overall support to accomplish the project objectives, as described in the application, will be evaluated. Experience must include demonstrated knowledge of the current state, impact and nature of standards and standardization activities and experience in curricula development. Experience may also include bringing together diverse stakeholders in educational environments for undergraduate and/or graduate level STEM and/or law, public policy, business and/or multi-disciplinary curricula development.
- d. Resources Availability (0 – 20 points).** The extent to which the applicant has access to the necessary facilities and overall support to accomplish project objectives. The appropriateness of proposed resources compared to the project's scope, as well as the cost-effectiveness of the project in using available resources to complete the project. An assessment of the budget against the proposed activities will be conducted to determine the appropriateness of the proposed budget with respect to carrying out the objectives of the project as described in Section I. of this FFO. The use of funds and cost effectiveness will be evaluated.

2. Selection Factors. The Selecting Official, Director, Standards Coordination Office, or designee, will make final application selections. The Selecting Official shall select applications for awards based on the rank order of the applications, and may select an application out of rank based on one or more of the following selection factors:

- a. results of the reviewers' evaluations,
- b. relevance to the proposed project to the NIST SSCD Cooperative Agreement Program objectives described in Section I. of this FFO,
- c. variety among the most meritorious projects, and
- d. the availability of Federal funds.

3. Review and Selection Process

- a. Initial Administrative Review of Applications.** An initial administrative review of timely received applications will be conducted to determine applicant eligibility, completeness, and responsiveness to this FFO and the scope of the state program

objectives. Applications determined to be ineligible, incomplete, or non-responsive 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 which may easily be rectified or cured in a Full Application.

- b. Review of Eligible, Complete, and Responsive Applications.** At least three (3) independent, objective federal employees who are knowledgeable about the particular standards area described in the application will conduct a technical review of each application, based on the evaluation criteria (see Section V.1. of this FFO).

Based on the reviewers' final numeric scores, a final rank order will be prepared and provided to the Selecting Official for further consideration. The Selecting Official will then recommend applications for funding based upon the rank order and the selection factors (see Section V.2. of this FFO).

NIST reserves the right to negotiate the budget costs with the selected applicant. Negotiations may include requesting that the applicant remove certain costs. Additionally, NIST may request that the applicant 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 particular application. The final approval of selected applications and issuance of awards will be by the NIST Grants Officer. The award decisions of the 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 performs administration reviews, 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. Upon review of these factors, if appropriate, special conditions that correspond to the degree of risk may be applied.

- 4. Anticipated Announcement and Award Dates.** The earliest anticipated start date for awards under this FFO is expected to be August 1, 2015.

5. Additional Information

- a. 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.

- b. Notification to Unsuccessful Applicants.** Unsuccessful applicants will be notified in

writing.

- c. **Retention of Unsuccessful Applications.** An electronic copy of each non-selected application will be retained for three (3) years for record keeping purposes. After three (3) years, it will be destroyed.

VI. Federal Award Administration Information

1. **Federal Award Notices.** Successful applicants will receive an award from the NIST Grants Officer. The award cover page, i.e., CD-450, Financial Assistance Award is available at <http://go.usa.gov/SNMR>.
2. **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/SBq4>.
3. **Financial Assistance Standard Terms and Conditions.** The DoC will apply Financial Assistance Standard Terms and Conditions to this award. A current version of these terms, dated December 2014, is available at <http://go.usa.gov/hKbj>.
4. **Administrative and National Policy Requirements**
 - a. **DoC Pre-Award Notification Requirements.** The DoC Pre-Award Notification Requirements for Grants and Cooperative Agreements, 79 FR 78390 (December 30, 2014), are applicable to this FFO and are available at <http://go.usa.gov/hKkR>.
 - b. **Employer/Taxpayer Identification Number (EIN/TIN), Dun and Bradstreet Data Universal Numbering System (DUNS), and System for Award Management (SAM)** All applicants for Federal financial assistance are required to obtain a universal identifier in the form of DUNS number and maintain a current registration in the Federal government's primary registrant database, SAM. On the form SF-424 items 8.b. and 8.c., the applicant's 9-digit EIN/TIN and 9-digit DUNS number must be consistent with the information in SAM (<https://www.sam.gov/>) and if applicable, the U.S. Treasury's Automated Standard Application for Payment System (ASAP), if the applicant has received prior Federal awards and has received award funding through ASAP. For complex organizations with multiple EIN/TIN and DUNS numbers, the EIN/TIN and DUNS numbers MUST be the numbers for the applying organization. Organizations that provide incorrect/inconsistent EIN/TIN and DUNS numbers may experience significant delays in receiving funds if their application is selected for funding. Confirm that the EIN/TIN and DUNS number are consistent with the information on the SAM and ASAP.

Per 2 C.F.R. Part 25, each applicant must:

- (1) Be registered in the Central Contractor Registration (CCR) before submitting an application noting the CCR now resides in SAM;
- (2) Maintain an active CCR registration, noting the CCR now resides in SAM, with current information at all times during which it has an active Federal award or an application under consideration by an agency; and
- (3) Provide its DUNS number in each application it submits to the agency.

The applicant can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one business day. The CCR or SAM registration process may take five or more business days to complete. If you are currently registered with the CCR, you may not need to make any changes. However, please make certain that the EIN/TIN associated with your DUNS number is correct. Also note that you will need to update your CCR registration annually. This may take three or more business days to complete. Information about SAM is available at SAM.gov. See also 2 C.F.R. Part 25 and the *Federal Register* notice published on September 14, 2010, at 75 FR 55671, available here <http://go.usa.gov/h8PH>.

- c. Collaborations with NIST Employees.** All applications should include a description of any work proposed to be performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget.

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.

- d. Use of NIST Intellectual Property.** If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST 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 NIST-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 D.03 DoC Financial Assistance Terms and Conditions dated December 26, 2014, found at <http://go.usa.gov/hKbj>. Questions about these requirements may be directed to the Chief Counsel for NIST, (301) 975-2803, nistcounsel@nist.gov.

Any use of NIST-owned intellectual property by an applicant is at the sole discretion of NIST and will be negotiated on a case-by-case basis 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 one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this FFO, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

- e. **Research Activities Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects Including Software Testing.** Any application that includes research activities involving human subjects, human tissue/cells, or data or recordings involving human subjects, including software testing, must satisfy the requirements of the Common Rule for the Protection of Human Subjects ("Common Rule"), codified for the Department of Commerce (DoC) at 15 C.F.R. Part 27. Research activities involving human subjects who fall within the classes of subjects found in 45 C.F.R. Part 46, Subparts B, C and D must satisfy the requirements of the applicable subpart. In addition, any such application that includes research activities on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other Federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Executive Orders and Presidential statements of policy on these topics.

NIST reserves the right to make an independent determination of whether an applicant's activities include research involving human subjects. NIST policy also requires a NIST administrative review for research involving human subjects approved by a non-NIST Institutional Review Board (IRB). (15 C.F.R. § 27.112 Review by Institution.) If NIST determines that an application includes research activities which involve human subjects, the applicant will be required to provide additional information for review and approval. If an award is issued, no research activities involving human subjects shall be initiated or costs incurred for those activities under the award until the NIST Grants Officer issues written approval. Retroactive approvals are not permitted.

Organizations that have an IRB are required to follow the procedures of their organization for approval of exempt and non-exempt research activities that involve human subjects, if the application is funded. Both domestic and foreign organizations performing non-exempt research activities involving human subjects will be required to have protocols approved by a cognizant, active IRB currently registered with the Office for Human Research Protections (OHRP) within the DHHS that is linked to the engaged organizations. All engaged organizations must possess a currently valid Federalwide Assurance (FWA) on file from OHRP. Information regarding how to apply for an FWA and register an IRB with OHRP can be found at

<http://www.hhs.gov/ohrp/assurances/index.html>. NIST relies only on OHRP-issued FWAs and IRB Registrations for both domestic and foreign organizations for NIST supported research involving human subjects. NIST will not issue its own FWAs or IRB Registrations for domestic or foreign organizations.

The applicant should clearly indicate in the application, by separable task, all research activities believed to be exempt or non-exempt research involving human subjects and the expected institution(s) where the research activities involving human subjects may be conducted, and which institutions are expected to be engaged in the research activities.

If an activity/task involves data obtained through intervention or interaction with living individuals or identifiable private information obtained from or about living individuals but the applicant participant(s) believes that the activity/task is not research as defined under the Common Rule, the following information may be requested for that activity/task:

- (1) Justification, including the rationale for the determination and in some cases additional documentation, to support a determination that the activity/task in the application is not research as defined in the Common Rule. See 15 C.F.R. § 27.102 Definitions.
- (2) If the applicant participant(s) uses a cognizant IRB that provides a determination that the activity/task is not research, a copy of that determination documentation will be required by NIST. The applicant participant(s) is not required to establish a relationship with a cognizant IRB if they do not have one, but if the applicant participant(s) has a cognizant IRB that requires review of the activity/task, or the applicant participant(s) elects to obtain IRB review, a copy of the IRB approval/determination documentation will be required by NIST.

NIST will review the information submitted and may coordinate further with the applicant before determining whether the activity/task will be defined as research for purposes of implementing the Common Rule in the applicable NIST financial assistance program or project.

If the application appears to NIST to include exempt research activities, and the performer of the activity or the supplier and/or the receiver of the biological materials or data from human subjects ***does not*** have a cognizant IRB to provide an exemption determination, the following information may be requested during the review process so that NIST can evaluate whether an exemption under the Common Rule applies (see 15 C.F.R. § 27.101 To what does this policy apply?).

- (1) The name(s) of the institution(s) where the exempt research will be conducted; and/or from which biological materials or data from human subjects will be provided.
- (2) A copy of the protocol for the research to be conducted; and/or the biological materials or data from human subjects to be collected/provided, not pre-existing

- samples (*i.e.*, will proposed research collect only information without personal identifiable information, will biological materials or data be de-identified and when and by whom was the de-identification performed, how were the materials or data originally collected).
- (3) For pre-existing biological materials or data from human subjects, provide copies of the consent forms used for collection and a description of how the materials or data were originally collected and stripped of personal identifiers. If copies of consent forms are not available, explain.
 - (4) Any additional clarifying documentation that NIST may request during the review process in order to make a determination that the activity/task or use of biological materials or data from human subjects is exempt under the Common Rule (see 15 C.F.R. § 27.101 To what does this policy apply?).

If the application appears to NIST to include research activities (exempt or non-exempt) involving human subjects, and the performer of the activity has a cognizant IRB registered with OHRP, the following information may be requested during the review process:

- (1) The name(s) of the institution(s) where the research will be conducted;
- (2) The name(s) and institution(s) of the cognizant IRB(s), and the IRB registration number(s);
- (3) The FWA number of the applicant linked to the cognizant IRB(s);
- (4) The FWAs associated with all organizations engaged in the planned research activity/task, linked to the cognizant IRB;
- (5) If the IRB review(s) is pending, the estimated start date for research involving human subjects;
- (6) The IRB approval date (if currently approved for exempt or non-exempt research);
- (7) If any of the engaged organizations has applied for or will apply for an FWA or IRB registration, those details should be clearly provided for each engaged organization.

Additional documentation may be requested by NIST for performers with a cognizant IRB during review of the application, and may include the following for research activities involving human subjects that are planned in the first year of the award:

- (1) A signed (by the study principal investigator) copy of each applicable final IRB-approved protocol;
- (2) A signed and dated approval letter from the cognizant IRB(s) that includes the name of the institution housing each applicable IRB, provides the start and end dates for the approval of the research activities, and any IRB-required interim reporting or continuing review requirements;
- (3) A copy of any IRB-required application information, such as documentation of approval of special clearances (*i.e.*, biohazard, HIPAA, etc.) conflict-of-interest letters, or special training requirements;

- (4) A brief description of what portions of the IRB submitted protocol are specifically included in the application submitted to NIST, if the protocol includes tasks not included in the application, or if the protocol is supported by multiple funding sources. For protocols with multiple funding sources, NIST will not approve the study without a non-duplication-of-funding letter indicating that no other federal funds will be used to support the tasks proposed under the proposed research or ongoing project;
- (5) If a new protocol will only be submitted to an IRB if an award from NIST is issued, a draft of the proposed protocol may be requested;
- (6) Any additional clarifying documentation that NIST may request during the review process to perform the NIST administrative review of research involving human subjects. (See 15 C.F.R. § 27.112 Review by Institution.)

This clause reflects the existing NIST policy for Research Involving Human Subjects. Should the policy be revised prior to award, a clause reflecting the policy current at time of award may be incorporated into the award.

If the policy is revised after award, a clause reflecting the updated policy may be incorporated into the award.

For more information regarding research projects involving human subjects, contact Jason Boehm, Director, NIST Program Coordination Office (e-mail: jason.boehm@nist.gov; phone: (301) 975-8678).

- f. Research Applications Involving Live Vertebrate Animals.** Any application that includes research activities involving live vertebrate animals, that will be cared for, euthanized, or used by participants in the research described in the application to accomplish research goals, teaching, or testing, must meet the requirements of the Animal Welfare Act (7 U.S.C. § 2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. In addition, such applications should be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals (8th edition)," (the Guide) which can be obtained from National Academy Press, 500 5th Street, N.W., Department 285, Washington, DC 20055, or online at <http://grants.nih.gov/grants/olaw/Guide-for-the-Care-and-Use-of-Laboratory-Animals.pdf>.

The requirements described above do not apply to proposed research using preexisting images of animals or to research plans that do not include live animals. The requirements also do not apply to obtaining stock items from animal material suppliers (e.g., tissue banks), such as cell lines and tissue samples, or from commercial food processors, where the vertebrate animal was euthanized for food purposes and not for sample collection. NIST does require documentation for obtaining custom samples from live vertebrate animals from animal material suppliers and other organizations (i.e., universities, companies, and government laboratories, etc.). Custom samples includes samples from animal material suppliers, such as

when a catalog item indicates that the researcher is to specify the characteristics of the live vertebrate animal to be used, or how a sample is to be collected from the live vertebrate animal.

Some “field studies” of animals may be exempt under the Animal Welfare Act from full review and approval by an animal care and use committee, as determined by each institution. Field study is defined as “...a study conducted on free-living wild animals in their natural habitat.” However, this term excludes any study that involves an invasive procedure or that harms or materially alters the behavior of an animal under study. Field studies, with or without invasive procedures, may also require obtaining appropriate federal or local government permits (e.g., marine mammals, endangered species etc.)

The applicant should clearly indicate in the application, by separable task, all research activities believed to include research involving live vertebrate animals, the institution(s) where the research activities involving live vertebrate animals may be conducted, and if any special permits are required.

NIST reserves the right to make an independent determination of whether an applicant’s research activities involve live vertebrate animals, custom samples from, or field studies with live vertebrate animals. If NIST determines that the application includes research activities, field studies or custom samples involving live vertebrate animals, the applicant will be required to provide additional information for review and approval. If an award is issued, no research activities involving live vertebrate animals subjects shall be initiated or costs incurred for those activities under the award until the NIST Grants Officer issues written approval.

If an application appears to include research activities, field studies or custom sample collections involving live vertebrate animals the following information may be requested from the applicant during the application review process:

- (1) The name(s) of the institution(s) where the research involving live vertebrate animals will be conducted and/or custom samples collected;
- (2) The assurance type and number, as applicable, for the cognizant Institutional Animal Care and Use Committee (IACUC) where the research activity is located. [For example: Animal Welfare Assurance from the Office of Laboratory Animal Welfare (OLAW) should be indicated by the OLAW assurance number, i.e. A-1234; a USDA Animal Welfare Act certification should be indicated by the certification number i.e. 12-R-3456; and an Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) should be indicated by AAALAC.]
- (3) The IACUC approval date for the Animal Study Protocol (ASP) (if currently approved);
- (4) If the review by the cognizant IACUC is pending, the estimated start date for research involving vertebrate animals;

- (5) If any assurances must be obtained or IACUCs must be established, those details should be clearly provided for each instance.
- (6) If any special permits are required for field studies, those details should be clearly provided for each instance.

Additional documentation may be requested by NIST during review of the application and may include the following for research activities and/or custom sample collections involving live vertebrate animals that are planned in the first year of the award:

- (1) A signed (by the Principal Investigator) copy of the IACUC approved ASP;
- (2) Documentation of the IACUC approval indicating the approval and expiration dates of the ASP; and
- (3) If applicable, a non-duplication-of-funding letter if the ASP is funded from several sources.
- (4) If a new ASP will only be submitted to an IACUC if an award from NIST issued, a draft of the proposed ASP may be requested.
- (5) Any additional clarifying documentation that NIST may request during review of applications to perform the NIST administrative review of research involving live vertebrate animals (e.g., documentation of special permits).

This clause reflects the existing NIST policy for Research Involving Live Vertebrate Animals. Should the policy be revised prior to award, a clause reflecting the policy current at time of award may be incorporated into the award.

If the policy is revised after award, a clause reflecting the updated policy may be incorporated into the award.

For more information regarding research projects involving live vertebrate animals, contact Linda Beth Schilling, Senior Coordinator and Policy Advisor for Animal Subjects Research at NIST (e-mail: linda.schilling@nist.gov; phone: 301-975-2887).

- g. Funding Availability and Limitation of Liability.** Funding for the program listed in this FFO is contingent upon the availability of appropriations. In no event will NIST or DoC be responsible for application preparation costs if this program fails to receive funding or is cancelled because of agency priorities. Publication of this FFO does not oblige NIST or DoC to award any specific project or to obligate any available funds.
- h. Certifications Regarding Federal Felony and Federal Criminal Tax Convictions, Unpaid Federal Tax Assessments and Delinquent Federal Tax Returns.** In accordance with Federal appropriations law, an authorized representative of the selected applicant(s) may be required to provide certain pre-award certifications regarding federal felony and federal criminal tax convictions, unpaid federal tax assessments, and delinquent federal tax returns.
- i. Collaborations Making Use of Federal Facilities.** All applications should include a

description of any work proposed to be performed using Federal facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities 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 availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the application prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the following NIST Web site: <http://www.nist.gov/user-facilities.cfm>.

5. Reporting

- a. Reporting Requirements.** The following reporting requirements described in Sections A.01 Performance (Technical) Reports and B.02 Financial Reports of the DoC Financial Assistance Standard Terms and Conditions dated December 26, 2014, <http://go.usa.gov/hKbj>, 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 to the NIST Grants Officer and Grants Specialist named in the award documents. A final financial report is due within 90 days after the end of the project period.
 - (2) Performance (Technical) Reports.** Each award recipient will be required to submit a technical progress report to the NIST Grants Officer and Grants Specialist named in the award documents 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. § 200.328. A final summary paper will be due within 30 days after the end of the project period, as described in Section I.(5). of this FFO.
 - (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.
- b. Audit Requirements.** A non-Federal entity (as defined in 2 C.F.R. § 200.69) that expends \$750,000 or more in Federal award funds during the non-federal entity's fiscal year is required to conduct a single or program-specific audit in accordance with the requirements set forth in 2 C.F.R. part 200, Subpart F. In addition, pursuant to Section F. of the Department of Commerce Financial Assistance Standard Terms and Conditions (December 26, 2014), non-Federal entities that are not subject to Subpart F of 2 C.F.R. Part 200 (e.g., for-profit entities) and that expend \$750,000 or more in

Department of Commerce award during their fiscal year must have an audit conducted for that year in accordance with Subpart F of 2 C.F.R. Part 200, unless otherwise specified in the terms and conditions of an award, Applicants are reminded that NIST, the DoC 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 (Pub. L. 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 Contact(s)

Questions should be directed to the following contact persons:

Subject Area	Point of Contact
Programmatic and Technical Questions	Erik Puskar Phone: (301) 975-8619 Fax: (301) 975-4715 E-mail: erik.puskar@nist.gov
Technical Assistance with Grants.gov Submissions	Christopher Hunton Phone: (301) 975-5718 Fax: 301-975-8884 E-mail: christopher.hunton@nist.gov Or Grants.gov Phone: (800) 518-4726 E-mail: support@grants.gov
Grant Rules and Regulations	Robin Bunch Phone: (301) 975-8006 Fax: (301) 975-6368 E-mail: robin.bunch@nist.gov