SUPPORTING STATEMENT FOR PAPERWORK REDUCTION SUBMISSION
Program Monitoring Data Collections for National Science Foundation (NSF) Innovation Corps (I-Corps) Programs

SUPPLEMENTARY INFORMATION

Title of Collection: National Science Foundation (NSF) Innovation Corps (I-Corps) Program Monitoring

OMB Number: 3145-0267

Type of Request: Renewal of an information collection

Section A. Justification

This request is to seek approval in renewing the NSF I-Corps Program Monitoring data collection, an information collection for the NSF I-Corps program that is intended to monitor immediate, intermediate, short- and long-term outcomes of the program. No changes were made to the data collection instruments—all three surveys remained the same. The only revision is the burden estimates.

The National Science Foundation (NSF) Innovation Corps (I-Corps) program was started in 2011 to develop and nurture a national innovation ecosystem built upon fundamental research that guides the output of scientific and engineering discoveries closer to the development of technologies, products, and services that benefit society.

The goal of the NSF I-Corps program is to use experiential education to help entrepreneurial researchers reduce the time necessary to translate promising ideas from the laboratory bench to widespread implementation. In addition to accelerating technology translation, the NSF I-Corps program also seeks to reduce the risk associated with technology development conducted without insight into industry requirements and challenges.

To enable effective oversight of its investment and fulfill its monitoring and management responsibilities, NSF needs current and standardized information about the immediate, intermediate, short- and long-term outcomes of the I-Corps program. Data and information collected from the surveys in the collection will help NSF to meet its reporting requirements to Congress, as mandated by the 2017 American Innovation and Competitiveness Act (AICA, Public Law 114-329, Sec. 601), on the effectiveness and efficacy of the I-Corps Program.

A.1 Circumstances Requiring the Collection of Data

The *NSF I-Corps Program Monitoring* was designed to collect information on four strategic themes that NSF reports to Congress (in order to meet the AICA mandates):

1.   Translating Technologies
2.   Enabling Economic Impact

3.   Training an Entrepreneurial Workforce
4.   Nurturing an Innovation Ecosystem

1. Translating Technologies

One of the initiatives of the NSF I-Corps Program is to accelerate the development of new technologies, products, and processes that arise from fundamental research. As each I-Corps team focuses on a specific technology, having descriptive and quantitative indicators to track the progresses and outputs that these I-Corps teams made before and after their participation of the I-Corps Program would be crucial for program monitoring and evaluation. To that end, we plan to collect data pertaining to knowledge transfer and technology translation, data such as:

- Invention Disclosures
- Technology Licensing
- Publication Records
- Patenting Applications
- Company Formations

2. Enabling Economic Impact

An important objective of the NSF I-Corps program is to identify, develop, and support promising research that can generate economic value. Metrics that will allow us to measure economic impact include:

- Startup Business Formation
  - Whether a startup business was formed at the time of the program participation
    - Name of the businesses (for verification purposes)
  - Median age of the startup (if applicable)
    - Year the startup was founded (collected in the survey)
  - Number of salary-drawing employees (if applicable)

- Sources of Funding, Financial Support, and/or Investment
  - Public
  - Private
- Prospective/Forthcoming Applications to the Small Business Innovation Research (SBIR) / Small Business Technology Transfer (STTR) Programs

3. Training an Entrepreneurial Workforce

I-Corps is an experiential educational program designed to help entrepreneurial researchers reduce the time necessary to translate a promising idea from the laboratory bench to widespread implementation. The training and mentoring provide a platform for the participants to learn about the process and methodology in assessing the commercial potentials of their technology. In doing so, the program opens future opportunities in entrepreneurship as a career path for the participants as well as fostering them to be leaders of the future. Former I-Corps participants have noted that through the program, they have obtained a new set of skills that allow them to conduct research with impact, bring out more market-driven innovations, and

understand what it takes to be an entrepreneur. Therefore, measure on the size and scope of the entrepreneurial workforce trained would be necessary information to collect.

4. Nurturing an Innovation Ecosystem

One way to track the progress of the NIN expansion and the growth of the innovative ecosystem is by counting and assessing the teams that participated in the:
- I-Corps Hubs program
- I-Corps National Teams program

Metrics pertaining to these four themes will be captured in the Pre-course and Longitudinal Surveys. The Pre-course survey will be administered once during the life of the award, and the Longitudinal surveys three times during the life of the award, administered at intervals: 6-, 18-, and 36-months after program participation.

In addition, a course evaluation survey (also administered once during the life of the award) was developed to gauge the participants' overall satisfaction of the NSF I-Corps program, to assess their understandings on some of the key concepts covered in the course, and to collect feedback about the program that would enable I-Corps Program Directors to ensure that the awards as well as the contractors--including I-Corps instructors--working for the I-Corps program are complying with the NSF program requirements and adhering to the industry's best practices.

A.2 Purposes and Use of the Data

The *NSF I-Corps Program Monitoring* has been designed primarily to meet our congressional reporting requirements (as outlined above).   In addition, the data could be used in reports and presentations (internal and external) and allowing managing Program Directors and NSF senior leadership to consider changes which would improve program efficiency and impact, remain responsive to the nation's changing science, technology, and economic environment, and to secure future program funding for continued program growth.

A.3 Use of Information Technology to Reduce Burden

All of the collections included under this clearance request will utilize electronic forms to minimize data errors and respondent burden. In some cases, Program Directors and/or supporting staff may contact the respondent for clarifications or follow-up questions, and will update the data gathered from these conversations accordingly.

A.4 Efforts to Identify Duplication

The *NSF I-Corps Program Monitoring* does not duplicate efforts undertaken by NSF, other federal agencies, or other data collection agents.

A.5 Small Businesses

In *NSF I-Corps Program Monitoring*, some of the information is collected from small businesses, as some I-Corps Teams could have formed a startup company prior to entering the NSF I-Corps program. These startups are partners to current awardees or are run by current awardees. The only impact of this data collection on the businesses will be the time required for the respondents to gather the information, complete the questionnaire, and/or have follow-up conversations with managing Program Directors or supporting staff for clarifications.

A.6 Consequences of Not Collecting the Information

If the information were not collected, NSF would be unable to (1) fulfill its reporting requirements as mandated by the AICA, (2) assess the degree to which the I-Corps program are meeting its objectives over time, and (3) document progresses and outcomes of the NSF I-Corps program.

The absence of this data collection would preclude NSF from adequately monitoring and documenting the progress on the I-Corps program. In addition, the consequence of less frequent collection would manifest itself in the inability to effectively monitor the impact of resources that NSF has committed to the I-Corps Program.

A.7 Special Circumstances Justifying Inconsistencies with Guidelines in 5 CFR 1320.6

Data collected for the *NSF I-Corps Program Monitoring* will comply with 5 CFR 1320.6.   First, a valid OMB control number will be displayed at the beginning of the electronic form. Second, as the reporting requirement is mandatory, the NSF I-Corps program will communicate clearly—through proposal solicitations and/or Terms & Conditions of each I-Corps award—that collection of this information is required to satisfy a condition of the award.

Each survey under this collection will be asked once during the life of the award, for the exception of the Longitudinal Survey, which will be administered at 6-, 18-, and 36-months after program participation for post-award monitoring. All the surveys under this collection are voluntary.

A.8 Federal Register Notice and Consultation Outside the Agency

The agency's notice, as required by 5 CFR 1320.8(d), was published in the *Federal Register* on June 15, 2025, at 90 FR 11079, and no comments were received.

A.9 Payments or Gifts to Respondents

Not applicable

A.10 Assurance of Confidentiality

Respondents will be informed that any information on specific individuals will be maintained in accordance with the Privacy Act of 1974. Every data collection instrument will display both OMB and Privacy Act notices.

Respondents will be told that data collected are available to NSF officials and staff, as well as authorized contractors and/or grantees who manage the data and data collection software. Data will be processed according to federal and state privacy statutes. The data collection system will limit access to personally identifiable information to authorized users. Data submitted will be used in accordance with criteria established by NSF for monitoring research and education grants and in response to Public Law 99-383 and 42 USC 1885c.

A.11 Questions of a Sensitive Nature

In the *NSF I-Corps Program Monitoring,* information from survey correspondents, including demographic data are collected. These data allows us to obtain authentic, valid, and accurate (self-) reporting from each participant as part of the participation records.

Please note, while individual-level data are being collected, the data will only be provided to managing Program Directors, NSF senior management, and support staff conducting analyses using the data as authorized by NSF. Any public reporting of data, including the biennial report that NSF submit to Congress, will be in aggregate form, and all personal identifiers will be removed.

A.12 Estimates of Response Burden

A.12.1 Number of Respondents, Frequency of Response, and Annual Hour Burden

Estimate of Public Burden:

Collection Title	No. of Respondents	Annual No. of Responses/ Respondent	Annual Hour Burden
Program Monitoring Data Collections for the National Science Foundation (NSF) Innovation Corps (I-Corps) Program	400 I-Corps Teams (1,200 program participants) per year	3	900
	13 I-Corps Hubs (3,900 program participants) per year	3	2,925
Total	**5,100 participants**		**3,825**

For life-of-award monitoring, the data collection burden to awardees will be limited to no more than 15 minutes of the respondents' time in each instance.

The program participants/survey respondents are consisted of Technical Lead (TL) of the I-Corps Project or Principal Investigator (PI) of NSF I-Corps Program awards, Entrepreneurial Lead (EL), and Industry Mentor (IM). A typical I-Corps team will consist of 3 members, one of each category. As such, in the 1,200 program participants, 400 of them would be TLs or PIs, 400 ELs, and 400 IMs.

A.12.2 Estimates of Annualized Cost to Respondents for the Hour Burdens

The overall annualized cost to the respondents is estimated to be $160,650. The following table shows the annualized estimate of costs to PIs or TLs/ ELs/ IMs respondents.

The annualized estimate of cost to both the PIs/TLs and IMs, who are generally University Professors, is calculated using the hourly rate based on a report from the American Association of University Professors: "The Annual Report on the Economic Status of the Profession, 2024-25," Survey Report Table 1. According to this report, the average salary of an associate professor across all types of doctoral-granting institutions (public, private-independent, religiously affiliated) was $119,801. When divided by the number of standard annual work hours (2,080), this calculates to approximately $57 per hour.

Similarly, the annualized estimate of costs to the ELs, who are generally graduate students, can be calculated using the data published in the 2017 *Science* magazine article that a typical annual stipend for graduate students in the sciences is around $25,000. When divided by the number of standard annual work hours (2,080), this calculates to approximately $12 per hour.

Table 1. Annuitized Cost to Respondents

Respondent Type	No. of Respondents	Burden Hours Per Respondent	Average Hourly Rate	Estimated Annual Cost
PIs	1,700	0.75	$57	$72,675
ELs/TLs	1,700	0.75	$12	$15,300
Industry Mentors	1,700	0.75	$57	$72,675
Total	**5,100**	3,825	$31.50 (average)	**$160,650**

A.13 Estimate of Total Capital and Startup Costs/Operation and Maintenance Costs to Respondents or Record Keepers

Not applicable

A.14 Estimate of Costs to the Federal Government

The contractors assigned to the project will need to spend about 400 - 600 hours of work every year (to code the questionnaire, pre-test it on a web survey platform, send reminder emails and follow-up correspondences, and clean and format the (response) data prior to any data analysis). Of the 400 - 600 hours, 50 - 75 hours will be used on managerial duties.   Assuming

the billable hour rate for a data analyst is about $90 per hour, and the billable hour rate for a manager is $150 per hour, then the total cost to the government for this data collection effort would be between $39,000 and $58,500 (Of which, $31,500 - $47,250 for the data analyst(s) and $7,500 - $11,250 for the manager(s)).

A.15 Changes in Burden

The change in burden is due to improved accounting for the time needed to complete the surveys, along with the increase in the number of respondents. The surveys themselves have not changed.

A.16 Plan for Publication, Analysis, and Schedule

Not applicable

A.17 Approval to Not Display Expiration Date

Not applicable

A.18 Exceptions to Item 19 of OMB Form 83-I

No exceptions apply.