



# **Translation to Practice (TTP) Program**

## **NSF 25-540**

### **Overview**

**<https://tinyurl.com/NSF-Translation>**

**[Translation@NSF.gov](mailto:Translation@NSF.gov)**

# TTP Goals

- To enable a continuum from foundational research to practice;
- To develop partnerships and collaborations between institutions of higher education and other entities (e.g., industry, state / local / national government agencies, philanthropies, open-source ecosystems, for-benefit, for-profit and non-profit organizations, international organizations, etc.);
- To promote and advance education and training of students and postdoctoral researchers in innovation and entrepreneurship;
- To identify future customer needs and opportunities and bring these to the forefront



# TTP Tracks Overview

TTP-Explore	TTP-Translate	TTP-Partner
<ul style="list-style-type: none"><li>— Explore adventurous, high-risk, use-inspired research and initial translational activities</li><li>— First step for researchers seeking to translate their basic research to practice</li><li>— Supplement to active, eligible, NSF research award</li><li>— Must have &gt; 1 year left on award</li><li>— Up to \$600,000 and up to 24 months</li></ul>	<ul style="list-style-type: none"><li>— Use-inspired research and initial translational activities</li><li>— Further matures the idea(s), iterates and improves the solution(s)</li><li>— Lowers the barrier(s) to effective translation of research from lab to practice</li><li>— Prior federal funding not required</li><li>— Participation in NSF I-Corps required, if funded</li><li>— Up to \$1,200,000 and up to 36 months</li></ul>	<ul style="list-style-type: none"><li>— All TTP-T functions, plus</li><li>— Understanding of prevailing community needs or unmet market opportunities to develop useful products, processes, or services</li><li>— NSF-Catalyzed Partnership(s) required</li><li>— Strategic partnerships with stakeholders beyond U.S. IHEs</li><li>— Up to \$2,000,000 and up to 48 months</li></ul>



# Eligibility

- Proposals may be submitted by:
  - U.S. Institutions of Higher Education
  - Non-profit, non-academic U.S. organizations directly associated with educational or research activities



# Who May Serve as a PI

- By the submission deadline, a PI must hold either:
  - A tenured or tenure-track position, or
  - A primary, full-time, paid appointment in a research or teaching position, with exceptions granted for family or medical leave, as determined by the submitting institution

**A PI (or Co-PI) may submit only one NSF TTP proposal at a time and must wait for determination on their current proposal before submitting another TTP proposal**





# TTP-Explore (TTP-E)

- Eligibility: An active NSF basic research award
  - Should have at least one year remaining
  - Should have submitted (and approved) 1-2 annual reports
- Results in an extension of the initial award period for up to two years
- Exceptions: EAGER, RAPID, or RAISE awards are not eligible to receive TTP-E funds
- Types of activities supported could include (but not limited to): maturation of technology readiness levels (TRL), support of student internships and other collaborations with industry, engagement in open-source products design and implementation, etc.
- Partnerships with industry, government, non-profits, other academic institutions encouraged but not required



# TTP-E Application Process

- First Step:
  - Reach out to your cognizant PD to discuss your proposed project
  - **After receiving their guidance**, provide a 3–5-page description of future translational activities to your cognizant NSF program officer and translation@nsf.gov via e-mail to gain approval to submit a TTP-E proposal
  - Description should include details of research to be pursued, opportunity (or gap) the technology translation would address, role of any potential partners, role of students and/or postdocs, etc.
- Second Step
  - Upon approval, submit a **Special Creativity Extension** via “Supplemental Funding Request” function in Research.gov.
  - Proposal should include the 3–5-page research description and a copy of the e-mail invitation.



# TTP-Translate (TTP-T)

- Does not require previous NSF funding but begins with existing use-inspired research
- Types of activities supported could include (but not limited to): designing and iterating prototypes, etc.
- Partnerships with industry, government, non-profits, other academic institutions encouraged but not required
- Participation in NSF I-Corps Teams required, if funded\*

\* This requirement may be waived for PIs who can demonstrate that they have completed National I-Corps (aka I-Corps Teams) training within the last 2 years for the technology in the proposed project





# Partnerships - NSF-Direct Partnerships

- NSF working with government, industry, nonprofit, and international organizations
- Formalized through a Memorandum of Understanding (MOU) or other signed agreements
- Examples: DCL with U.S. Army Combat Capabilities Development Command Ground Vehicle Systems Center (DEVCOM GVSC) and DCL with U.S. Naval Surface Warfare Center, Dahlgren Division (NSWCDD)



# Partnerships - NSF-Catalyzed Partnerships

- PI initiated partnerships with individuals or entities
- Provide additional value to the project (paid or unpaid)
- PI and Partners are responsible for entering into agreements
- May include IHEs, industry partners, government entities, philanthropies, international organizations, or other groups associated with large scale productization and distribution
- While TTP-E and TTP-T tracks may include NSF-Catalyzed Partnerships, the TTP-P track requires an NSF-Catalyzed Partnership and strongly prioritizes a non-academic partner



# TTP-Partner (TTP-P)

- Types of activities supported could include (but not limited to): collaborations and activities associated with scaling and mass production of products, development of standards for the global growth of the next generation market, etc.
- Partnerships with industry, government, philanthropies, etc.(i.e., non-academic partnerships) are **required**
- Participation in NSF I-Corps Teams required, if funded\*

\* This requirement may be waived for PIs who can demonstrate that they have completed National I-Corps (aka I-Corps Teams) training within the last 2 years for the technology in the proposed project



# Merit Review Criteria, & Solicitation-Specific Considerations



# Intellectual Merit



## Importance of proposed activity:

Should this be done?

- to advance knowledge and understanding
- within the field and across fields
- creative, original, or potentially transformative research
- significance of expected contributions

## How well conceived and organized is the proposed activity?

Can this be done?

- Soundness and feasibility of approach, evaluation, research plan
- How qualified is the team to conduct the proposed research
- Data Management Plan
- Mentoring Plan
- Access to necessary resources, equipment, facilities, etc.
- Requested support (budget)





# Broader Impacts

## Accomplished through

- The research itself
- Activities that are directly related to specific research projects, AND/OR
- Activities that are supported by, but complementary to the project.

## Considerations

1. What is the potential for the proposed activity to benefit society or advance desired societal outcomes?
2. To what extent do the proposed activities suggest and explore creative, original or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized and based on sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team or institution to conduct the proposed activities?
5. Are there adequate resources available to the principal investigator (either at the home institution or through collaborations) to carry out the proposed activities?



# Additional TTP Solicitation Specific Criteria

- **Research Motivation:** Compellingly motivates the project by outlining translational outcomes with significant societal and/or economic impact. It clearly defines the unmet need, identifies relevant stakeholders, and conveys the potential value of the innovation. It describes current knowledge gaps and technical barriers, sets clear end goals, and presents a vision for the anticipated solution, such as a prototype, policy change, startup, or other outcome, along with a credible plan to achieve it. The proposal also assesses the expected benefits and stakeholder interest in a comprehensive and well-justified manner.
- **Development of Solutions:** The proposal clearly outlines the technical barriers and anticipated hurdles, such as safety, compliance, scalability, cost, and IP, that must be addressed for successful translation and deployment. It includes appropriate risk assessment, mitigation strategies, and contingency plans for critical challenges. The research plan defines how the product, process, or service will be tested, refined, and validated, while also addressing potential unintended consequences. A chart of milestones and success metrics provides a reasonable framework for tracking progress and determining when pivots or course corrections may be needed. The proposal also considers market integration factors, such as supply chains, cost-effectiveness, and competitive timelines, and, where appropriate, presents a sound IP protection strategy.



# Additional TTP Solicitation Specific Criteria (contd.)

- **Project Team:** Presents a team with the necessary expertise to execute the research and translation plan effectively, with no significant gaps or unnecessary duplication of roles. It also offers meaningful learning opportunities for students and postdoctoral researchers, demonstrating strong potential for both technical and professional development through active engagement in the project.
- **Partnerships:** The proposal outlines a strategic NSF-Catalyzed Partnership with well-defined roles and strong complementarity among partners. The collaboration is thoughtfully structured to enhance the overall effort and is likely to catalyze and accelerate the translation of the proposed technology.



# How do I Apply?

- Detailed instructions in the solicitation NSF 25-540
  - <https://www.nsf.gov/funding/opportunities/nsf-ttp-national-science-foundation-translation-practice/nsf25-540/solicitation>
- Submission deadlines:
  - TTP-E: Proposals accepted anytime, contact your cognizant PD
  - TTP-T/P
    - May 19, 2026 (third Tuesday in May, annually thereafter)



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### **Overview, Q&A**

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