



DPI Seed Grants Request for Proposals (RFP)

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Overview

The Discovery Partners Institute (DPI) was founded on the idea that a collaborative partnership of higher education institutions can provide the leadership essential to 21st century innovation. Led by the University of Illinois System, DPI brings together some of the nation’s strongest research and education institutions into one institute to support and grow multi-institutional, interdisciplinary science; to extend opportunities for education and workforce training; and to translate application-driven technology research and development into economic growth and strength.

Over the past three years, DPI has established itself as a driver of innovation serving researchers across the DPI partner network in meeting their goals to translate their research into innovation and commercial realms. We have seed funded 27 Science Teams across the DPI partner network, and these teams have raised over ~\$100M in external grant funding, and 42 industrial partnerships have been developed during this period with companies worldwide. Some additional salient accomplishments include:

- [Cannabis Research Institute](#): Launched jointly between DPI, State of Illinois and the City of Chicago, the Cannabis research institute is being supported to about ~\$10M over an initial 4-year period.

- Climate Practice: A climate and sustainability practice that is part of the Chicago Climate Alliance serving companies in the region is on its way to educate approximately 20,000 executives and employees on the fundamentals of climate science at a large energy and utilities corporation. This practice is in part funded by a 10M NSF+UKRI Center on clean transportation, and with hosting of the 2025 Sustainability Congress.
- Wastewater based epidemiology: Funded as a 2020 science team with a seed grant of \$125K involving DPI, UIC, Northwestern and Argonne, this team has established the largest wastewater surveillance program in the US, has raised more than \$20M in funding, and received the prestigious Chicago Innovation Award in 2023 for its breadth of innovation and impact in Chicago and beyond. As a winner, the team traveled to and was [recognized at the bell-ringing ceremony at NASDAQ](#). [Shield-T3](#): This was a new business venture launched by DPI to commercialize the saliva-based COVID test developed by the University of Illinois at Urbana Champaign. Shield performed more than 5 million tests and generated more than \$100M in revenues since inception.

Many other initiatives, including building practice areas in Artificial Intelligence/Machine Learning, and FinTech with novel applications to innovate in the consumer insurance industry are underway. In 2024, we expect to launch or support several new applied research, consulting and business initiatives, as well as pursue to establish a few externally funded Institutes and Centers.

The objective of this RFP is to identify the next set of science teams that have the promise to accelerate innovation further with the support of DPI. We would like to see innovative and ambitious plans that leverage DPI's seed funding, its unique internal resources, and external connections towards greater success. This RFP outlines the resources provided by DPI and lays out the expectations from successful proposals. We expect the selected efforts to generate enough critical mass of activity at DPI in the next 24 months that would eventually result in thematic "Hubs" - freestanding centers of national reputation that bring academic and industry stakeholders in performing applied R&D, workforce upskilling and technology translation and thereby actively improving the region's economy around those themes.

DPI Resources, Funding and Logistics

Due Date: Feb 16, 2024, 11:59 PM CT

- For this cycle, we expect to fund 1-2 institutes/ center proposals, and/or about 4-7 Venture / Practice efforts.

The primary (but not the only) modality of engagement with DPI's research and development portfolio is by applying for a DPI R&D Science Team Seed Grant, and we welcome applications from members in the DPI partnership network. Science teams should be interdisciplinary and inter-institutional with the goals of creating solutions to grand societal and technological challenges by answering research questions, enabling greater industry collaborations. Applicants should address these translational goals by establishing a team, in consort with the DPI team, that would:

- Create an externally funded translational research program,
 - optionally at the level of an Institute or Center (more below), or
- Set up an industry focused **practice**, or
- Perform the translational work required to start a new business **venture**.

The 2024 cohort of funded teams will add to our list of dozens of successful and dynamic teams created in previous years that have brought over \$100M in grants and contract funding to the System and partners since March 2020.

We also expect proposals to be interdisciplinary and substantially well-rounded to address the broader aspects/impacts of the problems tackled.

For this 2024 competition, at least one science team proposal (at the base \$125k level) will be funded from the social sciences and humanities, art, design, education, law, or public policy.

Funding available for each Science Team:

- Science team proposals that target translational research, industry-focused Practices or Startup Ventures will constitute a team of 2-5 faculty for 24 months. These proposal budgets are capped at \$125,000.
- Science team proposals that target Institutes / Centers must have the involvement of 10+ researchers from at least two or three of our U of I campuses and budget for a few key leaders of the proposal to have actual effort during the project duration at DPI. We recommend that the level of effort for 3-4 lead personnel be around ~1 day a week to work on translational research leading to an externally funded institute / center. Institute / Center proposal budgets are capped at \$350,000.

About DPI and Resources offered

The Discovery Partners Institute's ambition is to propel Chicago and Illinois into a pre-eminent and inclusive tech economy over the next decade. Led by the University of Illinois System in partnership with top research universities, it does three things: tech talent development, Research & Development, and business building. DPI prepares diverse students and workers to step into high-demand tech jobs. It also builds research teams and matches them with new funding. With state investment and an innovation district in development at the "78", DPI has the resources to attract, develop and leverage the most ambitious people and companies into its ecosystem. You can read more about the vision of DPI and plans for the future [here](#).

Resources offered for funded teams

In addition to providing seed funding, DPI will provide services and support along the following lines:

Research Development. proposal development support (including grant writers on a contract rider), connections to faculty and researchers from existing DPI Science Teams and partner institutions.

Software Development and Tool building Support. A team of dedicated software engineers offering AI/ML a service platform, with support for data collection tools, data curation, building tailored processing pipelines, use of transfer learning, and custom software development support.

Corporate Engagement. A dedicated corporate engagement team with extensive corporate experience advancing partnerships with industry, pursue contract and joint research opportunities and develop upskilling programs for executives.

Venture creation services. The New Business Ventures team assists the awarded teams with business plan development, market research, company formation, licensing and private equity connections.

Institute / Center proposals must describe a vision of how to realize a large team science effort leading to successful external funding can be accomplished by the seed grant resources as well as drawing from the in-kind support offered by DPI.

Use of Funds

For Institute / Center proposals, this RFP will support faculty effort during the calendar year at DPI as described earlier.

For all other proposal types, while the use of funds is not limited to specific types of expenses, they are not intended to substantially cover faculty summer salaries. The use of funds otherwise is to primarily cover the costs necessary to jumpstart activities that will be supported by external funds. We expect to see budgeted line items for grant writing and project management support. The effort of any personnel supported on the grant (including research personnel) must be justified clearly given the above guidance on the budgeting of funds, and we discourage conducting fundamental research primarily with the help of this funds, which are meant to support translational work. DPI staff involved in the review process will closely examine expenses, such as salaries/wages, materials and supplies, travel, and other participant support costs for proposed activities, and will evaluate proposal budgets based on the fidelity to the above guidance and the overall proposal vision. For proposals in the translational research, industry practice or venture category, senior personnel may not receive more than \$5,000 in summer salary from this program. Facilities and Administration (Indirect) costs are not allowed.

Characteristics of a Successful DPI R&D Team Science Seed Grant proposal

1. Personnel: Base science team proposals at \$125k that target the creation of an externally funded Translational Research Program, Practice or a Venture must have a minimum of two researchers with a lead faculty member from the University of Illinois System. Proposed teams are encouraged to include members from multiple partner universities or other organizations. You are not limited in the number of senior personnel. The team (PI or one of the Co-Pis) must have at least one member with a 0.5 FTE appointment on a University of Illinois campus.
 - a. Science team proposals targeting an Institute or Center must include a minimum of three researchers, who will need to have a committed level of effort at DPI during the academic year.
2. Focus on the following umbrella areas of DPI themes of research interest:

- a. Fintech / Insurtech
- b. Digital Health
- c. Climate Solutions
- d. Transportation / Infrastructure
- e. Food Technologies
- f. Computing and Information Technology
- g. Cannabis (medicinal, agricultural and social equity)
- h. Humanities, Arts, Media, Social Sciences, Law and Public Policy

Of areas a-f listed above, we are particularly interested in funding proposals that address grand challenges involved in the federal [Critical and Emerging Technologies](#) list. Innovative use and considerations of computing technologies (AI/ML, Cloud computing, IoT, Security) to elevate the themes is encouraged.

- 3. *Economic impact and Translational potential.* The project should address DPI's mission of economic impact. We expect teams to be interested in realizing the commercial potential of their research, however, no prior experience in commercialization is expected. For proposals in the arts and humanities, this section must address the larger societal challenges, including addressing inequities in the current status quo.
- 4. *Potential for future external funding.* The project should lay the groundwork for the submission of external grant applications and/or proposals for industry-funded R&D partnerships. Priority will be given to teams that propose quarter-by-quarter timeline of various grants that they hope to pursue and have a budget / staffing plan supporting such pursuits.
- 5. *Proposes broader impacts to benefit the Chicago area or Illinois.* This would include meaningful external engagement with private, public, or non-profit entities.
- 6. Proposed team's distinction and leadership in the field
- 7. Budget accurately reflects the needs of the proposed activities, and follows the spirit of the guidelines of RFP.
- 8. Project feasibility in the timeframe that is provided

Proposal Content

Cover page(s) must include the following:

- a. Project Name
- b. Name and Title of Lead Researcher
- c. University, College and Department of PI
- d. Names and Titles of Co-Investigators
- e. Institution(s), College(s) and Department(s) of co-PIs

Proposal Sections:

- 1) Abstract (maximum 250 words)
- 2) Description of vision, team, background, and proposed activities (not to exceed five pages)
 - a. For proposals targeting institutes / centers, explain how the team is strategically positioned towards being highly competitive to win an Institute in this space.

- b. For proposals targeting translational research, explain how the research will lead to broader near-term impact
 - c. For proposals targeting industry practices, outline a vision and approach (including but not limited to forming a consortia) that would successfully lead to a research theme to be explored in consort with industrial partners
 - d. For proposals targeting ventures, explain how you envision performing the translation of an existing body of work (say, at lower TRL levels) towards commercial readiness.
- 3) Brief description of the potential for economic impact (not to exceed one page)
- 4) Brief description of how the team would leverage DPI resources (outlined above under “Resources offered”) to realize the vision and activities. (not to exceed one page)
- 5) Brief description of the broader societal impacts of the proposed research. This may include a focus on DEI (Diversity, Equity, and Inclusion), which is a core commitment of DPI. (not to exceed one page)
- 6) Statement of work and timetable for the seed grant activities (not to exceed one page). DPI engagement period will be a minimum of 18 months.
- 7) Statement on external (governmental, foundation, corporate, NGO, etc.) funding.
 - a. List any existing external funding commitments which currently support the applicants’ research activities that relate to the proposed team
 - b. List any identified external funding programs/prospects that the proposed team intends to pursue
- 8) Faculty and team members, include short CVs (not to exceed two pages each)
- 9) Letters of support from partners (if any) that describe their role on the project
- 10) Bibliography of relevant scholarship that is related to the project
- 11) Budget for requested funding, typically up to \$125,000 for base science team proposals, and up to 350,000 for institute proposals.

Proposals not adhering to the page limits or missing sections might be returned without review.

Information Session and Team Facilitation Meeting

DPI will hold an information session on Jan 24 from 8:30 – 10.30 am. Please register at the following [link](#) by Jan 17. The meeting will include an informational presentation and include time for questions and answers. A portion of the meeting will be devoted to facilitating team formation. If you plan to attend the team facilitation portion of the meeting, please provide information on your research interests to the [event registration link](#). Opportunities to network and form teams offline will also be made available to those who register. While we encourage participation, your involvement in this meeting will not affect the review of a subsequent proposal.

How to apply

Please submit your proposals at [this link](#).

If you have any questions, please reach out to venkat@uillinois.edu with a copy to msilva@uillinois.edu.