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# 1. Proof of Concept Funding Overview

Proof-of-Concept funding is designed to facilitate the translation of University of Illinois at Urbana-Champaign innovations into commercial products by providing 1) monetary support and 2) commercialization resources, guidance, and services. The purpose of the funding is to bridge an existing funding “gap” between government supported innovations that result from University research and private sector supported translation of those innovations into commercial products. “Gap” funding is designed to facilitate the demonstration of a technology’s proof-of-concept, working prototype, or scale-up development to make that technology more attractive for private sector funding and partnering. The Illinois Proof-of-Concept Fund (I-POC) is financed through support from the University’s colleges, research institutes, and Vice Chancellor for Research Office. The Faculty Entrepreneurial Fellows Program, which is open to faculty in the College of Engineering, is financed through alumni donation.

Both programs support the economic development goal of the University of Illinois by facilitating transformation of University discoveries and technologies into useful products and services that benefit society. I-POC and FEF help launch University technologies into the University’s innovation pipeline, which is aimed at protecting, supporting, and launching ideas into global solutions (see Figure 1).

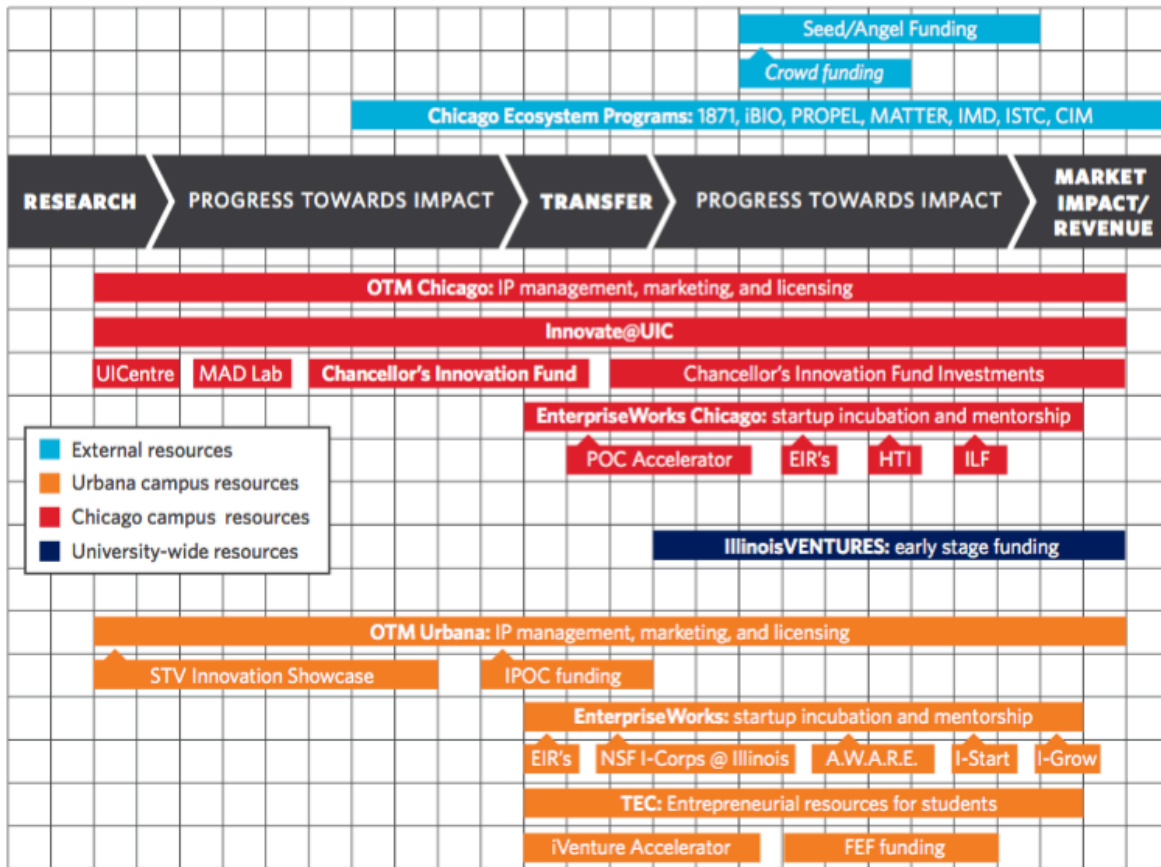


Figure 1. System Resources

### 1.1. Making a Difference with POC Funding

The Illinois Proof-of-Concept program, and prior OTM-managed programs dating to 2009, has awarded more than \$1.08 million in funding, which has led to:

- 26 funded projects
- 9 start-up companies
- \$49 million in venture and angel funding
- \$1.875 million in SBIR/STTR funding

For updates on I-POC projects, please visit <http://otm.illinois.edu/POC>

## 2. POC Program Outlines

Faculty submitting proposals must propose a plan for further development of University-owned technologies or inventions close to commercialization and/or licensing. Each project should contain defined steps or tangible set of milestones that would overcome a specific, identifiable hurdle to commercialization. A successful project will enable a technology or invention, within 1-2 years of the program completion, to become more attractive for either (1) licensing to an existing company or (2) enabling the formation of a start-up company that will further develop and commercialize the technology. Projects that relate to a technology or invention that could address a significant market need and are able to achieve proof of concept in less than 12 months are especially encouraged. Projects solicited under this program may include:

- Building of a prototype or second iteration prototype to prepare for commercialization
- Commercial feasibility tests
- Creating a mobile application to disseminate a social sciences intervention
- Work to demonstrate mitigation of risk for potential licensees
- Work to address a specific gap identified by industry that impairs the ability to license or attract capital

### 2.1. Scope of Award

Projects will be awarded in amounts up to \$50,000 and money will be tranching over a 12-18 month period. For the I-POC, the number of awards and amount of rewards will be based on individual contribution from each College/Institute and the available matching funds from the Office of the Vice Chancellor for Research. Illinois Proof-of-Concept funding is contingent on the availability of funds in the budget. Up to four proposals will be funded in this round under the Faculty Entrepreneurial Fellows program.

In addition to the monetary support, participants in each program will be offered commercialization support in the form of the additional resources and services.

For winners this includes:

- Mandatory quarterly meetings with an Entrepreneur in Residence (EIR) (see Section 5.2. for more details on the EIR Program)
- 2 hours of free consultation per month with an EIR
- Up to 20 hours of support from the Office of Technology Management (OTM) with intellectual property landscape and market landscape analysis

- Up to 10 hours of support from an EIR and the OTM for assistance with generation of a project-tailored “pitch” presentation (see Section 3.2.3. for more details on pitch presentations)

For FEF winners, additional components of the program are outlined here:

<http://tec.illinois.edu/experiences/fellows>

## 2.2. Eligibility

Proposals will be accepted from all fields of research in which the proposed project fulfills the goals and funding priorities of the program outlined above. Additionally, proposals must meet both the application and project eligibility as outlined below. To be considered eligible for funding, both the investigator and proposed project must meet the following criteria:

### 2.2.1. Program Eligibility

**2.2.1.1. Illinois Proof-of-Concept Fund:** Faculty must be affiliated with one of the participating units in order to be eligible for proof-of-concept funding from that unit. Units contributing funding to the Spring 2016 round of I-POC are:

- Beckman Institute for Advanced Science & Technology
- Carl R. Woese Institute for Genomic Biology
- College of Applied Health Sciences
- School of Social Work

**2.2.1.2. Faculty Entrepreneurial Fellows:** Faculty must be affiliated with the College of Engineering in order to be eligible to participate in the program.

### 2.2.2. Principle Investigator Eligibility

- The PI must currently be a full-time faculty member at Illinois, or an emeritus faculty member who maintains an active research group.
- The PI must have an invention disclosure on file with the OTM upon which the proposed project will be based, prior to or concurrent with applying. Pre-proposal applications will not move forward if a disclosure is not on file with the OTM. The invention disclosure can be made at the time of the letter of intent.
- Non-Illinois personnel should be identified within the grant application as key contributors and their role within the project should be defined. Competitive applications will utilize both University and non-University expert resources and personnel to help with key milestones related to product development, testing, or prototype construction.
- A PI may submit only 1 proposal per funding Unit. A PI may submit proposals to multiple funding Units, provided that the proposals are not based on the same invention disclosure.

### 2.2.3. Project Eligibility

- The technology which provides the basis for the proposal must not be exclusively licensed, or encumbered by any other prior obligations that would preclude the University from moving forward with commercialization (i.e. sponsored research agreement, ongoing collaboration with an industrial partner, or consulting agreement). Please note that technologies that have been optioned or non-exclusively licensed **may be** eligible for the program, depending on the circumstances.
- The IP surrounding the invention disclosure must be owned (or co-owned) by the University of

Illinois. If co-owned with another academic institution, the University of Illinois must be the lead institution, meaning 50% or more of invention ownership. Please contact the OTM if you are unsure about the IP ownership of your invention.

- The project must be focused on commercial product development or testing. POC funding cannot be used for basic exploratory studies or as general funding for the PI's lab. Project proposals should address how achieving identified project milestones will move the invention towards commercialization.
- Project milestones and deliverables must be achievable within 12-18 months of the start of funding and within the requested budget.

#### 2.2.4. Limitations and Exclusions

The following are NOT eligible for funding under this program:

- Proposals to fund pharmaceutical/drug clinical trials. Pre-clinical animal testing and medical device testing, if it can be completed in 12-18 months and is feasible within program limits and other guidelines, may be proposed.
- Proposals to fund basic research or theoretical development, or to generate models, new data, or assess the feasibility of a research project.
- Projects for which the proposed activities require more than 18 months to complete.
- Projects with industry sponsorship, an investment partner, or research grant support.
- Renewals for projects funded in previous cycles.
- Funds cannot be directly distributed to a start-up company.
- Intellectual property resulting from proof-of-concept funding is wholly owned by the University of Illinois.
- All research funded by I-POC and FEF must take place in the PI's laboratory or other University research space. Research **cannot** take place within company facilities (such as a start-up), including companies located in the University's EnterpriseWorks incubator.

### 3. How to Apply/Submission and Review Process

The submission and review of proposals will consist of a two-stage process. The first stage (Pre-proposal submission) will be required of all investigators who wish to be considered for either the I-POC or FEF Programs. After a review of the Pre-proposal submissions, select Pre-proposal applicants will be invited to submit Full Proposals. Only those investigators who are invited to submit Full Proposals will be eligible for funding. Any Full Proposals submitted without an invitation will not be reviewed.

#### 3.1. Pre-proposal

The Pre-proposal will have two components: 1) a short, **two**-page letter of intent and 2) a pre-proposal application form. The Pre-proposal should be submitted to: [IllinoisPOC@illinois.edu](mailto:IllinoisPOC@illinois.edu). Detailed information on the recommended content is as follows:

##### 3.1.1. Pre-proposal Application Form

A completed Pre-Proposal Application Form will need to be submitted. The Pre-proposal Application Form can be found at: <http://otm.illinois.edu/POC> or at: <http://tec.illinois.edu/experiences/fellows>

##### 3.1.2. Letter of Intent (LOI)

- **Project Description** – Introduce the problem your technology solves, a high-level overview of

your technology and how it will address that problem, as well as a brief description of your proposed project.

- **Project Impact** – Identify current technical or commercial risks associated with your technology that your proposed project will be able to address, thus significantly impacting the commercial potential of your technology.
- **Specific Aims/Milestones** – Propose 2-3 distinct milestones that will be used to track the progress of the project over the course of the funding period. Milestones should be logically ordered such that the successful completion of one milestone triggers work to begin on the next milestone. (Please note: I-POC funds are released in tranches, meaning a defined milestone must be successfully achieved before the next tranche of funding is released.)
- **Market Attractiveness** – Describe the envisioned end product based on your technology and the market it will compete in. Identify the differentiating factors (e.g. better/faster/cheaper) that will make your technology competitive in the market place. Provide any industry-specific feedback you have received on the competitive advantage of your technology and its ability to fulfill an unmet need in the marketplace.
- **Appendix** – A maximum of one (1) page of supporting data or references cited in the LOI may be included. The appendix will not count towards the two-page LOI limit.

### 3.1.3. Review Process

An internal University committee (Internal Review Committee) consisting of Deans, Directors, and select delegates from the funding unit will review Pre-proposals. Pre-proposals will be evaluated based on the project's ability to successfully prepare the technology for commercialization within the scope of the proposed studies and within the requested budget and time frame. Pre-proposals will also be reviewed to determine whether the projects meet the eligibility criteria in section 2.2.2. Please note: reviewers are **not** required to sign a confidentiality agreement prior to the review. Protected or proprietary information should not be included in the proposals, but applications must provide sufficient information for reviewers to make a determination regarding commercialization potential.

## 3.2. Full Proposal

Only investigators who have submitted a Pre-proposal and are invited to submit a Full Proposal will be eligible to submit a Full Proposal. Any Full Proposals submitted without an invitation will not be reviewed. The Full Proposal should be submitted to: [IllinoisPOC@illinois.edu](mailto:IllinoisPOC@illinois.edu).

**3.2.1. Full Proposal Application PowerPoint** – Invited investigators will be required to use the pre-formatted proposal application .ppt template for Full Proposal submission. The template can be found at: <http://otm.illinois.edu/POC> or for the FEF applications at at: <http://tec.illinois.edu/experiences/fellows>

**3.2.2. Budget** – A detailed, line item description of how funds will be allocated for the proposed project should be included in the Full Proposal. Funds are only to be used for activities that further commercial development of the specified technology and are not to be used as general laboratory funding (see Section 4 for specific budgetary restrictions). A budget template can be found at: <http://otm.illinois.edu/POC>.

**3.2.3. Pitch Presentation** – Investigators will be required to prepare a short, 15 min. “pitch” presentation for the Review Committee. Pitch Presentations are designed to “sell” a technology and attract investors (or licensees). Presentations will be given by way of a webinar. The committee will score projects based upon both the strength of the written proposal as well as the inventor's passion and vision for the project as conveyed through the Pitch Presentation. Support for the Pitch Presentation is available to all Full Proposal applicants through the OTM and EIRs (see Section 2.1). Please note, the Pitch Presentation should not be

the same as the Full Proposal Application PowerPoint, but the two documents should be cohesive and may be redundant in some areas.

### 3.2.4. Review Process

**3.2.4.1. Review Committee** – Multidisciplinary panels composed of scientists from both within and outside the University, business experts, members of the investment community, and industry professionals will review Full Proposals. Applicants are encouraged to avoid jargon and to prepare proposals and Pitch Presentations in a manner comprehensible to a general audience. Full Proposal reviewers are **not** required to sign a confidentiality agreement prior to the review. Protected or proprietary information should not be included in the proposals, but applications must provide sufficient information for reviewers to make a determination regarding commercialization potential.

**3.2.4.2. Review Criteria** – The Review Committee will evaluate proposals based on the scoring criteria and generate a rank-ordered list of applications that are recommended for funding. The following criteria will be evaluated as indicated below:

- **Strength of IP that exists now or will be generated** - The IP review will consist of assessment of the patentable material that has already been generated or will be generated within the POC funding time period, analysis of the IP landscape (including presence of currently existing patents and publications in the field that will give a sense of whether broad or narrow claims are anticipated), and whether the technology presents itself as a platform technology.
- **Market attractiveness and commercialization strengths** - The market review will incorporate the estimated size and growth potential of the market, and impact the technology will have on the market. Commercialization analysis will include assessing any hurdles that may affect the value of the technology from the perspective of potential licensees as well as an assessment on what resources will be required to develop the invention for commercial applications.
- **POC funding as an appropriate enabler of commercialization for this technology** - Reviewers will assess whether the technology has been demonstrated or sufficiently reduced-to-practice to justify POC funding (including the identification of a defined hurdle to commercialization) and whether the proposed deliverables will clearly reduce the future licensee or investor risk to enable licensee or investor interest.
- **Expertise and Commercialization interest by PI and project participants** - The project team presented in the proposal will be evaluated for their experience, qualifications, and strengths with regards to the proposed studies as well as the commercialization milestones. A strong proposal will include project participants that have experience in commercialization and entrepreneurship, an interest and passion for commercialization and entrepreneurship, and have potentially expressed interest in starting a company based on the technology presented in the proposal.
- **FEF applicants have an additional set of criteria that involve the usage of students on the projects as well as the utilization of the Grainger Engineering Library IDEA Laboratory.**

## 4. Award Funding Obligations and Limitations

The POC grants will be awarded in the range of up to \$50,000 over a 12-18 month period. A maximum of \$50,000 can be requested. Grants are intended to only provide support for project related expenses and cannot be used to provide salaries for principal investigators, to purchase laptops or large equipment, for travel (except when it directly supports project completion), for publications, or to cover legal costs or obtain intellectual property

protection. Furthermore, funds cannot be used as general support for the investigator's lab. Funding may be used to provide salary support for graduate or undergraduate students involved in the project.

For projects that are funded under this initiative, funds are expected to be released within two weeks of award announcement, and contingent on completing the required meeting regarding conflict management (see section 5.1 below). However, there is no guarantee funds will be released by this date. As a result, investigators must not spend any funds prior to release into the investigator's account. Funds will be dispersed through your College/Institute's Finance/Business Manager. After the first quarter, the release of additional funds will be contingent upon successful achievement of the stipulated milestones and deliverables. Release of funds will be triggered based on the progress conveyed in the Quarterly Progress Report (see Section 5.i.). Failure to complete the stipulated milestones and deliverables may result in delay of payment and potential termination of project.

## **5. Post-award Funding Obligations**

In addition to meeting the specified milestones and deliverables in the project proposal, awardees will be required to participate in the following activities:

**5.1. Post –Award Meeting regarding conflict management** -- Awardees will be required to meet with either the Executive Associate Vice Chancellor for Research, Melanie Loots, or the Senior Associate Director of the Office of Sponsored Programs, Linda Learned, to discuss conflict management, restrictions on funds, and University obligations. Completion of this meeting is mandatory; funds will not be released until OTM has received confirmation that the meeting occurred.

**5.2. Quarterly Reports** – A Quarterly Report will need to be submitted at the end of each quarter. The Quarterly Report outlines the milestones and deliverables that were met (or not met) as well as provides an outline of the topics discussed at the mandatory meeting with the EIR. The Quarterly Report provides information back to the OTM on whether the next funding tranche should be released as well as general feedback on how the program is enabling translational development of a given technology. The Quarterly Report template can be found here: <http://otm.illinois.edu/POC>

**5.3. Entrepreneur in Residence (EIR) Meetings** – EIRs are a University and Enterprise Works resource. EIRs consult with prospective technology entrepreneurs and are able to provide feedback on various business aspects surrounding new innovations, commercialization, and startup company formation. Award recipients will be assigned an EIR and are required to meet with their EIR once every quarter. Topics discussed with the EIR should focus on commercialization aspects of the project proposal, but are not defined and are at the control of the PIs.

**5.4. Final Pitch Presentation** – Awardee teams may be required to prepare a final, 15 min. Pitch Presentation at the end of the funding period and present their pitch to a public audience. This presentation should also summarize the outcomes and deliverables of the funding. Investigators are encouraged to seek support for composing their pitch presentation from their EIR and the OTM.

## **6. Post-award Funding Opportunities** (see Figure 1)

All applicants are encouraged to pursue additional funding opportunities.

### **6.1. Campus Funding Opportunities**

**6.1.1. NSF I-Corps at Illinois Site** – NSF I-Corps is a public-private partnership program that teaches university entrepreneurs how to identify valuable product opportunities that can emerge from academic research and offers entrepreneurship training to participants. The University of Illinois at Urbana-Champaign is an official I-Corps "Site." I-Corps Sites are intended to develop future I-Corps Teams and I-Corps Projects by providing an entrepreneurial program for faculty and graduate students. Specifically, the I-Corps Site will provide infrastructure, advice, resources, networking opportunities, training, and modest funding (~\$3K



per team) to enable teams to transition their inventions into the marketplace or into becoming NSF I-Corps applicants. For more information visit: <http://researchpark.illinois.edu/i-corps>. Awardees will be pre-qualified to participate in the NSF I-Corps Site program.

**6.1.2. I-Start Professional Service Assistance** -- The I-Start Entrepreneur Assistance Program is a matching award program targeted to University of Illinois researchers that have a strong potential for technology commercialization through new company formation. I-Start offers a suite of first-year professional services startup services for new University of Illinois entrepreneurs including business development, legal setup, SBIR application, bookkeeping assistance, and marketing assistance. EnterpriseWorks has referrals to providers that can offer the scope of services at rates that match the funding level. For more information <http://researchpark.illinois.edu/resources/i-start-professional-service-assistance>

**6.1.3. Accelerating Women and Underrepresented Entrepreneurs (AWARE)** -- offers resources and an enhanced infrastructure that make the current entrepreneurial ecosystem more accessible to all. More information at: <http://researchpark.illinois.edu/AWARE>

## **6.2. Federal Funding Opportunities**

**6.2.1. Innovation Corps Team Program (I-Corps)** -

[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504672](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504672)

**6.2.2. Partnerships for Innovation: Accelerating Innovation Research** – Technology Translation (PFI: AIR-TT)

<http://www.nsf.gov/pubs/2015/nsf15570/nsf15570.htm>

**6.2.3. Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs:**

<https://www.sbir.gov/>

**6.2.4. More information on local resources for entrepreneurs at:** <http://otm.illinois.edu/resources-entrepreneurs/partners-programs>

## **7. Contact**

Questions can be emailed to: [IllinoisPOC@illinois.edu](mailto:IllinoisPOC@illinois.edu).

## **8. Acknowledgements**

The OTM thanks the colleges and institutes that have helped seed the Illinois Proof of Concept Fund including the College of Agricultural, Consumer and Environmental Sciences, the Beckman Institute, the College of Education, the College of Engineering, the College of Fine and Applied Arts, the Institute for Genomic Biology, the College of Liberal Arts and Sciences, and the School of Social Work. The OTM also thanks the Office of the Vice Chancellor for Research for providing matching support.