

**Stanford Catalyst for Collaborative Solutions**  
**2018 Request for Proposals**  
Deadline: February 23, 2018

The Stanford Catalyst for Collaborative Solutions is seeking to fund interdisciplinary project teams in its second year of its pilot phase, each team receiving up to \$3 million over three years. Proposals should address significant societal challenges requiring a truly interdisciplinary team to make significant process. Proposals can -- but are not required to -- fall under one of the [Future 10 Grand Challenges](#) (listed at the end of this CFP), and they must satisfy the project proposal guidelines. We are looking for bold approaches with the potential of achieving lasting, high-impact solutions.

To help faculty find collaborators, form functional interdisciplinary teams, and develop competitive proposals, the Catalyst program will hold a number of workshops during January and February 2018. If you are interested in receiving future mailings about Catalyst programs, please sign up on the [Catalyst website](#), which also will contain information about the [workshops](#).

The details of the proposal process are included in the enclosed attachment.

If you would like to attend the workshops, please [RSVP](#).

<b>Event</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>
Introductory Workshop	01/11/18	9-12pm	D. School Studio 2
Introductory Workshop	01/12/18	4-7pm	D. School Studio 2
Topic-focused Workshop	01/16/18	9-12pm	D. School Studio 2
Topic-focused Workshop	02/05/18	2-5pm	D. School Studio 2
Skills-based Workshop	02/06/18	1-4pm	D. School Studio 1
Skills-based Workshop	02/08/18	9-12pm	D. School Studio 2

Mark Horowitz  
Catalyst Director

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**Eligibility**

- The Principal Investigator (PI) must be a Stanford faculty member and be eligible per [Stanford policy](#).
- Each project team must include the participation of at least one tenure-line faculty member from the School of Engineering as the Principal Investigator (PI) or Co-Principal Investigator (Co-PI).
- A faculty member can serve as a Co-PI on, or be associated with, no more than two proposals, but each faculty member may serve as the PI for only one proposal.
- Maximum number of Co-PIs per project proposal is 4 (not including the PI).

**Selection Criteria**

Proposals will be evaluated based on the following criteria:

1. Likelihood of the project initiating and sustaining meaningful interdisciplinary collaborations within the School of Engineering, across the University, and beyond.
2. Boldness, ingenuity, and potential for transformative impact of the proposed research, especially in comparison to research typically supported by existing funding mechanisms.
3. Project's capability to educate, train, and prepare the next generation of leaders to take on the challenges of the future.

**Annual Budget and Renewal**

A three-year project budget justification is required with all proposals. Project budget may not exceed \$1 million per year. Annual renewal will be based primarily on demonstrated interdisciplinary collaboration in the preceding year.

**Proposal Requirements**

The web submission form must be filled out by the Principal Investigator. In addition to the data requested on the web form, a single merged PDF of the proposal including the five sections and observing the maximum length limit listed on the next page must also be submitted. Proposals must be self-contained with no links to additional information, and submitted by 11:59 pm on

**Friday, February 23, 2018** at the Catalyst website: [catalyst.stanford.edu](http://catalyst.stanford.edu)

## Proposal Outline

### 1. Abstract (maximum 500 words)

Provide a non-technical summary of the proposed project. The summary should address the following:<sup>1</sup>

- What are you trying to do? Articulate your objectives using absolutely no jargon: What is the problem?
- How is it done today, and what are the limits of current practice?
- What is new in your approach and why do you think it will be successful?
- Who cares? If you succeed, what difference will it make?
- What are the risks and the payoffs?
- How much will it cost?

### 2. Research Project Proposal (maximum of 4 pages, 12 pt font)

Describe the project in sufficient technical detail that it can be assessed by domain experts. Provide background and motivation, research objectives and methods, potential impact, and pathway to implementation of the solution.

### 3. Collaboration Plan (maximum of 2 pages, 12 pt font)

Given the different vocabulary/objectives/timeframe of different disciplines, describe the processes that will be implemented to facilitate sustained, meaningful collaboration among your team. This section must show how the resulting collaboration leads to results that are much greater than the sum of the individual contributions, and the essential contributions that each PI brings. We are looking for programs where the collaboration leads to new ideas and new learnings and not just a pipeline of research results.

### 4. Participant List

Provide a list of the project team members including:

- Name
- Email
- Affiliation (e.g. department name if inside Stanford, organization name if outside Stanford)
- Project Role (e.g. Principal Investigator, Co-Principal Investigator, senior team member, postdoctoral scholar, graduate student, etc.)

#### **\*\*Notes:**

- Maximum number of Co-PIs per project proposal is 4 (not including the PI).
- Other participating faculty and non-academic team members should be listed as “senior team member”.
- Unassigned project team members can be identified by a generic title and number (e.g. Graduate Student 1, Graduate Student 2, etc.).

### 5. 3-Year Budget Justification (maximum of 1 page, 12 pt font)

Describe how the 3-year project funds will enable success of the project team. **This is not a detailed, line item budget**; finalists will be asked to submit a detailed budget at a later date.

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<sup>1</sup>Adapted from The Heilmeier Catechism

## **Review Process**

Proposals will be evaluated in multiple rounds of review according to the Selection Criteria stated in this Request for Proposals. The Catalyst Proposal Review Committee comprises individuals from different disciplines across the University. Reviewers will keep proposals and the information that they contain strictly confidential. Finalists will be provided feedback on their project proposals.

## **Post-Award Administration**

Funding recipients agree to the terms for inventions, patents, and licensing set forth in the [Stanford University Research Policy Handbook](#).

Continued project funding is contingent on team participation in Catalyst activities including, but not limited to, progress reports, research seminars, periodic workshops, and development events.

## **Timeline**

Finalists will be notified by April 23, 2018 and invited to present their proposals at the 2018 Stanford Engineering Future 10 Symposium in late May. Project teams will be selected for funding shortly thereafter.

\*\*If your project is selected as one of the finalists, the team is expected to attend the 2018 Stanford Engineering Future Symposium.

## **Contact**

For any questions related to your project proposal, please contact:

Mark Horowitz, Director, [horowitz@ee.stanford.edu](mailto:horowitz@ee.stanford.edu)

Pinky Medina, Program Administrator, [pinkym@stanford.edu](mailto:pinkym@stanford.edu)

## Future 10 Grand Challenges:

1. How can we ensure that humanity flourishes in the cities of the future?
2. How can we engineer matter from atomic to macro scales?
3. How can we use autonomy to enable future technologies?
4. How can we use our strength in computation and data analysis to drive innovation?
5. How do we achieve effective yet affordable healthcare everywhere?
6. How do we create synergy between humans and engineered systems?
7. How do we secure everything?
8. How do we sustain the exponential increase in information technology performance?
9. How do we provide humanity with the affordable energy it needs and stabilize the climate?
10. How good can we get at engineering living matter?