

## **HPI-MIT Designing for Sustainability Program**

### **CALL FOR PROPOSALS**

In program year two, the MIT Morningside Academy for Design (MAD), Cambridge, Massachusetts and the Hasso Plattner Institute (HPI), Potsdam, Germany, invite grant proposals for joint research in design, technology, and sustainability. Two PIs (one from MIT and one from HPI) are expected to submit a proposal for a joint research project. Applications are accepted from collaborative teams led by one PI from MIT and one from HPI. Grants are up to \$200,000 per year for one year, with the possibility to apply for an extension. Approximately 10 awards are expected each year. The Program seeks to engage multidisciplinary research teams with divergent backgrounds in computer science, AI, machine learning, engineering, design, architecture, the natural sciences, the humanities, business and management; proposals are encouraged from all academic units at both MIT and HPI.

### **Program Vision**

The HPI-MIT Designing for Sustainability Program engages multidisciplinary research teams to develop ambitious, sustainable explorations that leverage design to generate sustainable impact for society across various domains of practice. The program applies rigorous academic research methods to understand the scientific basis for how and why design innovation works and fails. Design is understood broadly to include design research across disciplines as well as in a multidisciplinary context. Funded researchers have studied the complex interaction between members of multi-disciplinary teams challenged to deliver breakthrough product, service, and business-model sustainable design innovations.

An important feature of the design space is the need for creative collaboration across spatial, temporal, and cultural boundaries.

### **Program Priorities**

Funding decisions favor projects that set new research priorities for this emergent knowledge domain. The collaboration plan must demonstrate scientific depth and mechanisms to sustain the proposed innovation. Selection is also based on scientific merit, methodology, rigor, and evidence of open collaboration.

We seek proposals positioned to yield deep insights into building and designing sustainability and have visibility and potential to make a large societal impact. The protocols that design researchers might apply to achieve “insights” versus “data” will be appraised by the selection committee for viability.

We are particularly interested in the following areas:

- **Approaches for sustainable design innovation:** How can new frameworks, tools, systems, and methods – in design, computer science, or other disciplines – augment, capture, and re-use successful practices for sustainable design innovation? How can stakeholders engage in sustainable design innovation?
- **Motivating stakeholders in sustainable design innovation:** What are the impacts and roles of human stakeholders in the process of sustainable design innovation? How can stakeholders be motivated to implement more sustainable solutions in the future?
- **Assessing the impacts of sustainable design innovation:** What is the impact of design on human, business, and technology performance as it relates to sustainability and reaching United Nations Sustainable Development Goals? How do tools, systems, and methods create the right innovation at the right time? How do they fail? Why is now the right time to apply these tools, methods and/or systems? What societal impact can design and computer science have in navigating digital transformation or for reaching the United Nations Sustainable Development Goals?

## Funding Requirements

- All applications must explicitly show the link to design and sustainability
- The Principal Investigator (PI) must be a tenured or tenure-track professor at MIT or the Hasso Plattner Institute. They must be authorized to supervise Ph.D. candidates as the primary dissertation advisor. The National Science Foundation (USA) eligibility criteria define PI requirements.
- Research visits to the other institution are expected.
- Members of funded teams are expected to participate in two collaborative on-site workshops, one at HPI and one at MIT each year. These workshops focus on community building, research and knowledge exchange, and the creation of joint research outcomes.
- Team members are expected to attend virtual research seminars (approximately every six weeks) and present (take on organization) of one virtual seminar session during the duration of the project. In addition to advancing knowledge, these virtual events ensure strong community building throughout the year.

## Application Guidelines

1. Each team must have an eligible PI on both the MIT and HPI side
2. There should only be one joint proposal per team
3. Teams can apply for a **maximum \$200,000** of funding for **one year** (September 2024 – August 2025). This total should include all potential overhead costs. Project funding has to be allocated to each institution (HPI and MIT) in such a way that no school receives less than 40% of the total proposed project funding or more than 60%.
4. Proposal should include:

- a. Cover Sheet with Project title, names (incl. affiliations & email) of all members of the proposed project team (please use attached template)
- b. Proposal Description of maximum of two pages in length including figures (Fonts should be 12pt or larger, with minimum 2cm margins, and either US letter or A4 page layouts). It should:
  - i. Explicitly address the following key questions (If these issues do not fit your vision, please present alternatives and the rationale for using them):
    - What is the direct connection to sustainability and design
    - What is the proposed experiment design? What are the analysis methods?
    - How is performance being measured?
    - What is the expected impact?
    - What human need is being addressed?
    - How does the proposed project contribute to reaching United Nations Sustainable Development Goals?
    - What are other potential future sources of funding? (Background of this question: This program should serve as a catalyst or seed funding for an extended joint undertaking.)
  - ii. Describe how exactly the teams will work together and identify the students and scholars who will be involved. Indicate the level of exchange and how each side is invested in the cooperation. How is collaboration envisaged?
  - iii. Include the list of planned researcher stays (including duration) at the partner institution. Please note that research stays of less than three months are suggested. For stays of longer than three months, list the name of the researcher, the preferred duration of stay, and whether it has been agreed to by the PI at the host institution. It is also possible to suggest master's level candidates to complete an exchange in the framework of the program.
  - iv. Indicate if a sub-award is proposed, and provide details about it.
- c. Project budget on the included template (Annex 2). Please use the "remarks" section to provide a justification for the budget item.
- d. Appendices:
  - i. References
  - ii. One-page resume for each PI (NSF style)

**Note:** MIT teams are asked to complete a one-page summary that can be found on the [design.mit.edu](https://design.mit.edu) website.

## Application timeline

The complete application (four-part application form + appendices) is to be submitted by email as .pdf attachments (excel for the Budget template) to:

- Designing for Sustainability Research Program ([sustainability-research@hpi.de](mailto:sustainability-research@hpi.de)) by **23:59 (GMT), Thursday, 1 June 2024.**

After submission, teams may receive follow-up questions in mid-June, 2024 to answer electronically within a 3-day period. In the final selection, applicants may be asked to join

the joint selection committee for a ten-minute question round on June 24, 2024. At least one team member from each institution (preferably both PIs) must be present for the question round of review with the joint steering committee. Please note that teams that are not invited to the joint steering committee round may still receive project funding. The teams will be notified of the final decision by 30 June 2024.

### **Submission and Review Protocol**

The Program Committee with balanced institutional representation will review all eligible grant proposals. It may encourage groups to collaborate if it sees complementary lines of interest.

For any questions please contact:

- Designing for Sustainability Research Program ([sustainability-research@hpi.de](mailto:sustainability-research@hpi.de) )

## Cover Sheet (Form)

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| Proposal ID code:<br>(to be filled in by program manager)   |  |
| Project Title:  |  |
| Name and Affiliation of Principal Investigator 1:   |  |
| Name and Affiliation of Principal Investigator 2:   |  |
| Funding allocation Principal Investigator 1 (must be between 40-60% of total requested funding-indicate here in % of total requested) |  |
| Funding allocation Principal Investigator 2 (must be between 40-60% of total requested funding-indicate here in % of total requested) |  |
| Abstract:<br>(maximum of 200 words)   |  |
| Overall Budget requested (in US\$ up to US\$200,000):   |  |
| Is this an application to increase and extend funding for an already active project?  |  |