



## Yale Planetary Solutions (YPS) invites proposals for the 4th annual Grant Program

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### Executive Summary

In 2025 YPS will award three distinct types of grants, reflecting a growing and diversifying demand across the university to support novel and impactful projects that are aimed at solving planetary challenges. YPS is seeking proposals that align with [our mission](#), and particularly with one or more of our primary lenses: climate change; biodiversity and ecosystems; and communities and society.

**Initiation grants** are intended to empower work on potential new, challenging, or high-risk research and scholarship. Activities in an Initiation grant may include but are not limited to workshops, conferences, book projects, art installations, and curricular improvements. YPS expects to fund up to six Initiation grants with budgets up to \$25,000 and a 12-month timeline.

**Acceleration grants** are intended to support projects focused on research and scholarship that lay the groundwork for implementation. This may involve conducting proof-of-concept studies, gathering preliminary data, and practicing team science. This phase is crucial for bridging the gap between ideas and practical, scalable solutions. YPS will award up to twelve Acceleration grants with budgets up to \$100,000 and an 18-month timeline.

**Constellation grants** are intended to enable transformation of academic knowledge into tangible, actionable outcomes in concert with stakeholders. This could include pre-commercialization efforts to support new spin-out companies or developing, testing and scaling decision-making tools in collaboration with stakeholders who would implement those tools in their activities. This phase is aimed at ensuring that the research achieves its full potential. YPS anticipates funding up to three Constellation grants with budgets up to \$250,000 and a 24-month timeline.

Please reach out to [planetarysolutions@yale.edu](mailto:planetarysolutions@yale.edu) with any questions.

## YPS Mission

The magnitude, complexity, and interconnectedness of the planetary challenges we face are daunting and require urgent action —especially from those capable of generating knowledge and translating discovery into impact across communities. As such, [Yale Planetary Solutions](#) (YPS) seeks to drive planetary solutions through **all that Yale is**, from our students, faculty, staff, and alumni, to our buildings, collections, and campus, and **all that Yale does**—teaching, learning, researching, building, operating, convening, investing, and leading.

The planetary crises we face are complex, intertwined, and existential. Climate change, caused by greenhouse gas emissions from human activity, is altering the atmosphere, oceans, and land faster than at any point in recorded history, including by increasing global temperatures and the frequency of storms, droughts, and floods. These changes disrupt ecosystem function and exacerbate biodiversity loss, which were already impacted by deforestation, land-use change, unsustainable resource extraction, and pollution. Together, these crises harm human well-being, social systems, livelihoods, economies, and future development—as well as threaten the inherent value of the natural world. Given the scale and scope of the challenges—and recognizing the interconnectedness of the climate and biodiversity crises and their complicated relationship with humanity as the cause of and the solution to these challenges—Yale Planetary Solutions will focus our interdisciplinary and integrative systems work through three primary lenses: climate change, biodiversity and ecosystems, and communities and society.

The broad scope of Yale’s endeavors provides countless opportunities for isolated impact. If we want to achieve the greatest possible progress, all parts of the university must be meaningfully and collaboratively engaged. Notably, the mission we are undertaking is not merely to “understand planetary challenges.” We instead intend to empower every part of our university community to transform understanding into impact and action. By harnessing the university’s capacity to mobilize and focus collective resources, we can advance solutions to the greatest planetary challenges of our time.

## YPS Grant Program

The YPS Grant Program is intended to provide support to collaborative groups of Yale community members striving to create novel solutions, pilot new projects, or further existing ideas towards solving planetary challenges that are too complex to be addressed by a single individual or within a single discipline. To date, YPS has awarded \$5.5 million to support 66 grants for projects that have originated from both faculty and staff across the Faculty of Arts and Sciences and nine professional schools. The program is funded with longstanding generous support from the Three Cairns Climate Impact Innovation Fund, and this year we are pleased to welcome the Yale Center for Natural Carbon Capture and AI at Yale as partners in funding select awards. Additional support for these grants comes from the Natural Carbon Solutions Fund, the Simon Bates Catalyst Fund, the Science Catalyst Fund for Planetary Solutions, the Gordon Data and Environmental Sciences Research Grants, and the Science Frontiers Endowment.

We send this call to all Yale community members for project proposals that align with the YPS mission, and particularly with one or more of our primary lenses: climate change; biodiversity and ecosystems; and communities and society. We look forward to supporting individuals and teams

from different disciplines, schools, and academic domains. This year, we are excited to launch a new structure that aligns with our theory of change for transforming knowledge and innovation into action and impact, which can be conceptualized in three interconnected phases: Initiation, Acceleration, and Constellation.

- Initiation: sparking new ideas – either inquiry-based or user-inspired, fostering interdisciplinary collaborations, and charting novel research directions
- Acceleration: laying the groundwork for implementation by conducting proof-of-concept studies, gathering preliminary data, and practicing team science—a collaborative model that leverages the strengths of multidisciplinary teams
- Constellation: facilitating turning insight into progress, innovation into solutions, and knowledge into impact through collaborative action with partners within and beyond the Yale community

Proposals aligned with each of these phases will be accepted as detailed below. We encourage proposals from everyone: from physical and natural scientists, social scientists, engineers, clinicians, and those working in the arts and humanities. All teams must be led by a Yale faculty or staff member who is eligible to serve as a Principal Investigator (PI) and can include any university community member. Projects must be new, and teams must be interdisciplinary, though they do not need to be newly formed. We encourage proposals that explore collaborations with staff and the operations of the university and New Haven, harnessing the power of the campus or city staff as research partners. Junior faculty members are especially encouraged to apply. Questions about eligibility should be addressed to [planetarysolutions@yale.edu](mailto:planetarysolutions@yale.edu).

## Funding Guidelines

Funding requests must comply with the [Appropriate Use of University Research Funds](#) policy.

Funding may cover a range of activities including but not limited to:

- Personnel: Salary and fringe for post-docs and research assistants, as appropriate, but not faculty; stipend and up to 50% tuition for graduate students (please note that this funding cannot be used toward the [Graduate Student Tuition Matching Program](#)); undergraduate compensation for hourly work.
- Project or Research Supplies: Data collection and analysis; supplies; software; small instrumentation; syllabus development; dissemination of findings (e.g., symposia, publication fees, policy briefs, curricular materials). Please note, general office supplies, attendance at external conferences, and indirect costs will not be supported.
- Travel: Travel related expressly to the proposed project or research.
- Other: Items required for the project or research that do not fit in the above categories.

**Initiation grants** are intended to empower exploration and ideation that will launch new directions for research, teaching and scholarship. These grants are intended to enable challenging, or high-risk efforts. This phase supports a broad and inclusive approach to problem definition, inviting individual brilliance as well as diverse expertise and voices—including stakeholders and partners—to orient and inform the research agenda. Activities in an Initiation grant may include but are not limited to workshops, conferences, book projects, art installations, and curricular improvements.

Initiation grants may propose budgets up to \$25,000 with a 12-month timeline. We anticipate funding up to six Initiation projects, depending on the number and quality of proposals and budget requests.

**Acceleration grants** are intended to move from ideas into early action by supporting projects focused on research and scholarship that lay the groundwork for implementation. This may involve conducting proof-of-concept studies, gathering preliminary data, and practicing team science. During this phase, projects are aimed at robust and adaptable results that are aligned with the needs and capacities of stakeholders. This phase may also include positioning the work to be ready for adoption, whether by refining methodologies, developing prototypes, or securing buy-in from stakeholders. This phase is crucial for bridging the gap between ideas and practical, scalable solutions.

Acceleration grants may propose budgets up to \$100,000 with an 18-month timeline. We anticipate funding up to twelve Acceleration projects, depending on the number and quality of proposals and budget requests.

**Constellation grants** are intended to enable transformation of academic knowledge into tangible, actionable outcomes in concert with stakeholders. That is, facilitating turning insight into progress, innovation into solutions, or knowledge into impact through collaborative action. This involves connecting Yale research – and researchers – to others working to advance solutions to planetary challenges. This could include pre-commercialization efforts to support new spin-out companies or developing, testing and scaling decision-making tools in collaboration with stakeholders who would implement those tools in their activities. This phase is aimed at ensuring that the research achieves its full potential– turning theory into practice and realizing real world benefits by influencing policy, informing practices, and fostering innovations. As such, projects receiving Constellation grants will have a strong stakeholder engagement and collaboration component.

Constellation grants may propose budgets up to \$250,000 with a 24-month timeline. We anticipate funding up to three Constellation projects, with one focused on a path through Yale Ventures and hard technology commercialization for climate solutions, one focused on the intersection of Artificial Intelligence (AI) and any YPS lens, and one focused on other solutions pathways, depending on the number and quality of proposals and budget requests.

#### **Timeline:**

Please submit a proposal by **Sunday, March 30, 2025 at 11:59PM ET**. Proposals will be reviewed by a committee of faculty and staff from a wide range of disciplines supporting YPS. Applicants will be notified of funding decisions in May, with funds made available in June.

#### **Parameters for All Proposals:**

- Teams must be led by a Yale faculty or staff member eligible to serve as a PI and can include any university community member. Projects must be new, and teams must be interdisciplinary, though they do not need to be newly formed.
- Proposals may involve third parties (other institutions or agencies) but must clearly articulate how these connections generate new knowledge, enable the translation of knowledge into action, and/or lead to positive impact.
- Proposals should be written for a review committee that includes non-experts.

## Initiation Grants

### Proposal Elements for Initiation grants:

- **Summary Statement (750 Character Limit):** A summary paragraph describing in clear, non-expert terms the work the grant will support. This statement should answer the following key questions: 1) What challenge is the project promoting exploration of? 2) What is the project and how does it relate to the work of YPS? 3) What impact will this work have if successful? Note: this statement will be used in YPS communications if your grant is selected for funding.

Elaborating on your response to the summary statement request above, please provide the following details of your proposal:

- **Objective (4,000 Character Limit):** Define the challenge being addressed, describe how the proposed work will explore the challenge, and identify the innovative aspects of the proposal.
- **YPS Connection (1,000 Character Limit):** Describe how the proposal relates to one or more of the YPS lenses – Climate Change, Biodiversity and Ecosystems, and/or Communities and Society.
- **Alignment with the Initiation phase (1,000 Character Limit):** Detail how the proposed project aligns with the goal of launching new directions for research, scholarship or teaching.
- **Anticipated Positive Impact (1,500 Character Limit):** If you are successful, who or what will be impacted and what difference will it make? How do you plan to assess and evaluate your results?
- **Project Team and Management (1,000 Character Limit):** Please list the names, titles, and affiliations of proposed team members and indicate the collaborative roles that each team member will play to accomplish the proposed project.
- **Budget and Budget Justification:** Using the fields provided in InfoReady, please provide an itemized budget for Personnel, Project and Research Supplies, Travel, and Other, as well as a single budget justification. PIs of funded projects will be expected to be mindful of the award period and account balance throughout the life of the award, and to abide by the [Appropriate Use of University Research Funds](#) policy.
- **Project Durability (1,000 Character Limit):** Please indicate plans and sources for likely future funding.
- **Biosketch, CV, or Resume:** Please upload a biosketch, CV, or Resume for all PIs.

### Evaluation Criteria for Initiation grants:

Initiation grants will be evaluated on the following criteria: 1) relevance and alignment with YPS and Initiation phase goals, 2) feasibility and approach, 3) capacity to execute project, and 4) potential impact.

## Acceleration Grants

### Proposal Elements for Acceleration grants:

- **Summary Statement (1,000 Character Limit):** A summary paragraph describing in clear, non-expert terms the work the grant will support. This statement should answer the following key questions: 1) What problem is the project advancing a solution for? 2) What is the project and how does it relate to the work of YPS? 3) How will you know if your project is successful? Note: this statement will be used in YPS communications if your grant is selected for funding.

Elaborating on your response to the summary statement request above, please provide the following details of your proposal:

- **Objective (5,500 Character Limit):** Define the challenge being addressed and the work proposed to address it; identify the innovative aspects of the proposal.
- **YPS Connection (2,000 Character Limit):** Describe how the proposal relates to one or more of the YPS lenses – Climate Change, Biodiversity and Ecosystems, and/or Communities and Society.
- **Alignment with the Acceleration phase (1,500 Character Limit):** Detail how the proposed project aligns with the goal of laying the groundwork for implementation.
- **Anticipated Positive Impact (2,000 Character Limit):** If you are successful, who or what will be impacted and what difference will it make? How do you plan to assess and evaluate your results?
- **Project Team and Management (1,500 Character Limit):** Please list the names, titles, and affiliations of proposed team members and indicate the collaborative roles that each team member will play to accomplish the proposed project.
- **Budget and Budget Justification:** Using the fields provided in InfoReady, please provide an itemized budget for Personnel, Project and Research Supplies, Travel, and Other, as well as a single budget justification. Pls of funded projects will be expected to be mindful of the award period and account balance throughout the life of the award, and to abide by the [Appropriate Use of University Research Funds](#) policy.
- **Project Durability (1,500 Character Limit):** Please indicate plans and sources for likely future funding.
- **Biosketch, CV, or Resume:** Please upload a biosketch, CV, or Resume for all PIs.

### Evaluation Criteria for Acceleration grants:

Acceleration grants will be evaluated on the following criteria: 1) relevance and alignment with YPS and Acceleration phase goals, 2) feasibility and approach, 3) capacity to execute project, 4) stakeholder engagement, 5) metrics and assessment plan, and 6) potential impact.

## Constellation Grants

### Proposal Elements for Constellation grants:

- **Summary Statement (1,000 Character Limit):** A summary paragraph describing in clear, non-expert terms the work the grant will support. This statement should answer the following key questions: 1) What problem is the project advancing a solution for? 2) What is the project and how does it relate to the work of YPS? 3) How will you know if your project is successful? Note: this statement will be used in YPS communications if your grant is selected for funding.

Elaborating on your response to the summary statement request above, please provide the following details of your proposal:

- **Objective (5,500 Character Limit):** Define the challenge being addressed and the work proposed to address it; identify the innovative aspects of the proposal.
- **YPS Connection (2,000 Character Limit):** Describe how the proposal relates to one or more of the YPS lenses – Climate Change, Biodiversity and Ecosystems, and/or Communities and Society.
- **Alignment with the Constellation phase (1,500 Character Limit):** Detail how the proposed project aligns with the goal of enabling transformation of academic knowledge into tangible, actionable outcomes in concert with stakeholders.
- **Novelty (1,500 Character Limit):** What is novel about the proposed approach, application, or solution?
- **End-User/Stakeholder/Partner Engagement (2,000 Character Limit):** Describe how end-users/stakeholders/partners outside the Yale community are engaged in the design, development and implementation of the solution. Include any feedback gathered from potential customers, investors, or other partners. Explicit expressions of interest in the form of letters of support are welcome and do not count towards the page limit.
- **Connection to Yale research insights/discoveries (1,500 Character Limit):** For projects targeting impact through commercialization, list any Yale research discoveries / inventions that the Constellation grant will help develop or scale up. Include, if applicable, any invention disclosures to Yale Ventures, patents or patent applications filed by Yale Ventures, and/or novel technologies or techniques that will be central to the project.
- **Anticipated Positive Impact (2,500 Character Limit):** If you are successful, who or what will be impacted and what difference will it make? How do you plan to assess and evaluate your results?
- **Scale (1,500 Character Limit):** What barriers do you anticipate in moving from idea to action, and how can you overcome them?
- **Progress (1,500 Character Limit):** What are the key milestones you anticipate over your two years of work to assess your progress. Please provide at least one mid-term and one final milestone.

- **Project Team and Management (1,500 Character Limit):** Please list the names, titles, and affiliations of proposed team members and indicate the collaborative roles that each team member will play to accomplish the proposed project.
- **Budget and Budget Justification:** Using the fields provided in InfoReady, please provide an itemized budget for Personnel, Project and Research Supplies, Travel, and Other, as well as a single budget justification. Pls of funded projects will be expected to be mindful of the award period and account balance throughout the life of the award, and to abide by the [Appropriate Use of University Research Funds](#) policy.
- **Project Durability (1,500 Character Limit):** Please indicate plans and sources for likely future funding.
- **Biosketch, CV, or Resume:** Please upload a biosketch, CV, or Resume for all PIs.

### Evaluation Criteria for Constellation grants:

Constellation grants will be evaluated on the following criteria: 1) relevance and alignment with YPS and Constellation phase goals, 2) feasibility and approach, 3) real world applicability and scalability, 4) end-user, stakeholder, and partner engagement, 5) metrics and assessment plan, and 6) potential impact, and for proposals aligned with the commercialization pathway 7) connection to Yale research insights/discoveries.

## Outcomes and Expectations

Acceleration and Initiation teams must submit a very brief update midway through the project to demonstrate the state of the work as it is progressing, and a final report at the end of the project period describing the outcomes (a template will be provided). Constellation teams will be asked to submit biannual reports on their progress while also engaging with Yale Ventures or other support structures as they progress (a template will be provided). Constellation teams will also be required to provide a final report describing their outcomes (a template will be provided). These interim and final progress updates will support YPS review and enable continuous improvement of funding mechanisms. The report materials will also be used for communication and donor requirements. You may receive additional requests for communication support as needs arise.

Projects that have received a YPS Grant in the past may seek additional funding in this cycle but must have applied for external funding to be eligible. Projects selected for a YPS Grant this cycle may seek additional funding in future cycles but must have applied for external funding to be eligible. The intent of YPS Grant funding is to support projects early in the research process. The expectation is that grantees will seek sustained funding from external sources to continue to scale and expand the impact of their work.

Please email questions to [planetarysolutions@yale.edu](mailto:planetarysolutions@yale.edu).