
YALE
PLANETARY SOLUTIONS

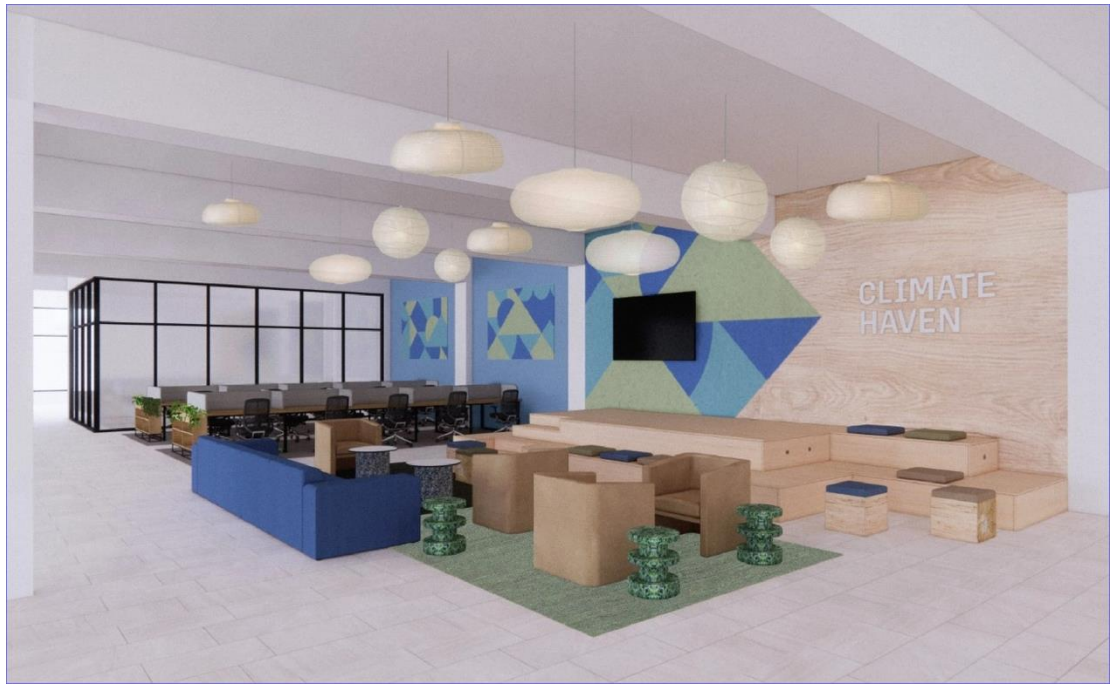
Understanding

PLANETARY PROBLEMS

is **NOT** *enough*


YALE
PLANETARY SOLUTIONS

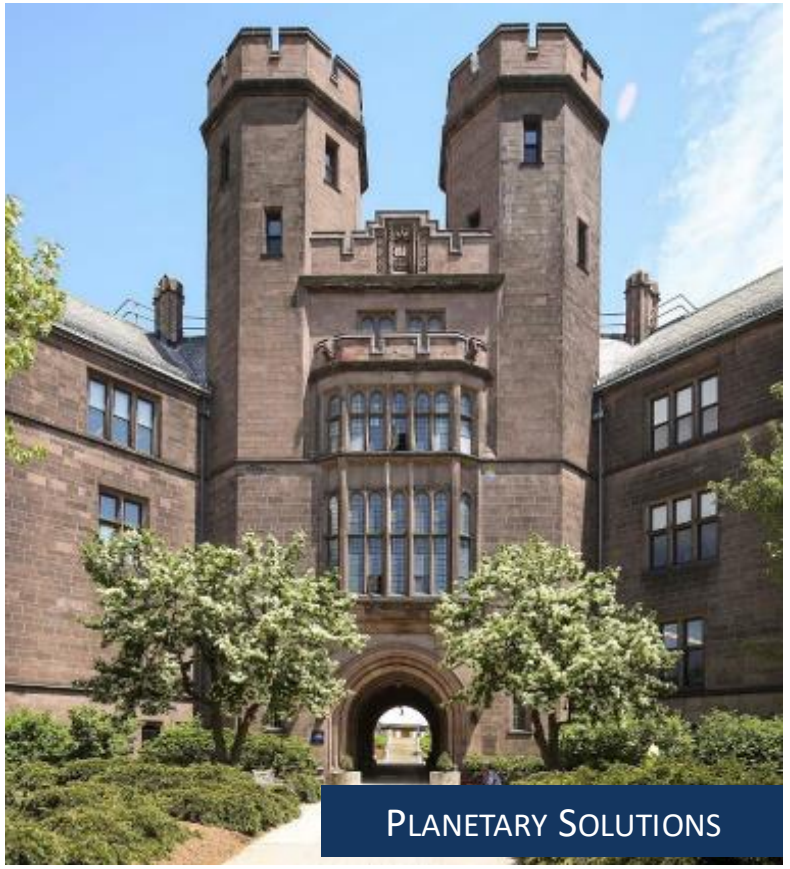
Yale Forest School Summer Camp, 1907



Climate Haven, 2023

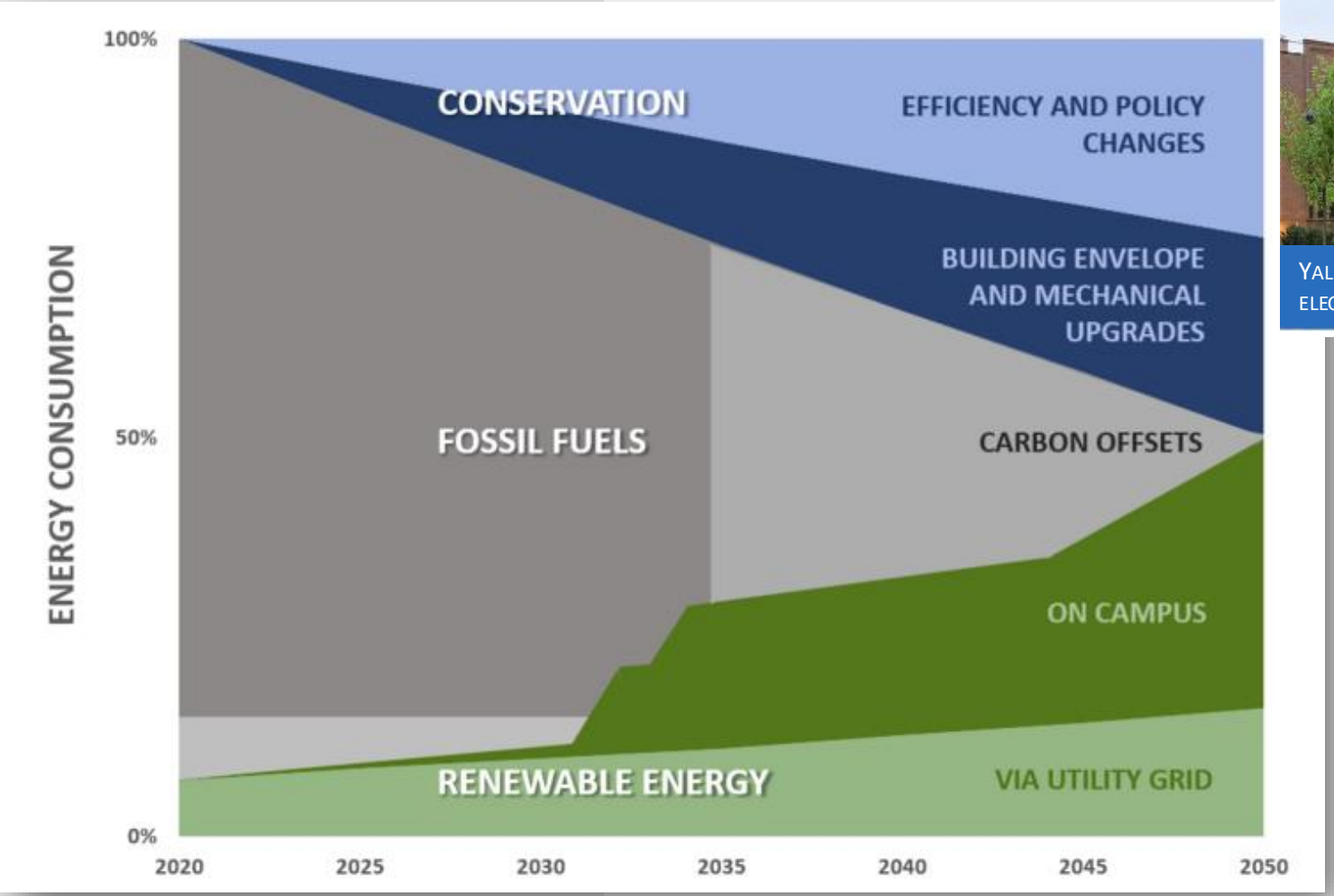
Where we started

YALE →



University Science Strategy Committee Recommendations

Climate Goals: Our Environmental Footprint



YALE'S NEW ECONOMICS BUILDING AT 87 TRUMBULL STREET, FULLY ELECTRIFIED AND ZERO CARBON READY.

Education

More than 75 courses on climate change, sustainability, and/or biodiversity each term
Three Cairns Climate Scholars from the Global South
Emerging Climate Leaders Fellowship
Bekenstein Climate Leaders Program
10+ non-degree certificate programs

Research

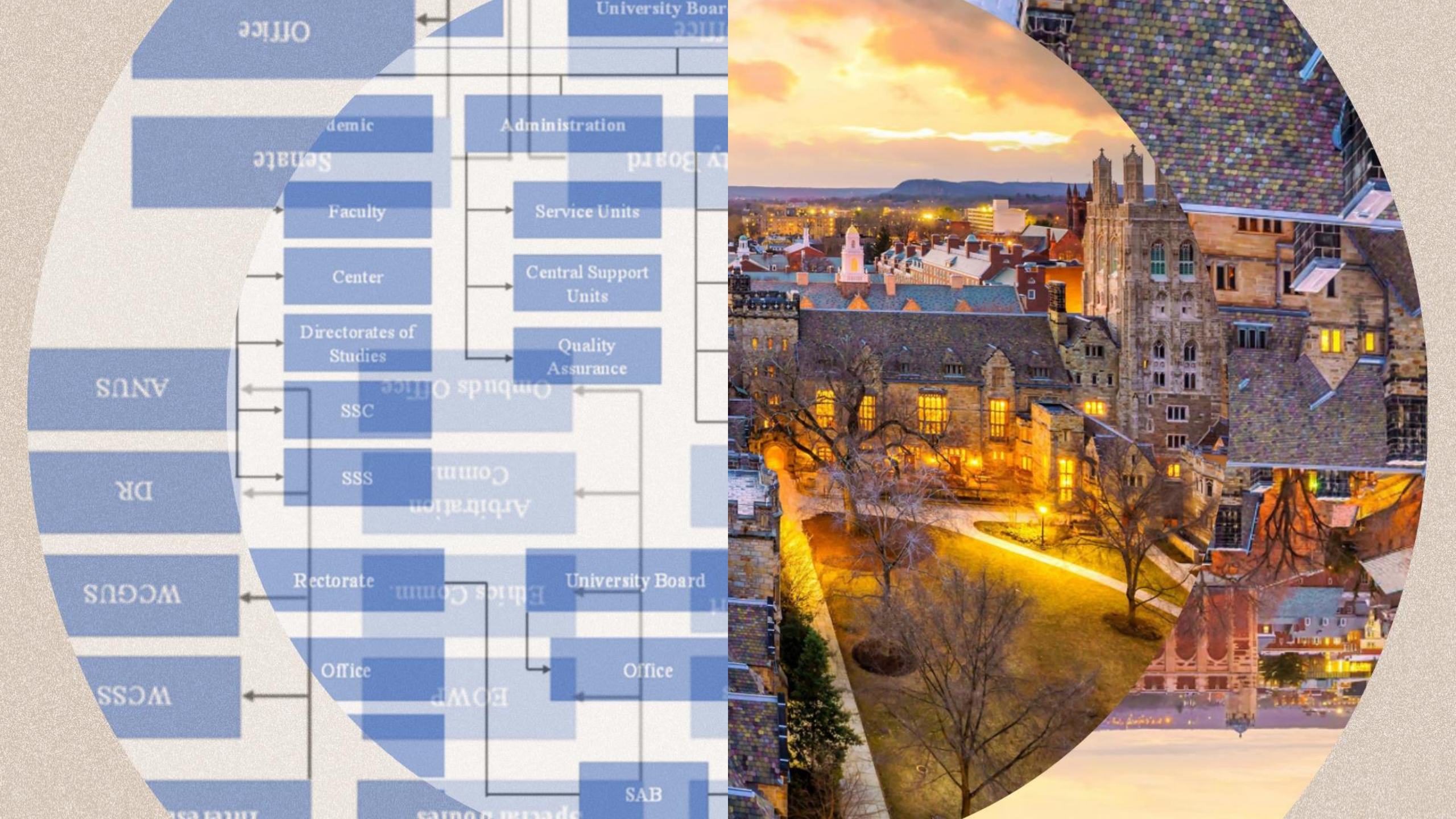
Yale Institute for Biospheric Studies
Yale Center for Natural Carbon Capture
Yale Center for Geospatial Solutions
Yale Center for Green Chemistry and Green Engineering
Yale Center for Climate Change and Health
Yale Center for Environmental Justice
Three Cairns Climate Impact Innovation Fund seed grants

Operations

First university to set a GHG reduction goal (2004)
Yale Office of Sustainability (2004)
Fossil Fuel Investment Principles
“Carbon Charge”
Net and actual zero carbon emission goals
Net zero ready building standard
Living Village, Divinity School
Geothermal plant for upper science hill
Operations Sustainability and Resiliency Task Force

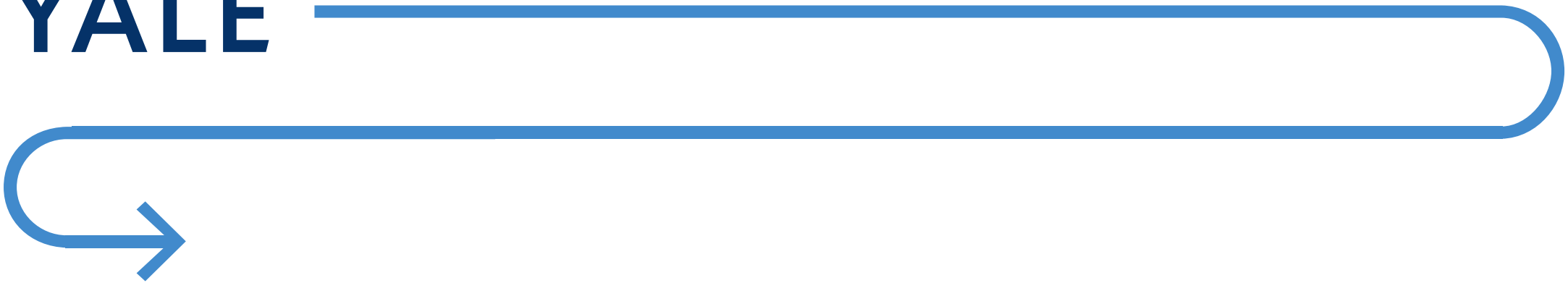
External Engagement

UNFCCC COP
UNFCBD COP
Yale Program on Climate Change Communication
Environmental Performance Index
Public Service Leaves


Administration
Faculty
Service Units
Center
Central Support Units
Directorates of Studies
Quality Assurance
SSC
SSS
Rectorate
University Board
Office
Office
SAB

How we are organizing

YALE



Yale Planetary Solutions Steering Committee

Sunil Amrith, Renu & Anand Dhawan Professor of History

John Barden, VP for Information Technology & Campus Services

Deborah Berke, Dean of the Yale School of Architecture

Co-Chairs

J. Mike Bellamy, VP for Facilities, Campus Development, & Sustainability

Julie Zimmerman, Professor; Vice Provost for Planetary Solutions

Peter Boston, University Director, Principal Gifts

Jeffrey Brock, Dean of the School of Engineering and Applied Sciences

Indy Burke, Carl W. Knoblock, Jr. Dean of the School of the Environment

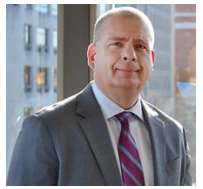
Liza Comita, Professor; Co-Director, Yale Center for Natural Carbon Capture

Alexandra Daum, AVP, New Haven and State Affairs

Doug Kysar, Joseph M. Field '55 Professor of Law

Amber Garrard, Director, Office of Sustainability

Renee Kopkowski, VP Communications



Anthony Kosier, AVP for Facilities & Campus Stewardship

James Levinsohn, Dean of the Jackson School of International Affairs

Megan Ranney, Dean of the School of Public Health

Eric Sargis, Professor; Director, YIBS

Karen Seto, Professor; Director of the Hixon Center

David Skelly, Director of the Yale Peabody Museum

Sara Smiley Smith, Asst. Provost, Planetary Solutions

Carla Staver, Associate Director, YIBS

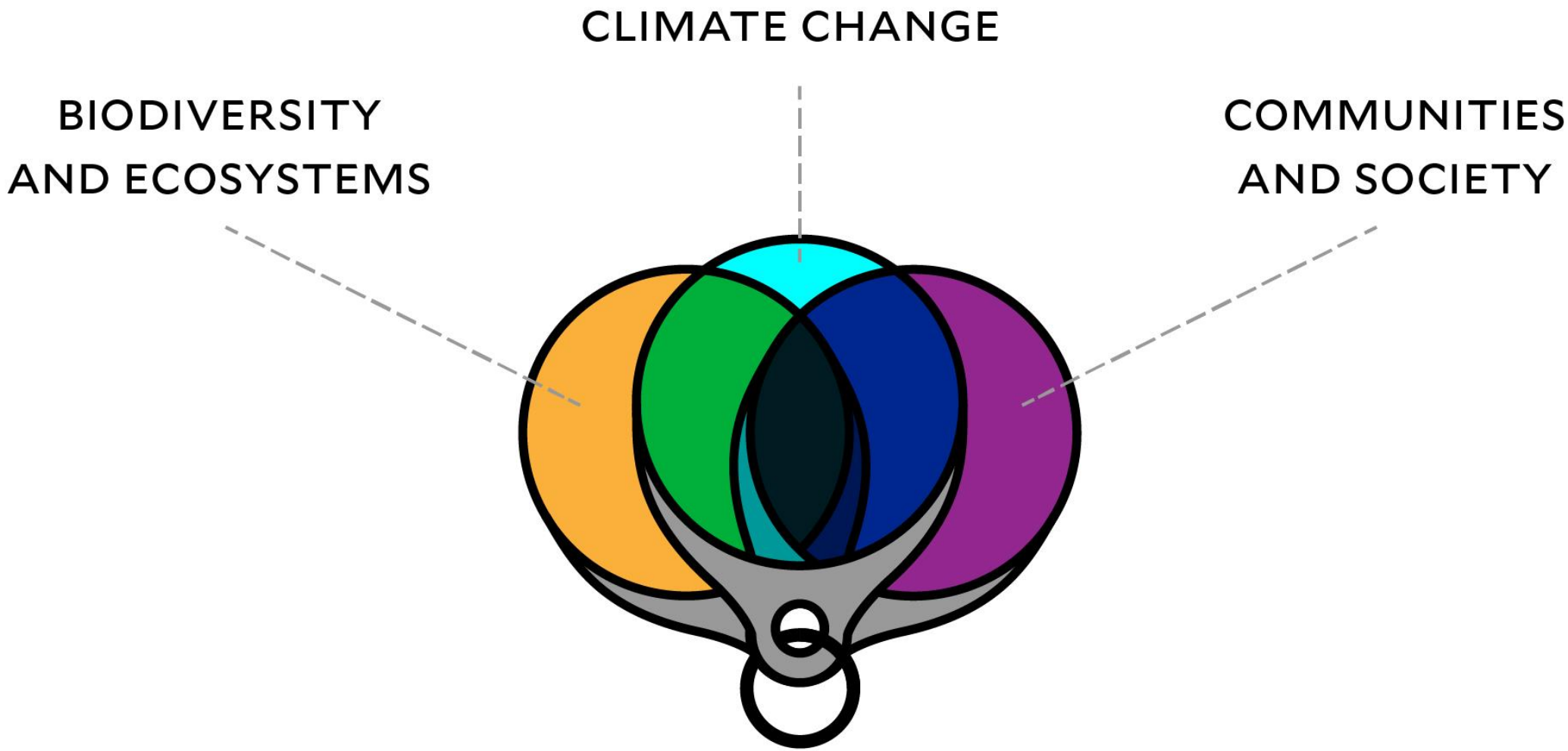
Rafi Taherian, AVP for Yale Hospitality

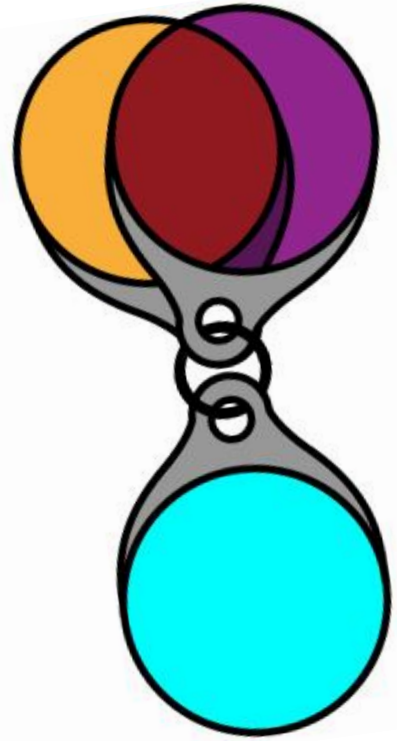
Gerald Torres, Professor; Environmental Justice & Law

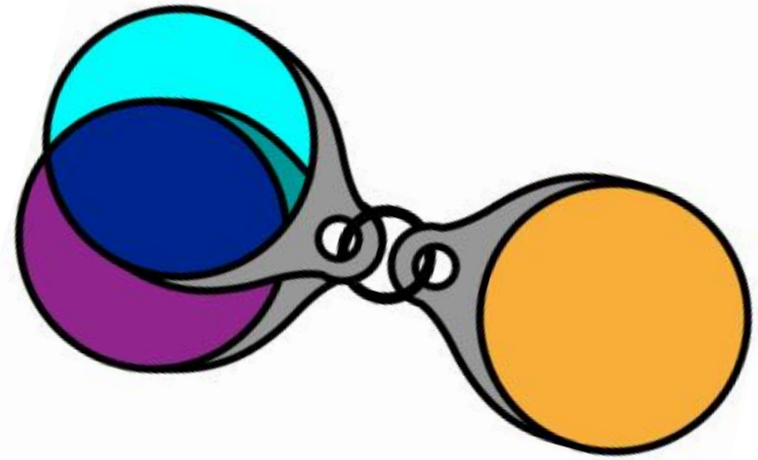
Catalyzing
PLANETARY SOLUTIONS
through all that
YALE IS
and all that
YALE DOES

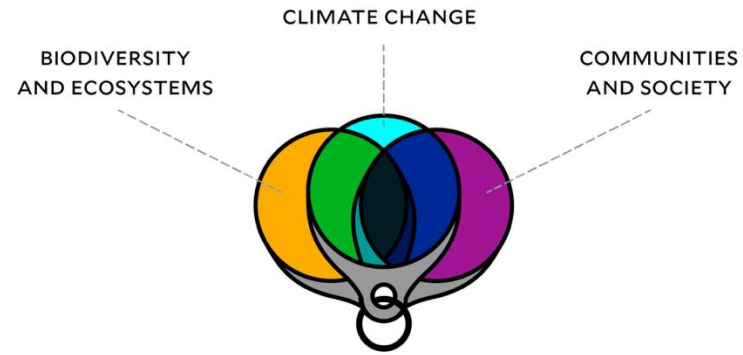

Education
Research
Operations
External Engagement
Impact


Impact


CLIMATE CHANGE
BIODIVERSITY
AND ECOSYSTEMS
COMMUNITIES
AND SOCIETY






CLIMATE CHANGE
BIODIVERSITY
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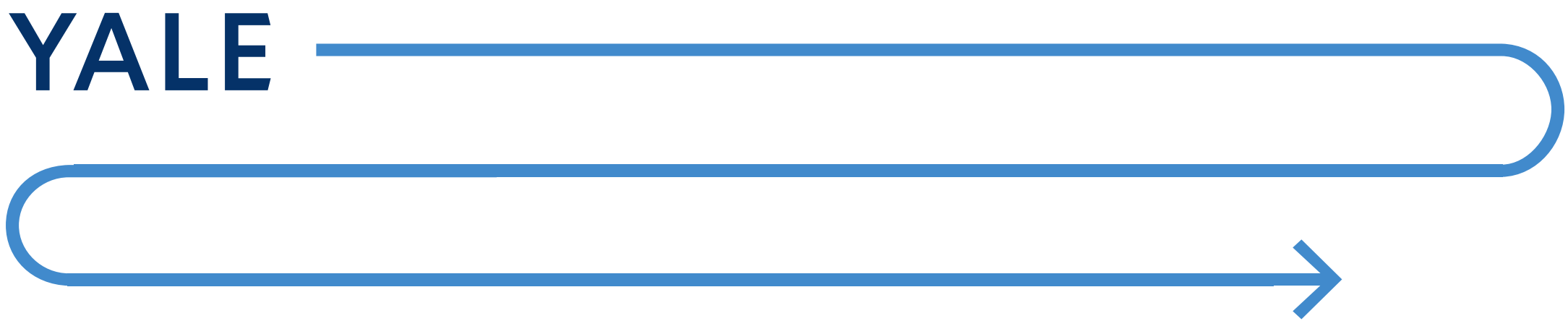
What we have built



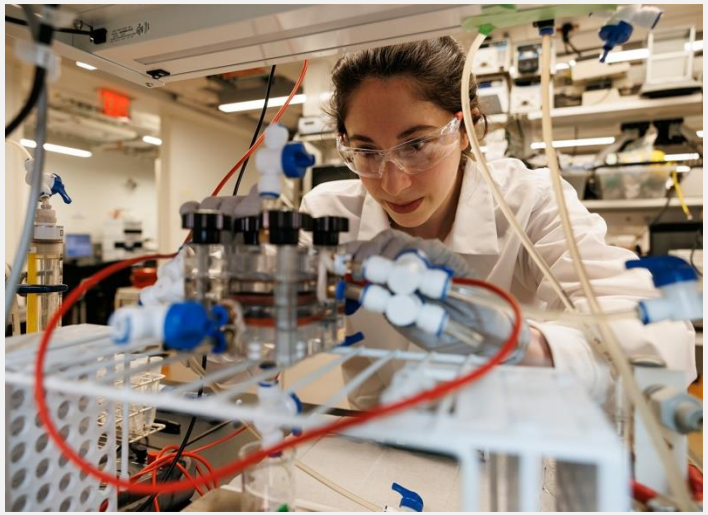
Educating and Empowering

- More than **75 courses** on climate, biodiversity, and sustainability each term in departments and schools across the university.
- More than **50 applicants** for the first Planetary Solutions Doctoral Fellowship cohort; Cohort will launch in September of 2025.
- **3 Impact! Awards** distributed to support student engagement in YPS-related research and projects.
- **$50,000 in support** provided for the first Yale Planetary Solutions Prize student winners in the 2025 Startup Yale competition.

Creating and Accelerating

More than **$7M distributed to 89 projects** over the four years of our YPS Grant Program, including **23 new awards** distributed this week!

- Developing the first low temperature, electrified, modular approach to destroy hydrofluorocarbon (HFC) refrigerant gases at the sites of cooling equipment and storage tanks.
- Connecting environmental challenges to national security so future leaders in the field can best assess risks.
- Designing a new computer network switch that uses energy in proportion to its network traffic, rather than consuming a significant amount of energy even when idle.
- Providing the first robust data on how high temperatures affect pregnancy for women with autoimmune diseases to inform public health strategy.
- Examining how ancient, river-based societies responded to extreme weather events to improve community preparedness and resiliency.
- Developing a framework for responsibly managing land use in areas newly revealed by retreating glaciers.
- Exploring affordable, AI-powered methods for monitoring soil carbon, laying the foundation for more farms to adopt regenerative practices.
- Redesigning a food donation matching system app to reduce the amount of donated food that goes to waste.



Source: Yale News

Creating and Accelerating

Grants awarded in previous YPS Grant Program cycles continue to yield exciting results:

- A Yale team is submitting a provisional patent for a reactive electrified membrane and storage pump for natural surface water carbon utilization — a single device that would capture and convert dissolved inorganic carbon (DIC) in water.

- A collaboration between the Yale School of Public Health and Music Haven gave students in New Haven Public Schools the opportunity to experiment with translating climate-related data from nature into musical compositions, using AI and visual programming. A performance of the music took place at Yale's Center for Collaborative Arts and Media in April.

Source: Yale News

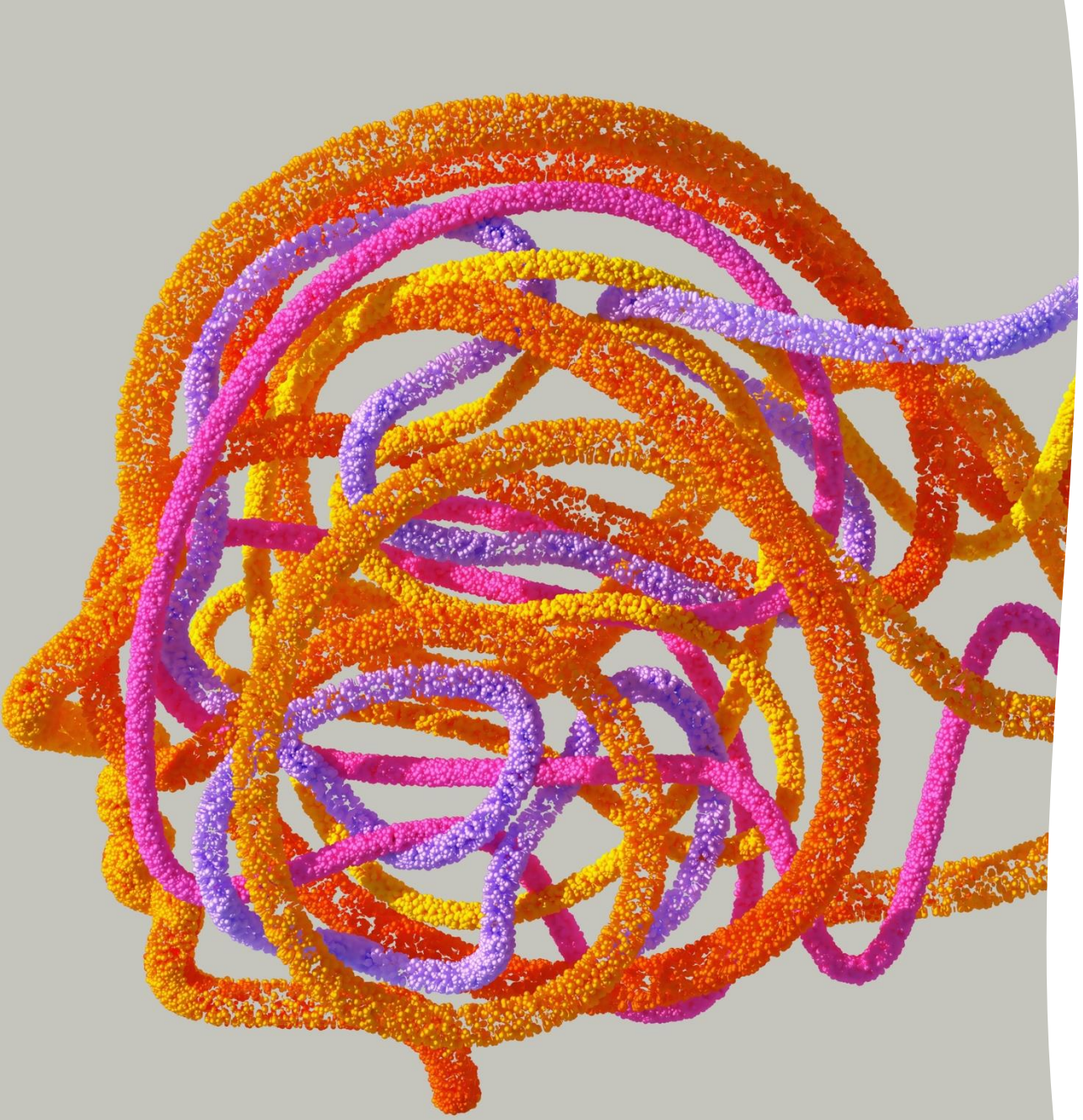
Creating and Accelerating

Grants awarded in previous YPS Grant Program cycles continue to yield exciting results:

- A Yale team is developing and refining models to understand electric vehicle (EV) demand and optimize the location of EV charging infrastructure. The project is providing helpful guidance on the optimal use of the National Electric Vehicle Infrastructure (NEVI) funds remaining for Connecticut's NEVI roll-out. The team will use Connecticut as a pilot study to establish a real-world model for use by other states.

- Yale researchers are working on a full-scale prototype of a structural assembly for construction projects that uses locally sourced, non-cementitious, unfired earth brick from construction excavation. The proposed assembly would dramatically reduce harmful CO2 equivalent emissions.

Source: Yale News

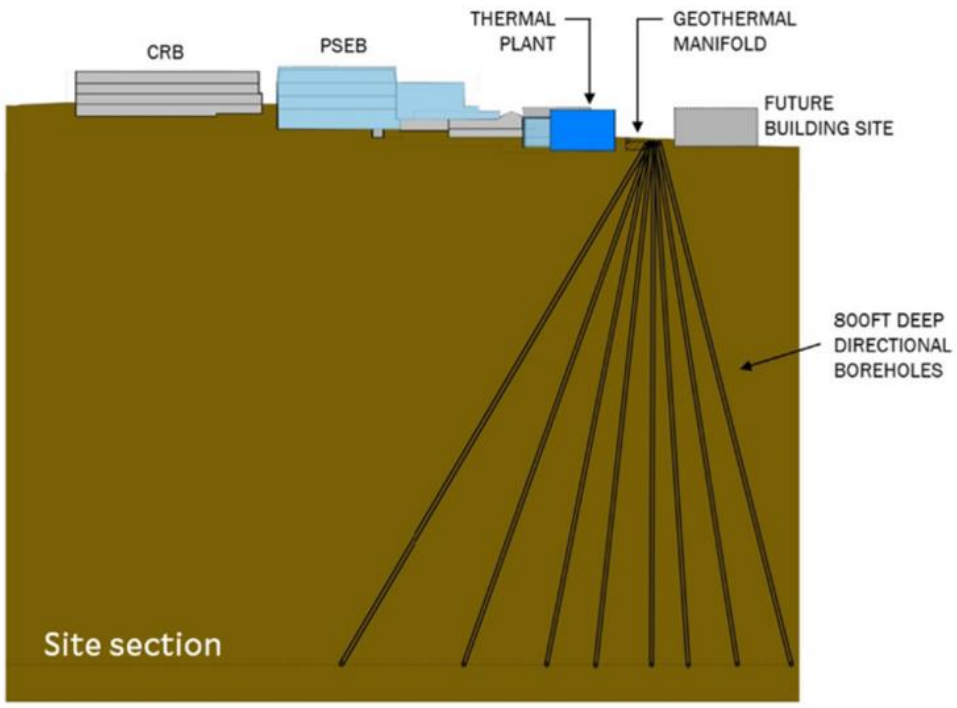


Creating and Accelerating

- Working with multiple interdisciplinary faculty clusters across campus to develop novel proposals for funding (**More than $10M**) that could accelerate efforts, explore new pathways, and engage with the broader community.

- Work underway to establish **Catalyst Consortia** bringing industry and scientists together to explore critical research needs to drive more sustainable futures.

Leading and Practicing



- Led Yale's engagement with the 10 other university observers to the IPCC to set up a nomination pathway through a new entity – the **USAA-IPCC** hosted by AGU – to enable US Scientists to be nominated to participate in writing AR7.
- Supported the Office of Facilities in pursuing both a **C02-based chiller** for the hockey rink, and the pursuit of **geothermal installations** to support heating and cooling needs for PSEB and Lower Science Hill

Convening and Engaging

- Held the first Yale @ Climate Week NYC events welcoming more than **1,200 participants** to four days of content; Plans underway for Yale @ Climate Week NYC 2025 (Sept 24 and 25).
- Hosted the first Sci x Sci-Fi event on campus with **more than 240 in attendance** to explore pathways to brighter futures with science fiction creators and scientists.
- Hosted multiple **ColLABoratories** to stimulate new interdisciplinary partnerships.

How you can contribute

Yale Planetary Solutions: Strategic Vision 2050

Imagining the future we want to create.

What is a strategic vision?

The desired future state of an organization.

- Long-term focus
- Forward-looking
- Inspiring
- Guiding
- Inclusive

"Strategic Vision: A Guide for Developing a Clear Roadmap for your Organization." The Strategy Institute. Sept 11, 2024.

YPS Strategic Vision 2050: Timeline

Summer & Fall 2025

YPS will convene listening sessions, workshops, events and symposia to gather feedback and encourage participation

Winter 2026

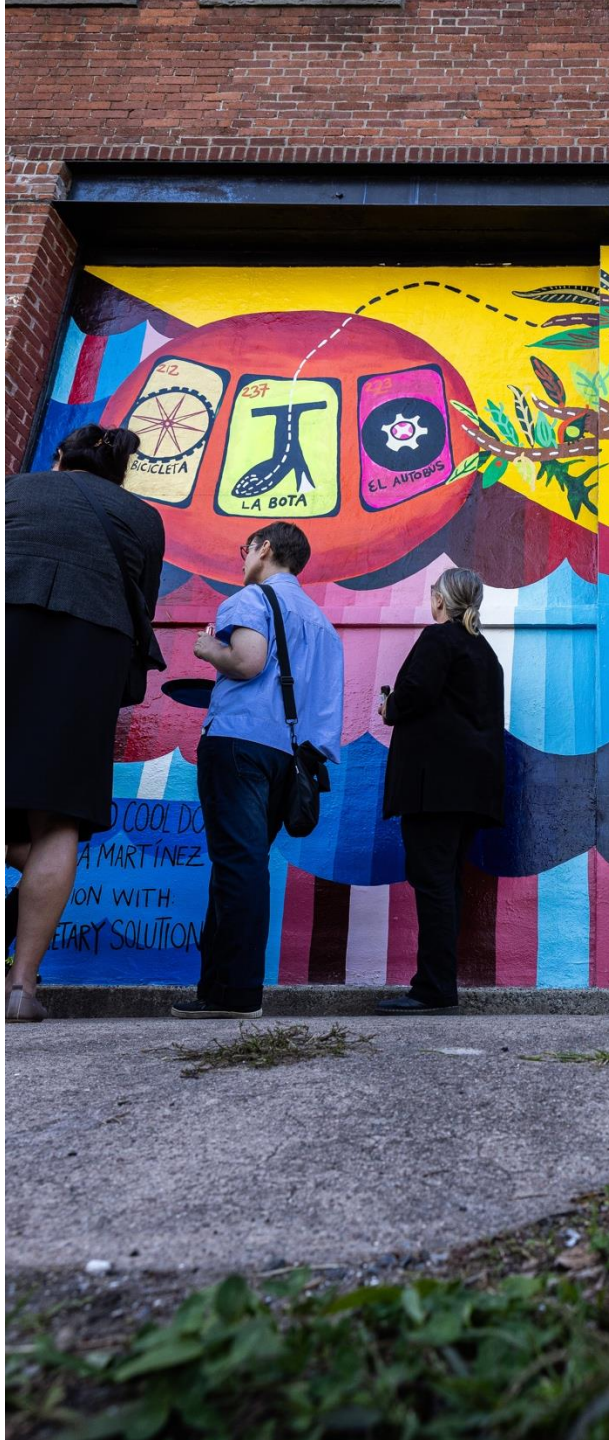
YPS Steering Committee will review the full body of submissions to develop a cohesive vision to be shared with the President and Provost for consideration and approval

Spring 2026

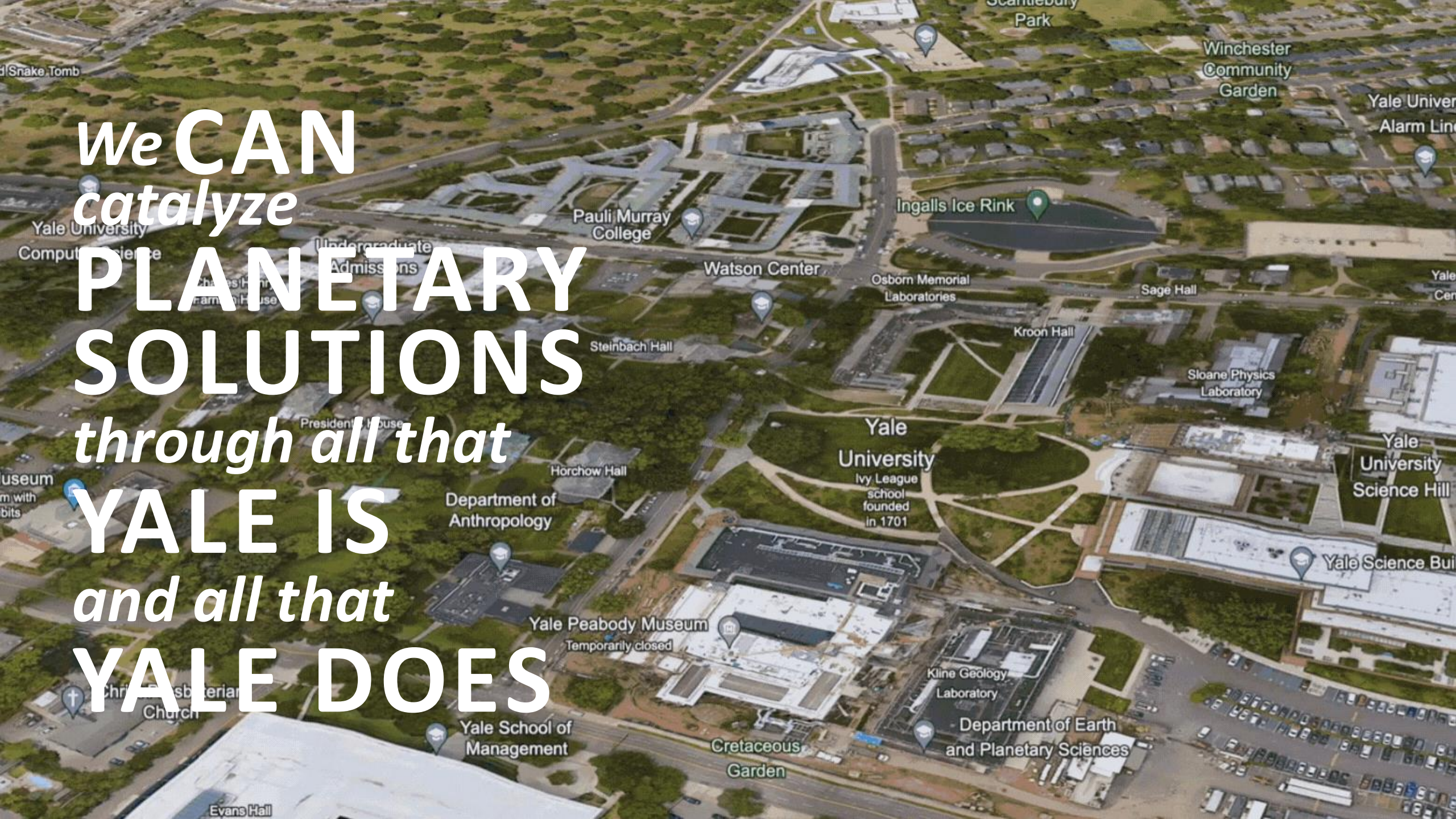
Launch vision and subsequent goal setting process to drive University efforts on climate and sustainability

How you can contribute

- Share your ideas for our YPS Strategic Vision 2050 (QR Code)
- Subscribe to our newsletter (QR Code)
- Engage in the Catalyst Consortium
- Join us for Yale @ Climate Week NYC
- Donate to support our efforts



Email: planetarysolutions@yale.edu Website: www.planetarysolutions.yale.edu


We CAN
catalyze
PLANETARY
SOLUTIONS
through all that
YALE IS
and all that
YALE DOES
Pauli Murray College
Ingalls Ice Rink
Watson Center
Osborn Memorial Laboratories
Sage Hall
Kroon Hall
Steinbach Hall
Sloane Physics Laboratory
Yale University
Ivy League school founded in 1701
Yale University Science Hill
Horchow Hall
Department of Anthropology
Yale Peabody Museum
Temporarily closed
Kline Geology Laboratory
Department of Earth and Planetary Sciences
Yale School of Management
Cretaceous Garden
Evans Hall
Winchester Community Garden
Scantlebury Park

And because

we **CAN,** ***we*** **MUST.**


YALE
PLANETARY SOLUTIONS

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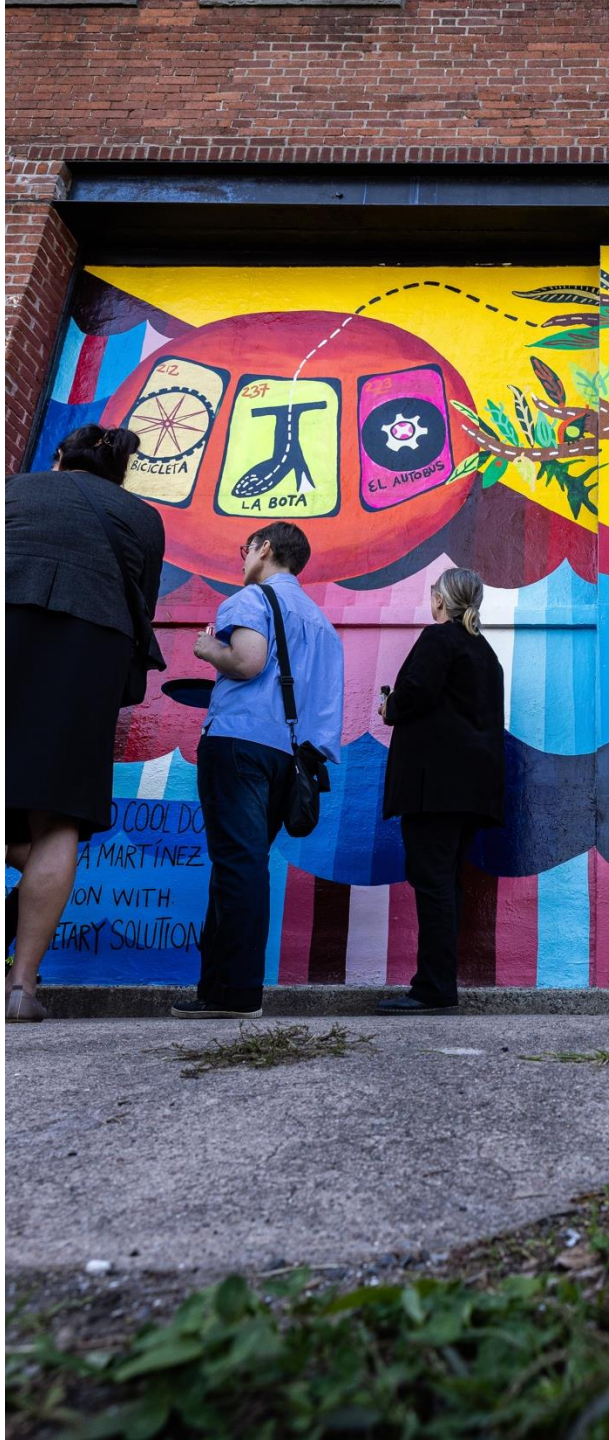

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