

Growing Our Impact: Community-Engaged Sustainability Research at Georgia Tech

Lunch, Panel & Town Hall Discussion

December 6, 2024

***CESR (Community-Engaged Sustainability Research)
connects the expertise in both communities and universities
to co-create locally relevant solutions to societal challenges.***

Sustainability among our units encompasses citizen science, circular economy, indigenous knowledge, cultural resilience, energy systems, and climate solutions.

Advancing Research Next Priorities

“What are the key problems that research universities must be prepared to address? As an institute historically focused on engineering and technology, how does Georgia Tech address techno-social challenges such as sustainability, global security, and equity?”

“Universities are but one actor in the broader implementation of solutions to societal challenges, and so we must become deeply integrated as trusted partners within the broader ecosystem of governments, companies, and local communities.”

– *Report of the Commission on Research Next*

2024 CESR Strategic Overview Process

- When:** Over 2 weeks in August and September, 2024
- Who:** Representatives from 6 IRIs and centers engaged in CESR
- How:** A 5-workshop, 12-hour strategic overview process, supported by VPIR and intended to establish a shared vision for CESR among participating IRIs and centers

Goals of the Strategic Overview Process

1. Create a shared vision for expanding and strengthening CESR at GT.
2. Identify elements already in place that support that vision.
3. Chart a trajectory for realizing the CESR vision over the next 3-5 years.

Core Participants



Nicole Kennard
BBISS



Katie O'Connor
PIN



Terri Sapp
RBI



Anna Tinoco-Santiago
SCoRE



Yang You
SEI



Ruthie Yow
SCoRE (*facilitator*)



Clint Zeagler
IPaT

Leadership Participants



Maribeth Coleman
IPaT



Christine Conwell
SEI



Josiah Hester
BBISS



Jennifer Hirsch
SCoRE



Leigh Hopkins
EI2



Debra Lam
PIN



Tim Lieuwen
EVPR



Carson Meredith
RBI

5-Year Impact Vision

SHARED VISION:	<i>Co-create a culture of CESR that expands Georgia Tech's research portfolio and grows the Institute's impact.</i>
BBISS Headline	BBISS faculty and community partner co-PIs lead 10 major research projects that invest a total of \$80M per year to increase local resilience to climate change.
IPaT Headline	IPaT deploys Community Engaged Research Academy to all twenty-six USG Institutions, enabling thousands of students and faculty to collaborate and innovate with communities across the state.
PIN Headline	Georgia Tech's Partnership for Inclusive Innovation recognized nationally for \$10M in community-engaged research projects advancing equity and innovation.
RBI Headline	RBI makes engagement and knowledge exchange among communities, industry, faculty and students key to the success of GT's \$30 Million Center for Climate-Smart Forests for a Renewables-Based Society.
SCoRE Headline	SCoRE trains a cadre of 10 neighborhood-based leaders to support research proposals that have resulted in \$40M per year being invested to advance community-led sustainability efforts across the Southeast.
SEI Headline	SEI incorporates community members into external advisory boards and engages community-based partners in external events.

5-Year Operational Vision

CESR Collaborative staffed by a Program Manager (under Sustainability)

CESR Community Partner Advisory Council

High-impact, data-inspired CESR storytelling
sharing CESR at GT across the region

CESR Principles adopted across research units

Platform for mapping ongoing CESR projects
and tracking impact

Ample training, support and recognition for
faculty doing CESR

Shared CESR partners and projects budget

***There are strong foundations that support our vision for
CESR in EVPR***

Advancing Institute Priorities from Research Next & ISP Big Bets

Amplify Impact and Grow Innovation through CESR



PIN Safe Water Together

Citizen
Science



PIN's Safe Water Together project convenes Georgia Tech, Georgia Southern, and the Brunswick/Glynn County community to train citizen scientists to test their own water quality and report out to their neighbors.

A Glynn County resident holds a water sample from his training. Safe Water Together utilizes advanced water quality detection technology to target microbial and chemical contamination exacerbated by sea-level rise and ultimately inform policy decisions related to these environmental impacts.

SCoRE/BBISS Energy Equity, Environmental Justice and Community Engagement Faculty Fellows Program

Circular
Economy



Fellows are pictured at the Lifecycle Building Center with partners from the ReBuild ATL Coalition, a group composed of industry, community organizations, local government, and higher education collaborators.

SCoRE and BBISS ran a Faculty Fellows program, co-sponsored with SEI and RBI, to build relationships between faculty and partners across the Southeast. Fellows represented 5 colleges. One program outcome was a \$20M EPA proposal, jointly written by faculty and partners.

BBISS – Food Systems Research

Manoomin Conservation with Tribal Ojibwe Partners

Indigenous
Knowledge



Members of the Georgia Tech research team and a partner from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) are pictured deploying their first iteration of a Makak buoy to sense manoomin (wild rice).

BBISS is convening teams of interdisciplinary researchers across universities with farmers and community partners to advance climate change solutions in the agrifood system.

An example is the Manoomin Conservation project, which focuses on the wild rice central to Ojibwe diet and culture; the project weaves together indigenous, ecological, and technological knowledge.

IPaT Pin Point Resilience Project

Cultural
Resilience



Part of the Coastal Equity and Resilience (CEAR) Hub's community engagement efforts, the Pin Point Resilience Projects are a partnership of Georgia Tech, Harambee House, and the Pin Point Betterment Association. Partners focus on both climate resilience and cultural resilience, preserving the Gullah Geechee knowledge and traditions that have shaped the barrier islands of Georgia, South Carolina, North Carolina, and Florida, while protecting those unique coastal ecosystems.

Partners participating in the Resilience Projects are pictured meeting in Pin Point, GA.

SEI Energy Faculty Fellows Program

Energy
Systems



Participating faculty members from Georgia Tech and partnering MSIs and ERIs are pictured during a program excursion.

SEI's 10-week program brings together faculty pairs from Georgia Tech and undergraduate or Minority Serving Institutions to engage with energy leaders, build networks, and pursue research collaborations in the energy space. The program aims to support research collaborations well beyond the summer – with faculty and students carrying their efforts to their home institutions and into the new academic year.

RBI ReWOOD

Climate
Solutions



ReWOOD's launch, pictured here and held at the Robert C. Williams Museum of Papermaking, kicked off the initiative which focuses on xylochemistry's role in the development of an economy no longer dependent on petrochemicals.

ReWOOD will engage communities traditionally impacted by the timber and forestry industries in its vision for a "Renewables-based economy from WOOD." Its current efforts include a \$30M NSF STC Preproposal: "Center for Renewable Forest Biotechnology, Chemistry and Society," which was submitted in November 2024.

Identifying CESR Strengths in the EVPR Ecosystem . . .

Graduate
student-led
CESR
collaborations

Collaborative
engagement
with MSIs and
HBCUs

Dynamic CESR
storytelling for
the broader
public

Collaborative
CESR
Sustainability
Next projects

Shared faculty
training
programs

Experience co-
authoring
proposals with
partners

Strong
community
partnerships
across the city,
region and state

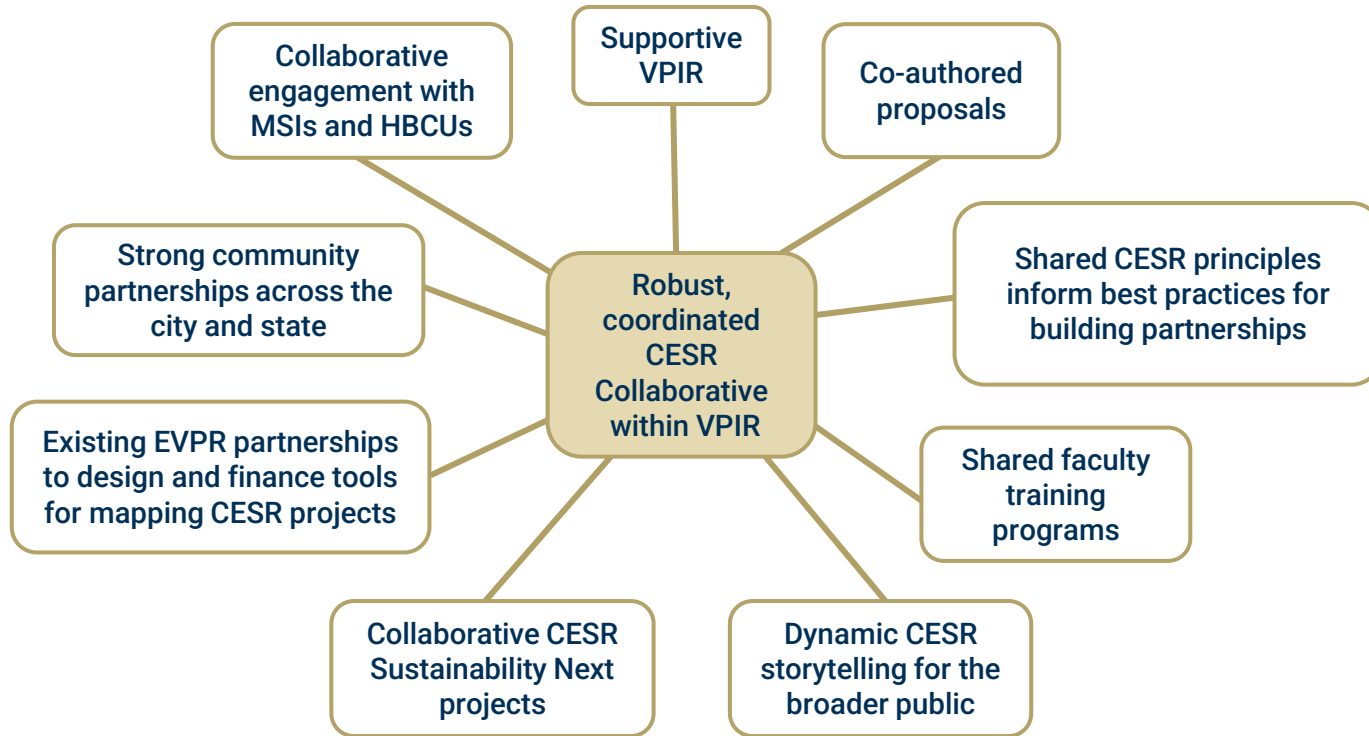
Existing EVPR
partnerships to
design and
finance tools for
mapping CESR
projects

Shared CESR
principles inform
best practices
for building
partnerships

Expertise in
compensation
practices

Supportive
VPIR office

... in order to Connect and Amplify CESR Impact



Five (5) recommendations for how to best connect and mobilize existing CESR assets during 2025:

Recommendation #1: **COORDINATION**

Create a robust CESR collaborative that makes CESR a pillar of GT research.

YEAR 1 ACTIONS FOR CONSIDERATION:

Support the establishment of a standing CESR Council to advance CESR across research units moving forward.

Recommendation #2: **PARTNERS**

Through identifying and adopting shared best practices, strengthen relationships with partners through compensation, recognition, and assessment.

YEAR 1 ACTION FOR CONSIDERATION :

Institutionalize partner compensation across CESR research units by establishing a shared CESR partner engagement budget.

Recommendation #3: **FACULTY TRAINING AND RECOGNITION**

Incorporate CER into faculty leadership training programs and reward structures, in part through collaboration with College and School leadership (Deans/Chairs)

YEAR 1 ACTIONS FOR CONSIDERATION :

- Convene Deans to discuss ways to build a culture in each College that rewards CER.
- Incorporate CER training into Research Leaders Academy.

Recommendation #4: **COMMUNICATION**

Communicate CER as a priority for the research enterprise and elevate CER stories in GT communications

YEAR 1 ACTIONS FOR CONSIDERATION :

- Hold an EVPR-hosted Town Hall focused on CER.
- Publish 3 CER project stories on research.gatech.edu.

Recommendation #5: **RESOURCE DEVELOPMENT**

Create a shared development strategy for CER and identify CER as a priority for funding

YEAR 1 ACTIONS FOR CONSIDERATION :

- Identify 3 joint funding priorities across CESR units and jointly pursue funding.
- Incorporate CER as a key funding priority within the Sustainability Development Plan.

RECOMMENDATIONS		GETTING STARTED: Year 1 Actions for Consideration
Coordination	Create a robust CESR collaborative that makes CESR a pillar of GT research.	Support the establishing of a standing CESR Council to advance CESR across research units moving forward.
Partners	Through identifying and adopting shared best practices, strengthen relationships with partners through compensation, recognition, and assessment.	Institutionalize partner compensation across CESR research units by establishing a shared CESR partner engagement budget.
Faculty Training and Recognition	Incorporate CER into faculty leadership training programs and reward structures, in part through collaboration with College and School leadership (Deans/Chairs).	- Convene Deans to discuss ways to build a culture in each College that rewards CER. - Incorporate CER training into the Research Leaders Academy.
Communication	Communicate CESR as a priority for the research enterprise and elevate CESR stories in GT communications.	- Hold an EVPR-hosted Town Hall focused on CESR. - Publish 3 CESR project stories on research.gatech.edu.
Resource Development	Create a shared development strategy for CESR and identify CESR as a priority for funding.	- Identify 3 shared funding priorities across CESR units and jointly pursue funding. - Incorporate CESR as a key funding priority within the Sustainability Development Plan.