



# Multiscale RECIPES for Sustainable Food Systems

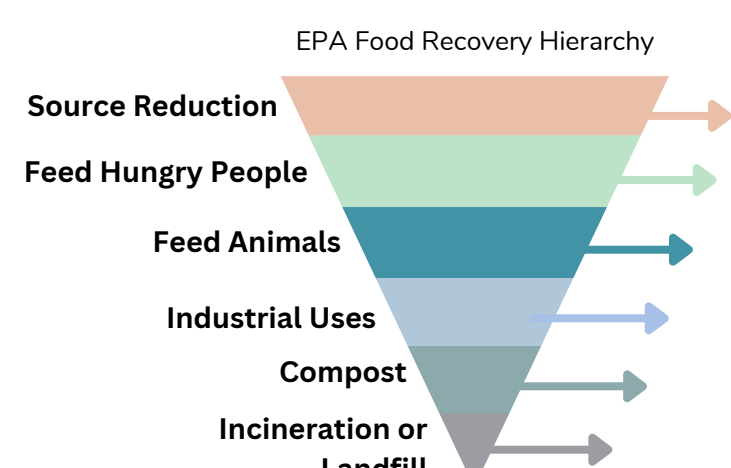
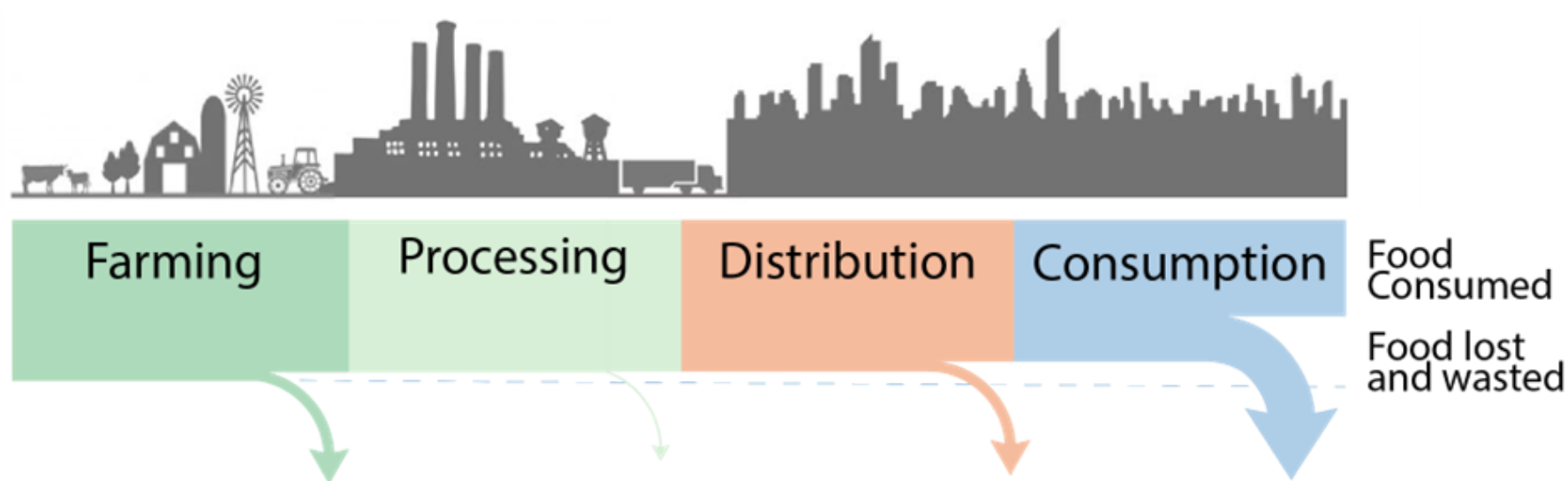
RECIPES: Resilient, Equitable, and Circular Innovations with Partnership and Education Synergies

NSF Grant #2115405

## THE PROBLEM

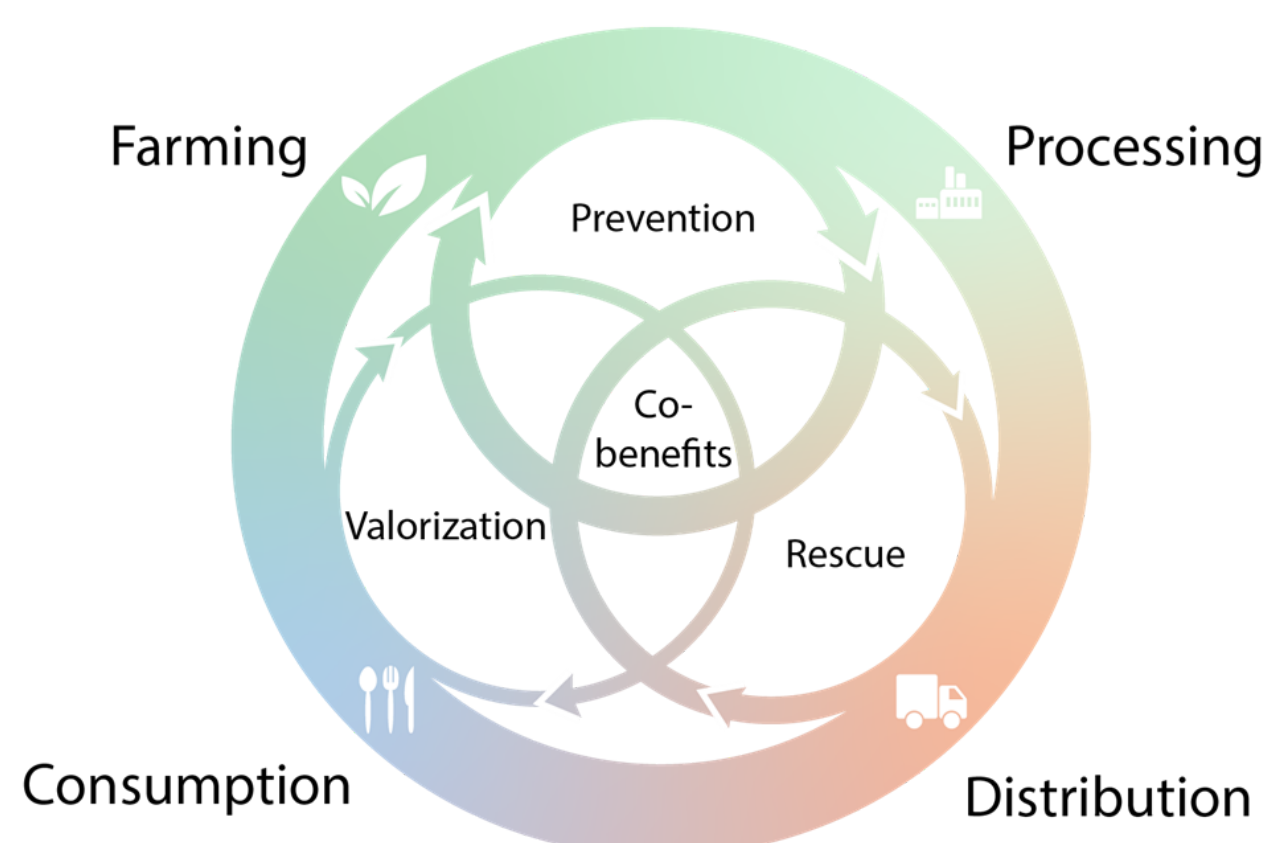
40% of food produced is never eaten, resulting in lost resources and pollution, economic costs, and decreased food security.

U.S. consumers waste an average of 1 pound of food per person per day. That's nearly 1,250 calories, about 30% of daily calories available for consumption.

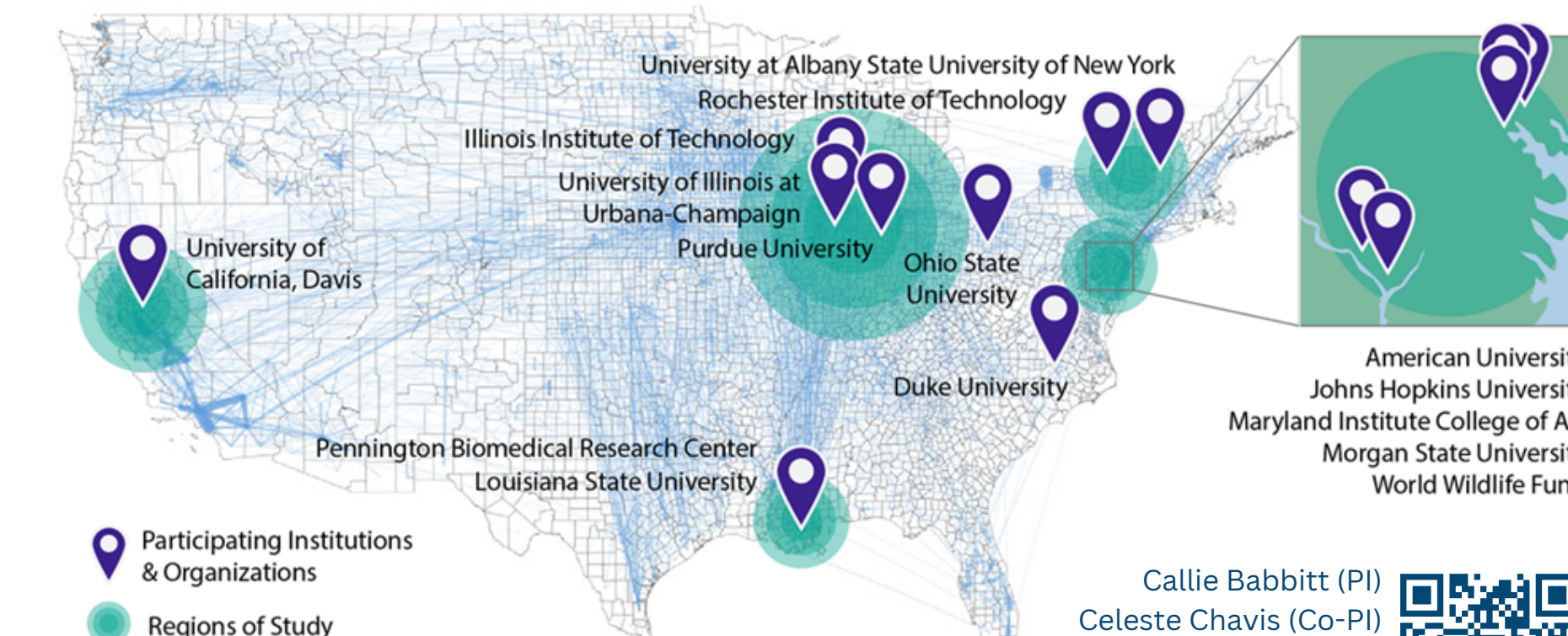


## OUR GOAL

Create knowledge to transform wasteful food systems to promote sustainability, equity, and resilience.



## OUR RESEARCH NETWORK



Map based on Co-PI Konar's work on food flows supported by NSF Grants: ACI-1639529; EAR-1534544; CBET-1844773. Cite as: Lin, X., Russ, P. J., Marston, L., & Konar, M. (2019). Food flows between counties in the United States. Environmental Research Letters, 14(8), 084011.

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@WastedFoodNTWK

## GUIDING PRINCIPLES & COMMUNITY NORMS



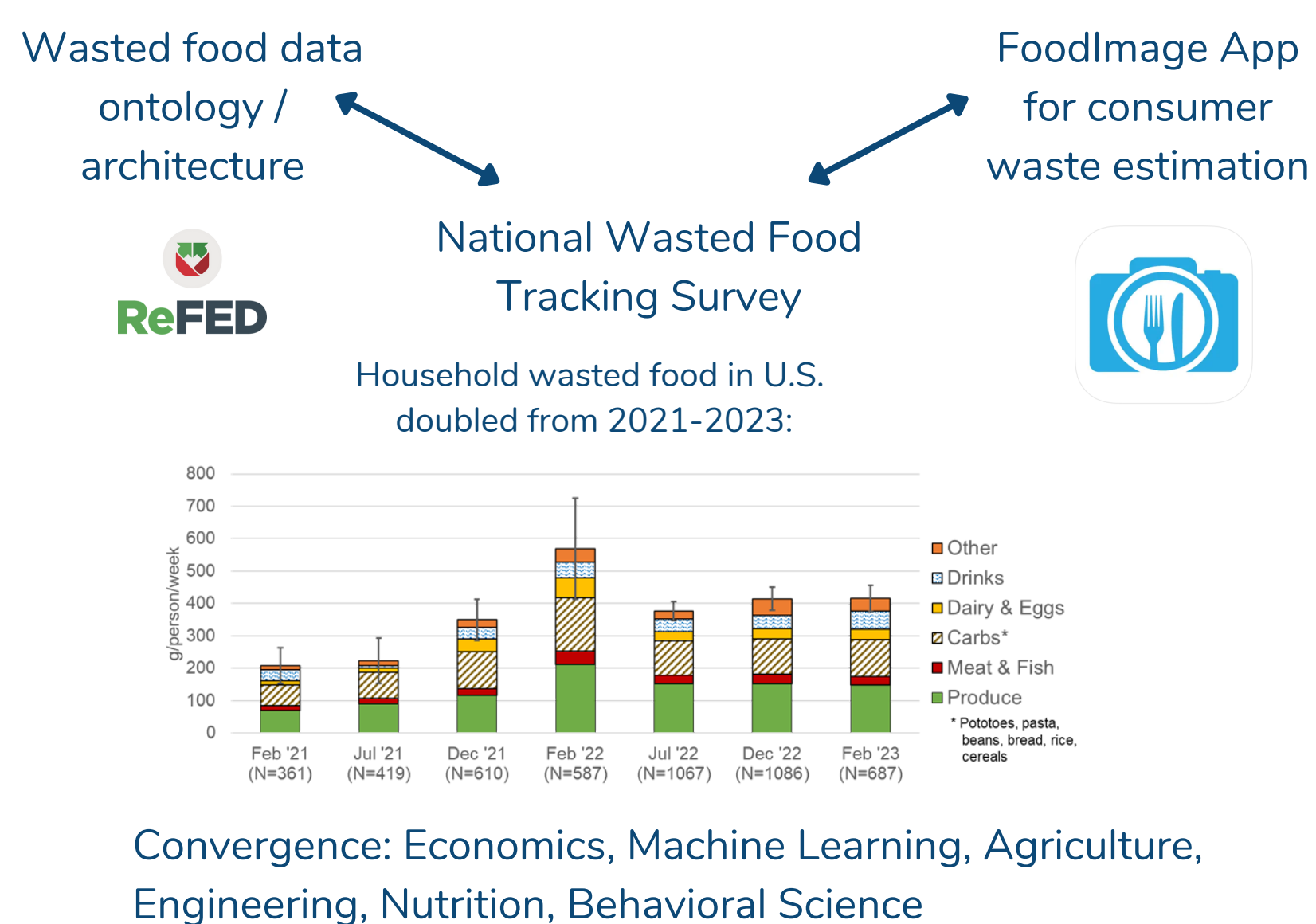
GUIDING PRINCIPLES are based on our values, what we believe in and what is important to us. They are high level, inspirational and aspirational directions that inform our actions, decisions, and products.

COMMUNITY NORMS are how we put the Guiding Principles into action. They are specific and action oriented, meant to influence the day to day interaction. We can think of them as the equivalent to a Code of Conduct.

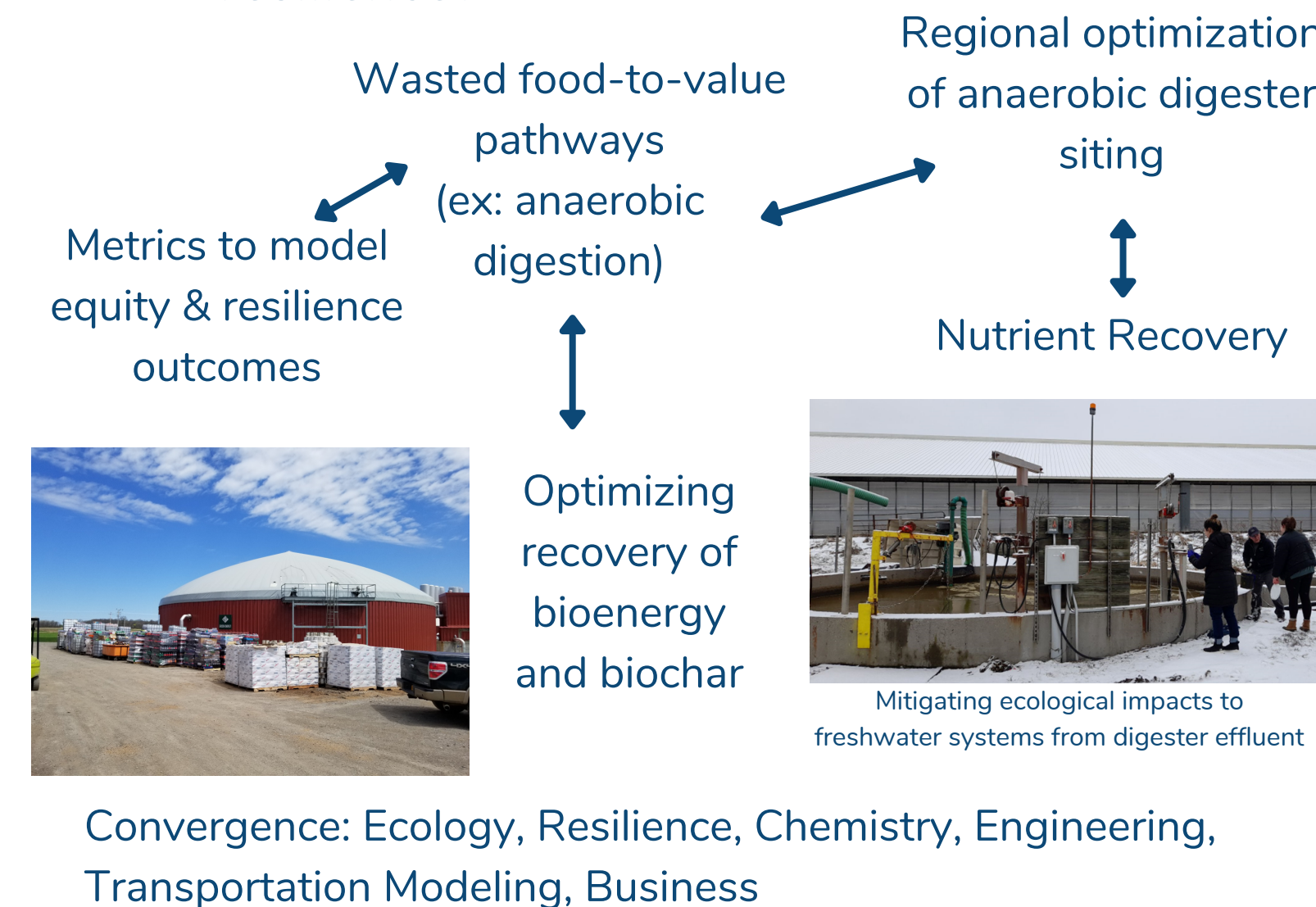
## CONVERGENT RESEARCH

Examples from over 25 collaborative projects

### 1 What are the causes of wasted food within regional and national food systems?



### 2 Which solutions best address wasted food while maximizing sustainability, equity, and resilience?



### 3 How do academics, workers, farmers, non-profits, communities, firms, and regulators work together to create research about wasted food?



## TRAINING THE NEXT GENERATION SUSTAINABILITY WORKFORCE

We are developing "Wasted Food 101" - a multi-disciplinary, general-education course on wasted food and the food system. This 15-week course covers (1) how the food system works; (2) where and how food is wasted; (3) how different communities experience and are impacted by wasted food, and (4) solutions to reduce wasted food.

The course will be taught at American University beginning in Fall 2023.

We established Food-Fueled, a peer-reviewed, online-only, open access journal managed by undergraduates. Students learn to evaluate claims, apply scientific knowledge, and learn about the peer review process.

Submissions also accepted from high schools and students outside RECIPES. The first issue covers local composting policies, urban gardening, food deserts, and more, and will be published digitally in August 2023.



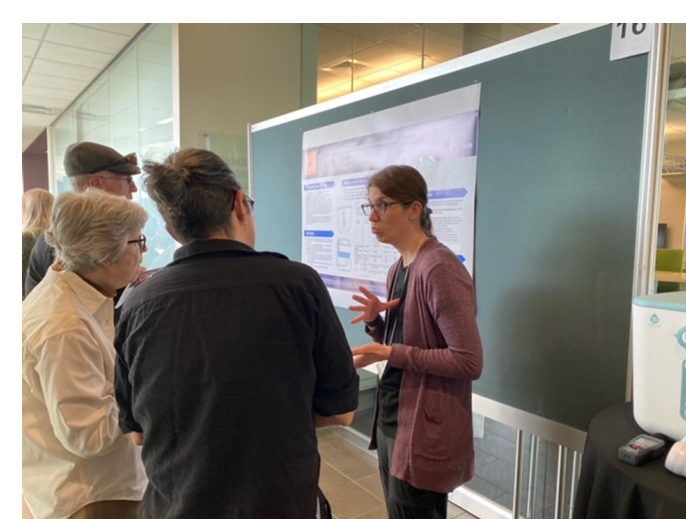
## CREATING A CULTURE OF DIVERSITY, EQUITY, & INCLUSION

Partnership with Black in Engineering to engage early career Black faculty scholars in collaborations aimed at supporting research and professional development



Research immersions for deaf and hard of hearing students to develop research skills and increase interest in STEM research, degrees, and careers.

Network-wide assessment of structure & procedures to promote DEI, to engage with diverse communities, and to examine power & positionality

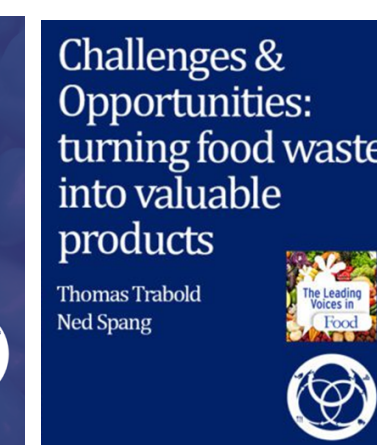


Hannah DeFelicis, (RIT student) presented research on household composting at the National Technical Institute of the Deaf Research Symposium



Winnie Opoku (OSU PhD student) was awarded the Ohio State GRA Leadership Award for her work on RECIPES DEI efforts with Dr. Monica Cox.

## PRODUCTS & OUTPUTS



Parity as radical pragmatism: Centering farm justice and agrarian expertise in agricultural policy

### Assessing the Use of Social Cognitive Theory Components in Cooking and Food Skills Interventions



Transforming wasted food will require systemic and sustainable infrastructure innovations  
Callie W Babbitt<sup>1</sup>, Roni A Neff<sup>2</sup>, Brian E Roe<sup>3</sup>, Sauleh Siddiqui<sup>4</sup>, Celeste Chavis<sup>5</sup> and Thomas A Trabold<sup>1</sup>

What predicts and prevents source separation of household food waste? An application of the theory of planned behavior



Ariella Knight, Claire Corbasson, and Dr. Kaitlin Stack Whitney (RIT) presenting their summer valorization research project.



Is today's food waste a consequence of historical public policy?  
Garrett Graddy-Loveless