Journal of Agriculture, Food Systems, and Community Development
ISSN: 2152-0801 online
https://foodsystemsjournal.org

Resilience strategies for centers and institutes focused on food systems transformation

Lauren Gwin [a] *
Oregon State University

Michelle Miller [b] * and Erin B. Lowe [c] *
University of Wisconsin-Madison

Casey Hoy [d]
The Ohio State University

Nancy Creamer [e]
North Carolina State University

Nevin Cohen [f]
City University of New York

Rich Pirog [g]
Michigan State University

Tom Kelly [h]
University of New Hampshire

Thomas P. Tomich [i]
University of California, Davis

Submitted July 18, 2023 / Revised February 19, May 17, and July 14, 2024 / Accepted July 15, 2024 / Published online September 27, 2024

Citation: Gwin, L., Miller, M., Lowe, E. B., Hoy, C., Creamer, N., Cohen, N., Pirog, R., Kelly, T., & Tomich, T. P. (2024). Resilience strategies for centers and institutes focused on food systems transformation. *Journal of Agriculture, Food Systems, and Community Development*, *13*(4), 53–74. https://doi.org/10.5304/jafscd.2024.134.018

Abstract

University-based centers and institutes can play an important role in facilitating community-based, inter- and transdisciplinary research, and providing the capacity and expertise to address pressing issues. However, many centers and institutes face challenges related to long-term stability and resilience. In this paper we share recommendations on how to support centers and institutes that focus on food systems transformation. We drew these recommendations from insights and stories shared by leaders of nine diverse centers and institutes that participate in the Inter-Institutional Network for Food, Agriculture, and Sustainability (INFAS). We discuss how they are structured, the work they

* Lauren Gwin, Michelle Miller, and Erin B. Lowe are co–first authors.

[a] * *Corresponding author:* Lauren Gwin, PhD, Associate Professor, College of Agriculture and Life Sciences, Oregon State University; Crop Science Building 131; 3050 SW Campus Way; Corvallis, OR 97331 USA; https://orcid.org/0000-0001-6156-4932; lauren.gwin@oregonstate.edu

[b] * Michelle Miller, MS, Senior Researcher, Center for Integrated Agricultural Systems, University of Wisconsin-Madison; 1535 Observatory Drive; Madison, WI 53706 USA; https://orcid.org/0000-0002-2857-5629; mmmille6@wisc.edu

[c] * Erin B. Lowe, PhD, Research Scientist, University of Wisconsin-Madison; 1535 Observatory Drive; Madison, WI 53706 USA; https://orcid.org/0000-0002-0738-5201; eblowe@wisc.edu

[d] Casey Hoy, PhD, Professor Emeritus, Department of Entomology, The Ohio State University; 1680 Madison Ave.; Wooster, OH 44691 USA; https://orcid.org/0000-0003-4356-3789; hoy.1@osu.edu

continued on next page

have done, and the benefits of that work, as well as the challenges they have faced and what they recommend for addressing those challenges. Their primary challenges include cultivating the support of university administrators and faculty, hiring and retaining supportive faculty, and securing sustainable funding. We provide a diverse range of recommendations to address each of these challenges, with the hope that other centers and institutes can find some that will be relevant to their particular institutional, social, and political contexts.

Keywords
center, institute, organizational resilience, agriculture, food systems

Introduction

The purpose of this paper is to share suggestions on how academics and community partners may support university-based centers and institutes that focus on food systems transformation. We have drawn these suggestions from the experiences of current or former center and institute directors who participate in the Inter-Institutional Network for Food, Agriculture and Sustainability (INFAS),[1] a group that includes all of this paper's authors. We hope that those who lead centers and institutes can apply the ideas best suited to their own institutional contexts, and that doing so will inspire future conversations that further long-term resilience and stability.

University-based centers and institutes (hereafter, "centers") are diverse. However, in general, they help university faculty, staff, and students collaborate with partners within and outside the university to address complex societal challenges. Most centers, including those participating in INFAS, support inter- or transdisciplinary research with an applied, community-engaged, and/or problem-focused approach. Because they are not standard administrative units like colleges, schools, and departments, they are usually structured and supported differently. For example, they typically receive some funding from external sources (e.g., private individuals, foundations, or government agencies) (Boardman, 2006).

Why Centers are Valuable

Centers play an important role in universities across the United States. Between 1985 and 2009, the number of centers at each of the top 25 research universities doubled, increasing from an average of 48 to 95 centers per university (Biancani et al., 2018). Centers are also increasingly recognized and funded by federal agencies including the National Institute of Health (NIH) and the National Science Foundation (NSF) because they are designed to work across departments, schools, and colleges, using the inter- and transdisciplinary approaches needed to tackle complex, real-world problems (Arnold et al., 2021; Biancani et al., 2018; Leahey & Barringer, 2020; Mendes et al., 2014; Nyden, 2003; Rhoten, 2003; Salimi et al., 2012; Van Noorden, 2015).

There is also growing recognition that food and agriculture systems must be transformed to better support farmers, communities, public health, and the environment (High Level Panel of Experts on Food Security and Nutrition [HLPE], 2019;

[e] Nancy Creamer, PhD, Blue Cross and Blue Shield/WK Kellogg Distinguished Professor Emeritus, North Carolina State University; 357 Luther Road; Apex, NC 27523 USA; https://orcid.org/0000-0001-7894-1845; nancy_creamer@ncsu.edu

[f] Nevin Cohen, PhD, Associate Professor, CUNY School of Public Health, and Director, CUNY Urban Food Policy Institute, City University of New York; 55 West 125th Street, Room 605; New York, NY 10027 USA; https://orcid.org/0000-0003-4961-572X; nevin.cohen@sph.cuny.edu

[g] Rich Pirog, MS, Former Director, MSU Center for Regional Food Systems, Michigan State University; 2792 Dell Ridge Drive; Holt, MI 48842 USA; richpirog@gmail.com

[h] Tom Kelly, PhD, Executive Director and Chief Sustainability Officer, Sustainability Institute, University of New Hampshire; 108 Nesmith Hall; Durham, NH 03824 USA; tom.kelly@unh.edu

[i] Thomas P. Tomich, PhD, Distinguished Professor of Sustainability Science & Policy, Department of Environmental Science & Policy, University of California, Davis; One Shields Avenue; Davis, CA 95616 USA; https://orcid.org/0000-0001-6532-9948; tptomich@ucdavis.edu

[1] See https://asi.ucdavis.edu/programs/infas

International Panel of Experts on Sustainable Food Systems [IPES] & ETC Group, 2021; El Bilali, 2021; Schneider et al., 2023), and that inter- and transdisciplinary and community-focused research is critical to achieving this goal (Association of Public and Land Grant Universities [APLU], 2017; Benton, 2023; Resnick & Swinnen, 2024). Sustainable food systems centers provide essential infrastructure to support this transformation by helping faculty, staff, and students build collaborative relationships across departments or colleges and between the university and external partners. While academic departments often focus on specific disciplines, methods, and issues, centers often use broader approaches. They are also usually more publicly visible than departments, making them a more obvious entry-point into the university for community members (Mendes et al., 2014). Some centers have staff dedicated to facilitating community partnerships, an activity that requires more time and different skills than many research faculty have (Israel et al., 2006; Mendes et al., 2014; Nyden, 2003).[2] Many centers provide faculty with guidance and technical support for community-engaged research (Nyden, 2003). By building relationships between universities and communities outside the university, centers can facilitate valuable two-way exchange of knowledge. Communities can access research and information relevant to their challenges and goals (e.g., Extension papers), and sometimes access resources (funding, equipment, etc.),while faculty have the opportunity to learn from community-based knowledge, which has been shown to increase the rigor, relevance, and reach of science (Mendes et al., 2014).

Challenges

Despite the numerous benefits centers may provide to universities, faculty, and communities, many centers that focus on food systems transformation face a variety of challenges to stability and resilience. They regularly confront structural and political barriers, especially when they challenge power structures from which many universities benefit.[3] Universities are beginning to recognize the value of interdisciplinary research and community engagement, and land grant universities have the requirement to serve broader communities as part of their legally defined mission.[4] However, it can still be difficult to translate the value of this work to university administrators and faculty who may lack understanding of and experience with inter- trans- or nondisciplinary research, or with community-based research methods (APLU, 2017; Ammons et al., 2018). While some universities put significant resources toward certain types of centers (e.g., those focused on health), many, including most food systems-focused centers, lack university support and struggle to find funding (Israel et al., 2006).

Additionally, faculty are often disincentivized to participate in center activities by university reward structures and research norms that incentivize disciplinary work, compel competition between researchers, departments, and colleges, and base success on "bottom-line" fundraising goals. Campuses managed as though they are competitive free markets struggle to create trust-based, collaborative systems research (Hil et al., 2021). Center-based research can also compete for faculty members' limited time and resources, which are often necessarily dedicated to disciplinary research and teaching (APLU, 2017; Boardman & Bozeman 2007). The research that is rewarded within universities is often disciplinary, and tenure evaluations are conducted by departments, which sometimes fail to recognize work outside their discipline (Biancani et al., 2018; Mallon, 2006; Rhoten et al., 2003).

INFAS

In this paper, we integrate suggestions from current and former center directors participating in

[2] While much of this paper and most INFAS centers refer to community-engaged research as the project of research faculty, it is critical to remember that Extension, one of the three missions of the U.S. land-grant university system, is and can be a catalyst for reciprocal, co-learning relationships for LGUs and communities (Ostrom, 2020).

[3] Food systems transformation has long been politically difficult work at U.S. land grant universities; see Hightower (1972).

[4] In 1987, UC-Davis faced a lawsuit for failure to meet its land grant responsibilities to consumers, rural communities, and small farmers as defined under the Hatch Act. For details of this lawsuit and how it was resolved, see Friedland (1991).

INFAS. INFAS is a peer learning network that envisions a U.S. food system that is environmentally sustainable and socially just. The INFAS mission is to facilitate collaborations to build food system resilience, sustainability, and equity; raise the visibility of research on food system problems and solutions; catalyze research, Extension, and education on food systems transformation, and support institutional change; and diversify who is doing food systems work in academia.

INFAS developed out of earlier attempts to organize center-focused peer-learning networks, such as the Consortium for Sustainable Agriculture Research and Education (CSARE, 1994–2008). In 2010, faculty at the University of California, Davis, revived the CSARE Network as INFAS with a US$1.5 million endowment from the W. K. Kellogg Foundation. Today, INFAS has 212 members from 96 organizations across the U.S. Member centers are diverse in terms of age, institution, and location, providing a rich source of insights on challenges and opportunities. Newer centers and older centers, including the original INFAS members, have much to learn from each other. The original INFAS centers, after many years of experience and high-impact accomplishment, are maturing organizationally. Sometimes this brings stability, but it also brings faculty and leadership retirements, unsupportive and even hostile institutional reviews, and shifting resources. Newer and "mid-career" centers form and operate in different contexts yet can learn from those experiences. By bringing these centers together to share challenges and ideas, INFAS helps centers diagnose issues and devise solutions that enhance stability and resilience.

Project Genesis

Many of the authors of this paper lead or have led INFAS centers. Over our time in the network, we noticed that people who lead centers are rarely given time, space, or training for organizational development, and that many centers were struggling with long-term stability. We began wondering if these challenges were idiosyncratic situations or systemic problems. Was there something about the organizational structure of the struggling centers that made them vulnerable? What could centers learn from each other about how to build resilience?

To explore these questions, we formed a working group within INFAS focused on organizational development. Through the working group, we observed that center leaders appreciate the space to share personal stories and experiences that are not typically covered in peer-reviewed academic literature,[5] and that, indeed, many centers experience similar issues. The idea for this paper emerged from INFAS webinars in which nine center directors shared their stories and challenges. In the paper, we share what we learned about the organizational structure of the nine centers (see the "How are Centers Structured and Funded?" section), the work they have done ("What Do Centers Do?"), and the benefits of that work ("Benefits of Centers' Work"). We then discuss the challenges centers have faced ("Challenges") and provide recommendations on how to address those challenges ("Recommendations").

Methods

The INFAS Organizational Development working group, led by co-authors Gwin and Miller, conducted three one-hour webinars between May and September of 2021. For each, we asked three center leaders to respond to a set of questions (see below) using a conversational format. Presenters for the first webinar were from older centers founded by original INFAS members. For webinars two and three we selected a group of centers from varying geographies, land-grant and non–land-grant universities, and centers based in universities and Cooperative Extension. Presenting centers were located at universities across eight states: three on the West Coast, two in the Northeast, one in the Southeast, and three in the Midwest. The centers represented were:

- Sustainability Institute (University of New Hampshire)
- Berkeley Food Institute (University of California-Berkeley)

[5] An important exception, and an inspiration for our work, is Porter et al., 2018.

- Agroecosystems Management Program (AMP)/The Initiative for Food and AgriCultural Transformation (InFACT) (Ohio State University)
- Center for Energy and Environmental Education (University of Northern Iowa)
- Center for Environmental Farming Systems (North Carolina State University, North Carolina Agricultural and Technical State University, and the North Carolina Department of Agriculture and Consumer Services)
- Agricultural Sustainability Institute (University of California, Davis)
- Center for Regional Food Systems (Michigan State University)
- Urban Food Policy Institute (The City University of New York)
- Center for Small Farms and Community Food Systems (Oregon State University)

The oldest center was established in 1984, and the newest in 2016. Each presenter was asked to address the following questions:

- How is your center or institute structured?
- How is your center or institute funded?
- Give us an example of a storm you've had to weather—budget crisis, academic unit reorganization, leadership change, or other. What happened? How did you manage?
- What might you do differently if you launched it today?

Presentations were followed by 10–25 minutes of discussion, conversation, and questions, during which presenters added more detail about the challenges they had faced. Ninety-four people participated in one or more webinars. Participants included faculty from 24 U.S. and two Canadian universities. Three independent scholars and staff from four nongovernmental organizations and six philanthropic foundations also attended.

We organized the webinars so that centers and institutes could learn from their peers, especially those with many years of experience navigating challenges within their home institutions. The richness of the presentations and discussions convinced us, after the fact, that what we had all learned together was important to summarize and share more broadly. To compile data for this paper, we carefully reviewed the webinar recordings to identify similarities and differences in the experiences of center and institute directors, and to identify cross-cutting themes based on our guiding questions listed above. We synthesized recommendations from both the presenting centers and from existing research on university-based centers. In 2023, presenters reviewed the synthesized recommendations to add missing detail and more examples. Presenters were also invited to co-author this paper since this knowledge was co-generated.

How are Centers Structured and Funded?

In the webinars, presenters responded to open questions about structure and funding. The range of responses we received reflects differences in the home institutions and food systems contexts in which the centers are working.

Institutional Home

The centers represented were governed in a variety of ways. Five of nine were within an academic college and under the jurisdiction of that college dean's office. Out of the remaining four, two were under the jurisdiction of the provost or vice provost and two were jointly overseen by a department and Extension. One presenter shared that they appreciated being "co-owned" by multiple schools because it helped them garner administrative support from several places and function as a cross-university team. Another felt strongly about the value of being under the provost's office because their provost had a pan-university scope that helped them understand the center's interdisciplinary work. Moreover, a provost's level of authority means that they are in a position to effectively advocate on the center's behalf.

Most presenters agreed that the best "home" for a center is less about the specific office that oversees them and more about the person leading that office and their desire to be a champion for the center. As one presenter put it.

> *I think it's really personality driven. … I don't know if I could say this is better than that, because it really*

depends on the support you get from where you're embedded. [It's best to be where] you know you're going to get more support.

Governance Structure

Centers were governed in a variety of ways. Most of the presenting centers had dedicated staff, with at least one staff member in a director role. Some centers were directed or co-directed by faculty while others do not involve faculty in leadership. A few also included students, deans, and/or research station directors in their governance committees.

In addition to internal governance, many centers had external advisory boards that provided overall feedback or advised individual projects. One center consulted community advisors on an ad-hoc basis for activities like writing grant proposals, rather than maintaining a formal advisory board. Most advisory boards included a diverse set of community members, including alumni, farmers or others involved in agriculture, community organizations, public health institutions, and/or restaurants. Some presenters noted that advisory boards and other community partnerships helped facilitate university-community connections, broaden their thinking, increase capacity, and cultivate political support outside of the university. As one center director put it, the community advisory board *"has been hugely important because they're influential and very supportive. … They have really broadened the way we've thought about the food system."*

Involvement of Faculty, Staff, and Students

Centers ranged widely in how and how much they interacted directly with faculty.[6] Some centers had a designated set of "affiliated" faculty who self-selected to have a more formal relationship with the center (although what this means varies across university contexts). In others, faculty partnered on a project-by-project basis and/or engaged primarily with community partners. Formal affiliation did not guarantee participation, and one presenter even reported that about 10% of their center's formally affiliated faculty were hostile to the center's work. Some of the larger centers also had full-time staff specialists who worked on center projects, communications, or administration. A few center directors reported hiring student workers or working with graduate students, and some facilitated educational programs such as undergraduate majors.

Budget

Because centers were either not funded by or received little funding from their universities, all had to secure a significant amount of funding from outside of their institutions.[7] Sources included donations from individuals and private foundations; research grants or cooperative agreements with state and federal governments, nongovernmental organizations, and values-aligned companies; and fee-for-service work. Four centers also had endowments.

Five of the nine centers received funds from their universities, although the amount they received varied widely, ranging from US$37,000 to US$2.5 million per year. In contrast, centers brought significant funding into universities; each raised US$1.5–$2 million per year. Some centers were specifically required to document a return on investment (ROI) of the university's funding: one center was expected to generate an ROI of 2–4% and could often document 12%; another reported a 6–7% ROI. This outside funding was critical for centers and beneficial to universities. However, some presenters worried that the amount of money their centers brought in had created tension with university administrators or faculty. One presenter was concerned that the university would reduce the limited amount of funding they provide because they receive outside funding, and another mentioned having to justify why the funds they received could not go to a faculty member instead of to the center.

[6] The faculty involvement question seemed simple but is complicated by the fact that Extension personnel are "faculty" at some universities but not others, depending on how Extension is (or isn't) integrated into colleges and departments.

[7] Our discussion of funding, in the webinars and in this paper, did/does not address the much larger problem of the "neoliberal university" where, for example, research and students are primarily seen as sources of revenue due to loss of public funding. See, for example, Slaughter and Rhoades (2000).

What Do Centers Do?

Characterizing Centers' Work

The centers in our sample all had broad missions focused on cultivating greater human and environmental health through sustainable food systems (Table 1). Several centers' missions explicitly emphasized social and racial justice.

Table 1. Missions of Presenting Centers

Center	University	Mission Statement
Agricultural Sustainability Institute	University of California, Davis	"To ensure access to healthy food and to promote the vitality of agriculture today and for future generations. We do this through integrative research, education, communication, and early action on big, emerging issues."
Berkeley Food Institute	University of California, Berkeley	"To transform food systems—to expand access to healthy, affordable food and promote sustainable and equitable food production. We empower new leaders with capacities to cultivate diverse, just, resilient, and healthy food systems. We focus on four food system themes and emphasize a holistic approach to address these pressing issues."
Center for Energy and Environmental Education	University of Northern Iowa	"Empowering Iowans with the knowledge, experiences, tools, and inspiration needed to create a sustainable and desirable future for our communities."
Center for Environmental Farming Systems (CEFS)	North Carolina State University and North Carolina Agricultural and Technical State University	"Develops and promotes just and equitable food and farming systems that conserve natural resources, strengthen communities, improve health outcomes, and provide economic opportunities in North Carolina and beyond."
Center for Regional Food Systems	Michigan State University	"To engage the people of Michigan, the United States and the world in applied research, education and outreach to develop regionally integrated, sustainable food systems."
Center for Small Farms and Community Food Systems	Oregon State University	"Advancing sustainable agriculture, community food systems, and economic progress for Oregon's farmers and ranchers and providing a leading-edge experience for students."
Urban Food Policy Institute	City University of New York (CUNY)	"Our research, education and action advances just, healthy, and resilient urban food systems."
Initiative for Food and AgriCultural Transformation (InFACT) [a]	The Ohio State University	"To transform the way we grow, process and distribute our food, leading to vibrant, sustainable and resilient agriculture that places nourishing food at the center of just and vital communities in Ohio and beyond."
Sustainability Institute	University of New Hampshire	"To be a catalyst, convener, and champion of sustainability ideas and actions across and beyond the University of New Hampshire. We foster a culture of sustainability that permeates the civic, professional, and personal lives of members of our community. We embrace the notion of a 'sustainable learning community'; a community in which everyone learns, and everyone and everything that we do teaches."

[a] The webinar presentation focused on InFACT, a university-wide initiative that involved faculty from 10 colleges, hundreds of external partners from over 10 partnering organizations, and central university support. InFACT had grown out of the Agroecosystems Management Program (AMP), which was the first center endowed under a Kellogg Chair. In 2016, AMP's network and relationships were instrumental in the successful proposal to create InFACT, a university-wide program led by the Kellogg Chair. InFACT was dissolved in 2021 by the Dean of the College of Food, Agricultural and Environmental Sciences and the Vice President for Outreach and Engagement, although AMP remains and continues its leadership of work for agriculture and food system sustainability and resilience. Most of the stories from the former InFACT/AMP director pertain to InFACT, although a few apply to AMP.

An important function of these centers was to facilitate connections within and between units on campus, and between the university and the broader community. All conducted research, most of which was applied, interdisciplinary, and/or transdisciplinary research that involved community collaboration. Many had projects that included local, state, regional, and even national partners including food hubs, community organizations, schools, government representatives and agencies, healthcare providers, and utility companies. While all centers worked in communities and with community organizations, they varied in the degree to which their work emphasized collaborations with partners on campus, farmers, and/or broader community members. Some centers worked with students or directed on-campus initiatives, while others worked almost exclusively outside their university base.

Center Projects

Centers engaged in a wide variety of work (Table 2). They collaborated with partners on policy-focused projects (e.g., policy research, briefs, comment letters), capacity and leadership development, project coordination, and research and technical support.

Benefits of Centers' Work

Presenters highlighted the numerous benefits that their centers provided. Centers attracted sources of funding that the university would not otherwise receive, including funding that supported faculty

Table 2. Examples of the Variety of Work that Presenting Centers Engaged In

Areas of work	Examples from webinars
Campus-oriented projects	• Manage university research and education farms • Plan and implement campus sustainability plans • Develop curriculum • Provide education, professional development, and training for students and broader campus community
Technical support and community service	• Provide farmer training and technical support • Produce policy briefs and provide guidance to policy-makers on science-informed policy-making • Facilitate policy training for community members • Conduct research and evaluation on behalf of community organizations and state agencies
Network-building and coordination across community projects	• Facilitate networks of farmers, food hubs, nonprofit organizations, public health officials, and assorted food-related organizations • Support, network, and document the work of food councils and mayors' offices • Coordinate a national learning network for Extension professionals
Policy, planning, and infrastructure (state, regional, and national)	• Facilitate state agriculture plan development, implementation, and progress assessment • Conduct public policy analysis and share information to support nongovernmental organizations (NGOs) in collaborative policy advocacy • Facilitate Good Food Purchasing and farm-to-institution programs • Conduct local and regional food workforce assessments • Support community visioning around future food systems • Develop a regional food systems equity plan

members and their research. One presenter emphasized that some foundation funders would not fund their work if they were part of the regular university system, and another shared that funders were attracted to entities like centers that can present a more *"cohesive body of work"* than a university or an individual department.

Centers promoted creative and innovative solutions. Presenters gave examples of how their centers had been on the forefront of emerging issues, promoted curricular innovation, provided new opportunities for faculty professional development and student leadership, and/or fostered interdisciplinary work within and across departments and colleges. One presenter shared that as a center, they were *"more nimble"* than Extension or the broader university system, which has allowed them to *"be in front of [emerging] issues in food systems that the university's not ready to [pursue]."* For example, their center had worked with the Extension system nationally to make institutional reforms in favor of racial equity, and these reforms had made a significant difference in terms of fostering greater inclusivity in several state Extension systems. Another presenter talked about how their center had promoted curricular innovation, developing a dietetic intern program with a policy focus. They also supported faculty and student training in food justice, an opportunity that otherwise would not have existed within their university.

Centers facilitated long-term collaborations across departments and colleges and with partners outside the university, building capacity for critical interdisciplinary and community-engaged work. Within the university, centers helped researchers build creative and productive collaborations and integrated research, education, and Extension. One center director shared how their center bridged university research and Extension outreach, framing Extension's work in a way that university administrators understood and appreciated:

> *When our dean hears 'center' he thinks about 'centers of excellence, centers are prestigious.' In addition to working with Extension faculty, we are collaborating with academic faculty who aren't Extension. Having a center makes a strong connection with other parts of the university.*

Another presenter shared that joint faculty appointments, shared 50/50 between their center and departments, had freed faculty to do more interdisciplinary research than they would otherwise by making it an explicit expectation in their position descriptions.

Centers also supported partnerships with researchers at other universities and with community organizations that benefitted both the university and its partners. On a structural level, centers provided the training, time, and administrative capacity needed to support external collaborations and create *"a structure that people outside of the university can come to for technical assistance and guidance."* Connecting with key community partners increased the impact of university research and bolstered the public visibility and reputation of the university. For example, one center director shared that as racial justice work was more normalized within the university, the center's existing relationships with communities of color helped university administrators build new and valuable relationships with those communities. Moreover, centers were able to increase community capacity. Because many centers worked frequently with community partners, they often learned early on about a community's most pressing problems and could recruit researchers from appropriate departments to help find the answers community partners were looking for. Presenters shared specific examples of how their centers had worked with community leaders to understand conservation programs and craft new policies and state standards relevant to their agricultural systems. Centers also played an active role in supporting community partners by sharing grant funding or supporting their grant applications, nominating them to powerful positions, and inviting them to speak at public events. Some center directors talked about how their centers had supported science-based policy-making by offering topical input on legislative issues or various forms of technical support to policymakers and public employees. Centers also provided faculty affiliates with opportunities to provide input on public policy through the center, adding credibility to their advocacy beyond what they had as individuals.

Some centers offered non-academic work experience to students, experience that can be hard

to find within academic departments, which tend to focus on preparing students for careers in academia. One center director said that giving students the opportunity to participate in center leadership offered *"an incredibly valuable experience"* because it gave them their *"first exposure to strategic planning. … They told me they really valued it."* Another shared that the majority of graduate students who worked with their center were initially unprepared to do public-facing work and engage with nonprofit partners. However, through working with the center they gained experience that helped them get jobs after graduation.

Challenges

Working with University Administrations

One common theme in our conversations was the importance of gaining support from university administrators (e.g., deans, provosts). Like departments, most centers were overseen by university administrators who generally did not participate in center activities and may or may not have been sympathetic to a center's mission. Moreover, administrators change jobs frequently, so staying relevant through administrative shifts can be a challenge. One presenter shared that as administrators transitioned, it was difficult to avoid being seen as a *"program of someone else from a long time ago."*

Many presenters also expressed that some administrators had trouble understanding the importance of inter- and transdisciplinary or community-focused projects because these projects differ from traditional grant-funded research. One shared that administrators misunderstood their food justice work in particular, because it was broader and more community-based than, for example, public health research typically funded by the NIH. Another shared that integrating research, teaching, and Extension was highly effective, but that their administrators had trouble comprehending their center's broad mission and integration of work. Administrators at their university wanted to know *"which box"* they fit into, rather than how they bridged topics to address food systems issues in a holistic way. Some centers had to undergo administrative reviews more often than other academic units, with no justification provided: this felt to some like a deliberate and potentially hostile effort to delay completion of projects that might challenge the status quo.

Similarly, several presenters shared how challenging it was for them to focus on sustainable agriculture and food systems while operating within universities committed to "productivist" modes of agriculture: focused on producing higher volumes of cheap food while externalizing consequences for human and environmental health. Moreover, many centers were established before sustainability was more broadly recognized as a societal goal and were often marginalized or tolerated, at best. As sustainability initiatives have been adopted by universities, some centers tried to expand into bigger organizations. In at least a few cases, however, this created an opening for opportunistic administrators to redirect budgets away from a center's transformative work. One presenter shared a cautionary tale about their effort to turn an older, smaller center into a campuswide organization. Over more than 20 years, the original center had created a strong faculty and community network from which the larger organization emerged. A dean then seized an opportunity to redirect the budget intended for the new organization, despite strong faculty support. Another center was undermined when a dean redirected a budget intended to enlarge and transform that center's work on sustainability, undercutting the work and hobbling the center. Some centers are threatened by decision-makers outside the university as well. In 2016, the state legislature threatened one center's funding because the center had issued a statement of nondiscrimination. That center was able to survive the threat because they had not become an "official" center within their university, shielding them from the legislature's power over centers that are officially recognized.

Cultivating Faculty Support

Many presenters stressed the importance of faculty support in navigating relationships with university administrators, increasing capacity, and reducing budgetary constraints. Two center directors emphasized the valuable influence that faculty can have on university administrators. One shared that he *"should have paid more attention to … faculty support*

[because] deans, in particular, care about what faculty think," and two others stated that if they could have done something differently, it would have been to cultivate greater on-campus support, particularly from faculty.

However, building faculty support can be a challenge. One center director shared that departments at their university sometimes felt like *"they're competing with [the center] for resources and really resent that."* Moreover, like university administrators, some faculty did not understand the value of centers or focus only on *"what the center can do for them rather than what they can do for the center."*

Another challenge is that the type of work done by centers, especially community engagement, was not typically recognized or rewarded in university incentive or reward systems. Engagement takes time that many faculty had to dedicate to other obligations like research and teaching.[8] As one presenter said, *"We are supposed to have a network of faculty from across the university, but we don't have the funds to buy them out of courses."* Another shared that *"I can't tell you the number of new tenure-track hires that get very excited about [our work] but [because] they're on the tenure track line … they can't embrace the full breadth of it."*

Hiring and Retaining Faculty

Presenters also pointed to lack of control over hiring processes as a major challenge. Most faculty are hired by and administratively housed in departments, not in centers, meaning that centers typically had limited control over faculty hiring. Centers that did have their own faculty appointments typically also hosted untenured and unendowed positions that were more vulnerable. One center director shared how this had especially hindered hiring and retaining faculty of color. He said: *"I hope it's more than lip service that we want to see more … leaders of color. … And yet I don't find at [my university] that untenured, unendowed positions are going to be fully supported."* Similarly, a former center director discussed how university norms that required PhDs and devalued lived experience impeded opportunities to hire faculty of color. He shared that *"When we were hiring the next director, almost every person of color I spoke with suggested that we needed to go with a 'professor of practice' rather than the tenure track approach."*[9] He expressed frustration that tenured faculty were given more power and credibility than non-tenured faculty, *"even if the latter have other talents and assets that are incredibly important to the university."* He continued, *"It is disappointing that universities don't fully recognize and value people who have really deep lived experiences and skills that the universities need."*

Securing Sustainable Funding

Regardless of their funding sources, nearly all presenting centers (eight of nine) cited insufficient funding or funding instability as a major challenge. One presenter likened their funding situation to being *"threatened by 1000 cuts,"* while another said their center was *"always on a treadmill of raising money for new projects."* Presenters also found it challenging to raise funds for general operating expenses, as most funders *"want to fund [research] programs and results."* In addition, the high percentage of grant funding often retained by the university to cover overhead ("indirect costs") was often shared with departments but not with centers. This was especially true when the principal investigator for a center-led grant was formally housed in a department and not the center. While centers were often able to access funding that would be unavailable to departments, one center director reported that some funders incorrectly assumed that centers were fully funded by their universities, including faculty and student time to work on center projects. Some private funders may have seen the value of centers' work but preferred to fund direct-service organizations.

[8] Faculty with full or partial Extension appointments are often more involved with community engagement yet may still face unforgiving pressure and timelines to generate "products," especially for promotion.

[9] "Professor of practice" is usually a promotable but non–tenure track position. Expectations, funding, and job security for PoPs vary across universities, but in general these are positions that value "in practice" experience, e.g., in government, nongovernmental organizations, or the private sector. They are often hired for their deep lived experience, local knowledge, and connections to institutions. Salaries are often lower than tenured faculty.

Recommendations

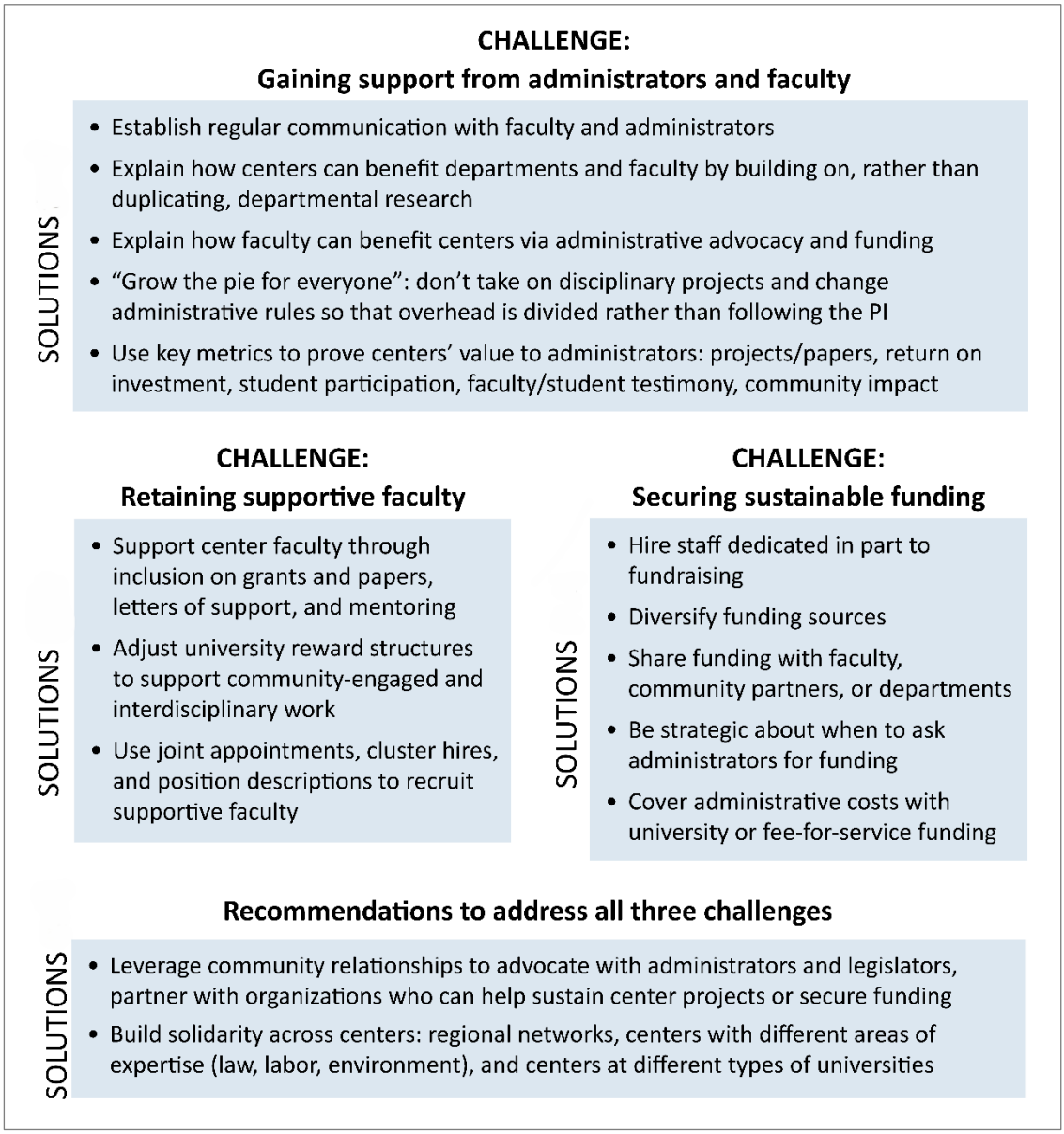
The challenges raised by presenting centers generally fell into four categories: (1) working with university administrators, (2) cultivating faculty support, (3) hiring and retaining faculty, and (4) securing sustainable funding. In this section, we offer strategies to address these challenges, drawn from presenting centers and from published research (Figure 1).

Gaining Support from Administrators and Faculty

Establish regular communication with administrators and faculty

Regular communication with administrators and faculty can help build positive relationships and increase awareness of the value that centers can bring to a university. Several center directors gave tips on how they had opened avenues for commu-

Figure 1. Summary of Recommendations



nication. One center director shared that the center *"had a monthly newsletter and would make sure all of the administrators were included on that circulation list, or sometimes sent them personal notes when we got a big grant."* Centers' relationships with certain communities or influential community members can also be valuable to university administrators. One center director described how she had leveraged their community relationships by inviting administrators to meetings with community advisory boards:

> *Credentials of the board and opportunity to interact with them was also important to administrators. Inviting them to board meetings allowed them to interact with the board but also hear what was happening in the center. Our deans and administrators would often come to our board meetings.*

Another director said, "If you don't show faculty the different ways to be involved, they don't get involved," and stressed the importance of regularly communicating these different ways to faculty. Some options are a minimal commitment, such as giving a talk, other options are deeper commitments, such as applying for a grant with the center or participating in center-led research projects.

Reaching out to newly hired faculty was another important tip. One center director shared how her center had done *"strategic outreach to new faculty to help them understand the importance of interdisciplinary work and the value the center could provide through collaborations on grants, projects, research, and papers."* Building relationships with faculty early on helped offset the influence of departments who *"didn't appreciate the value of interdisciplinary work and would often advise new faculty not to collaborate or be involved with others outside their department."*

Describe how centers benefit departments and faculty

Many center directors talked about how they had struggled to get faculty or administrators to understand the purpose of their work. They highlighted the need to communicate how a center's work complements and extends (rather than duplicates) the work done in academic departments as well as how centers can benefit faculty.

The disciplinary research conducted within many university departments provides a critical foundation for problem-solving. However, most real-world problems are highly complex, necessitating integration of research from different fields (Arnold et al., 2021; Leahey & Barringer, 2020; Van Noorden, 2015). Centers can facilitate this process by providing the expertise, time, and administrative capacity needed to build inter- and transdisciplinary collaborations and community relationships. In doing so, they play a critical role in helping faculty and departments extend and apply their research to solve real-world problems.

Centers are network-builders, connecting faculty with communities within and outside of academia. At a most basic level, centers help facilitate, as one presenter said, *"social connection amongst people."* For faculty, this could mean anything from engaging deeply with a center's work or participating informally in center-hosted gatherings *"to get to know people better in ways that can lead to the next grant proposal."* One center organized an annual summit for faculty and non-university partners to meet, build relationships, generate project ideas, and apply for seed funding. The most important part of the summit for many faculty was relationship-building: *"Faculty come to the summit not because they're looking for another project but because they're interested in seeing what's happening and maybe being involved,"* and ultimately, *"people end up working together as friends, not just business associates."* This is echoed in the literature on centers and institutes: engaging with faculty from other departments or communities outside the university can help faculty build community and "networks of practice," making academia feel less isolating (Mallon, 2006; Nyden, 2003; Rhoten, 2003). Moreover, Rhoten (2003) found that engaging with centers increased faculty's interdisciplinary research opportunities by 20%, facilitated information-sharing, and promoted greater creativity and collaboration.

The networks built by centers can include many different types of community partners, including government agencies, researchers at other institutions, funders, local organizations, and community members. Such community engagement provides numerous benefits to faculty, departments, and to the integrity of research pro-

jects. It helps build trust in research and ensures that it is relevant to particular community contexts, strengthening the rigor, relevance, and reach of research projects (Balazs & Morello-Frosch, 2013; Israel et al., 2006; Mendes et al., 2014) and in some cases, leads to higher-impact publications (Biancani et al., 2018; Van Noorden, 2015). Community engagement is often meaningful to individual faculty members, many of whom find it gratifying to see their work being put to use by communities or policymakers, or to see it gain public visibility through the media (Nyden, 2003). Moreover, community engagement connects researchers with the "human face" of the issues they study in ways that can foster compassion and cultivate a greater sense of value in their work (Nyden, 2003).

Because of the ways in which centers' work differs from that of departments, centers can also access funding sources that departments cannot, including foundation funding or cooperative agreements with government agencies at the city, state, and federal levels (Biancani et al., 2018; Mallon 2006). By engaging with centers or applying together for grants, faculty can gain access to funding that would otherwise be unavailable to them.

Explain how faculty can benefit centers

While it is important to communicate the benefits that centers can bring to faculty, explaining how faculty can benefit centers is just as key. Faculty can provide financial support that can help a center maintain key programs when other funding is limited. Presenters shared that they have had faculty write the center into grants, and Israel et al. (2006) give an example of faculty using research incentive funds to support core center staff during times of scarcity. Moreover, faculty can be key advocates for centers. Several presenters emphasized that faculty can help secure university funding and administrative support. As one center director put it, *"The importance of administrators hearing about center benefits from their own faculty cannot be underestimated; it's critically important."* Faculty can also help recruit other faculty to work with a center. Nyden (2003) emphasizes the impact of faculty speaking directly to peers about the type of work a center does and the benefit it can provide to them as faculty.

"Grow the pie for everyone"

Many center directors said that some faculty or departments view centers as competitors for limited resources. Communicating how centers complement the work of departments or other centers can offset some fears around competition. One director shared how he has made this difference extremely explicit: *"I stated publicly and repeatedly that the institute would* not *take on any projects that could be done by a disciplinary department and I passed on opportunities for disciplinary projects to relevant departments and colleagues."* Moreover, emphasizing that centers can utilize different sources of funding than departments and faculty, and focusing on applying for those pots of funding, can reinforce the mindset that centers *"grow the pie for everyone rather than stealing their piece of an existing pie."* This is critical outside the university as well; one center director mentioned that they were conscientious about avoiding funding sources that could be tapped by nonprofits or other community-based organizations.

While decisions like this can help mitigate the competition problem, some competition can come from administrative rules outside of a center's control. As one presenter emphasized, *"University budget models can really pit departments and centers against each other, leaving interdisciplinary projects caught in the middle."* For example, many universities have rules dictating that overhead on grants accrues only to the academic unit of the principal investigator (PI). This can create competition for PI-ship within project teams because everyone involved (faculty, departments, centers) wants to receive those funds. Several presenters gave examples of how their administrations had reworked these rules to change overhead allocations so that faculty collaborators are no longer caught between departments and centers. One center director who reported that their overhead was split equitably between all academic units and faculty shared that *"While faculty get less than they would with different rules, it's not something we haggle over, it's never been seen as taking away."* At a second center, similar rules have incentivized faculty to participate in center grants, and a third reported that administrators made a change that maintained the overhead rate for departments but added more funds for an interdisciplinary program. While many centers preferred the idea of redistrib-

uting overhead, one center took the opposite approach and strategically decided *not* to advocate for redistribution. In their case, having the overhead go to departments appeased department chairs and helped them see the center as a value-add rather than a competitor. Overhead can also be a challenge when centers work with community organizations, given the size of community-level grants compared with large research grants to a university. To offset the perceived loss of funds to the university, one center director decided to apply for more federal funding to bring in additional money to the university.

Use key metrics to prove centers' value to administrators

It is also critical that centers identify and communicate the ways in which their work contributes to university-level metrics. Grants and papers are standard metrics within most university systems, and one former center director talked about how their center "*kept a running list of grant-funded projects and papers on our website so we could easily pull totals and titles for administrators."* They asked faculty collaborators to send information from the annual activity reports they already had to prepare. Some research also indicates that by facilitating interdisciplinary research, centers can produce higher-impact publications and increase faculty productivity relative to that of departments (Sabharwal & Hu, 2013). While collecting data that compares such metrics for centers and departments could be challenging, highlighting high-impact publications or increased faculty productivity that result from center activities could be beneficial.

Several center directors also discussed the importance of showing that their centers brought in more funding than the university contributed to center operations, i.e., a positive ROI. However, they cautioned that ROI can be difficult to define (e.g., is it over the course of a year or over the lifetime of a grant) and hard to prove, especially with limited administrative capacity. One center had built strategic relationships with the Research Foundation and Office of Research at their university to run reports on grant awards and ROI. These reports, he noted, were difficult to get because *"these analyses are not typically performed and require good relationships and some cajoling of those with the data and authority to run reports."* Highlighting center funding from sources that are unavailable to departments can also help demonstrate that the center is attracting funds the university would otherwise be unable to access.

Some centers helped facilitate degree programs or involve students in their work. For these centers, presenters shared that reporting student enrollment or other similar statistics could also be valuable metrics. Similarly, the type of work done in centers and through their networks can attract both new and "star" faculty who bolster the university's reputation (Mallon, 2006; Rhoten, 2003). Rhoten (2003) found that graduate students (the next generation of faculty) were particularly excited to work with centers. A presenter echoed this, emphasizing that new hires had been especially eager to engage with their center. A center's contribution to faculty and student recruitment is another valuable metric for center leaders to share with administrators by, for example, providing testimony from faculty or students about how the center was part of what drew them to the university.

Finally, presenters spoke to the value of highlighting the community impact of their work. One shared that, *"As academics, we're not trained to take credit for our impacts,"* and that he has been encouraged to take more credit for more of the community work the center has led. Another director echoed this advice, saying that he has learned to *"write your impact statements with great confidence."* Evidence of community impact can be valuable to administrators at public universities, who need evidence of the university's impact to justify the university budget to legislators. For private universities, alumni and donors respond to similar metrics (Nyden, 2003). Moreover, community projects can gain media attention in a way that traditional research does not, bolstering the university's public image (Nyden, 2003). Positive media coverage about a center's public impact may also be welcomed by administrators. While community impact can be a useful metric to share, center directors also urged caution: if a university publicly credits a center in ways that exclude other partners, this can harm community

relationships. Moreover, community impact can be difficult to quantify, especially because many centers work toward systemic change. As one director put it,

> *We asked, "what if we could shift food insecurity rates from 6% to 5% and people recognized us as having a big role in that?" Administrators immediately recognized the value of bringing those numbers to the state legislature. But a change like that requires other things to happen too, and it can be hard to trace back to your involvement.*

Retaining Supportive Faculty

Support faculty who work with centers

Because university incentive structures are rarely oriented to support inter- and transdisciplinary or community-engaged work, working with centers can be a challenge for faculty, particularly before they receive tenure. Presenters discussed ways to support early career faculty, for example, by including them on grants and papers, mentoring them, and advocating for them during tenure review.

When collaborating with faculty on grant applications, one center director noted the importance of applying for funds to cover summer salary for faculty or to buy them out of teaching obligations. Another presenter shared that center staff met with faculty a few times a year to learn about their research and other projects. This helped the center be strategic in identifying larger grant programs that could support faculty projects.

Centers can also play a critical role in supporting junior faculty. Nyden (2003) suggests that building mentoring networks for junior faculty to connect with senior faculty is important to career advancement. A presenter echoed this, saying that mentoring by experienced senior faculty *"is critical in helping junior faculty ensure that they are achieving the output that is expected by their administrators and promotion and tenure committees, while engaging in center work."* Additionally, center directors can provide annual letters of evaluation to explain a faculty member's contributions to the center's research, teaching, and outreach. One presenter shared that *"these letters can be included in junior faculty promotion and tenure dossiers and tend to be valued by both the junior faculty members and their administrators and promotion and tenure committees."*

Adjust university reward structures

While university reward structures are outside of a center's direct control, centers can advocate for important changes to the institutional barriers that limit faculty engagement in community-engaged and interdisciplinary work (Biancani et al., 2018; Mallon, 2006; Mendes et al., 2014; Nyden, 2003; Rhoten, 2003). Some center directors discussed the impact that such changes have had at their universities. At one university, administrators provided funding for 50/50 faculty appointments with time split between a center and a department. Another center used university and endowment funding toward partial support of faculty appointments. Both strategies allowed faculty to dedicate time to the center's work, improved center capacity, and brought a more integrative lens to disciplinary departments. Split positions may, however, cause confusion during the promotion process, if the disciplinary department assumes their promotion criteria (for example, number of papers or total grant funds) apply equally to the faculty member's entire appointment.

Tenure and promotion guidelines can be revised to recognize interdisciplinary and community-based work. Extension faculty promotion criteria may be useful models because Extension positions include community engagement and outreach. A presenter said they had had more success working with Extension faculty, compared with research and teaching faculty, because Extension job descriptions were more aligned with the center's goals and approaches. Guidelines have been developed to support community-based participatory research (CBPR), a specific form of community engagement in which power is shared between researchers and community members who are actively involved in the research process (Balazs & Morello-Frosch, 2013; Israel et al., 2006). Not all centers practice CBPR per se, but because many centers do community-engaged work, the recommendations for supporting CBPR (e.g., Jordan, 2006; O'Meara, 2012) may be applicable. Jordan (2007) and Nyden (2003) provide example dossiers, recommendations for developing supportive guide-

lines, and other useful resources. Additionally, Nyden (2003) recommends supporting faculty engaged in CBPR by:

- Developing leave policies or reducing course loads for faculty engaged in community work;
- Establishing adjunct appointments shared by the university and an organization, social service agency, or regional advocacy group;
- Creating fellowships to support community members who engage in research or teaching; and/or
- Using institutional review boards to assess the degree to which research benefits the community (rather than simply the degree to which it minimizes harm).

Perhaps even more critical than adjusting reward systems for faculty is adjusting reward systems for administrators, especially for those in positions of power like deans, provosts, presidents, and chancellors. One center director explained that *"The pressures to which these administrators respond revolve around funding, leading to short-term, bottom-line thinking. Because turnover in these positions tends to be rapid, new administrators often ignore or suppress previous administrations' investments in favor of new ones for which they can claim credit. In such an environment, university support for a center can go from 100% to zero very suddenly."* To address this, he suggested implementing a reward system, dictated by the board of trustees, that would secure ongoing support—for example, new faculty positions—for established priority challenge areas like food system transformation. This would discourage rapid shifts in priorities and help ensure university priorities align with the needs of the public rather than industry or wealthy donors.

Use specific hiring practices to recruit supportive and more diverse faculty

Many presenters voiced frustration around their lack of control over recruiting and hiring for their centers, much of which was done through departments. However, some presenters successfully engaged with cluster hires, and two benefited from joint appointments where faculty time was shared between the center and a department or across two centers. The joint appointments had multiple benefits, including increasing engagement in social equity issues and interdisciplinary research and enhancing information flow between center and department faculty and staff. Presenters also identified position changes that could support a more diverse applicant pool:

> *We found that when we listed joint center-department positions that explicitly list expectations for community-engaged scholarship and interdisciplinary work, they are attractive to a more diverse candidate pool. They led to the kind of diverse hiring profile that administrations prize. The position descriptions need to change if universities want more diverse faculty. A critically important complement, however, is serious work on the university culture and reward systems that have resulted in a high percentage of white male faculty in the first place.*

Securing Sustainable Funding

Presenters made a variety of recommendations around funding sources and strategies:

- Identify a person or group of people whose time is at least partially dedicated to fundraising, e.g., hire a development director, create an alumni board, or work with department administrative staff who have grant writing as part of their job description;
- Diversify funding sources (though one presenter warned that risk-averse administrators may balk at unusual sources of funding);
- Explore fee-for-service work (e.g., training, technical assistance, speaking engagements);
- Share funding and center staff with community partners, and help partners build their own capacity to support collaborative projects in future.

Presenters also provided more detailed recommendations for acquiring funding from within the university and covering operating costs.

Acquiring university funding

One center successfully used joint appointments and combined funding from different administrative units within the university to fund staff posi-

tions. For example, they provided partial funding for a department's communication specialist, which not only allowed the position to be full time but also improved information flow between the center and departmental faculty and staff. At that university, Extension is separate from departments, and this center had also successfully combined Extension and college funding to fund the center's director.

One presenter said she had had more success in securing program funding from the university before a program was created or after a program was firmly established, rather than in the initial stages of the program. For example, before she secured external grant funding for the program, she successfully convinced administrators to continue supporting the program after grant funding ran out. She believed this strategy was successful because of the hypothetical nature of the agreement: the administrators who made the commitment did not necessarily expect the center to be awarded the grant, making them more amenable to offering support. She also reported that administrators would sometimes fund programs once they had been established and had proven their value to Extension or faculty.

Covering operating costs

Because most grants will not cover general operating costs, presenters emphasized the importance of having strategies to sustain operating budgets. They recommended building administrative costs into grants whenever possible. One center director shifted limited university funding away from his salary and toward his center's program managers to provide more sustainable funding for center staff, backfilling his position with grants and other sources. When possible, investing university funding in permanent staff positions can be helpful because these positions often receive regular cost-of-living increases and therefore are similar to an investment that accrues interest over time. When staff leave the center, the funding stays with the center and can be used to rehire staff or to support projects, students, communications, or additional administrative support.

Several centers also took on fee-for-service work, which helped cover operating expenses because it provided revenue to use how the center saw fit. However, other centers noted drawbacks to fee-for-service work. Managing contracts, client expectations, and university rules for hourly rates can add administrative burdens. Moreover, some universities required funds in this category to be spent down yearly, and some took a percentage for college administration.

Endowments can also be helpful in covering operating costs, but it is difficult to find foundations willing to fund endowments. Individual major donors may be more likely sources, but finding and cultivating such donors requires extensive and dedicated staff time.

General Recommendations

Leverage community relationships

Most centers had community partnerships, but presenters noted that not all centers recognize the critical role such relationships can play in maintaining center resilience and stability. Community partners can support the center in many of the same ways as faculty: they can advocate on behalf of the center to university administrators (and sometimes to state legislators), increase center capacity, and provide access to additional sources of funding. Moreover, one presenter remarked that community partners can have the power to shape external politics in ways that also benefit their partner centers, for example by creating new public programs that support the shared mission.

Advocacy: Several center directors shared stories of how influential community partners had encouraged administrators to support the center. Relationships with university alumni, senior community leaders, academic organizations, city or state budget office staff, local government officials, and private funders can be particularly helpful because these partners may have a great deal of influence in their communities (Israel et al., 2006). One center director shared that because their community advisory board was composed of *"very influential people, our administration … really wants to rub elbows [with them]."* Another said, *"We can say to our bosses, 'look at this network, they have political power, you need to pay attention,' and it's starting to work."* Another

way for community partners to support a center is to write letters of support. One center director said:

> *Administrators remember letters from people with power. I would solicit letters to be sent to the dean and department chair from the directors of key state partners—the letters would simply state how invaluable the center was in helping that organization achieve a key goal. Letters from farmers or food businesses were also used on occasion.*

Another director said that many of their community partners were willing to add their names and logos to stakeholder sign-on letters to the state legislature to support the university's budget for Extension and experiment stations: *"Those logo letters used to be mostly traditional agriculture and forestry stakeholder groups … and now it's so powerful to see all our partners, both community-based and statewide groups, there on the page. They add their voices because they value us. I hope university leadership sees that."*

Donors can also influence university policy, and one center shared how they had leveraged their W. K. Kellogg endowment to retain faculty and staff positions. When the W. K. Kellogg Foundation set up the endowment, the foundation had convinced university administrators to commit to long-term faculty and staff appointments. Current staff were able to hold the university to these commitments during economic downturns when budgets tightened and those positions might have been cut.

Capcity: Presenters also discussed ways in which community partners helped sustain center projects during times when university support is lacking. Partnering with large organizations or agencies that have stable funding, staffing, and capacity can be particularly valuable. Those relationships can be strengthened by inviting them to be part of center leadership, for example by holding a position on a center's board of directors (Israel et al., 2006). As one presenter explained, *"The ideal seems to be a strong university center and a well-supported and capable external organization or coalition who share leadership and support for each other as their own sources of support and capacity vary over time."* Some centers have utilized these types of relationships to sustain programs over the long term. For example, centers have initiated programs that they have then passed off to community partners who can continue the work into the future.

Funding: Community partners with significant financial stature can also open doors to funding sources. One former center director shared a story about how his center had built on such partnership:

> *During the last few months I was at the center, we developed an MOU with a regional bank. This bank had developed a loan and technical assistance program focused on regional food system businesses and would refer some loan clients to the center for technical assistance. Even though this bank did not directly provide the center funds, this MOU raised the credibility of the center with other financial institutions.*

The same presenter shared that a different center he had worked for built a network of food system organizations; that network attracted new funders to support food system work, growing the funding pie for all.

Build solidarity across centers

Building solidarity across centers and bringing in new perspectives and ideas also supports peer-to-peer learning and builds capacity and resilience. In recent years, INFAS has expanded to include 1890 and 1994 land-grant institutions through graduate student fellowship programs and other projects. INFAS members have also connected with Hispanic-Serving Agricultural Colleges and Universities (HSACUs). Moreover, there is opportunity in the future for centers focused on agricultural transformation to build and expand collaborations with centers whose work intersects with agriculture and food systems from different angles, including policy, law, the environment, labor, public health, and more. Finally, centers within a state or a multistate region may build their resilience by identifying shared values and creating shared systems that

allow them to accomplish more than they can do alone.[10]

Conclusion

University centers and institutes have an important role in transforming agriculture and food systems. Through facilitating the Organization Development Working Group within INFAS, we have learned about many structural and operational choices that support or undermine centers' resilience and stability. Outcomes of these choices depend, of course, on context: all the centers represented in this paper are housed in different institutional environments, in different parts of the U.S. Newer centers face different challenges and have different opportunities compared with those founded three decades ago. Yet, there are clearly many parallels and connections. In this paper, we provide a range of recommendations in hopes that center leaders can adopt those most relevant to their institutional, social, and political contexts. We will also continue to collect and share "ah ha's" and "uh oh's" through the INFAS Organizational Development Working Group.[11] Many INFAS members have spent much of their professional lives working with centers and are excited to take on informal mentoring roles, help newer centers brainstorm ideas and challenges, and share insights from their lived experience. If you are interested in learning from the group or sharing your experience, we invite you to join the network. Together, we will strengthen our collective capacity to enable food systems transformation.

References

Ammons, S., Creamer, N., Thompson, P. B., Francis, H., Friesner, J., Hoy, C., Kelly, T., Porter, C. M., Tomich, T. M. (2018). *A deeper challenge of change: The role of land-grant universities in assessing and ending structural racism in the US food system*. https://asi.ucdavis.edu/programs/infas/a-deeper-challenge-of-change-the-role-of-land-grant-universities-in-assessing-and-ending-structural-racism-in-the-us-food-system

Arnold, A., Cafer, A., Green, J., Haines, S., Mann, G., & Rosenthal, M. (2021). Perspective: Promoting and fostering multidisciplinary research in universities. *Research Policy*, *50*(9), Article 104334. https://doi.org/10.1016/j.respol.2021.104334

Association of Public and Land Grant Universities. (2017). *The challenge of change: Harnessing university discovery, engagement, and learning to achieve food and nutrition security*. https://www.aplu.org/library/the-challenge-of-change/

Balazs, C. L., & Morello-Frosch, R. (2013). The three Rs: How community-based participatory research strengthens the rigor, relevance, and reach of science. *Environmental Justice*, *6*(1), 9–16. https://doi.org/10.1089/env.2012.0017

Benton, T. G. (2023). Academics can do more to disrupt and reframe the solution space for food system transformation. Nature Food, 4, 928-930. https://doi.org/10.1038/s43016-023-00876-w

Biancani, S., Dahlander, L., McFarland, D. A., & Smith, S. (2018). Superstars in the making? The broad effects of interdisciplinary centers. *Research Policy*, *47*(3), 543–557. https://doi.org/10.1016/j.respol.2018.01.014

Boardman, C., & Bozeman, B. (2007). Role strain in university research centers. *The Journal of Higher Education*, *78*(4), 430–463. https://doi.org/10.1080/00221546.2007.11772323

Boardman, P. C. (2006). *University research centers and the composition of academic work* [Doctoral dissertation]. Georgia Institute of Technology. http://hdl.handle.net/1853/14004

El Bilali, H., Strassner, C., Hassen, T.B. (2021). Sustainable agri-food systems: Environment, economy, society, and policy. *Sustainability*, *13*(11), Article 6260. https://doi.org/10.3390/su13116260

Friedland, W. H. (1991). "Engineering" social change in agriculture. *The University of Dayton Review*, *21*(1), Article 4. https://ecommons.udayton.edu/udr/vol21/iss1/4

[10] For example, in May 2023, USDA funded 12 new regional food business centers that include multistate collaborations focused on local, regional, and resilient food sector development. Some of these centers are led by sustainable agriculture centers at land-grant institutions.

[11] https://asi.ucdavis.edu/programs/infas/projects-and-programs

Hightower, J. (1972). *Hard tomatoes, hard times: A report of the agribusiness accountability project on the failure of America's land grant college complex*. Schenkman Books.

Hil, R., Lyons, K., & Thompsett, F. (2021). *Transforming universities in the midst of global crisis: A university for the common good*. Routledge. https://doi.org/10.4324/9781003021117

High Level Panel of Experts on Food Security and Nutrition [HLPE]. (2019). *Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition*. http://www.fao.org/cfs/cfs-hlpe/en/

International Panel of Experts on Sustainable Food Systems [IPES-Food] & ETC Group (2021). *A long food movement: Transforming food systems by 2045*. https://www.ipesfood.org/_img/upload/files/LongFoodMovementEN.pdf

Israel, B. A., Krieger, J., Vlahov, D., Ciske, S., Foley, M., Fortin, P., Guzman, J. R., Lichtenstein, R., McGranaghan, R., Palermo, A., & Tang, G. (2006). Challenges and facilitating factors in sustaining community-based participatory research partnerships: Lessons learned from the Detroit, New York City and Seattle Urban Research Centers. *Journal of Urban Health*, *83*, 1022–1040. https://doi.org/10.1007/s11524-006-9110-1

Jordan, C. (2006). *Developing criteria for review of community-engaged scholars for promotion or tenure*. Community-Engaged Scholarship for Health Collaborative, University of Washington. https://rede.ecu.edu/engagement/wp-content/pv-uploads/sites/397/2018/05/Developing-CriteriaforTP.pdf

Jordan C. (Ed.). (2007). *Community-engaged scholarship review, promotion & tenure package*. Peer Review Workgroup, Community-Engaged Scholarship for Health Collaborative, Community-Campus Partnerships for Health. https://drive.google.com/file/d/1918oZmD_NRPS68jHxhyt6u4Wp2L96mQe/view

Leahey, E., & Barringer, S. N. (2020). Universities' commitment to interdisciplinary research: To what end? *Research Policy*, *49*(2), Article 103910. https://doi.org/10.1016/j.respol.2019.103910

Mallon, W. T. (2006). The benefits and challenges of research centers and institutes in academic medicine: Findings from six universities and their medical schools. *Academic Medicine*, *81*(6), 502–512. https://doi.org/10.1097/01.ACM.0000225212.77088.10

Mendes, W., Gingras, J., Robinson, P., & Waddell, J. (2014). Community–university research partnerships: A role for university research centers? *Community Development*, *45*(2), 166–180. https://doi.org/10.1080/15575330.2014.892018

Nyden, P. (2003). Academic incentives for faculty participation in community-based participatory research. *Journal of General Internal Medicine*, *18*, 576–585. https://doi.org/10.1046/j.1525-1497.2003.20350.x

O'Meara, K. (2012). *Promotion and tenure documents: Engaged scholarship policy examples*. Campus Compacts, Eastern Region. https://userpages.umbc.edu/~kogan/senate/19/04/ERCC_P+T_policy_examples_final.pdf

Ostrom, M. (2020). Radical roots and twenty-first century realities: Rediscovering the egalitarian aspirations of Land Grant University Extension. *Agriculture and Human Values*, *37*, 935–943. https://doi.org/10.1007/s10460-020-10163-0

Porter, C. M., Woodsum, G., M., & Hargraves, M. (2018). Introduction—and invitation—to the Food Dignity special issue. *Journal of Agriculture, Food Systems, and Community Development*, *8*(Suppl. 1), 1–4. https://doi.org/10.5304/jafscd.2018.08A.025

Resnick, D., & Swinnen, J. (Eds.). (2024). *The political economy of food system transformation: Pathways to progress in a polarized world*. Oxford University Press. https://doi.org/10.2499/9780896294585

Rhoten, D. R. (2003). *A multi-method analysis of the social and technical conditions for interdisciplinary collaboration*. The Hybrid Vigor Institute. https://www.ssrc.org/publications/a-multi-method-analysis-of-the-social-and-technical-conditions-for-interdisciplinary-collaboration/

Sabharwal, M., & Hu, Q. (2013). Participation in university-based research centers: Is it helping or hurting researchers? *Research Policy*, *42*(6–7), 1301–1311. https://doi.org/10.1016/j.respol.2013.03.005

Salimi, Y., Shahandeh, K., Malekafzali, H., Loori, N., Kheiltash, A., Jamshidi, E., Frouzan, A. S., & Majdzadeh, R. (2012). Is community-based participatory research (CBPR) useful? A systematic review on papers in a decade. *International Journal of Preventive Medicine*, *3*(6), 386–393. https://pubmed.ncbi.nlm.nih.gov/22783464

Schneider, K. R., Fanzo, J., Haddad, L., Herrero, M., Moncayo, J. R., Herforth, A., Remans, R., Guarin, A., Resnick, D., Covic, N., Béné, C., Cattaneo, A., Aburto, N., Ambikapathi, R., Aytekin, D., Barquera, S., Battersby, J., Beal, T., Molina, P. B., … Wiebe, K. (2023). The state of food systems worldwide in the countdown to 2030. *Nature Food*, *4*, 1090–1110. https://doi.org/10.1038/s43016-023-00885-9

Slaughter, S., & Rhoades, G. (2000). The neo-liberal university. *New Labor Forum*, *6*, 73-79. https://www.jstor.org/stable/40342886

Van Noorden, R. (2015). Interdisciplinary research by the numbers. *Nature*, *525*, 306–307. https://doi.org/10.1038/525306a