## A Collaborative for Addressing Food Injustice (CAFI) A Partnership Between Community Stakeholders and UNO's Food Justice Innovation Hub

**The Problem:** Our food system has evolved to commodify people and planet in the name of "productivity" and profit, leading to disproportionate climate impacts, health outcomes, and privation for marginalized groups, including women, children, immigrants, indigenous communities, and black and brown bodies. Food is a human right; however, it is a right that is not enjoyed by all. We know hunger is not caused by a lack of food, but a lack of access, often undermined by poverty, social exclusion, and discrimination (United Nations Human Rights, n.d.).

In the Omaha-Council Bluffs metropolitan area, approximately 100,810 people (12.5%) experience food insecurity. As expected, this number is not consistent across the city. In some pockets, namely northeast, southeast, and northwest Omaha, food insecurity reaches the staggering rates of 48.5% of the population. Nearly 30% of census tracts in the metro have a food insecurity rate over 15%. Census tract 7 in zip code 68111 has the highest estimated food insecurity rate at 48.5%, while census tract 74.60 in zip code 68135 has the lowest estimated food insecurity rate at 3.8% (United Way of the Midlands, 2018). These disparities are indicative of broader social inequalities that intersect our food system locally and globally.

**Description of Proposed Initiative:** Our proposal is grounded on the belief that at the intersection of different disciplines lies the promise of addressing one of the most important challenges of our time: fair and equitable access to high quality, healthy food for all. *Our project's vision is to build an innovation hub that will leverage local resources and integrate evolving technologies to dismantle food apartheid and break the barriers that currently exist in our food system so that access to healthy food is not determined by zip code.* Our work focuses on strategically and collaboratively addressing inequities in access to healthy food, which holds the key to addressing health disparities in marginalized populations. The solutions we build through the hub have the opportunity to impact both local and global food insecurity.

Creation of UNO's Food Justice Innovation Hub: UNO's Food Justice Innovation Hub will be a team of faculty, staff,



students, and community partners leveraging their collective brain power to tackle the complex problem of food injustice. This cross-campus, cross-discipline, community wide effort will utilize the strengths of departments, assets of community partners and individuals to design and implement innovative educational and research efforts to tackle food injustice from a variety of angles. This collaborative, multidisciplinary team will involve engineering, life sciences, social sciences, public health, business and education. Leveraging the experience of our community partners already serving the food insecure of our community, in combination with the knowledge and expertise of our UNO community, our work will be a catalyst to drive a positive change in the pursuit of food equality in our community.

To do this, we will center upon the voices of our community partners who have gathered key insights through a wealth of ongoing community building work. These insights will drive our education, research, and community engagement objectives. Through this partnership, we invite community partners into decision-making positions, working to learn from one another and tackle this crisis together. We aim to create a collaborative space for challenging assumptions, learning reciprocally, negotiating and co-creating new ideas, and polyvocal (many-voiced) discussions across and through differences. In short, we will build a bi-directional learning web to make food justice a reality.

The overarching goal of this initiative is to create UNO's Food Justice Innovation Hub, which will accomplish the following objectives:

1. Education Objective [LEARN]: Create a bi-directional, intergenerational, mutually beneficial learning web with community partners to build shared understanding of food injustice by (a) creating courses and outreach activities centered around addressing issues of food injustice (K-20 and community workshops and classes); (b) Build a deep

partnership and understanding with the community about the importance of defending food justice; and (c) Develop community embedded/engaged scholarship opportunities, such as providing educational opportunities for students through curriculum and experiential learning, linking high impact practices such as internships, service learning, faculty-led research, and others. <u>Assessment Metrics include:</u> The number and quality of courses and outreach activities created and linked to the Hub; the number and quality of community trainings and supports taking place; the number and quality of modules infused in courses linking food injustice in inter- and trans-disciplinary ways; the utility and effectiveness of a Food Justice Summer Summit for P12 teachers and UNO faculty members; the placement of course offerings, such as in the community and J-term.

2. Research Objective [DO]: Create the Living Lab Incubator that will support the development of new knowledge, technology, and businesses by providing mentorship, development resources, and funding connections to local innovators and aspiring researchers seeking to address food injustice. This shared space will be structured using the principles of Participatory Design, which consist of theories and practices that regard end-users of technology as full participants in design activities, resulting in the strengthening of disempowered groups to make better services and products. It will be initially located in the renovated basement of greenhouse at the UNO campus. The activities of the incubator will culminate in an annual research summit for investigators conducting and sharing research on food systems and injustice. We will also conduct research in the field to examine the efficacy of new and emerging technologies with the served community, to advance in wide research associated with food injustice (i.e., vertical farming, seed distribution, community-led food choices to grow; home-based systems, etc.). <u>Assessment Metrics include:</u> We will measure success through number of grant submissions and research expenditure, the amount of grants given to startups or new investigators, the number of projects attaining external funding, number of published peer-reviewed conference papers and journal articles, number of students from underrepresented populations entering new undergraduate and graduate programs.

3. Community Engagement Objective [COLLABORATE]: We will build on community partnerships to share assets and forward food justice initiatives through community-based solutions. We will conduct international café-style listening sessions to identify priority areas, conduct asset mapping around food justice with our partners, and join already established community groups of leaders to prioritize projects. We anticipate these will fill in gaps with technology, research, and education solutions to the problems identified and optimize food growth potential within the community. <u>Assessment Metrics include</u>: Measured using the number of projects that have technology, knowledge, and skills transfer out of the Incubator, number of listening sessions and attendance, number of community partners engaged with the Living Lab Incubator, and a detailed social networking analysis of project community engagement. Increased, sustainable access to food and food growing options for food insecure.

**Tentative Timeline:** (Year 1) Hold community listening sessions with partners to identify priority needs and strategies, Build Living Lab Incubator and other training sites across campus. Develop curriculum in STEM areas. (Year 2) Build priority activities based on listening sessions, Partner with community to guide the work, Collaborate with Together, Inc. to ensure access across different delivery points in the community. (Year 3) Build/finish permanent site. Share results of year 2 projects and assessments. (Years 1-3), Seek external funding.

**Institutional Partners and Faculty Expertise:** (College of Information Science & Technology) Dhundy R Bastola, Pei-Chi Huang, Christine Toh, Andrea Grover, Kathryn Cooper. (Service-Learning Academy) Julie Dierberger. (College of <u>Arts and Sciences</u>) *Biology:* Mark Schoenbeck, Karen Murch-Shafer, Jill Blankenship; *Political Science:* Elizabeth Chalecki. (College of Education, Health, and Human Services) *Teacher Education:* Derrick Nero, Neal Grandgenett. (College of Public Affairs and Community Service) *School of Public Administration:* Bryce Hoflund. (College of Engineering UNO/UNL/Peter Kiewit Institute) *Electrical & Computer Engineering:* Hamid Sharif; *Computer Science and Engineering:* Mehmet Can Vuran. (College of Business Administration) *Technology Commercialization Director:* Josh Nicol-Caddy; *State and Federal Industry Liaison Officer:* Deanna Marcelino; *Business Law & Ethics:* Destynie Sewell. (UNMC) *Department of Biochemistry and Molecular Biology:* Amar Singh, Punita Dhawan. (STEM TRAIL Center/Omaha STEM Ecosystem) Tracie Reding, Julie Sigmon. *Community Partners:* Whispering Roots Inc. (Greg Fripp), Samal Foundation, Healthy Food for All, Latino Center of the Midlands, Table 10 Restaurant Group, Together Omaha/2419 (Craig Howell), Soil to Sustenance, No More Empty Pots, Big Muddy Urban Farm, City Sprouts, Nebraska Sustainable Agriculture Society, Nebraska Extension.

**External Funding Opportunities:** We believe that we will be increasingly competitive for large external grants from agencies such as the National Science Foundation, U.S. Department of Education, NASA; U.S. Department of Labor, U.S. Department of Agriculture, AmeriCorps, and pilot funding from organizations such as NASA Nebraska Space Grant, and private foundations (working with the NU Foundation). Samples include: Cyber-Physical Systems (CPS):

https://www.nsf.gov/pubs/2021/nsf21551/nsf21551.pdf; Engineering Design and Systems Engineering (EDSE): https://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=505478

Small Business Innovation Research Aquaculture grant (due May) <u>https://www.sbir.gov/node/1863143;</u> Small Business Technology Transfer <u>https://www.sbir.gov/about;</u> US Economic Development Administration <u>https://www.eda.gov/funding-opportunities/</u>