

2019 NSF SMART AND CONNECTED COMMUNITIES PI MEETING

Developing an Informational Infrastructure for Building Smart Regional Foodsheds, NSF Award 1737573

PARTICIPANTS: University of California, Davis: Thomas Tomich (PI; Agricultural Sustainability Institute (ASI), Matthew Lange (co-PI; Food Science & Technology), Nina Amenta (Computer Science), Jim Quinn (Environmental Science & Policy), Nick Anderson (School of Medicine), Allan Hollander (ESP), Courtney Riggie (ASI), Patrick Huber (ASI); **The Ohio State University:** Casey Hoy (co-PI; Initiative for Food & AgriCultural Transformation, InFACT), Ayaz Hyder (co-PI; Translational Data Analytics), Dorota Grejner-Brzezinska (Engineering), Jill Clark (Public Affairs), Ingrid Adams (College of Medicine), Angela Latham (InFACT); **Other Institutions and Steering Committee Partners:** Suzanna Lewis (co-PI; Lawrence Berkeley National Laboratory), Robyn Krock (Valley Vision), Matt Baker (Ecological Council of Sacramento), Daphne Miller (UC Berkeley/UC San Francisco), Brandi Braun (City of Columbus / Smart Columbus), Amrik Khalsa (Nationwide Children's Hospital), Brian Estabrook (Franklin Co. Economic Development & Planning)

Project Aims & integrative research approach

Develop an informatics framework for understanding and optimizing regional food systems ("foodsheds")



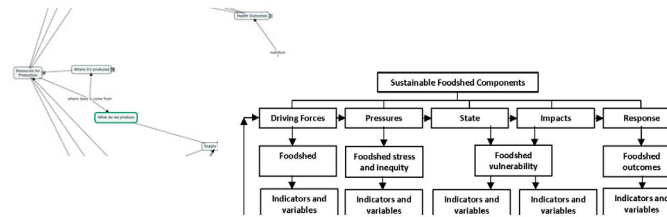
1. Document interrelated network relationships and material flows in the food system
2. Develop and connect information technologies to capture these relationships for information sharing and analysis
3. Collaborate with stakeholders, strengthen regional, national, and international food system research and action

Status of the Project

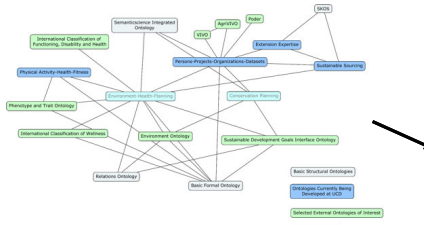
- Food system mapping
- Stakeholder mapping
- Informatics infrastructure / ontologies



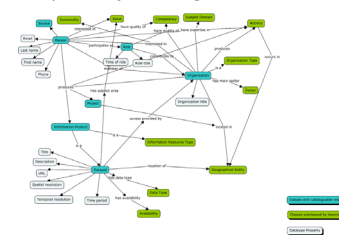
Conceptual models (Systems Dynamics, DPSIR, others)



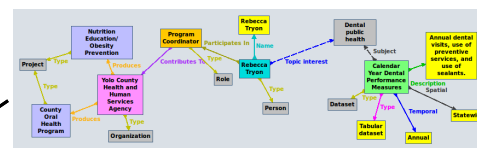
Multi-ontology framework



PPOD Ontology framework (People-Projects-Organizations-Data)



Stakeholder Record



Practical applications



Community engagement

What's next

- Meeting with stakeholders to develop use cases
- Collecting and curating data resources
- Use cases in four key areas:
 - Policy
 - Health
 - Supply chains
 - Production
- Publications: Hollander et al. In revision. Towards smart foodsheds: using stakeholder engagement to improve informatics frameworks for regional food systems. 2020 Special Issue on Smart Spaces and Places, Annals of the American Association of Geographers.

