Overcoming the Rural Data Deficit to Improve Quality of Life and Community Services in Smart & Connected Small Communities

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Kimberly Zarecor, Iowa State University

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Principal Research Investigators

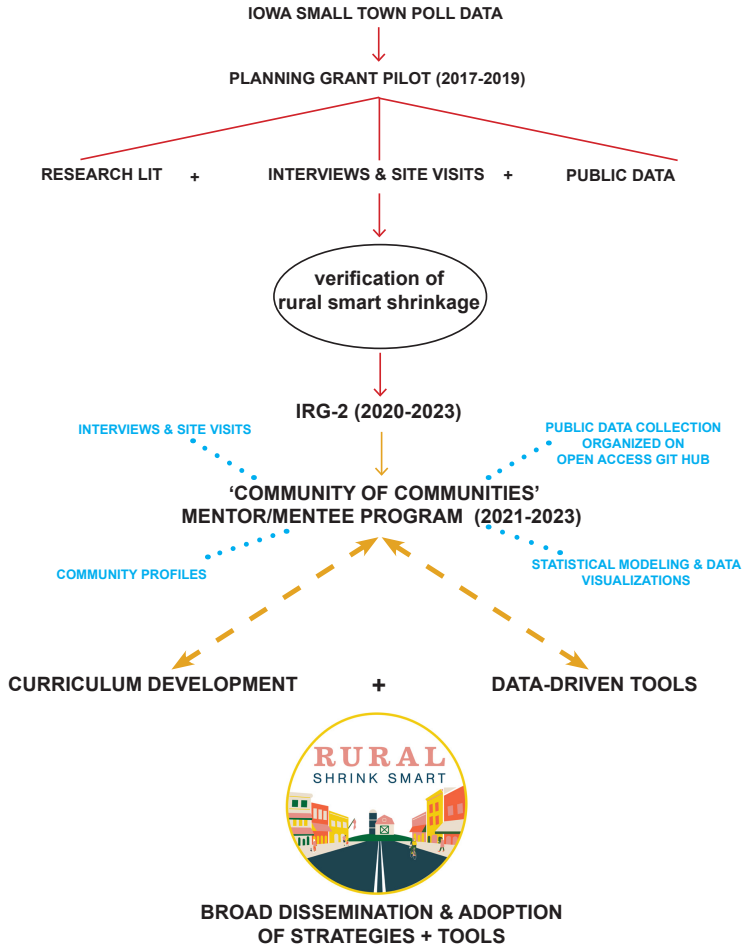
Kimberly Zarecor, Iowa State University (PI)
Biswa Das, Iowa State University
David J. Peters, Iowa State University
Susan Vanderplas, University of Nebraska, Lincoln
Zhengyuan Zhu, Iowa State University

Community Partners

Erin Mullenix, Research Director, Iowa League of Cities (primary partner)

Collaborating communities in Iowa:
Bancroft, Elma, Everly, Sac City + 2-3 to be confirmed

Project Overview



Project Vision

Many small and rural communities are shrinking due to macroeconomic changes beyond their control and this trend is unlikely to be reversed in most places.

This project proposes to develop *educational resources* and *data-driven tools* to help these communities to **shrink smart**, which is the process of adapting to population loss while also protecting quality of life and community services.

Project Overview

Use-Inspired Research

1. Community Information Ecosystem that **addresses the rural data deficit** by increasing data utilization and tracking progress of shrink-smart approach using new tools for data collection, analysis and visualization.

2. Working with a group of small and rural Iowa communities in a **'community of communities' mentor/mentee program** to inform development of the educational resources and data-driven tools with the **Iowa League of Cities** as our primary community partner to reach its 870 members.

Fundamental Research Contributions

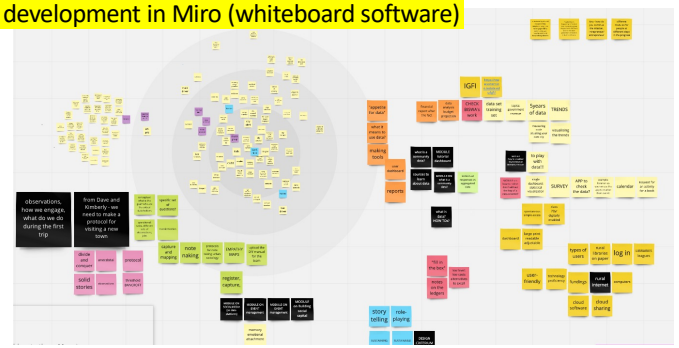
1. Overcoming the rural data deficit by empowering small communities to **embrace data-driven approaches** as they learn how **to shrink smart**.

2. Innovative **statistical analysis and machine learning techniques** to combine new data collected by community members with existing public data.

Project Update

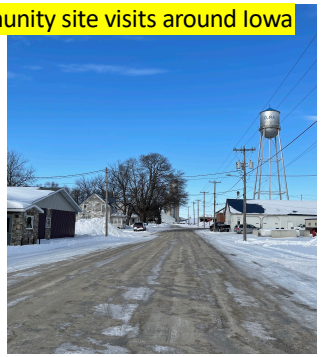
1. Set up GitHub with **public data sets** for team use (access for other researchers in the future)
2. New **statistical modeling** using existing longitudinal data from the Iowa Small Town Poll (1994, 2004, 2014)
3. Weekly meetings of **curriculum development** team to discuss content, stakeholders, delivery models including online design, and learning objectives with participation of Iowa League of Cities staff
4. Visits to **4 small and shrinking Iowa communities** (Bancroft, Elma, Everly, Sac City) who **will join a *"community of communities" mentor/mentee program*** to help co-design curriculum and data-driven tools
5. Grad/undergrad students from underrepresented groups joined team
6. Student-designed **website** and initial **interactive dashboard tools**

curriculum development in Miro (whiteboard software)



website in development

community site visits around Iowa



Project Evolution

We are learning that small communities are eager to learn from each other, and that few opportunities exist for them to network and meet leaders in similar types of small and shrinking places.

We also find that we are welcomed warmly and with a lot of excitement when we visit communities around Iowa, especially as COVID has reduced opportunities for in-person interactions with people from outside of the towns.

We are finding towns more receptive to the ‘shrink-smart’ label than anticipated, because they know they are shrinking and that the reasons are outside of their control.

Anticipated outcomes & success measures for next year

- **Visit 3 more communities** identified as potential members of mentor/ mentee group by June 2021
- **Travel** to community events and for qualitative data collection as COVID vaccines become more available
- **Develop profiles of participating communities** using data analysis, ethnographic and historical methods, and spatial mapping with 2 REU students and 1 Ph.D. student
- **Disseminate early results** at conferences, workshops, and online through the website and social media