

North Carolina Smart & Connected Communities Initiative

What?

Smart and Connected Communities programs aim to use state-of-the-art technologies to exploit “Big Data” and the “Internet of Things” to promote sustainable social, economic, and environmental development across rural and urban communities. S&CC solutions produce marked improvements in social, economic, and environmental health by addressing a range of concerns, including food, energy, and water; pollution; greenhouse gas emissions; public health; rural and urban planning; access to quality jobs; vulnerability to extreme events; disaster preparedness; crime reduction; and social justice.

Why?

We want to take advantage of information and communications technology and data sources and apply the theories and practices of social and data science in order to transform physical communities into connected communities that can support economic growth, enable environmental sustainability, and enhance quality of life. To develop successful S&CC solutions, researchers, practitioners, and (importantly) citizens from all sectors (academic, industry, non-profit, government) must engage collectively, from conceptualization to implementation. As the NSF points out, S&CC solutions should be developed using the “living lab” approach, in which research, development, and education are staged with pilot deployments of prototype solutions within defined communities.

Barriers to overcoming these challenges are not technical, however, but rather operational and related to the complexity of community management, finance, regulation, and planning, and operations that are multidimensional and comprised of multiple stakeholders, with intricate dependencies and interdependencies.

How?

We are building a North Carolina Smart and Connected Communities Initiative (NCSCCI) bringing together academic, industry, and government leaders with the goal to define gaps in connectedness as it applies to both rural and urban communities throughout North Carolina and to coalesce viewpoints on how to bridge these gaps through cooperative and novel social, scientific, and technical approaches and policies.

Our initiative emphasizes the connectedness between common components and dimensionalities of communities of any scale.

Vision?

Our ultimate goal is to develop and implement a national model for a multi-centered, interdisciplinary, hub-and-spokes S&CC Framework that will engage in transformative research, development, commercialization, standardization of best practices, education, and outreach to benefit the economic and social welfare of communities across North Carolina.

Key Partners and Supporters

- University of North Carolina General Administration
- University of North Carolina at Chapel Hill
- University of North Carolina at Charlotte
- North Carolina State University
- SAS Institute Inc.
- TetraTech.com
- Strateq Future Systems, Netherlands
- Envision Charlotte
- City of Charlotte
- City of Kinston

Goals

Engage stakeholders in discussions aimed at defining connectedness as it applies to North Carolina communities.

Motivate discussions on social, scientific, and technical approaches and policies to connect and promote cohesion between and among rural and urban communities.

Develop people-centered ideas for sustainable economic and social growth designed to achieve economic and social stability.

Design innovative research and development programs based on novel information and communication technology and aimed at rural and urban communities and regions.

Inventory existing educational courses and opportunities and draft plans for new educational opportunities within the broader research and development. Identify plans to spin-off technologies for commercialization.

Garner commitments from additional researchers and leaders from academia, industry, and government to realize our vision.

Install a clearing house for technologies, policies and solutions.

Contact:

Arcot Rajasekar,
rajasekar@unc.edu

Web:

<https://scci.web.unc.edu/>



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

North Carolina Smart & Connected Communities Diagram

